Test of Aruba AP-175P / MSR2K23N0-XX 802.11a/b/g/n Wireless AP

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

Test Report Serial No.: ARUB61-U1 Rev A





Test of: Aruba Networks, Inc AP-175P / MSR2K23N0-XX 802.11a/b/g/n Wireless AP

To: FCC 47 CFR Part 15.247 & IC RSS 210

Test Report Serial No.: ARUB61-U1 Rev A

This report supersedes: NONE

Applicant: Aruba Networks, Inc 1344 Crossman Avenue Sunnyvale, CA 94089 USA

Product Function: Wireless Access Point

Copy No: pdf

Issue Date: 1st November 2010

This Test Report is Issued Under the Authority of;

MiCOM Labs, Inc.

440 Boulder Court, Suite 200 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



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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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1 ACCREDITATION, LISTINGS & RECOGNITION

1.1 ACCREDITATION

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



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1.2 LISTINGS

MiCOM Labs test facilities are listed by the following organizations;

North America

United States of America Federal Communications Commission (FCC) Listing #: 102167

Canada

Industry Canada (IC) Listing #: 4143A-2

Japan Registration

VCCI Membership Number: 2959

- Radiated 3 meter site; Registration No. R-2881
- Line Conducted, Registration Nos. C-3181 & T-1470
- Emissions; Registration Nos. C-3180 & T-1469

1.3 RECOGNITION

APEC MRA (Asia-Pacific Economic Community Mutual Recognition Agreement)

Conformity Assessment Body (CAB) – MiCOM Labs

Test data generated by MiCOM Labs is accepted in the following countries under the APEC MRA.

Country	Recognition Body	Phase	CAB Identification No.
Australia	Australian Communications and Media Authority (ACMA)	I	
Hong Kong	Office of the Telecommunication Authority (OFTA)	Ι	
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)		US0159
Singapore	pore Infocomm Development Authority (IDA)		
Taiwan			
Vietnam	Ministry of Information and Communications	I	

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2 DOCUMENT HISTORY

	Document History						
Revision	Date	Date Comments					
Draft							
Rev A	1st November 2010	Initial Release					

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3 TEST RESULT CERTIFICATE

Applicant:	Aruba Networks, Inc	Tested By:	MiCOM Labs, Inc.
	1344 Crossman Avenue		440 Boulder Court
	Sunnyvale		Suite 200
	California,94089, USA		Pleasanton
			California, 94566, USA
EUT	802.11a/b/g/n Wireless AP	Tel:	+1 925 462 0304
Model AP-175P / MSR2K23N0-XX		Fax:	+1 925 462 0306
S/No's:	25A02102800027		
Test Date(s)	23 rd Sept – 7 th Oct 2010	Website:	www.micomlabs.com

STANDARD(S)	TEST RESULTS
FCC 47 CFR Part 15, SubPart 15.247	EQUIPMENT COMPLIES

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

Notes:

- 1. This document reports conditions under which testing was conducted and the results of testing performed.
- 2. Details of test methods used have been recorded and kept on file by the laboratory.
- 3. Test results apply only to the item(s) tested.

Approved & Released for MiCOM Labs, Inc. by:



TESTING CERTIFICATE #2381.01

Graeme Grieve Quality Manager MiCOM Labs,

Gordon Hurst resident & CEO MiCOM Labs, Inc.

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4 REFERENCES AND MEASUREMENT UNCERTAINTY

4.1 Normative References

Ref.	Publication	Year	Title
i.	47 CFR Part 15, SubPart 15.247	2009	For Digitally Modulated Intentional Radiators
ii.	Industry Canada RSS-210	lssue 7 June 2007	Low Power License-Exempt Radiocommunication Devices (All Frequency Bands): Category 1 Equipment
iii.	Industry Canada RSS-Gen	lssue 2 June 2007	General Requirements and Information for the Certification of Radiocommunication Equipment
iv.	ANSI C63.4	2003	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
v.	CISPR 22/ EN 55022	2005	Limits and Methods of Measurements of Radio Disturbance Characteristics of Information Technology Equipment
vi.	M 3003	Edition 1 Dec. 1997	Expression of Uncertainty and Confidence in Measurements
vii.	LAB34	Edition 1 Aug 2002	The expression of uncertainty in EMC Testing
viii.	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
ix.	A2LA	14 th September 2005	Reference to A2LA Accreditation Status – A2LA Advertising Policy

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4.2 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.



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5 TEST SUMMARY

List of Measurements:

Standard Section(s)	Test Description	Condition	Result	Test Report Section
15.247 (b) (3) RSS-210 A8	Maximum Conducted Power & EIRP	Conducted	Compliant	7.1
1.1310 RSS-GEN §5.5	Maximum Permissible Exposure	Calculated	Compliant	7.2
(d), 15.205, 15.209	Transmitter Radiated Spurious Emissions	Radiated	Compliant	
(d), 15.205, 15.209	(d), 15.205, Transmitter Band-Edge		Compliant	7.3
RSS-GEN	RSS-GEN Transmitter Peak Emissions		Compliant	
RSS-GEN	Transmitter Receiver Emissions	Radiated	Compliant	
15.205	Radiated (Digital) Emissions	Radiated	Compliant	7.4

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 6.7 Equipment Modifications highlights the equipment modifications that were required to bring the product into compliance with the above test matrix

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6 PRODUCT DETAILS AND TEST CONFIGURATIONS

6.1 EUT Details Detail Description Test of the Aruba Networks, Inc AP-175P / Purpose: MSR2K23N0-XX 802.11a/b/g/n Wireless Access Point for compliance against FCC 47 CFR Part 15, SubPart 15.247 and Industry Canada RSS-210 regulations. Aruba Networks, Inc Applicant: 1344 Crossman Avenue Sunnyvale, CA 94089 USA Manufacturer: As manufacturer Test Laboratory: MiCOM Labs, Inc. 440 Boulder Court. Suite 200 Pleasanton, California 94566 USA Test report reference number: ARUB61-U1 Rev A Date EUT received: 23rd September 2010 23rd Sept – 7th Oct 2010 Dates of test (from - to): No of Units Tested: Product Name: AP-175P / MSR2K23N0-XX Manufacturers Trade Name: Wireless Access Point **Equipment Primary Function:** 802.11a/b/g/n Wireless Access Point, 2x2 Spatial Multiplexing MIMO configuration Type of Technology: 802.11a/b/g/n Installation type: Fixed Construction/Location for Use: Outdoor only Software/Firmware Release: Build# 75568 Version: 5.0.7.1 TDD (Time Div Duplex) Transmit/Receive Operation: Output Power Type Stepped Rated Input Voltage and Current: Power Over Ethernet (POE) 48 Vdc @ 1.25 A Nominal: 20 °C Min: 0 °C Max: 50 °C **Operating Temperature Range:** ITU Emission Designator(s): 2400 – 2483.5 MHz 802.11b 15M6G1D 2400 – 2483.5 MHz 802.11g 16M5D1D 2400 - 2483.5 MHz 802.11n - HT-20 17M8D1D 2400 - 2483.5 MHz 802.11n - HT-40 35M9D1D 5725 – 5850 MHz 802.11a 16M6D1D 5725 – 5850 MHz 802.11n – HT-20 17M8D1D 5725 – 5850 MHz 802.11n – HT-40 36M4D1D Long Term Frequency Stability: ±20 ppm Equipment Dimensions: 10.2" x 10.2" x 4.0" (25.9cm x 25.9cm x 10.2cm) Weight: 7ibs (3.25 kgs) Primary function of equipment: Wireless Access Point for transmitting data and voice

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6.2 Scope of Test Program

The scope of the compliance program was to test the Aruba Networks Inc AP-175P / MSR2K23N0-XX 802.11 a/b/g/n AP wireless Access Point, 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 for Radiated Emissions.

The Aruba Networks AP-175P / MSR2K23N0-XX has external antennas with N-type connectors. The device has two radios with two transmit and receive antennae. The antennas used with the AP-175P / MSR2K23N0-XX are detailed in section 6.4 "Antenna Details".

The Aruba Networks AP-175P / MSR2K23N0-XX contains two WLAN 802.11a/b/g/n MiniPCI modules model DNMA-H92. The results for conducted testing for compliance to the requirements of FCC Pt 15.247 & IC RSS-210 Annex 8 are reported in Sportan International Inc test report No. FR9N1919-01AB.



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6.3 Equipment Model(s) and Serial Number(s)

Type (EUT/ Support)Equipment Description (Including Brand Name)		Mfr	Model No.	Serial No.
EUT 802.11 a/b/g/n Wireless Access Point		Aruba Networks Inc	AP-175P	25A02102800027
Support	Power Over EtherNet (POE) 48Vdc supply	PowerDsine	7100G	7400000004
Support	Laptop PC – ThinkPad	IBM	T60	-
Support	Laptop PC – ThinkPad	IBM	T30	-
Support	Switch Controller	Aruba Networks Inc	620	AE0000949

6.4 Antenna Details

The following is a description of the EUT antennas.

Antenna Type:	Manufacturer	Model	Gain (dBi)	Frequency Range (MHz)
Dipole	Aruba	AP-ANT-80D	8	2400 – 2500 MHz
Dipole	Aruba	AP-ANT-86	9	5150 – 5875 MHz
Directional	Aruba	AP-ANT-85	15	2400 – 2500 MHz
Directional	Aruba	AP-ANT-89	13.25	5470 – 5875 MHz



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6.5 Cabling and I/O Ports

Number and type of I/O ports on supporting wireless access point

- 1. 1000/100/10 Ethernet with POE x 1.
- 2. USB Local maintenance terminal (LMT) x 1.

6.6 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)	Variant	Data Rate with Highest Power	Frequencies (MHz)
b	Legacy	1 MBit/s	2,412
g	Legacy	6 MBit/s	2,437
	HT-20	6.5 MCS	2,462
n	HT-40	13.5 MCS	2,422 2,437 2,452
а	Legacy	6 MBit/s	5,745 5,785
	HT-20	6.5 MCS	5,785
n	HT-40	13.5 MCS	5,755 5,785 5,815

Legacy - data rates for 802.11a/b/g products

Results for the above configurations are provided in this report

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6.7 Equipment Modifications

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

1. None

6.8 Deviations from the Test Standard

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

1. None



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7 TEST RESULTS

7.1 Maximum Transmit Power (EIRP)

Output power measurements were taken from the EUT various power settings for each operational mode. An output power V's antenna gain matrix has been generated for worst case conditions. Power levels for each frequency and operational mode has been taken into consideration in the generation of the following matrix.

The quoted EIRP is the maximum allowable for the antenna gain.

2,400 - 2483.5 MHz Operation

Antenna Gains

Antenna Type:	Manufacturer	Model	Gain (dBi)	Frequency Range (MHz)
Dipole	Aruba	AP-ANT-80D	8	2400 – 2500 MHz
Directional	Aruba	AP-ANT-85	15	2400 – 2500 MHz

Frequency Band 2400-2483.5 MHz

Power Setting	Port A Port B (dBm) (dBm)		Calculated Combined Power Level	EIRP V's Antenna Gain (dBm/EIRP)		
			(dBm)	8 dBi	15 dBi	
4	1.39	1.59	4.5	+12.5	+19.5	
8	4.86	7.21	9.2	+17.2	+24.2	
9	5.77	8.63	10.4	+18.4	+25.4	
10	6.54	9.61	11.4	+19.4	+26.4	
17	16.58	16.83	19.7	+27.7	+34.7	
18	17.64	17.85	20.7	+28.7	+35.7	
19	18.75	18.91	21.8	+29.8		
20	19.56	19.83	22.7	+30.7		

Note: Maximum transmit EIRP = +36 dBm. The conducted power level setting for a particular antenna is restricted to boxes with an EIRP value in the above table.

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5,725 - 5,850 MHz Operation

Antenna Gains

Antenna Type:	Manufacturer	Model	Gain (dBi)	Frequency Range (MHz)
Dipole	Aruba	AP-ANT-86	9	5150 – 5875 MHz
Directional	Aruba	AP-ANT-89	13.25	5470 – 5875 MHz

Frequency Band 5725-5850

Power Setting	Port A (dBm)	Port B (dBm)	Calculated Combined Power Level	EIRP V's An (dBm/E	
			(dBm)	9 dBi	13.25 dBi
9	8.05	8.92	11.6	+20.6	+24.8
10	8.72	10.06	12.5	+21.5	+25.7
11	10.51	11.04	13.8	+22.8	+27.1
12	12.39	11.78	15.1	+24.1	+28.4
13	13.34	12.65	16.1	+25.1	+29.3
14	14.62	13.92	17.4	+26.4	+30.6
15	15.71	15.06	18.5	+27.5	+31.7
16	16.51	15.93	19.3	+28.3	+32.6
17	17.72	16.36	20.1	+29.1	+33.4
18	18.47	17.85	21.2	+30.2	+34.5
19	19.83	18.92	22.5	+31.5	+35.7
20	21.07	20.03	23.7	+32.7	

Note: Maximum transmit EIRP = +36 dBm. The conducted power level setting for a particular antenna is restricted to boxes with an EIRP value in the above table.



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Specification

Limits

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

(3) For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

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.

Laboratory Uncertainty for Power Measurement(s)

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-01 'Measuring RF Output Power'	0070, 0075, 0116, 0156, 0193, 0252, 0313, 0314



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7.2 Maximum Permissible Exposure

FCC, Part 15 Subpart C §15.247(i) Industry Canada RSS-Gen §5.5

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm²) = EIRP/($4\pi d^2$) EIRP = P * G * 2 P = Peak output power (mW) G = Antenna numeric gain (numeric) d = Separation distance (cm) Numeric Gain = 10 ^ (G (dBi)/10)

The Aruba AP-175P / MSR2K23N0-XX has two transmitters. The peak power used in the table below is the highest conducted level used to meet the EIRP requirements.

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 $\rm mW/cm^2$

Freq. Band (MHz)	Antenna Gain (dBi)	Antenna Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm ² Limit(cm)	Minimum Separation Distance (cm)
2400 – 2500	15.0	31.62	+20.7	117.5	17.2	20.00
5725 - 5850	13.25	21.10	+22.1	162.2	16.5	20.00

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification Maximum Permissible Exposure Limits

FCC §1.1310 Limit = 1mW / cm² from 1.310 Table 1

RSS-Gen §5.5 Before equipment certification is granted, the application requirements of RSS-102 shall be met.

Laboratory Measurement Uncertainty for Power Measurements

Measurement uncertainty ±1.33 dB



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7.3 Radiated Spurious Emissions - Radio Device

Test Procedure

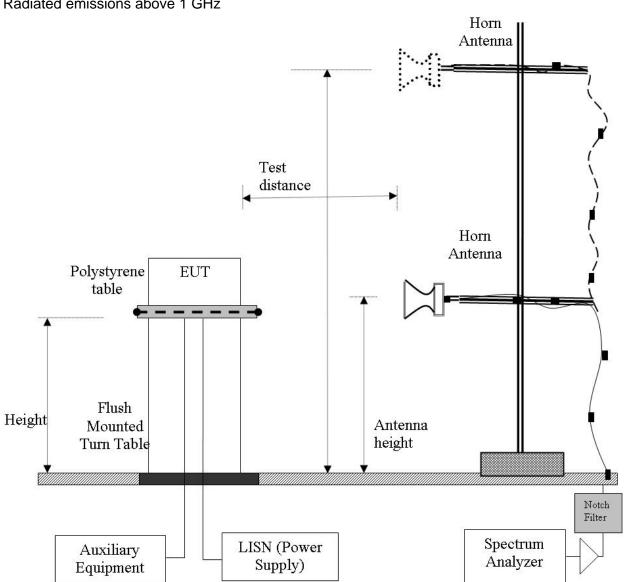
Testing was performed in a 3-meter anechoic chamber. Preliminary radiated emissions were measured on every azimuth and with the receiving antenna in both horizontal and vertical polarizations. Preliminary emissions were recorded with in Spectrum Analyzer mode, using a maximum peak detector while in peak hold mode.

Emissions nearest the limits were chosen for maximization and formal measurement using a CISPR Compliant receiver. Emissions above 1000 MHz are measured utilizing a CISPR compliant average detector with a tuned receiver, using a bandwidth of 1 MHz. Emissions from 30 MHz – 1000 MHz are measured utilizing a CISPR compliant quasi-peak detector with a tuned receiver, using a bandwidth of 120 kHz. Only the highest emissions relative to the limit are listed.

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Test Measurement Set Up

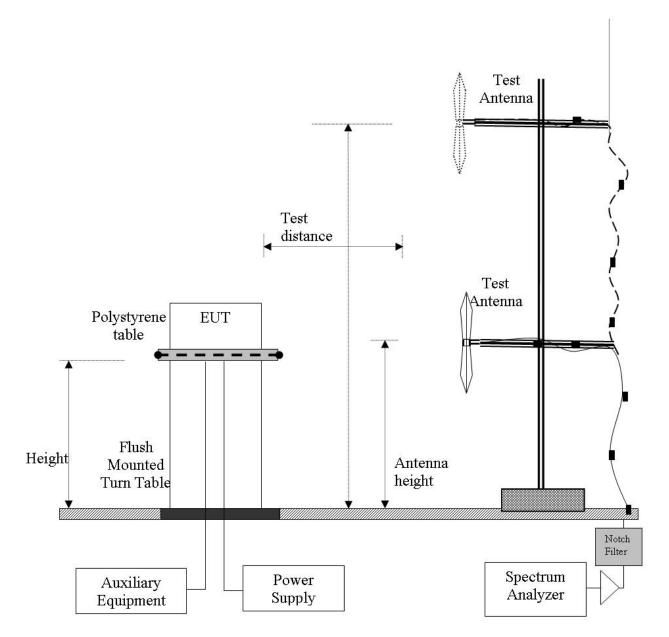
Radiated emissions above 1 GHz



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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

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

Field Strength Calculation 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:

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

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

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

40 dB μ V/m = 100 μ V/m 48 dB μ V/m = 250 μ V/m

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

 Serial #:
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Specification

Transmitter Radiated Spurious Emissions

FCC §15.247(d) 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.

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)).

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.

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Receiver Spurious Emissions

Industry Canada RSS-Gen §4.10,

The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is the higher, to at least 3 times the highest tunable or local oscillator frequency, whichever is the higher, without exceeding 40 GHz.

RSS-Gen §6

The following receiver spurious emission limits shall be complied with; (a) If a radiated measurement is made, all spurious emissions hall comply with the limits of Table 1.

Table 1: FCC 15.209 Spurious Emissions Limits

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 Spectrum Measurement

Measurement Uncertainty +5.6/-4.5 dB

Traceability:

Method	Test Equipment Used
Work instruction WI-03	0088, 0158, 0134, 0304, 0311, 0315, 0310, 0312

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7.3.1 AP-ANT-80D 2.4GHz - Transmitter Radiated Spurious Emissions – Above 1 GHz

Test	Frea.	2412 N	/Hz					E	ngineer	SB		
	/ariant		b; 1 Mb:	S					emp (°C)	29		
Freg.	Range	1000 N	/Hz - 18						Hum.(%)	29		
Power S		18.5					Р		(mBars)	 993		
	tenna	APAN	IT-80D						Cycle (%)			
Test N		Funda	mental	attenuated	d by band-stop f	ilter.						
Test N	otes 2											
Micem	abs	dBu∨ 800 600 800 300 400 200 ↓ 1000 830		a A	Vasona by E			1000		- A D D D D D D D D D D D D D] Horizor] Vertica eak Limit verage L ebug Ghyapm Dist 3m Dist 3m	vita 1 1 1
		File	name: k:	igrogram ia	ruba girubo i- azaile.	a msrzi	000 41a -			5210 81112		
Formally Frequency	mea Raw						Hgt	Azt	Limit	Margin	Pass	
Frequency MHz	Raw dBuV	Cable Loss	d em AF dB	ission Level dBuV	peaks Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
Frequency MHz 4824.033	Raw dBuV 57.3	Cable Loss 4.5	AF dB -9.4	ission Level dBuV 52.3	Peaks Measurement Type Peak Max	Pol V	Hgt cm 118	Azt Deg 150	Limit dBuV 74.0	Margin dB -21.7	Pass /Fail Pass	Comments RB
Frequency MHz 4824.033 17320.24	Raw dBuV 57.3 42.4	Cable Loss 4.5 8.7	AF dB -9.4 1.8	Level dBuV 52.3 52.9	Peak Max Peak Max	Pol V H	Hgt cm 118 >20	Azt Deg 150 DdB be	Limit dBuV 74.0 low funda	Margin dB -21.7 amental	Pass /Fail Pass Pass	Comments RB NRB
Frequency MHz 4824.033 17320.24 9647.916	Raw dBuV 57.3 42.4 49.6	Cable Loss 4.5 8.7 6.3	AF dB -9.4 1.8 -3.3	Level dBuV 52.3 52.9 52.6	Peaks Measurement Type Peak Max Peak Max Peak Max	Pol V H	Hgt cm 118 >20 >20	Azt Deg 150 DdB be	Limit dBuV 74.0 low funda	Margin dB -21.7 amental	Pass /Fail Pass Pass Pass	Comments RB NRB NRB
Frequency MHz 4824.033 17320.24 9647.916 2184.128	Raw dBuV 57.3 42.4 49.6 60.2	Cable Loss 4.5 8.7 6.3 2.9	AF dB -9.4 1.8 -3.3 -11.5	Level dBuV 52.3 52.9 52.6 51.6	Peaks Measurement Type Peak Max Peak Max Peak Max Peak Max Peak Max	Pol V H V	Hgt cm 118 >20 >20	Azt Deg 150 0dB be 0dB be	Limit dBuV 74.0 low funda low funda	Margin dB -21.7 arrental arrental	Pass /Fail Pass Pass Pass	Comments RB NRB NRB NRB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172	Raw dBuV 57.3 42.4 49.6 60.2 47.9	Cable Loss 4.5 8.7 6.3 2.9 2.1	AF dB -9.4 1.8 -3.3 -11.5 -15.7	Level dBuV 52.3 52.9 52.6 51.6 34.3	Measurement Type Peak Max Peak Max Peak Max Peak Max Peak Max Peak Max	Pol V H V V	Hgt cm 118 >20 >20 >20 169	Azt Deg 150 0dB be 0dB be 0dB be 37	Limit dBuV 74.0 dow funda low funda low funda 74	Margin dB -21.7 amental amental amental -39.7	Pass /Fail Pass Pass Pass Pass	Comments RB NRB NRB NRB RB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7	Cable Loss 4.5 8.7 6.3 2.9 2.1 5.4	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0	ission Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0	Measurement Type Peak Max	Pol V H V V V	Hgt cm 118 >20 >20 >20 169 >20	Azt Deg 150 0dB be 0dB be 0dB be 37 0dB be	Limit dBuV 74.0 low funda low funda 74 low funda	Margin dB -21.7 amental amental amental -39.7 amental	Pass /Fail Pass Pass Pass Pass Pass	Comments RB NRB NRB NRB RB NRB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4	ission Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1	Peaks Measurement Type Peak Max	Pol V H V V V V V V V V V V V V V	Hgt cm 118 >20 >20 169 >20 118	Azt Deg 150 0dB be 0dB be 37 0dB be 147	Limit dBuV 74.0 low funda low funda 74 low funda 74	Margin dB -21.7 amental amental -39.7 amental -20.9	Pass /Fail Pass Pass Pass Pass Pass Pass	Comments RB NRB NRB NRB RB NRB RB RB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 4824.033	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0 54.4	Cable Loss 4.5 8.7 6.3 2.9 2.1 5.4 4.5 4.5	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 -9.4	ission Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4	Peaks Measurement Type Peak Max	Pol V H V V V V V	Hgt cm 118 > 20 > 20 20 169 > 20 118 118	Azt Deg 150 0dB be 0dB be 0dB be 37 0dB be 147 150	Limit dBuV 74.0 low funda low funda low funda 74 low funda 74 54	Margin dB -21.7 amental amental -39.7 amental -39.7 amental -20.9 -4.6	Pass /Fail Pass Pass Pass Pass Pass Pass Pass	Comments RB NRB NRB NRB RB RB RB RB RB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 4824.033 17320.240	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0 54.4 29.7	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 -9.4 1.8	ission Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4 40.2	Deaks Measurement Type Peak Max	Pol > H > > > > > H + + + + + + + + + + + + +	Hgt cm 118 > 20 > 20 169 > 20 118 118 20	Azt Deg 150 0dB be 0dB be 37 0dB be 147 150	Limit dBuV 74.0 low funda low funda 74 low funda 74 54 low funda	Margin dB -21.7 amental amental -39.7 amental -20.9 -4.6 amental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB NRB NRB NRB RB RB RB RB RB RB RB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 4824.033 17320.240 9647.916	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0 54.4 29.7 44.0	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 -9.4 1.8 -3.3	ission Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4 40.2 46.9	Peaks Measurement Type Peak Max Average Max Average Max	Pol > H > > > > H > + + + + + + + + + + + + +	Hgt cm 118 >20 >20 169 >20 118 118 >20 20 20 20 20 20 20 20 20 20 20 20 20 2	Azt Deg 150 0dB be 0dB be 37 0dB be 147 150 0dB be	Limit dBuV 74.0 low funda low funda 74 low funda 74 low funda low funda	Margin dB -21.7 amental amental -39.7 amental -20.9 -4.6 amental amental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB NRB NRB NRB RB NRB RB RB RB NRB NRB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 17320.240 9647.916 2184.128 12121.121	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.6 58.0 54.4 29.7 44.0 50.3	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5 4.5 4.5 2.9 2.1 5.4 4.5 4.5 2.9 2.1	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 -9.4 1.8 -3.3 -11.5	Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4 40.2 40.2 46.9 41.7	Peak S Peak Max Peak Max	Pol V H V V V V V V V V V V V	Hgt cm 118 > 20 > 20 169 > 20 118 118 > 20 20 > 20 > 20 > 20	Azt Deg 150 0dB be 0dB be 0dB be 147 150 0dB be 0dB be 0dB be	Limit dBuV 74.0 low funda low funda 74 low funda 74 54 low funda low funda	Margin dB -21.7 amental amental -39.7 amental -20.9 -4.6 amental amental amental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB NRB NRB NRB RB RB RB RB RB RB NRB NR
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 17320.240 9647.916 2184.128 17320.240 9647.916 17320.240 17320.241 17320.241 17320.241 17320.241 17320.241 17320.241	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0 54.4 29.7 44.0 50.3 34.4	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3 2.9 2.1	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -15.7	Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4 40.2 46.9 41.7 20.8	Peaks Reasurement Type Peak Max Average Max Average Max Average Max Average Max Average Max Average Max	Pol > H > > > > + > > > > > > > > > > > > >	Hgt cm 118 >20 >20 169 >20 118 118 >20 >20 169	Azt Deg 150 0dB be 0dB be 37 0dB be 147 150 0dB be 0dB be 37	Limit dBuV 74.0 low funda low funda 74 low funda 54 low funda low funda low funda	Margin dB -21.7 amental amental -39.7 amental -20.9 -4.6 amental amental amental amental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB NRB NRB NRB RB RB RB RB NRB NRB NRB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 17320.240 9647.916 2184.128 1127.172 9647.916 1127.172 7240.599	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0 54.4 29.7 44.0 50.3 34.4 36.6	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3 2.9 2.1 5.4 5.5	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -5.0 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -11.5 -15.7 -5.0 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -11.5 -15.7 -5.0 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -11.5 -15.7 -5.0 -9.4 -11.5 -15.7	ission Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4 40.2 46.9 40.2 46.9 41.7 20.8 37.0	Peaks Measurement Type Peak Max Average Max Average Max Average Max Average Max Average Max Average Max	Pol > H > > > > H > > Pol	Hgt cm 118 > 20 > 20 169 > 20 118 118 > 20 > 20 20 20 20 20 20 20 20 20 20 20 20 20 2	Azt Deg 150 0dB be 0dB be 0dB be 37 0dB be 147 150 0dB be 0dB be 0dB be 37	Limit dBuV 74.0 low funda low funda 74 low funda 54 low funda low funda 54 low funda	Margin dB -21.7 amental amental -39.7 amental -20.9 -4.6 amental amental amental amental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB NRB NRB NRB RB NRB RB RB NRB NRB NRB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 17320.240 9647.916 2184.128 17320.240 9647.916 17320.240 17320.241 17320.241 17320.241 17320.241 17320.241 17320.241	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0 54.4 29.7 44.0 50.3 34.4 36.6 55.8	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3 2.9 2.1	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -3.3 -11.5 -3.3 -11.5 -3.3 -11.5 -3.3 -11.5 -3.3	Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4 40.2 46.9 41.7 20.8	Peaks Reasurement Type Peak Max Average Max Average Max Average Max Average Max Average Max Average Max	Pol > H > > > > + > > > > > > > > > > > > >	Hgt cm 118 >20 >20 169 >20 118 118 >20 >20 169	Azt Deg 150 0dB be 0dB be 37 0dB be 147 150 0dB be 0dB be 37	Limit dBuV 74.0 low funda low funda 74 low funda 54 low funda low funda low funda	Margin dB -21.7 amental amental -39.7 amental -20.9 -4.6 amental amental amental amental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB NRB NRB NRB RB RB RB RB NRB NRB NRB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 17320.240 9647.916 2184.128 1127.172 9647.916 1127.172 7240.599	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0 54.4 29.7 44.0 50.3 34.4 36.6	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3 2.9 2.1 5.4 5.5	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -5.0 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -11.5 -15.7 -5.0 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -11.5 -15.7 -5.0 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -11.5 -15.7 -5.0 -9.4 -11.5 -15.7	ission Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4 40.2 46.9 40.2 46.9 41.7 20.8 37.0	Peaks Measurement Type Peak Max Average Max Average Max Average Max Average Max Average Max Average Max	Pol > H > > > > H > > Pol	Hgt cm 118 > 20 > 20 169 > 20 118 118 > 20 > 20 20 20 20 20 20 20 20 20 20 20 20 20 2	Azt Deg 150 0dB be 0dB be 0dB be 37 0dB be 147 150 0dB be 0dB be 0dB be 37	Limit dBuV 74.0 low funda low funda 74 low funda 54 low funda low funda 54 low funda	Margin dB -21.7 amental amental -39.7 amental -20.9 -4.6 amental amental amental amental amental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB NRB NRB NRB RB NRB RB RB NRB NRB NRB
Frequency MHz 4824.033 17320.24 9647.916 2184.128 1127.172 7240.599 4823.961 17320.240 9647.916 17320.240 17320.240 9647.916 2184.128 127.172 9647.916 2184.128 1127.172 9647.916 2184.128 1423.961	Raw dBuV 57.3 42.4 49.6 60.2 47.9 47.7 58.0 54.4 29.7 44.0 50.3 34.4 36.6 55.8 76.5	Cable 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3 2.9 2.1 5.4 4.5 8.7 6.3 2.9 2.1 5.4 3.0	AF dB -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -15.7 -5.0 -9.4 1.8 -3.3 -11.5 -5.0 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -11.5 -5.0 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -9.4 -11.5 -5.0 -9.4 -11.5 -15.7 -9.4 -11.5 -15.7 -9.4 -11.5 -15.7 -9.4 -11.2	ission Level dBuV 52.3 52.9 52.6 51.6 34.3 48.0 53.1 49.4 40.2 46.9 40.2 46.9 41.7 20.8 37.0 50.8 68.3	Peaks Measurement Type Peak Max Average Max	Pol > H > > > > > > > > > > > > > > > > > > >	Hgt cm 118 > 20 20 169 > 20 118 118 20 169 > 20 118 118 20 169 > 20 169 > 20 169 > 20 100	Azt Deg 150 0dB be 0dB be 0dB be 147 150 0dB be 0dB be 0dB be 0dB be 147 147 	Limit dBuV 74.0 low funda low funda 74 low funda 74 low funda low funda 54 low funda 54 low funda	Margin dB -21.7 amental amental -39.7 amental -20.9 -4.6 amental amental amental amental amental -33.3 amental -3.2 	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB NRB NRB NRB RB NRB RB NRB NRB NRB NR

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109	st Freq.	2437 M	Hz						Engineer	SB		
	Variant	802.11k	o; 1 Mbs					Т	emp (⁰C)	29		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	29		
Power	Setting	20						Press	. (mBars)	993		
А	ntenna	AP AN	Г-80D					Duty	Cycle (%)	100		
Test	Notes 1	Fundar	mental at	ttenuated b	by band-stop filter							
Test I	Notes 2											
Miceim	Labs	dBu∨ 800 600 800 800 800 400	A		Vasona by E	MiSo	ft		المعموديستان	Pit A	10 14:12 1 Horizon 2 Vertica eak Limit werage L werage L by by by by by by by by by by	nt: I
Formally	measu		diated Em marne: k:		ruba\arub61- azale	Ten a msr2i	nplate: F 000'na -	1000 CC RE fee 15		18000.0	ocy: MHz x 8\data\	n
Formally Frequency MHz	measu Raw dBuV	10.0 1000) Rav File	diated Em marne: k:			Ten a msr21 Pol	Hgt cm			18000.0	-	تة Comments
Frequency	Raw	ured e	diated En marne: k:	n peaks	Measurement		Hgt	CC RE fee 15	E 1-18GHz .247 & ic rs Limit	130000 ss210 anne Margin	x 8\data\ Pass	
Frequency MHz	Raw dBuV	ured e	diated Em mame: k: missio AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm 107	Azt Deg 239	1-18GHz 247 & ic rs Limit dBuV	Margin dB -31.7	x 8\data\ Pass /Fail	Comments
Frequency MHz 4873.953	Raw dBuV 47.2	Lured e Cable Loss 4.5	missio AF dB -9.3	Level dBuV 42.3	Measurement Type Peak Max	Pol H	Hgt cm 107	Azt Deg 239	Limit dBuV 74.0	Margin dB -31.7	× 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz 4873.953 9747.916	Raw dBuV 47.2 53.2	Cable Loss 4.5 6.4	AF dB -9.3 -3.6	n peaks	Measurement Type Peak Max Peak Max	Pol H V	Hgt cm 107 > 2 184	Azt Deg 239 0dB be 242	Limit dBuV 74.0	Margin dB -31.7 mental -23.1	× 8\data\ Pass /Fail Pass Pass	Comments RB NRB
Frequency MHz 4873.953 9747.916 7313.006	Raw dBuV 47.2 53.2 50.4	Cable Loss 4.5 6.4 5.4	diated Em missio AF dB -9.3 -3.6 -5.0	n peaks Level dBuV 42.3 55.9 50.9	Measurement Type Peak Max Peak Max Peak Max	Pol H V V	Hgt cm 107 > 2 184	Azt Deg 239 0dB be 242	Limit dBuV 74.0 247	Margin dB -31.7 mental -23.1	× 8\data\ Pass Pass Pass Pass	Comments RB NRB RB
Frequency MHz 4873.953 9747.916 7313.006 17420.842	Raw dBuV 47.2 53.2 50.4 41.3	Cable Loss 4.5 6.4 5.4 8.7	AF dB -9.3 -3.6 -5.0 1.9	n peaks Level dBuV 42.3 55.9 50.9 52.0	Measurement Type Peak Max Peak Max Peak Max Peak Max	Pol H V V V V	Hgt cm 107 > 2 184 > 2 107	Azt Deg 239 0dB be 242 0dB be 239	Limit dBuV 74.0 elow fundar 74	Margin dB -31.7 mental -23.1 mental -22.3	Pass /Fail Pass Pass Pass Pass	Comments RB NRB RB NRB
Frequency MHz 4873.953 9747.916 7313.006 17420.842 4873.953	Raw dBuV 47.2 53.2 50.4 41.3 36.5	Cable Loss 4.5 6.4 5.4 8.7 4.5	diated Emmana missio AF dB -9.3 -3.6 -5.0 1.9 -9.3	n peaks Level dBuV 42.3 55.9 50.9 52.0 31.7	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max	Pol H V V V H	Hgt cm 107 > 2 184 > 2 107	Azt Deg 239 0dB be 242 0dB be 239	Limit dBuV 74.0 elow fundar 74 elow fundar 54	Margin dB -31.7 mental -23.1 mental -22.3	× 8\data\ Pass Pass Pass Pass Pass Pass	Comments RB NRB RB NRB RB
Frequency MHz 4873.953 9747.916 7313.006 17420.842 4873.953 9747.916	Raw dBuV 47.2 53.2 50.4 41.3 36.5 49.4	Cable Loss 4.5 6.4 5.4 8.7 4.5 6.4	diated Emminance: k: missio AF dB -9.3 -3.6 -5.0 1.9 -9.3 -3.6	n peaks Level dBuV 42.3 55.9 50.9 52.0 31.7 52.2	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max	Pol H V V H V	Hgt cm 107 > 2 184 > 2 107 > 2 184	Azt Deg 239 0dB be 242 0dB be 239 0dB be 239	Limit dBuV 74.0 elow fundar 74 elow fundar 54 elow fundar	Margin dB -31.7 mental -23.1 mental -21.3 mental -13.3	Rest Pass Pass Pass Pass Pass Pass Pass Pass	Comments RB NRB RB NRB RB NRB
Frequency MHz 4873.953 9747.916 7313.006 17420.842 4873.953 9747.916 7313.006	Raw dBuV 47.2 53.2 50.4 41.3 36.5 49.4 40.2	Cable Loss 4.5 6.4 5.4 8.7 4.5 6.4 5.4	diated Emmana missio AF dB -9.3 -3.6 -5.0 1.9 -9.3 -3.6 -5.0	n peaks Level dBuV 42.3 55.9 50.9 52.0 31.7 52.2 40.7	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max Average Max	Pol H V V V H V V	Hgt cm 107 > 2 184 > 2 107 > 2 184	Azt Deg 239 0dB be 242 0dB be 239 0dB be 239	Limit dBuV 74.0 elow fundar 74 elow fundar 54 elow fundar	Margin dB -31.7 mental -23.1 mental -21.3 mental -13.3	× 8\data\ Pass Pass Pass Pass Pass Pass Pass Pa	Comments RB NRB RB NRB RB NRB RB
Frequency MHz 4873.953 9747.916 7313.006 17420.842 4873.953 9747.916 7313.006 17420.842	Raw dBuV 47.2 53.2 50.4 41.3 36.5 49.4 40.2 28.9 87.7	Cable Loss 4.5 6.4 5.4 8.7 4.5 6.4 5.4 8.7 4.5 6.4 8.7 3.0	diated Emmana missio AF dB -9.3 -3.6 -5.0 1.9 -9.3 -3.6 -5.0 1.9 -9.3 -3.6 -5.0 1.9 -9.1 -1.1	n peaks Level dBuV 42.3 55.9 50.9 52.0 31.7 52.2 40.7 39.5 79.5	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max	Pol H V V V H V V V V V H H	Hgt cm 107 > 2 184 > 2 107 > 2 184 > 2 184 > 2	Azt Deg 239 0dB be 242 0dB be 242 0dB be 242 0dB be 	Limit dBuV 74.0 clow fundar 74 clow fundar 54 clow fundar 54 clow fundar 54 clow fundar 54	Margin dB -31.7 mental -23.1 mental -22.3 mental -13.3 mental -13.3	× 8\data\ Pass Pass Pass Pass Pass Pass Pass Pa	Comments RB NRB RB NRB RB NRB RB NRB RB NRB Fund

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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	st Freq.	2462 M	Hz						Engineer	SB		
	Variant	802.11k	o; 1 Mbs					٦	Гетр (ºC)	29		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	29		
Power	Setting	19.5						Press	. (mBars)	993		
А	ntenna	AP ANT	Г-80D					Duty	Cycle (%)	100		
Test I	Notes 1	Fundar	mental at	ttenuated b	by band-stop filter							
Test I	Notes 2											
MiCein	Labs	dBu∨ 80.0 70.0 60.0 80.0 80.0 30.0 20.0	~		Vasona by E	MiSo	ft		المرفيدسين	Pit A	10 14:55 1] Horizor 2] Vertica eak Limit werage L Houg Limsgam Dist 3m	
			diated En name: k:		ruba\arub61- azale	Ten a msr2i	nplate: 000'na		00 E 1-18GHz .247 & ic rs	18000.0	ncy:MHz x8\data∖	
Formally	measu	1000) Ra(File	diated En name: k:			Ten a msr2i	nplate: 000'yna -			18000.0		
Formally Frequency MHz	measu Raw dBuV	1000) Ra(File	diated En name: k:			Ten a msr21 Pol	Hgt cm			18000.0		
Frequency	Raw	ured e	diated Err marne: k: missio	n peaks	Measurement		Hgt	FCC RE	E 1-18GHz .247 & ic rs Limit	130000 s210 anne Margin	x 8\data\ Pass	ra
Frequency MHz	Raw dBuV	Cable Loss	diated Em iname: k: missio AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	E 1-18GHz 247 & ic rs Limit dBuV	190000 s210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 7389.579	Raw dBuV 49.1	Cable Loss 5.5	diated Em mame: k: missio AF dB -4.8	n peaks Level dBuV 49.8	Measurement Type Peak Max	Pol V	Hgt cm 130	Azt Deg 345	Limit dBuV 74.0	Margin dB -24.2	× 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz 7389.579 4923.998	Raw dBuV 49.1 53.9	Cable Loss 5.5 4.6	Missio AF dB -4.8 -9.1	n peaks Level dBuV 49.8 49.3	Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 130 117	Azt Deg 345 77	Limit dBuV 74.0 74.0	Margin dB -24.2 -24.7	x 8\data\ Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 7389.579 4923.998 7389.579	Raw dBuV 49.1 53.9 39.5	Cable Loss 5.5 4.6 5.5	AF dB -4.8 -9.1 -4.8	n peaks Level dBuV 49.8 49.3 40.2	Measurement Type Peak Max Peak Max Average Max	Pol V V V	Hgt cm 130 117 130 117	Azt Deg 345 77 345 77	Limit dBuV 74.0 54	Margin dB -24.2 -24.7 -13.8 -9.5	x 8\data\ Pass /Fail Pass Pass	Comments RB RB RB
Frequency MHz 7389.579 4923.998 7389.579 4923.998	Raw dBuV 49.1 53.9 39.5 49.0	Cable Loss 5.5 4.6 5.5 4.6	AF dB -4.8 -9.1 -4.8 -9.1	n peaks Level dBuV 49.8 49.3 40.2 44.5	Measurement Type Peak Max Peak Max Average Max Average Max	Pol V V V	Hgt cm 130 117 130 117 > 2	Azt Deg 345 77 345 77 20dB be	Limit dBuV 74.0 54 54	Margin dB -24.2 -24.7 -13.8 -9.5 mental	X 8'data' Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 7389.579 4923.998 7389.579 4923.998 9857.715	Raw dBuV 49.1 53.9 39.5 49.0 51.9	Cable Loss 5.5 4.6 5.5 4.6 6.4	AF dB -4.8 -9.1 -4.8 -9.1 -3.3 -3.3	n peaks Level dBuV 49.8 49.3 40.2 44.5 55.1	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan]	Pol V V V V V	Hgt cm 130 117 130 117 > 2	Azt Deg 345 77 345 77 20dB be	Limit dBuV 74.0 54 54 elow fundar	Margin dB -24.2 -24.7 -13.8 -9.5 mental	x 8\data\ Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB NRB
Frequency MHz 7389.579 4923.998 7389.579 4923.998 9357.715 17352.705	Raw dBuV 49.1 53.9 39.5 49.0 51.9 49.0 551.9 40.8 85.0	Cable Loss 5.5 4.6 5.5 4.6 6.4 8.7 3.0	AF dB -4.8 -9.1 -4.8 -9.1 -4.8 -9.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1 -4.1	n peaks Level dBuV 49.8 49.3 40.2 44.5 55.1 51.5 76.9	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V V V V H H	Hgt cm 130 117 130 117 2 100	Azt Deg 345 77 345 77 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 elow fundar 	Margin dB -24.2 -24.7 -13.8 -9.5 mental mental 	Restance of the second	Comments RB RB RB RB NRB NRB Fund

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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		2412 M							Engineer			
Vari	iant	802.11g	;; 6 Mbs						ſemp (⁰C)	29		
Freq. Ra	nge	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	29		
Power Sett	ting	15.5						Press	. (mBars)	993		
Ante	nna	AP ANT	-80D					Duty	Cycle (%)	100		
Test Note	es 1	Fundar	nental a	tenuated b	y band-stop filter							
Test Note	es 2											
Formally me			name: k:		Vasona by E	Acres		1000		PR PR	10 15:06) Vertica eak Limit verage L ebug Dist 3m Dist 3m ocy: MHz x 8\data\	nti il t
	≀aw BuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
2396.794 8	34.0	3.0	-11.2	75.8	Peak [Scan]	V	150				n/a	Fund
16807.615 4	0.9	8.6	1.6	51.1	Peak [Scan]	Н	> 2	0dB be	low fundar	mental	Pass	NRB
Legend: T>	X = Tr	ansmitte	er Emiss	ions; DIG :	= Digital Emissior	ns; FUI	ND = Fi	undame	ental; WB =	- Wideban	d Emiss	ion
	–	4 - 1 - 4	Dond (15 200 1	its); NRB = Non	Destrie	tod Do	ndlim		halaw fund	10000040	l maal.

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	_											
	- ·	2437 M							Engineer			
Var	riant	802.11g	; 6 Mbs						emp (⁰C)	29		
Freq. Ra	ange	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	29		
Power Set	tting	20						Press	. (mBars)	993		
Ante	enna	AP ANT	-80D					Duty	Cycle (%)	100		
Test Note	es 1	Fundar	nental a	ttenuated b	y band-stop filter							
Test Note	es 2											
Formally me		File	name: k:	orogram (a	Vasona by E		يم ا مي	100		Pk A	10 15:16 Horizor Vertica eak Limit werage Li ebug Dist 3m Dist 3m Dist 3m x 8\data\	rt: 1 t
	Raw IBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
2430.862 8	31.3	3.0	-11.1	73.2	Peak [Scan]	V	150				n/a	Fund
16841.683 4	40.7	8.6	1.8	51.0	Peak [Scan]	Н	> 2	0dB be	low fundar	mental	Pass	NRB
Legend: T	X = Tr	ansmitte	er Emiss	ions; DIG :	= Digital Emissior	ns; FUI	VD = Fu	undame	ental; WB =	Wideban	d Emissi	ion

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Tech	t Erog	2462 M	LI-7						Engineer	SB		
									Engineer	-		
			g; 6 Mbs						emp (⁰C)	29		
	•		Hz - 180	00 MHz					Hum.(%)	29		
Power S		15.5							. (mBars)			
		AP AN1						Duty	Cycle (%)	100		
Test N	otes 1	Fundar	mental a	ttenuated b	by band-stop filter							
Test N	otes 2											
MiC®M.			name: k		Vasona by E		بو نام م	1000		PR PR	10 15:24) Horizai eak Limit verage Li ebug Dist 3m Dist 3m Dist 3m ovy: MHz x 8\data\	rt: :
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
	81.6	3.0	-11.1	73.5	Peak [Scan]	V	150				n/a	Fund
2430.862	51.0				Deals (Ceen1	Н	> 2	0dB be	low fundar	mental	Pass	NRB
2430.862 16364.729	43.0	8.9	0.4	52.3	Peak [Scan]						1 400	ININD
		8.9 8.7	0.4 1.7	52.3 51.1	Peak [Scan] Peak [Scan]	V	> 2	0dB be	low fundar	mental	Pass	NRB
16364.729 17318.637	43.0 40.7	8.7	1.7	51.1		V					Pass	NRB

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Tes	t Frea.	2412 M	Hz						Engineer	SB		
				; 6.5 MCS					Гетр (ºC)	29		
			,	00 MHz					Hum.(%)	29		
Power S	<u> </u>	15	112 100	00 11112					. (mBars)	-		
		AP AN	-80D						Cycle (%)			
	lotes 1			ttenuated k	by band-stop filter			Duty		100		
	lotes 2	i unuu	nontar a			•						
MiC@ML			diated En name: k		Vasona by E	h		100	100 1-18GHz 247 & ic rs	Pk A	Dist 3m	nt: il t
Formally	Raw	Cable	AF dB	Level	Measurement	Pol	Hgt	Azt	Limit	Margin	Pass	Comments
MHz	dBuV	Loss		dBuV	Туре		cm	Deg	dBuV	dB	/Fail	_
2396.794	79.5	3.0	-11.2	71.3	Peak [Scan]	Н	150				n/a	Fund
16807.615	40.9	8.6	1.6	51.1	Peak [Scan]	V	>2	UdB be	elow fundar	mental	Pass	NRB
Legend:	ТХ – Т	ransmitt	er Emiss	ions: DIG	= Digital Emissior	ns: FUI	ND = FI	Indame	ental WB =	- Wideban	d Emiss	ion
Legenu.	17 - 1				2.9.14					- Widebuil		

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	st Freq.	2437 M	Hz						Engineer	SB		
	Variant	802.11r	n; HT-20;	; 6.5 MCS				٦	ſemp (⁰C)	29		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	29		
Power	Setting	20						Press	. (mBars)	993		
А	ntenna	AP AN	Г-80D					Duty	Cycle (%)	100		
Test I	Notes 1	Fundar	mental at	ttenuated b	by band-stop filter							
Test I	Notes 2											
MiC®M	Labs	dBu∨ 800 600 800 800 800 300	An	Ä	, Vasona by E	MiSo	ft +	, , , , , , , , , , , , , , , , , , ,	أسغوه فسير	PK A	10 16:09) Horizon Vertical vertage uebug Vistapm Dist 3m	
F			diated En name: k:		ruba'ıarubô1- azale	Ten a msr2i	nplate: l 000\na -		00 E 1-18GHz .247 & ic rs	18000.0	ocy:MHz x8\data\	73
Formally Frequency MHz	Raw	ured e	diated En name: k:	n peaks	Measurement	Ten a msr2i Pol	Hgt	FCC RE	1-18GHz .247 & ic rs Limit	18000.0	x 8\data\ Pass	تع Comments
		100 Hand File	diated Err marne: k: missio	n peaks	5			FCC RE	1-18GHz .247 & ic rs	130000 ss210 anne Margin	x 8\data\	
Frequency MHz	Raw dBuV	ured e	diated Em iname: k: missio AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	E 1-18GHz .247 & ic rs Limit dBuV	12000 ss210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 7311.824	Raw dBuV 52.8	Loss 5.4	diated Em mame: k: missio AF dB -4.9	n peaks Level dBuV 53.3	Measurement Type Peak Max	Pol V	Hgt cm 192	Azt Deg 242	Limit dBuV 74.0	Margin dB -20.7	× 8\data\ Pass /Fail Pass	Comment
Frequency MHz 7311.824 2227.495	Raw dBuV 52.8 61.6	Cable Loss 5.4 2.9	AF dB -4.9 -11.4	n peaks	Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 192 113	Azt Deg 242 77	Limit dBuV 74.0 74.0	Margin dB -20.7 -21.0	× 8\data\ Pass Pass Pass	Comments RB RB
Frequency MHz 7311.824 2227.495 4870.621 7311.824	Raw dBuV 52.8 61.6 48.9	Cable Loss 5.4 2.9 4.5	AF dB -4.9 -11.4 -9.3 -9.3	n peaks Level dBuV 53.3 53.1 44.1	Measurement Type Peak Max Peak Max Peak Max	Pol V V V V	Hgt cm 192 113 126	Azt Deg 242 77 175	Limit dBuV 74.0 74	Margin dB -20.7 -21.0 -29.9	Pass /Fail Pass Pass Pass	Comment RB RB RB
Frequency MHz 7311.824 2227.495 4870.621 7311.824	Raw dBuV 52.8 61.6 48.9 36.6	Cable Loss 5.4 2.9 4.5 5.4	AF dB -4.9 -11.4 -9.3 -4.9	n peaks Level dBuV 53.3 53.1 44.1 37.1	Measurement Type Peak Max Peak Max Peak Max Average Max	Pol V V V V V	Hgt cm 192 113 126 192	Azt Deg 242 77 175 242	Limit dBuV 74.0 74 54	Margin dB -20.7 -21.0 -29.9 -16.9	Pass /Fail Pass Pass Pass Pass	Comment RB RB RB RB RB
Frequency MHz 7311.824 2227.495 4870.621 7311.824 2227.495	Raw dBuV 52.8 61.6 48.9 36.6 47.5	Cable Loss 5.4 2.9 4.5 5.4 2.9	AF dB -4.9 -11.4 -9.3 -4.9 -11.4 -11.4	n peaks Level dBuV 53.3 53.1 44.1 37.1 39.0	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max	Pol V V V V V V V V V	Hgt cm 192 113 126 192 113	Azt Deg 242 77 175 242 77	Limit dBuV 74.0 74 54 54	Margin dB -20.7 -21.0 -29.9 -16.9 -15.0	x 8\data\ Pass Pass Pass Pass Pass Pass	Comment RB RB RB RB RB RB
Frequency MHz 7311.824 2227.495 4870.621 7311.824 2227.495 4870.621	Raw dBuV 52.8 61.6 48.9 36.6 47.5 36.0	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5	AF dB -4.9 -11.4 -9.3 -4.9 -11.4 -9.3	n peaks Level dBuV 53.3 53.1 44.1 37.1 39.0 31.2	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max	Pol V V V V V V V V V V V V V	Hgt cm 192 113 126 192 113 126 150	Azt Deg 242 77 175 242 77 175 	Limit dBuV 74.0 74 54 54	Margin dB -20.7 -21.0 -29.9 -16.9 -15.0 -22.8 	× 8\data\ Pass /Fail Pass Pass Pass Pass Pass Pass	Comment RB RB RB RB RB RB RB
Frequency MHz 7311.824 2227.495 4870.621 7311.824 2227.495 4870.621 2430.862	Raw dBuV 52.8 61.6 48.9 36.6 47.5 36.0 87.6	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5 3.0	AF dB -4.9 -11.4 -9.3 -11.4 -9.3 -11.4 -9.3 -11.4	n peaks Level dBuV 53.3 53.1 44.1 37.1 39.0 31.2 79.5	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol V V V V V V V V V V V V V V V V V V V	Hgt cm 192 113 126 192 113 126 150 > 2	Azt Deg 242 77 175 242 77 175 242 77 175 	Limit dBuV 74.0 74 54 54 54 	Margin dB -20.7 -21.0 -29.9 -16.9 -15.0 -22.8 mental	x 8\data\ Pass Pass Pass Pass Pass Pass Pass n/a	Comment RB RB RB RB RB RB RB RB Fund
Frequency MHz 7311.824 2227.495 4870.621 7311.824 2227.495 4870.621 2430.862 16841.683	Raw dBuV 52.8 61.6 48.9 36.6 47.5 36.0 87.6 40.7 50.3	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5 3.0 8.6 6.4	AF dB -4.9 -11.4 -9.3 -11.4 -9.3 -11.4 -9.3 -3.7	n peaks Level dBuV 53.3 53.1 44.1 37.1 39.0 31.2 79.5 51.1 53.0	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol V V V V V V V V V V V V V V V V	Hgt cm 192 113 126 192 113 126 150 > 2 > 2	Azt Deg 242 77 175 242 77 175 242 77 175 20dB be 20dB be	Limit dBuV 74.0 74.0 74 54 54 54 54 elow fundar	Margin dB -20.7 -21.0 -29.9 -16.9 -15.0 -22.8 mental mental	x 8\data\ Pass Pass Pass Pass Pass Pass Pass Pa	Comment RB RB RB RB RB RB RB RB Fund NRB

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Tee	(F ue a	0400 M	1-						En alla e en	CD.		
	•	2462 MI							Engineer			
			,	; 6.5 MCS				1	ſemp (⁰C)	29		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	29		
Power S	Setting	14.5						Press	. (mBars)	993		
Ar	ntenna	AP ANT	-80D					Duty	Cycle (%)	100		
Test N	otes 1	Fundar	nental a	ttenuated b	y band-stop filter							
Test N	otes 2											
Formally			liated En name: k		Vasona by E			1000 FCC RE Foc 15		Pit Spec	10 16:20 1) Vertica eak Limit werage L bist Dist 3m Dist 3m bist 3m key: MHz x 8\data	rti I t
	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
Frequency			AF dB -11.1			Pol V	-					Comments Fund
Frequency MHz	dBuV	Loss		dBuV	Туре		cm 150	Deg 	dBuV	dB 	/Fail	
Frequency MHz 2430.862	dBuV 82.7 40.5	Loss 3.0 8.7	-11.1 2.0	dBuV 74.5 51.2	Type Peak [Scan]	V H	cm 150 > 2	Deg 20dB be	dBuV elow fundar	dB mental	/Fail n/a Pass	Fund NRB

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										0.0		
Test Fr		2422 M							Engineer	SB		
Vari	iant	802.11r	i; HT-40	; 13.5 MCS				٦	ſemp (⁰C)	26.5		
Freq. Rar	nge	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	31		
Power Sett	ting	11						Press	. (mBars)	996		
Anter	nna	AP ANT	80D					Duty	Cycle (%)	100		
Test Note	es 1	Fundar	nental a	ttenuated b	y band-stop filter	•						
Test Note	es 2											
MiC@MLabs			liated En name: k		Vasona by E			1000 FCC RE fcc 16	00	PK PK	10 D9:07) Verticor) Verticor eak Umit werage L ebug Dist 3m Dist 3m Dist 3m x 8\data	vit; i i
	aw BuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
2396.794 80	0.5	3.0	-11.2	72.3	Peak [Scan]	V	150				n/a	Fund
17352.705 4	1.3	8.7	2.0	52.0	Peak [Scan]	Н	> 2	0dB be	low fundar	mental	Pass	NRB
Legend: TX	x = Trans	ansmitte	er Emiss	ions; DIG :	= Digital Emissior	ns; FUI	ND = Fi	undame	ental; WB =	Wideban	d Emiss	ion
-												

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	st Freq.	2437 M	Hz						Engineer	SB		
١	Variant	802.11r	n; HT-40;	; 13.5 MCS	6			٦	ſemp (⁰C)	26.5		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	31		
Power \$	Setting	20						Press	. (mBars)	996		
A	ntenna	AP AN	Г 80D					Duty	Cycle (%)	100		
Test N	lotes 1	Fundar	mental at	ttenuated b	by band-stop filter							
Test N	lotes 2											
MiC@M	abs	dBu∨ 800 600 800 800 800 800	.A.~	Å	Vasona by E	+ + +	ft	i	water	PK	10 09:31 Horizon 2 Vertica eak Limit werage L ebug dissaßm Dist 3m	rt: I
Formally			diated En ename: k:		ruba'\arub61- azale	Ten a msr2i	nplate: 000'na		1010 E 1-18GHz .247 & ic rs	18000.0	ocy:MHz x8\data∖	n
Formally Frequency MHz	measu Raw dBuV	10.0 1000 Rav File	diated En ename: k:			Ten a msr2i Pol	Hgt cm			18000.0	-	Comments
Frequency	Raw	ured e	diated En iname: k: missio	on peaks	Measurement		Hgt	FCC RE	1-18GHz .247 & ic rs Limit	130000 s210 anne Margin	x 8\data\ Pass	
Frequency MHz	Raw dBuV	ured e	diated Em mame: k: missio AF dB	on peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	E 1-18GHz .247 & ic rs Limit dBuV	12000 s210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 2288.101	Raw dBuV 66.0	Loss 2.9	missio	n peaks Level dBuV 57.7	Measurement Type Peak Max	Pol V	Hgt cm 106	Azt Deg 86	Limit dBuV 74.0	Margin dB -16.4	× 8\data\ Pass /Fail Pass	Comments
Frequency MHz 2288.101 7317.515	Raw dBuV 66.0 50.4	Cable Loss 2.9 5.4	AF dB -11.3 -5.0	n peaks Level dBuV 57.7 50.8	Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 106 98	Azt Deg 86 241	Limit dBuV 74.0 74.0	Margin dB -16.4 -23.2	× 8\data\ Pass Pass Pass	Comments RB RB
Frequency MHz 2288.101 7317.515 4854.970	Raw dBuV 66.0 50.4 55.2	Cable Loss 2.9 5.4 4.5	diated Em missio AF dB -11.3 -5.0 -9.3	n peaks Level dBuV 57.7 50.8 50.4	Measurement Type Peak Max Peak Max Peak Max	Pol V V V	Hgt cm 106 98 114	Azt Deg 86 241 145	Limit dBuV 74.0 74	Margin dB -16.4 -23.2 -23.6	Research Pass Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 2288.101 7317.515 4854.970 2288.101	Raw dBuV 66.0 50.4 55.2 50.4	100 Rahe Loss 2.9 5.4 4.5 2.9	AF dB -11.3 -5.0 -9.3 -11.3	on peaks Level dBuV 57.7 50.8 50.4 42.1	Measurement Type Peak Max Peak Max Peak Max Average Max	Pol V V V V V	Hgt cm 106 98 114 106	Azt Deg 86 241 145 86	Limit dBuV 74.0 74 54	Margin dB -16.4 -23.2 -23.6 -11.9	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 2288.101 7317.515 4854.970 2288.101 7317.515	Raw dBuV 66.0 50.4 55.2 50.4 36.0	Cable Loss 2.9 5.4 4.5 2.9 5.4	AF dB -11.3 -5.0 -9.3 -11.3	n peaks Level dBuV 57.7 50.8 50.4 42.1 36.4	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max	Pol V V V V V V V V V	Hgt cm 106 98 114 106 98	Azt Deg 86 241 145 86 241	Limit dBuV 74.0 74 54 54	Margin dB -16.4 -23.2 -23.6 -11.9 -17.6	Rest States A States	Comments RB RB RB RB RB RB
Frequency MHz 2288.101 7317.515 4854.970 2288.101 7317.515 4854.970	Raw dBuV 66.0 50.4 55.2 50.4 36.0 39.3	Cable Loss 2.9 5.4 4.5 2.9 5.4 4.5	AF dB -11.3 -5.0 -9.3 -11.3 -5.0 -9.3	n peaks Level dBuV 57.7 50.8 50.4 42.1 36.4 34.4	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max	Pol V V V V V V V V V V V V V	Hgt cm 106 98 114 106 98 114 150	Azt Deg 86 241 145 86 241 145 	Limit dBuV 74.0 74 54 54	Margin dB -16.4 -23.2 -23.6 -11.9 -17.6 -19.6 	Rest Pass Pass Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB
Frequency MHz 2288.101 7317.515 4854.970 2288.101 7317.515 4854.970 24854.970 2430.862	Raw dBuV 66.0 50.4 55.2 50.4 36.0 39.3 87.4	Cable Loss 2.9 5.4 4.5 2.9 5.4 4.5 3.0	AF dB -11.3 -5.0 -9.3 -11.3 -5.0 -9.3 -11.3 -5.0 -9.3 -11.3	n peaks Level dBuV 57.7 50.8 50.4 42.1 36.4 34.4 79.2	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol V V V V V V H	Hgt cm 106 98 114 106 98 114 150 > 2	Azt Deg 86 241 145 86 241 145 20dB be	Limit dBuV 74.0 74 54 54 54 54 	Margin dB -16.4 -23.2 -23.6 -11.9 -17.6 -19.6 	Restance of the second	Comments RB RB RB RB RB RB RB Fund

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Tes	t Freg	2452 M	Hz						Engineer	SB		
				; 13.5 MCS	2				emp (°C)	26.5		
			,	00 MHz	,				Hum.(%)	20.0 31		
Power S		1000 M	112 - 100						. (mBars)	-		
		12 AP ANT	- 000						Cycle (%)			
					and stars filter			Duty	Cycle (%)	100		
	lotes 1 lotes 2	Fundar	nental a	ttenuated t	by band-stop filter							
MiC®M	.abs	dBu∨ 800 600 800 800 800 300	~~		Vasona by E	MiSo			مېلىرىغۇ يەرىمىلىرىكى مەرىكى يەرىكى	PK A	10 09:44 1] Horizon 2] Vertica eak Limit werage Liebug Dist 3m Dist 3m	 1 2
Formally	meası		liated En name: k		ruba\arub61- azale	Terr a msr2i	nplate: l 000/na -	100 FCC RE fcc 15		18000.0	ncy:MHz x8∖data∖	ra
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
2430.862	81.6	3.0	-11.1	73.4	Peak [Scan]	Н	150				n/a	Fund
17284.569	40.5	8.6	1.6	50.7	Peak [Scan]	V	> 2	0dB be	low fundar	nental	Pass	NRB
Legend:				,	= Digital Emissior hits); NRB = Non	,			,			

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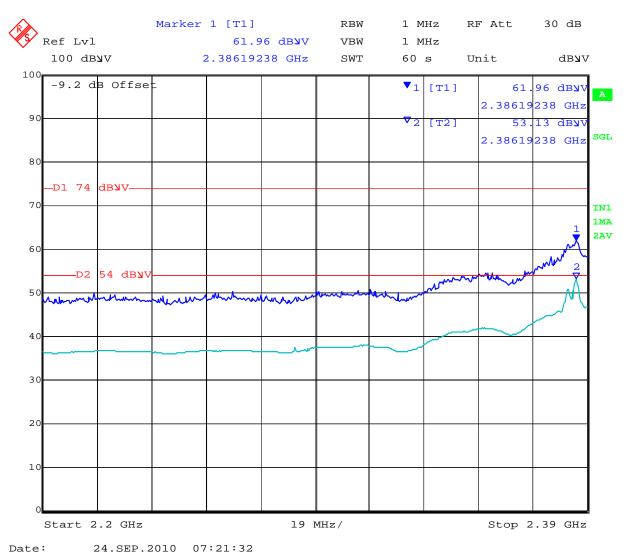
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7.3.2 AP-ANT-80D 2.4GHz - Transmitter Band Edge Emissions

ARUB61 Band Edge 2412 MHz; 802.11b 2200-2390 MHz ART=18.5



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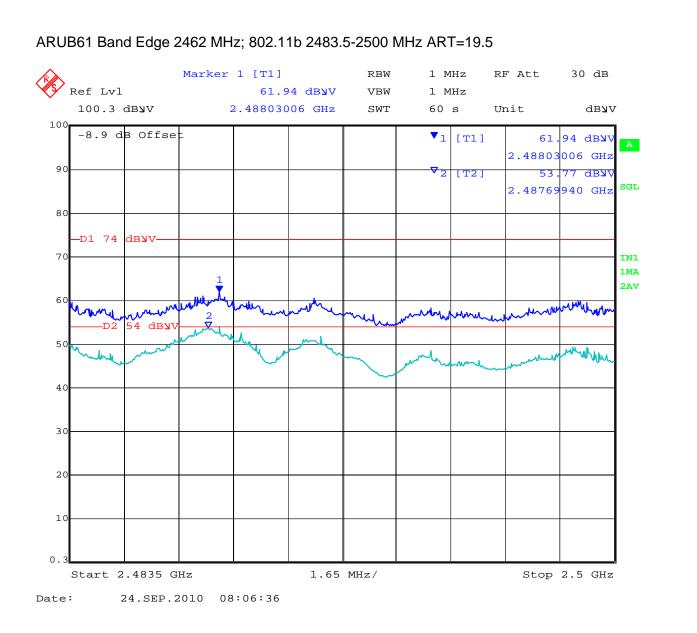
 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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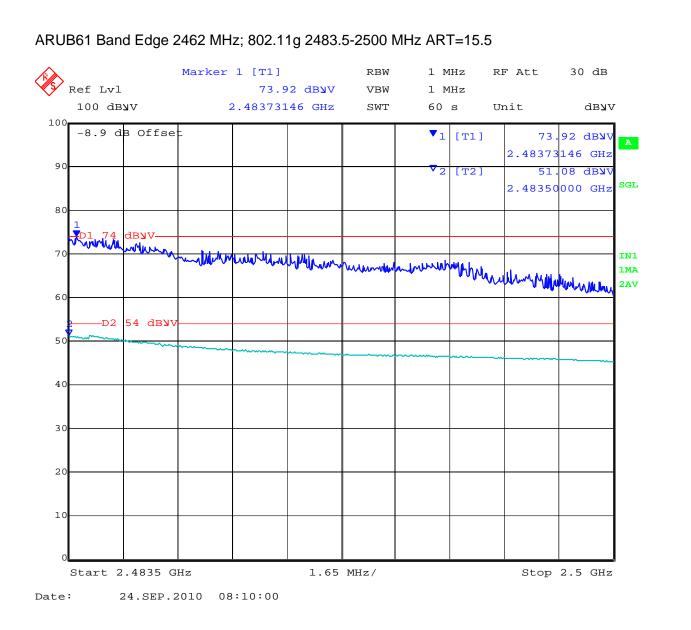
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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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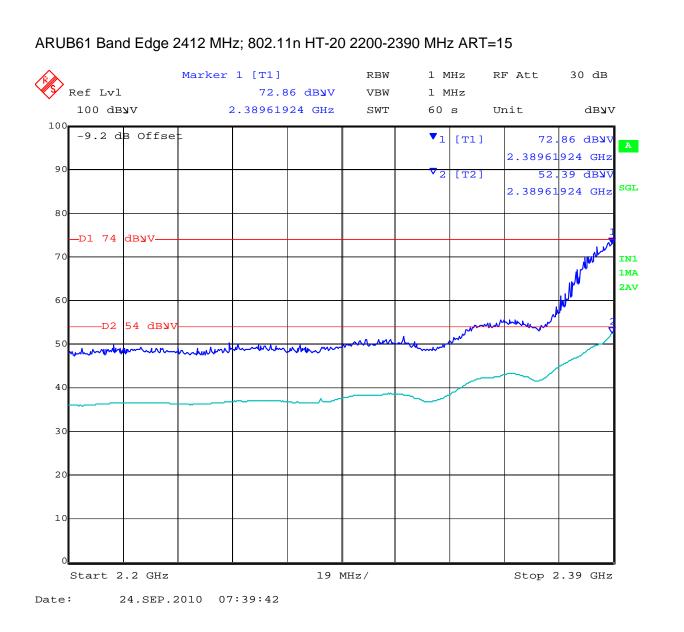
 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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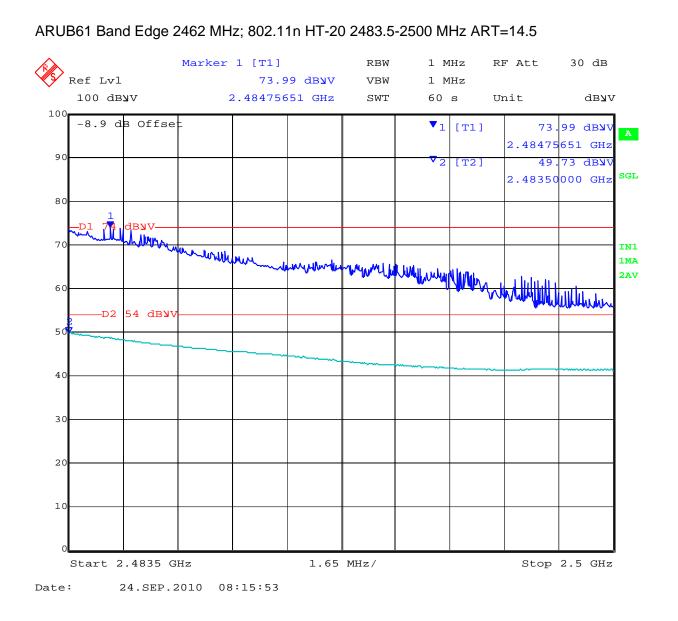
 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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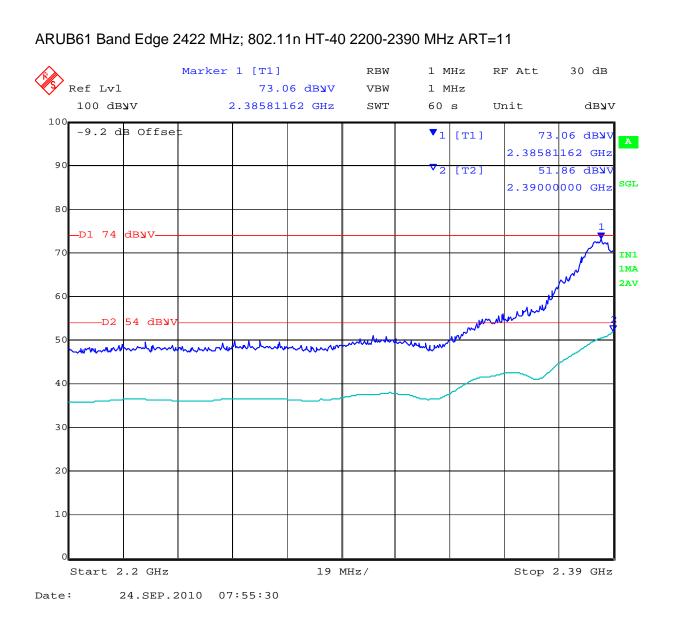
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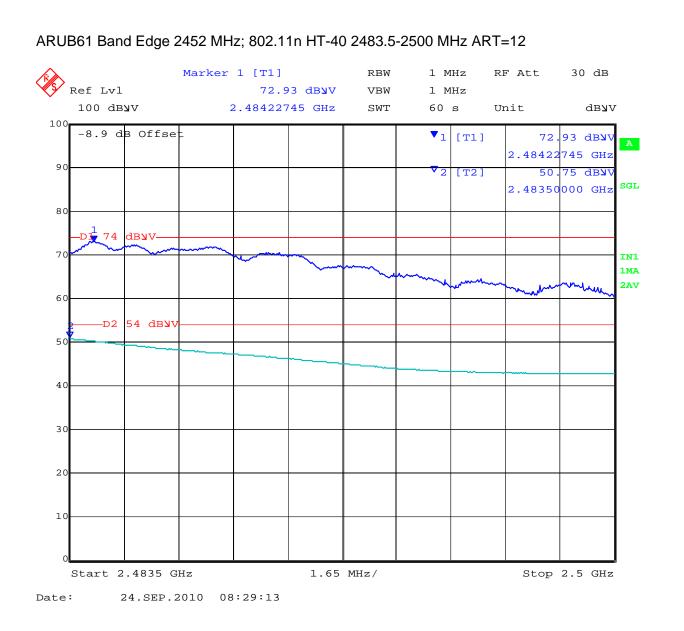
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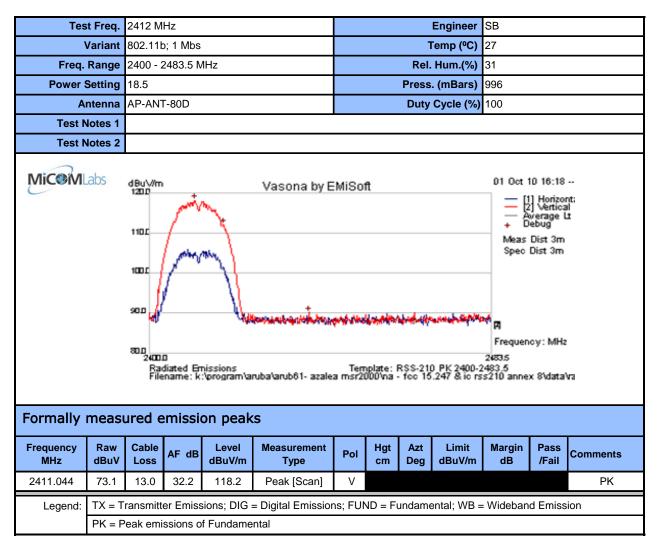
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7.3.3 AP-ANT-80D 2.4GHz - Transmitter Peak Emissions



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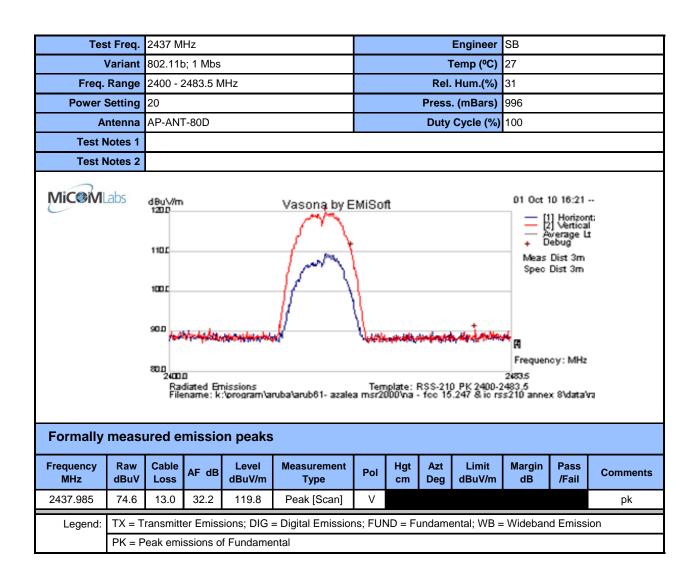
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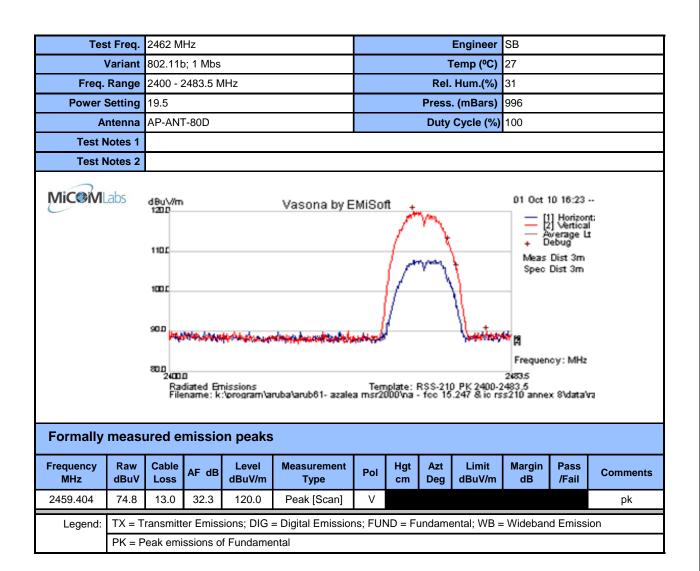
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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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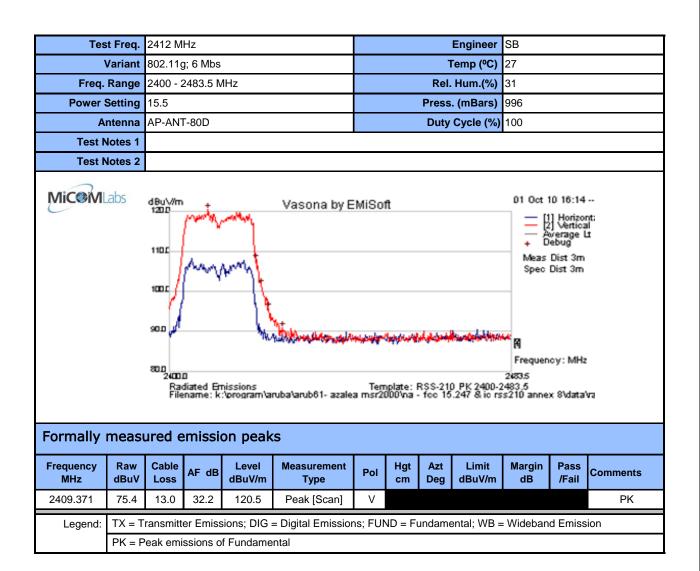
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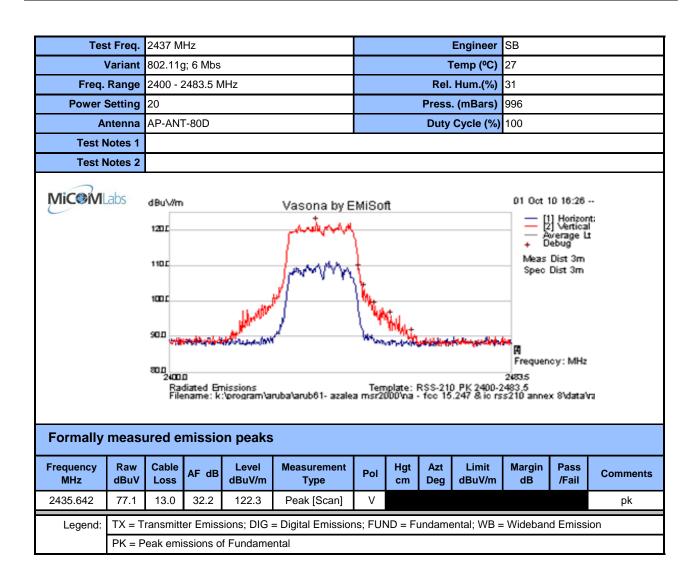
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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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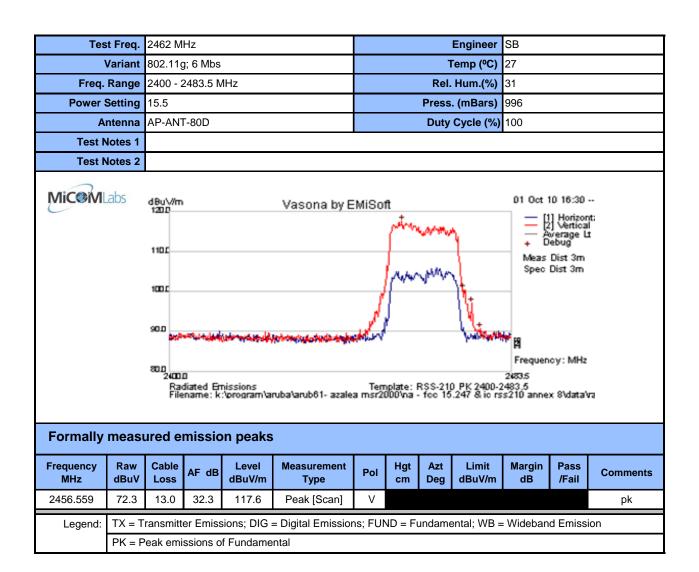
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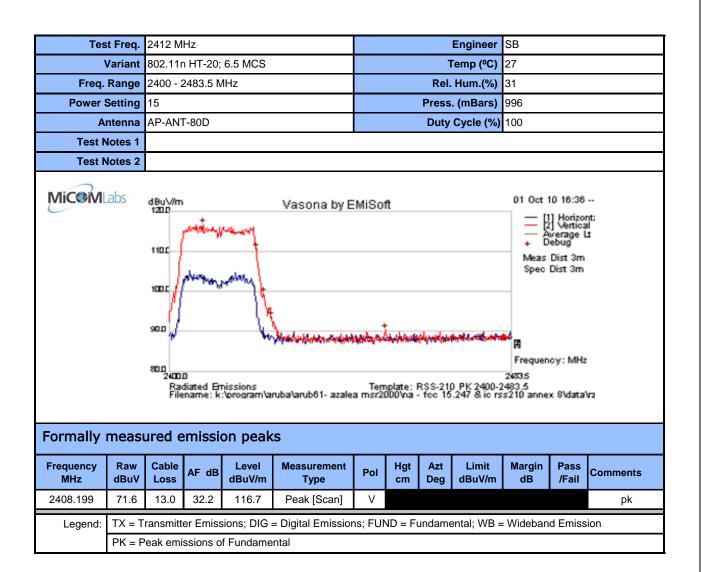
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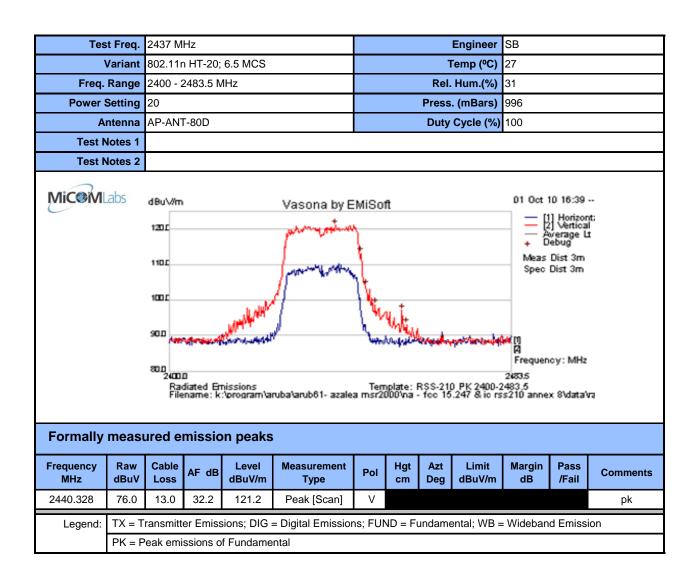
 Title:
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Tes	t Freq.	2462 M	Hz						Engineer	SB		
l l	/ariant	802.11r	n HT-20;	6.5 MCS					ſemp (⁰C)	27		
Freq.	Range	2400 - 2	2483.5 N	1Hz				Rel.	Hum.(%)	31		
Power S	Setting	14.5						Press	. (mBars)	996		
Aı	ntenna	AP-ANT	-80D					Duty	Cycle (%)	100		
Test N	lotes 1											
Test N	lotes 2											
MiC@M			liated En name: k		Vasona by E		prin.	V	0. PK 2400-2 .247 & ic rs	Meas Spec	10 16:44 1) Horizor 2) Vertica werage L lebug Dist 3m Dist 3m bist 3m werage L karrowski star karrowski star karrow	viti l t
Formally	measu	irea ei	missic	on 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
2456.392	71.1	13.0	32.3	116.3	Peak [Scan]	V						pk
Legend:	TX = T	ransmitte	er Emiss	sions: DIG :	= Digital Emissior	ns: FUN	ND = Fi	undame	ental: WB =	- Wideban	d Emiss	ion
				-, -	J	, ,			, =			

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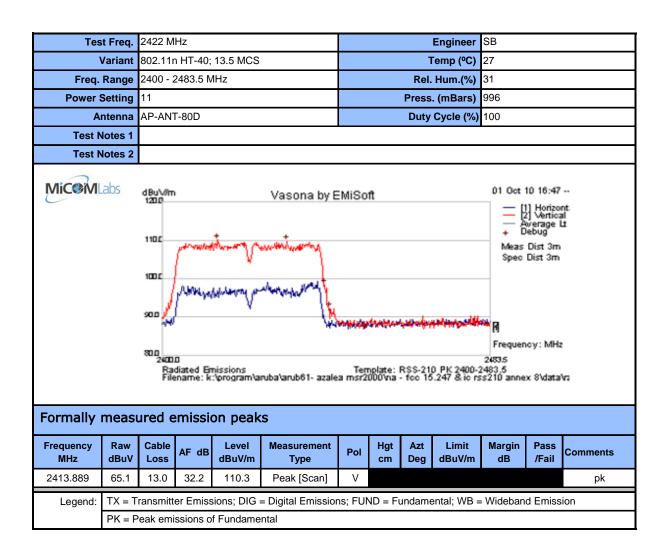
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Tes	t Freq.	2437 M	Hz						Engineer	SB		
١	/ariant	802.11r	hHT-40;	13.5 MCS				٦	ſemp (⁰C)	27		
Freq.	Range	2400 - 2	2483.5 N	1Hz				Rel.	Hum.(%)	31		
Power S	Setting	20						Press	. (mBars)	996		
Ar	ntenna	AP-ANT	-80D					Duty	Cycle (%)	100		
Test N	lotes 1											
Test N	lotes 2											
MiC®M			iated En		Vaspna by E	44.4	and the second	RSS-211	0. PK 2400-2 .247 & ic rs	+ C Meas Spec	10 16:52 Horizor Vertica werage L lebug Dist 3m Dist 3m Dist 3m (oy: MHz x 8\data\	iti İ İ
Formally	measu		1113510	преакз								
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
2433.467	74.4	13.0	32.2	119.6	Peak [Scan]	V						PK
					D: :: I E : : :							
Legend:	TX = T	ransmitte	er Emiss	sions; DIG :	 Digital Emissior 	וs; ⊦U	1D = Fi	undame	ental; WB =	: Widebar	d Emiss	ion

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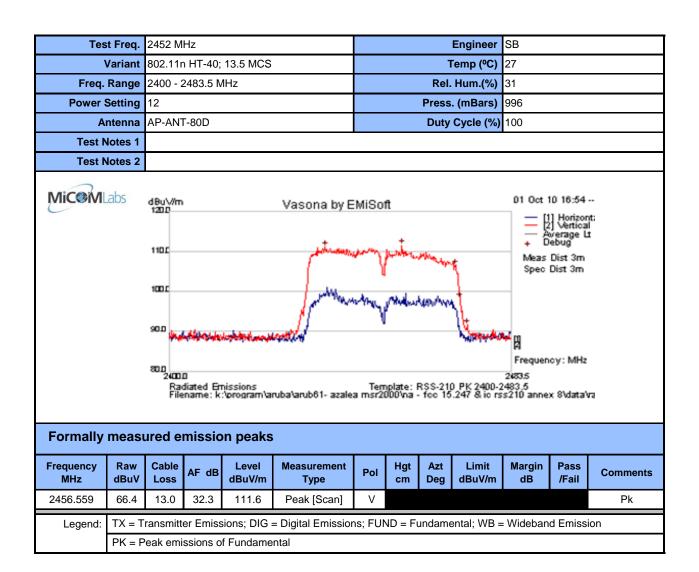
 Title:
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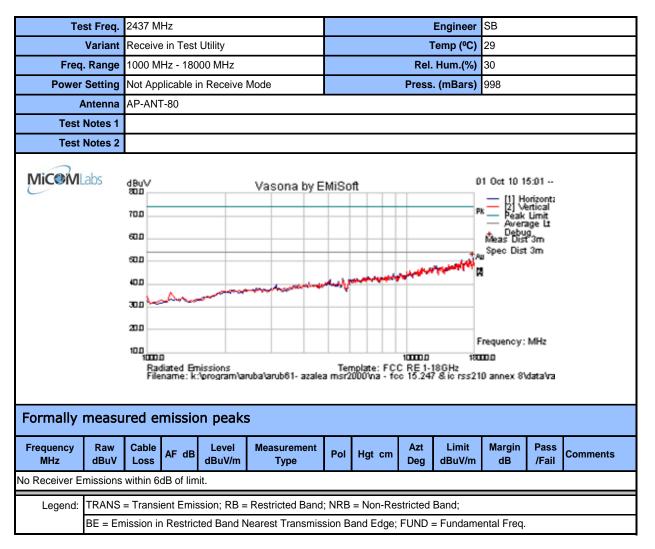
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 1st November 2010

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7.3.4 AP-ANT-80D 2.4GHz - Receiver Emissions



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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

 Serial #:
 ARUB61-U1 Rev A

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7.3.5 AP-ANT-85 2.4GHz - Transmitter Radiated Spurious Emissions – Above 1 GHz

	st Freq.	2412 M	Hz						Engineer	SB		
	Variant	802.11	o; 1 Mbs					٦	ſemp (⁰C)	26		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	17.5						Press	. (mBars)	1000		
А	ntenna	AP-AN	T-85					Duty	Cycle (%)	100		
Test I	Notes 1	Fundan	nental at	tenuated b	y band stop filter							
Test I	Notes 2											
Miceim	abs	dBu√ 30.0 50.0 50.0 30.0 20.0	, , ,	4	Vasona by E	MiSot	t t		ەلىسىيەيىسىر +	Pk A A Qeas	ID 11:D3] Horizor] Vertica eak Limit werage L ebug GHABAM Dist 3m	nta I
Formally	meas		diated Err name: k:		ruba'arub61- azale; (S	Terr a msr2(iplate: F 100 vna -	1000 FCC RE fcc 15		18000.0	cy:MHz x 8\data\	
Formally Frequency MHz	Raw dBuV	1000J Rac File	diated Err name: k:			Tem a msr21 Pol	plate: F 000 vna - Hgt cm			18000.0		
Frequency	Raw	ured e	emissio	on peak	S		Hgt	Azt	1-18GHz .247 & ic rs Limit	130000 s210 anne Margin	x 8\data\ Pass	
Frequency MHz	Raw dBuV	ured e	emissio	on peak Level dBuV	S Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	18000 s210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 15957.515	Raw dBuV 42.7	ured e Loss 9.0	emissio AF dB	Dn peak Level dBuV 52.0	S Measurement Type Peak Max	Pol V	Hgt cm 110	Azt Deg	Limit dBuV 74.0	Margin dB -22.0	x 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz 15957.515 4823.998	Raw dBuV 42.7 52.4	Cable Loss 9.0 4.5	AF dB 0.4 -9.4	Con peak	S Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 110 144	Azt Deg 0 26	Limit dBuV 74.0 74.0	Margin dB -22.0 -26.6	Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 15957.515 4823.998 1249.978	Raw dBuV 42.7 52.4 51.7	Cable Loss 9.0 4.5 2.2	AF dB 0.4 -9.4 -14.1	DN Peak Level dBuV 52.0 47.4 39.8	S Measurement Type Peak Max Peak Max Peak Max	Pol V V	Hgt cm 110 144 98	Azt Deg 0 26 198	Limit dBuV 74.0 74	Margin dB -22.0 -26.6 -34.2	Pass /Fail Pass Pass Pass	Comments RB RB RB RB
Frequency MHz 15957.515 4823.998 1249.978 15957.515	Raw dBuV 42.7 52.4 51.7 29.8	Cable Loss 9.0 4.5 2.2 9.0	iated Emi name: k: emissic AF dB 0.4 -9.4 -14.1 0.4	DN Peak Level dBuV 52.0 47.4 39.8 39.2	S Measurement Type Peak Max Peak Max Peak Max Average Max	Pol V V V V	Hgt cm 1100 144 98 110	Azt Deg 0 26 198 0	Limit dBuV 74.0 74 54	18000 0 s210 anne Margin dB -22.0 -26.6 -34.2 -14.8	× 8\data Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 15957.515 4823.998 1249.978 15957.515 4823.998	Raw dBuV 42.7 52.4 51.7 29.8 46.9	Cable 0.0 4.5 9.0 4.5 9.0	Jiated Eminarme: k: emissic AF dB 0.4 -9.4 -14.1 0.4 -9.4	DN PEAK Level dBuV 52.0 47.4 39.8 39.2 42.0	S Measurement Type Peak Max Peak Max Peak Max Average Max Average Max	Pol V V V V V V V	Hgt cm 110 144 98 110 144	Azt Deg 0 26 198 0 26	Limit dBuV 74.0 74 54 54	Margin dB -22.0 -26.6 -34.2 -14.8 -12.0	× 8'data' Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB
Frequency MHz 15957.515 4823.998 1249.978 15957.515 4823.998 1249.978 1249.978	Raw dBuV 42.7 52.4 51.7 29.8 46.9 42.3	Cable Loss 9.0 4.5 2.2 9.0 4.5 2.2	Jiated Eminame: k: emissic AF dB 0.4 -9.4 -14.1 0.4 -9.4 -14.1	DN PEAK Level dBuV 52.0 47.4 39.8 39.2 42.0 30.4	S Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max	Pol V V V V V V V V V V V	Hgt cm 110 144 98 110 144 98 	Azt Deg 0 26 198 0 26 198 	Limit dBuV 74.0 74 54 54	Margin dB -22.0 -26.6 -34.2 -14.8 -12.0 -23.6 	× 8\data Pass /Fail Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB RB
Frequency MHz 15957.515 4823.998 1249.978 15957.515 4823.998 1249.978 2396.794	Raw dBuV 42.7 52.4 51.7 29.8 46.9 42.3 70.9 49.7 TX = T	Cable 0.0 4.5 2.2 9.0 4.5 2.2 9.0 4.5 2.2 9.0 4.5 2.2 9.0 4.5 2.2 9.0 4.5 2.2 3.0 5.4	AF dB 0.4 -9.4 -14.1 0.4 -9.4 -14.1 0.4 -9.4 enderstand -14.1 0.4 -9.4 enderstand -14.1 enderstand -11.2 enderstand -5.2 enderstand -11.2	Level dBuV 52.0 47.4 39.8 39.2 42.0 30.4 62.7 49.9 sions; DIG sions; DI	S Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol V V V V V V H	Hgt cm 110 144 98 110 144 98 	Azt Deg 0 26 198 0 26 198 > 20 dE	Limit dBuV 74.0 74.0 74 54 54 54 54 54 54 54 54 54 54 54 54 54	Margin dB -22.0 -26.6 -34.2 -14.8 -12.0 -23.6 ND	x 8'data' Pass /Fail Pass Pass Pass Pass Pass n/a Pass d Emiss	Comments RB RB RB RB RB RB RB RB RD RD NRB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

 Serial #:
 ARUB61-U1 Rev A

 Issue Date:
 1st November 2010

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	st Freq.	2437 M	Hz						Engineer	SB		
	Variant	802.11	o; 1 Mbs					٦	ſemp (⁰C)	26		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	21						Press	. (mBars)	1000		
А	ntenna	AP-AN	T-85					Duty	Cycle (%)	100		
Test	Notes 1	Fundan	nental at	tenuated by	y band stop filter							
Test	Notes 2											
MiC®M	Labs	dBu∨ 80.0 60.0 80.0 40.0 30.0 ₩	~~	, t	Vasona by E	MiSot	ft		ر المنطقة المريمين المريمين المريمين المريمين المريمين المريمين المريمين المريمين المريمين المريمين المريمين ا	PK 2 PK A D Weas	10 11:38] Horizon] Vertical eak Limit werage Li lebug With Am Dist 3m	tz
Formally	measu		diated Err name: k:		ruba'arub61- azale:	Terr a msr20	oplate: f DDD\na -	1000 FCC RE fcc 15		18000.0	cy:MHz x8\data\u	а
Formally Frequency MHz	measu Raw dBuV	1000 10000 Rad File	diated Err name: k:			Terr a msr20 Pol	nplate: 1 000'na - Hgt cm			18000.0		Comments
Frequency	Raw	100 Rav File ured e Cable	diated Em name: k: missio	n peaks	Measurement		Hgt	Azt	1-18GHz .247 & ic rs Limit	180000 s210 anne Margin	x 8\data\ Pass	
Frequency MHz	Raw dBuV	1000 Rad File	diated Em name: k: missio AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	130000 s210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 7306.613	Raw dBuV 55.6	Loss 5.4	diated Em name: k: missio AF dB -4.9	n peaks Level dBuV 56.2	Measurement Type Peak Max	Pol H	Hgt cm 98	Azt Deg	Limit dBuV 74.0	120000 s210 anne Margin dB -17.8	x 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz 7306.613 4873.998	Raw dBuV 55.6 57.1	Loss 5.4 4.5	diated Em name: k: missio AF dB -4.9 -9.3	n peaks Level dBuV 56.2 52.3	Measurement Type Peak Max Peak Max	Pol H	Hgt cm 98 98	Azt Deg 1 341	Limit dBuV 74.0 74.0	120000 s210 anne Margin dB -17.8 -21.7	x 8\data\ Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 7306.613 4873.998 2246.333	Raw dBuV 55.6 57.1 60.8	Cable Loss 5.4 4.5 2.9	diated Em name: k: missio AF dB -4.9 -9.3 -11.4	n peaks Level dBuV 56.2 52.3 52.3	Measurement Type Peak Max Peak Max Peak Max	Pol H H	Hgt cm 98 98 114	Azt Deg 1 341 21	Limit dBuV 74.0 74	Margin dB -17.8 -21.7 -21.7	x 8\data\u Pass /Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 7306.613 4873.998 2246.333 7306.613	Raw dBuV 55.6 57.1 60.8 48.9	Cable Loss 5.4 4.5 2.9 5.4	diated Em name: k: missio AF dB -4.9 -9.3 -11.4 -4.9	n peaks Level dBuV 56.2 52.3 52.3 49.5	Measurement Type Peak Max Peak Max Peak Max Average Max	Роі Н Н Н	Hgt cm 98 98 114 98	Azt Deg 1 341 21 1	Limit dBuV 74.0 74 54	Margin dB -17.8 -21.7 -4.6	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 7306.613 4873.998 2246.333 7306.613 4873.998	Raw dBuV 55.6 57.1 60.8 48.9 54.3	100, Reile Cable Loss 5.4 4.5 2.9 5.4 4.5	tiated Em name: k: missio AF dB -4.9 -9.3 -11.4 -4.9 -9.3	n peaks Level dBuV 56.2 52.3 52.3 49.5 49.4	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max	Pol H H H H	Hgt cm 98 98 114 98 98 114	Azt Deg 1 341 21 341 21	Limit dBuV 74.0 74 54 54	Margin dB -17.8 -21.7 -21.7 -4.6 -15.9	x 8\data\ Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB
Frequency MHz 7306.613 4873.998 2246.333 7306.613 4873.998 2246.333 2246.333	Raw dBuV 55.6 57.1 60.8 48.9 54.3 46.6	100 File Cable Loss 5.4 4.5 2.9 5.4 4.5 2.9	tiated Em name: k: missio AF dB -4.9 -9.3 -11.4 -9.3 -11.4	n peaks Level dBuV 56.2 52.3 52.3 49.5 49.4 38.1	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max	Роі Н Н Н Н Н Н Н	Hgt cm 98 98 114 98 98 114	Azt Deg 1 341 21 341 21	Limit dBuV 74.0 74 54 54 54	Margin dB -17.8 -21.7 -21.7 -4.6 -15.9	× 8\data\u Pass Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB
Frequency MHz 7306.613 4873.998 2246.333 7306.613 4873.998 2246.333 9755.511	Raw dBuV 55.6 57.1 60.8 48.9 54.3 46.6 54.7	Cable Loss 5.4 4.5 2.9 5.4 4.5 2.9 6.4	tiated Em name: k: missio AF dB -4.9 -9.3 -11.4 -4.9 -9.3 -11.4 -3.7	n peaks Level dBuV 56.2 52.3 52.3 49.5 49.4 38.1 57.4	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol H H H H H H V V	Hgt cm 98 98 114 98 98 114 	Azt Deg 1 341 21 341 21 341 21 > 20 dE 	Limit dBuV 74.0 74 54 54 54	Margin dB -17.8 -21.7 -21.7 -4.6 -15.9 ND 	x 8\data\ Pass Pass Pass Pass Pass Pass Pass Pa	Comments RB RB RB RB RB RB RB NRB
Frequency MHz 7306.613 4873.998 2246.333 7306.613 4873.998 2246.333 9755.511 2430.862	Raw dBuV 55.6 57.1 60.8 48.9 54.3 46.6 54.7 75.4 40.4	Cable Loss 5.4 4.5 2.9 5.4 4.5 2.9 6.4 3.0 8.6	tiated Em name: k: missio AF dB -4.9 -9.3 -11.4 -9.3 -11.4 -3.7 -11.1 1.8	n peaks Level dBuV 56.2 52.3 52.3 49.5 49.4 38.1 57.4 67.3 50.8	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol H H H H H H H H H H H H H	Hgt cm 98 98 114 98 98 114 	Azt Deg 1 341 21 341 21 20 dE > 20 dE	Limit dBuV 74.0 74.0 74 54 54 3 below FU 3 below FU	Margin dB -17.8 -21.7 -21.7 -21.7 -4.6 -15.9 ND ND	x 8\data Pass Pass Pass Pass Pass Pass Pass P	Comments RB RB RB RB RB RB RB NRB FUND NRB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

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 ARUB61-U1 Rev A

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 1st November 2010

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	st Freq.	2462 M	Hz						Engineer	SB		
	Variant	802.11	; 1 Mbs					Т	ſemp (⁰C)	26		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	17.5						Press	. (mBars)	1000		
A	ntenna	AP-AN	Г-85					Duty	Cycle (%)	100		
Test I	Notes 1	Fundam	nental att	enuated b	y band stop filter							
Test	Notes 2											
Micem	Labs	dBu∨ 800 800 800 800 800 800 800 800 800 80		issions verogram va	Vasona by E	+ + +				РК 2 РК 2 Феазт, Аш Spec Я Frequen 130000	ID 11:52 -] Horizon J Vertical eak Limit werage Lt ebug GhmBβm Dist 3m Dist 3m cy: MHz x 8\data\v	ta :
		File	name. K.									
Formally	measi				5							_
Formally Frequency MHz	measu Raw dBuV				Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
Frequency	Raw	u red e Cable	missio	n peaks	Measurement		Hgt	Azt		-		
Frequency MHz	Raw dBuV	u red e Cable Loss	missio AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	dBuV	dB	/Fail	Comments
Frequency MHz 7382.525	Raw dBuV 51.7	Cable Loss 5.5	Missio AF dB -4.8	n peaks Level dBuV 52.3	Measurement Type Peak Max	Pol H	Hgt cm 98	Azt Deg 63	dBuV 74.0	dB -21.7	/Fail Pass	Comments
Frequency MHz 7382.525 4923.958	Raw dBuV 51.7 52.8	Cable Loss 5.5 4.6	AF dB -4.8 -9.1	n peaks	Measurement Type Peak Max Peak Max	Pol H	Hgt cm 98 188	Azt Deg 63 341	dBuV 74.0 74.0	dB -21.7 -25.8	/Fail Pass Pass	Comments RB RB
Frequency MHz 7382.525 4923.958 7382.525	Raw dBuV 51.7 52.8 42.9	Cable Loss 5.5 4.6 5.5	AF dB -4.8 -9.1 -4.8	n peaks Level dBuV 52.3 48.2 43.5	Measurement Type Peak Max Peak Max Average Max	Роі Н Н	Hgt cm 98 188 98	Azt Deg 63 341 63	dBuV 74.0 74.0 54	dB -21.7 -25.8 -10.5	/Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 7382.525 4923.958 7382.525 4923.958	Raw dBuV 51.7 52.8 42.9 46.8	Cable Loss 5.5 4.6 5.5 4.6	AF dB -4.8 -9.1 -4.8 -9.1	n peaks Level dBuV 52.3 48.2 43.5 42.2	Measurement Type Peak Max Peak Max Average Max Average Max	Роі Н Н Н	Hgt cm 98 188 98 188 	Azt Deg 63 341 63 341 	dBuV 74.0 74.0 54	dB -21.7 -25.8 -10.5 -11.8 	/Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 7382.525 4923.958 7382.525 4923.958 23.958 2464.930	Raw dBuV 51.7 52.8 42.9 46.8 70.7 41.4	Cable Loss 5.5 4.6 5.5 4.6 3.0 8.5	AF dB -4.8 -9.1 -4.8 -9.1 -11.1 0.8	n peaks Level dBuV 52.3 48.2 43.5 42.2 62.6 50.7	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan]	Pol H H H V	Hgt cm 98 188 98 188 	Azt Deg 63 341 63 341 > 20 dE	dBuV 74.0 74.0 54 54 3 below FU	dB -21.7 -25.8 -10.5 -11.8 ND	/Fail Pass Pass Pass Pass n/a Pass	Comments RB RB RB RB FUND NRB

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Tes	st Freq.	2412 M	Hz						Engineer	SB		
	-		a; 6 Mbs						emp (°C)	26		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	13.5						Press	. (mBars)	1000		
A	ntenna	AP-AN	T-85					Duty	Cycle (%)	100		
Test	Notes 1	Fundan	nental at	tenuated b	y band stop filter							
Test N	Notes 2											
MiC@M Formally		File	name: k:	\program\ai	Vasona by E	андарана и поредела и пор	polate: f	1000 FCC RE	1-18GHz	рк 2 рк 2 р феазт Аш Spec Аш Spec Г	10 12:07) Horizor) Vertica eak Limit verage Limit Although Dist 3m Dist 3m Cy: MHz x 8\data\	nta I I I I
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
16025.060	42.7	9.0	0.5	52.1	Peak Max	Н	174	210	74.0	-21.9	Pass	RB
16025.06	29.7	9.0	0.5	39.2	Average Max	Н	174	210	54.0	-14.8	Pass	RB
	67.2	3.0	-11.2	59.0	Peak [Scan]	V					n/a	FUND
2396.794		-		49.7	Peak [Scan]	н		> 20 dE	B below FU	ND	Pass	NRB
2396.794 7234.469	49.5	5.4	-5.2	49.7	I eak [Scall]						1 400	INRB
		-		-	= Digital Emission		ND = Fi		ental; WB =			

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	st Freq.	2437 M	Hz						Engineer	SB		
	Variant	802.11	g; 6 Mbs					٦	emp (⁰C)	26		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	22						Press	. (mBars)	1000		
А	ntenna	AP-AN ⁻	Г-85					Duty	Cycle (%)	100		
Test	Notes 1	Fundan	nental at	tenuated b	y band stop filter							
Test	Notes 2											
MiC®M	_abs	dBu∨ 800 600 800 800 800 800	~~~~		Vasona by E	MiSot	ft + 	ŧ	مەمەرىدە مەلمەر	Pk	10 12:26] Horizon] Vertical eak Limit werage lebug offisfaβm Dist 3m	ta I
Formally	meas		liated Err name: k:		ruba\arub61- azale:	Terr a msr2i	nplate: f 000\na -	1000 FCC RE fcc 15		18000.0	ncy:MHz x8\data∖	га
Formally Frequency MHz	meas Raw dBuV	100 1000) Rac File	liated Err name: k:			Tem a msr21 Pol	Hgt			18000.0		Comments
Frequency	Raw	100 Rad File	diated Brr name: k: missio	n peaks	Measurement		Hgt	Azt	1-18GHz 247 & ic rs Limit	130000 ss210 anne Margin	x 8\data\ Pass	
Frequency MHz	Raw dBuV	ured e	name: k: missio	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	180000 ss210 anne Margin dB	x 8\data\ Pass <i>I</i> Fail	Comments
Frequency MHz 7305.892	Raw dBuV 66.4	Cable Loss 5.4	missio	n peaks Level dBuV 66.9	Measurement Type Peak Max	Pol V	Hgt cm 129	Azt Deg 18	1-18GHz 247 & ic rs Limit dBuV 74.0	120000 ss210 anne Margin dB -7.1	x 8\data\ Pass /Fail Pass	Comment RB
Frequency MHz 7305.892 2307.255	Raw dBuV 66.4 68.8	Cable Loss 5.4 2.9	AF dB -4.9 -11.1	n peaks	Measurement Type Peak Max Peak Max	Pol V H	Hgt cm 129 106	Azt Deg 18 0	Limit dBuV 74.0 74.0	Margin dB -7.1 -13.4	× 8\data\ Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 7305.892 2307.255 4869.098	Raw dBuV 66.4 68.8 59.7	Cable Loss 5.4 2.9 4.5	iated Em name: k: missio AF dB -4.9 -11.1 -9.3	h peaks Level dBuV 66.9 60.6 54.9	Measurement Type Peak Max Peak Max Peak Max	Pol V H	Hgt cm 129 106 98	Azt Deg 18 0 340	Limit dBuV 74.0 74	Margin dB -7.1 -13.4 -19.2	× 8\data\ Pass /Fail Pass Pass Pass	Comment RB RB RB
Frequency MHz 7305.892 2307.255 4869.098 7305.892	Raw dBuV 66.4 68.8 59.7 48.5	100 Realized end Cable Loss 5.4 2.9 4.5 5.4	iated Em name: k: missio AF dB -4.9 -11.1 -9.3 -4.9	December 201 Level dBuV 66.9 60.6 54.9 49.1	Measurement Type Peak Max Peak Max Peak Max Average Max	Pol V H H	Hgt cm 129 106 98 129	Azt Deg 18 0 340	Limit dBuV 74.0 74 54	Margin dB -7.1 -13.4 -19.2 -4.9	x 8\data\ Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 7305.892 2307.255 4869.098 7305.892 2307.255 4869.098 4869.098	Raw dBuV 66.4 68.8 59.7 48.5 55.6	100 File Cable Loss 5.4 2.9 4.5 5.4 2.9	inarme: k: missio AF dB -4.9 -11.1 -9.3 -4.9 -11.1	Level dBuV 66.9 60.6 54.9 49.1 47.4	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max	Pol V H H V H	Hgt cm 129 106 98 129 106 98	Azt Deg 18 0 340 18 0 340	Limit dBuV 74.0 74 54 54	Margin dB -7.1 -13.4 -19.2 -4.9 -6.6 -13.9	x 8\data\ Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB RB
Frequency MHz 7305.892 2307.255 4869.098 7305.892 2307.255 4869.098 4869.098	Raw dBuV 66.4 68.8 59.7 48.5 55.6 44.9	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5	inarme: k: missio AF dB -4.9 -11.1 -9.3 -4.9 -11.1 -9.3	n peaks Level dBuV 66.9 60.6 54.9 49.1 47.4 40.1	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max	Pol V H H V H	Hgt cm 129 106 98 129 106 98	Azt Deg 18 0 340 18 0 340 > 20 dE	Limit dBuV 74.0 74 54 54 54	Margin dB -7.1 -13.4 -19.2 -4.9 -6.6 -13.9	x 8\data\ Pass /Fail Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB
Frequency MHz 7305.892 2307.255 4869.098 7305.892 2307.255 4869.098 16841.683	Raw dBuV 66.4 68.8 59.7 48.5 55.6 44.9 40.7	100, File Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5 8.6	inarme: k: missio AF dB -4.9 -11.1 -9.3 -4.9 -11.1 -9.3 1.8	n peaks Level dBuV 66.9 60.6 54.9 49.1 47.4 40.1 51.0	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol V H H V H H H V V	Hgt cm 129 106 98 129 106 98	Azt Deg 18 0 340 18 0 340 > 20 dE	Limit dBuV 74.0 74 54 54 54 3 below FL	Margin dB -7.1 -13.4 -19.2 -4.9 -6.6 -13.9	x 8\data\ Pass /Fail Pass Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB NRB
Frequency MHz 7305.892 2307.255 4869.098 7305.892 2307.255 4869.098 16841.683 9721.443	Raw dBuV 66.4 68.8 59.7 48.5 55.6 44.9 40.7 55.4 77.6	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5 5.4 2.9 4.5 3.4	inarme: k: missio AF dB -4.9 -11.1 -9.3 -4.9 -11.1 -9.3 1.8 -3.3 -11.1	n peaks Level dBuV 66.9 60.6 54.9 49.1 47.4 40.1 51.0 58.4 69.5	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol V H H V H H H V V V V H	Hgt cm 129 106 98 129 106 98 200 	Azt Deg 18 0 340 18 0 340 20 dE > 20 dE 	Limit dBuV 74.0 74.0 74 54 54 3 below FL 3 below FL 	Margin dB -7.1 -13.4 -19.2 -4.9 -6.6 -13.9 ND ND 	x 8\data Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comment RB RB RB RB RB RB RB NRB NRB FUND

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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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Tes	st Freq.	2462 M	Hz						Engineer	SB		
	Variant		g; 6 Mbs					Т	emp (ºC)	26		
Freq.	Range	1000 M	- Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	13.5						Press	(mBars)	1000		
A	ntenna	AP-AN	T-85					Duty	Cycle (%)	100		
Test N	lotes 1	Fundan	nental at	tenuated b	y band stop filter							
Test N	lotes 2											
Formally		File	diated Err name: k:	\program\ai	Vasona by E	, al , and a	+ +		1-18GHz	рк 2 рк 2 феаз А Б Г Г Г Т Т Т Т Т Т Т Т Т Т Т Т Т	10 12:41 -) Horizon) Vertical eak Limit werage ebug divragm Dist 3m Dist 3m cy: MHz x 8\data\v	t:
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
7383.888	54.3	5.5	-4.8	54.9	Peak Max	Н	98	54	74.0	-19.1	Pass	RB
7383.888	36.2	5.5	-4.8	36.9	Average Max	H	98	54	54.0	-17.1	Pass	RB
2430.862	68.0	3.0	-11.1	59.9	Peak [Scan]	V					n/a	FUND
	39.8	8.7	2.0	50.6	Peak [Scan]	Н		> 20 dE	8 below FU	ND	Pass	NRB
17454.910	33.0											
17454.910 Legend:		ransmitt	er Emiss	ions; DIG	= Digital Emissior	ns; FUI	ND = Fu	undame	ental; WB =	Wideban	d Emissi	on

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Tes	st Freq.	2412 M	Hz						Engineer	SB		
				; 6.5 MCS				Т	emp (ºC)	26		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	14						Press	. (mBars)	1000		
A	ntenna	AP-AN	T-85					Duty	Cycle (%)	100		
Test N	Notes 1	Fundan	nental at	tenuated b	y band stop filter							
Test N	Notes 2											
MiC@M			name: k:		Vasona by E			1000 CC RE fcc 15	+	Au Spec) Horizor) Vertica eak Limit verage L ebug diffapm Dist 3m Dist 3m	nta I t
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
16023.918	42.9	9.0	0.5	52.4	Peak Max	Н	184	336	74.0	-21.6	Pass	RB
16023.918	29.8	9.0	0.5	39.2	Average Max	Н	184	336	54.0	-14.8	Pass	RB
2396.794	67.1	3.0	-11.2	58.9	Peak [Scan]	Н					n/a	FUND
	50.2	5.4	-5.2	50.4	Peak [Scan]	Η		> 20 dE	3 below FU	ND	Pass	NRB
7234.469	00.2											
7234.469 Legend:		ransmitt	er Emiss	ions; DIG	= Digital Emissior	ns; FUI	ND = Fi	undame	ental; WB =	- Wideban	d Emiss	ion

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Tes	st Freq.	2437 M	Hz						Engineer	SB		
	Variant	802.11r	n; HT-20	; 6.5 MCS				٦	ſemp (⁰C)	26		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	20						Press	. (mBars)	1000		
A	ntenna	AP-AN	Г-85					Duty	Cycle (%)	100		
Test N	Notes 1	Fundan	nental at	tenuated b	y band stop filter							
Test N	Notes 2											
MiC®M	labs	dBu∨ 800 700 600 800 800 800 800 800 800 800 800 8		issions program'ai	Vasona by E	h		1000 FCC RE fcc 15		РК 20000	10 13:11 Horizon Vertical eak Limit werage Li ebug ebug diffeapm Dist 3m Dist 3m	ta :
Formally	meas	ured e	missio	on peaks	;							
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
7303.407	55.6	5.4	-4.9	56.1	Peak Max	Н	154	42	74.0	-17.9	Pass	RB
2307.655	68.3	2.9	-11.1	60.1	Peak Max	Н	106	12	74.0	-14.0	Pass	RB
7303.407	37.9	5.4	-4.9	38.4	Average Max	н	154	42	54	-15.6	Pass	RB
2307.655	54.9	2.9	-11.1	46.7	Average Max	н	106	12	54	-7.3	Pass	RB
2430.862	74.9	3.0	-11.1	66.8	Peak [Scan]	н					n/a	FUND
9755.511	53.4	6.4	-3.7	56.1	Peak [Scan]	V		> 20 dI	B below FU	ND	Pass	NRB
17454.910	39.7	8.7	2.0	50.5	Peak [Scan]	V		> 20 dE	B below FU	ND	Pass	NRB
Legend:					= Digital Emission hits); NRB = Non	-			-			

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	t Freq.	2462 M	Hz						Engineer	SB		
	Variant	802.11r	n; HT-20;	6.5 MCS				Т	ſemp (⁰C)	26		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power \$	Setting	12						Press	. (mBars)	1000		
Α	ntenna	AP-AN ⁻	Г-85					Duty	Cycle (%)	100		
Test N	lotes 1	Fundan	nental att	enuated b	y band stop filter					•		
Test N	lotes 2											
MiCOM	abs	dBu∨ 800 600 800 800 800 800	As		Vasona by E	MiSot	t 		و لمر م العرم +	Pk	10 13:23 -] Horizom Vertical eak Limit verage Li verage Li	tz
		10.0 1000 J		issions \program\ai	ruba'arub61- azale:	Terr a msr2(plate: F 100 vna -	1000 FCC RE fcc 15		18000.0	icy:MHz x 8\data\v	а
Formally	measu		missio	n peaks	5							
Formally Frequency MHz	measu Raw dBuV		missio AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
Frequency	Raw	u red e Cable		Level	Measurement	Pol V	-			-		Comments
Frequency MHz	Raw dBuV	u red e Cable Loss	AF dB	Level dBuV	Measurement Type		cm	Deg	dBuV	dB	/Fail	
Frequency MHz 16089.499 7382.124	Raw dBuV 43.2	Cable Loss 9.0	AF dB	Level dBuV 52.9	Measurement Type Peak Max	V	cm 171	Deg 249	dBuV 74.0	dB -21.1	/Fail Pass	RB
Frequency MHz 16089.499	Raw dBuV 43.2 53.5	Cable Loss 9.0 5.5	AF dB 0.8 -4.8	Level dBuV 52.9 54.1	Measurement Type Peak Max Peak Max	V	cm 171 98	Deg 249 335	dBuV 74.0 74.0	dB -21.1 -19.9	/Fail Pass Pass	RB RB
Frequency MHz 16089.499 7382.124 16089.499	Raw dBuV 43.2 53.5 29.6	Cable Loss 9.0 5.5 9.0	AF dB 0.8 -4.8 0.8	- Level dBuV 52.9 54.1 39.3	Measurement Type Peak Max Peak Max Average Max	V H V	cm 171 98 171	Deg 249 335 249	dBuV 74.0 74.0 54	dB -21.1 -19.9 -14.7	/Fail Pass Pass Pass	RB RB RB

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-	_	0 4 0 0 1 4								0.0			
		2422 M								SB			
		802.11r	n; HT-40	13.5 MCS	5	Temp (⁰C)				26			
Freq.	Range	1000 M	Hz - 180	00 MHz		Rel. Hum.(%)			32				
Power S	Setting	9				Press. (mBars)				1000			
Ar	ntenna	AP-AN1	Г-85			Duty Cycle (%) 10				100			
Test N	otes 1	Fundan	nental at	enuated b	y band stop filter	·							
Test N	otes 2												
dBuv Vasona by R an an an an an an an an an an an an an											Frequency: MHz 1800000		
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments	
16841.683	40.9	8.6	1.8	51.2	Peak [Scan]	V		> 20 dE	3 below FU	ND	Pass	NRB	
2430.861723	58.4	3.0	-11.1	50.3	Peak [Scan]	V					n/a	FUND	
Legend:	TX = T	ransmitt	er Emiss	ions; DIG :	= Digital Emissio	ns; FUI	ND = Fu	undame	ental; WB =	Wideban	d Emiss	ion	
-				15 000 1		Restricted Band, Limit is 20dB b							

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	t Freq.	2437 M	Hz						Engineer	SB			
V	Variant 802.11n; HT-40; 13.5 MCS							٦	ſemp (⁰C)	26	26		
Freq. F	1000 MHz - 18000 MHz						Rel.	Hum.(%)	32				
Power S	20						Press	. (mBars)	1000				
Antenna		AP-ANT-85						Duty	Cycle (%)	100			
Test No	otes 1	Fundan	nental at	tenuated b	y band stop filter								
Test No	otes 2												
MICOML	abs	dBuV 800 800 800 800 800 800 800 800 800 80	<u> </u>		Vasona by E	MiSot	t + +			PK PK PK PK PK PK PK PK	10 15:04) Horizon) Vertical esk Limit verage Li diffet from Dist 3m Dist 3m	tz	
Formally r	measu	File	name: k:		ruba'arub61- azale:	Terr a msr2(iplate: F 100 vna -	1000 FCC RE foc 15		18000.0 Is210 anne	x 8\data\	га	
Formally r Frequency MHz	meası Raw dBuV	File	name: k:			Tem a msr2t	Hgt cm			s210 anne Margin dB	x 8\data\ Pass /Fail	Comments	
Frequency	Raw	File	missio	n peaks	Measurement		Hgt	Azt	1-18GHz .247 & ic rs Limit	s210 anne Margin	Pass		
Frequency MHz	Raw dBuV	Cable Loss	Missio	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	s210 anne Margin dB	Pass /Fail	Comments	
Frequency MHz 7303.888	Raw dBuV 56.9	Cable Loss 5.4	AF dB -4.9	n peaks Level dBuV 57.4	Measurement Type Peak Max	Pol V	Hgt cm 131	Azt Deg 56	Limit dBuV 74.0	Margin dB -16.6	Pass /Fail Pass	Comments RB	
Frequency MHz 7303.888 2310.701	Raw dBuV 56.9 68.0	Cable Loss 5.4 2.9	AF dB -4.9 -11.1	n peaks Level dBuV 57.4 59.8	Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 131 108	Azt Deg 56 26	Limit dBuV 74.0 74.0	Margin dB -16.6 -14.2	Pass /Fail Pass Pass	Comments RB RB	
Frequency MHz 7303.888 2310.701 4871.182	Raw dBuV 56.9 68.0 52.6	Cable Loss 5.4 2.9 4.5	AF dB -4.9 -11.1 -9.3	Den peaks Level dBuV 57.4 59.8 47.8	Measurement Type Peak Max Peak Max Peak Max	Pol V V	Hgt cm 131 108 120	Azt Deg 56 343	Limit dBuV 74.0 74	Margin dB -16.6 -14.2 -26.2	Pass /Fail Pass Pass Pass	Comments RB RB RB	
Frequency MHz 7303.888 2310.701 4871.182 7303.888	Raw dBuV 56.9 68.0 52.6 38.5	Cable Loss 5.4 2.9 4.5 5.4	AF dB -4.9 -11.1 -9.3 -4.9	n peaks Level dBuV 57.4 59.8 47.8 39.0	Measurement Type Peak Max Peak Max Peak Max Average Max	Pol V V H V	Hgt cm 131 108 120 131	Azt Deg 56 26 343 56	Limit dBuV 74.0 74 54	Margin dB -16.6 -14.2 -26.2 -15.0	Pass /Fail Pass Pass Pass	Comments RB RB RB RB RB	
Frequency MHz 7303.888 2310.701 4871.182 7303.888 2310.701	Raw dBuV 56.9 68.0 52.6 38.5 47.9	Cable Loss 5.4 2.9 4.5 5.4 2.9	AF dB -4.9 -11.1 -9.3 -4.9 -11.1	n peaks Level dBuV 57.4 59.8 47.8 39.0 39.7	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max	Pol V V H V V	Hgt cm 131 108 120 131 108	Azt Deg 56 26 343 56 26	Limit dBuV 74.0 74 54 54	Margin dB -16.6 -14.2 -26.2 -15.0 -14.3	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB RB	
Frequency MHz 7303.888 2310.701 4871.182 7303.888 2310.701 4871.182	Raw dBuV 56.9 68.0 52.6 38.5 47.9 38.7	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5	AF dB -4.9 -11.1 -9.3 -4.9 -11.1 -9.3	h peaks Level dBuV 57.4 59.8 47.8 39.0 39.7 33.9	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max	Pol V V H V H	Hgt cm 131 108 120 131 108 120 	Azt Deg 56 26 343 56 26 343 	Limit dBuV 74.0 74 54 54	Margin dB -16.6 -14.2 -26.2 -15.0 -14.3 -20.1 	Pass /Fail Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB	
Frequency MHz 7303.888 2310.701 4871.182 7303.888 2310.701 4871.182 2310.701 2310.701 2310.701 2310.701 2310.701	Raw dBuV 56.9 68.0 52.6 38.5 47.9 38.7 74.9	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5 3.0	AF dB -4.9 -11.1 -9.3 -4.9 -11.1 -9.3 -11.1	n peaks Level dBuV 57.4 59.8 47.8 39.0 39.7 33.9 66.8	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol > > H V H H H	Hgt cm 131 108 120 131 108 120 	Azt Deg 56 26 343 56 26 343 > 20 dE	Limit dBuV 74.0 74 54 54 54 	Margin dB -16.6 -14.2 -26.2 -15.0 -14.3 -20.1 ND	Pass /Fail Pass Pass Pass Pass Pass n/a	Comments RB RB RB RB RB RB RB RB FUND	
Frequency MHz 7303.888 2310.701 4871.182 7303.888 2310.701 4871.182 2310.701 4871.182 9755.511	Raw dBuV 56.9 68.0 52.6 38.5 47.9 38.7 74.9 53.4	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5 5.4 2.9 4.5 5.4 2.9 4.5 6.4	AF dB -4.9 -11.1 -9.3 -4.9 -11.1 -9.3 -11.1 -9.3 -11.1 -3.7	n peaks Level dBuV 57.4 59.8 47.8 39.0 39.7 33.9 66.8 56.1	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V V H V V H H H V V	Hgt cm 131 108 120 131 108 120 	Azt Deg 56 26 343 56 26 343 56 26 343 > 20 dE	Limit dBuV 74.0 74.0 74 54 54 54 54 54 54 54 54 54 54	Margin dB -16.6 -14.2 -26.2 -15.0 -14.3 -20.1 ND	Pass /Fail Pass Pass Pass Pass Pass n/a Pass	Comments RB RB RB RB RB RB RB RB FUND NRB	
Frequency MHz 7303.888 2310.701 4871.182 7303.888 2310.701 4871.182 2340.701 4871.182 9755.511 17454.910	Raw dBuV 56.9 52.6 38.5 47.9 38.7 74.9 53.4 39.7	Cable Loss 5.4 2.9 4.5 5.4 2.9 4.5 3.0 6.4 8.7	AF dB -4.9 -11.1 -9.3 -4.9 -11.1 -9.3 -11.1 -9.3 -11.1 -3.7 2.0	n peaks Level dBuV 57.4 59.8 47.8 39.0 39.7 33.9 66.8 56.1 50.5	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V V H V H H V V V	Hgt cm 131 108 120 131 108 120 	Azt Deg 56 26 343 56 26 343 > 20 dE > 20 dE	Limit dBuV 74.0 74.0 74 54 54 54 54 54 54 54 54 54 54 54 54 54	Margin dB -16.6 -14.2 -26.2 -15.0 -14.3 -20.1 ND ND	Pass /Fail Pass Pass Pass Pass n/a Pass Pass	Comments RB RB RB RB RB RB RB FUND NRB NRB	

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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Tes	t Freq.	2452 M	Hz						Engineer	SB			
V	/ariant	802.11n; HT-40; 13.5 MCS					Temp (ºC)				26		
Freq.	Range	1000 M	Hz - 180	00 MHz			Rel. Hum.(%) 32				2		
Power S	Setting	9				Press. (mBars)				1000			
Ar	ntenna	AP-AN	Г-85			Duty Cycle (%) 100							
Test N	otes 1	Fundam	nental at	tenuated b	y band stop filter								
Test N	otes 2												
Formally			liated Err name: k:		Vasona by E					PK PK	10 15:22 -] Horizon] Vertical eak Limit verage Li verage Li	ta :	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments	
16060.939	43.2	9.0	0.8	53.0	Peak Max	V	192	189	74.0	-21.0	Pass	RB	
16060.939	29.7	9.0	0.8	39.5	Average Max	V	192	189	54.0	-14.5	Pass	RB	
2430.862	59.4	3.0	-11.1	51.3	Peak [Scan]	V					n/a	FUND	
Legend:	TX = T	ransmitt	er Emiss	ions; DIG	= Digital Emissior	ns; FUI	ND = Fu	undame	ental; WB =	Wideban	d Emissi	on	
						Restricted Band, Limit is 20dB b							

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

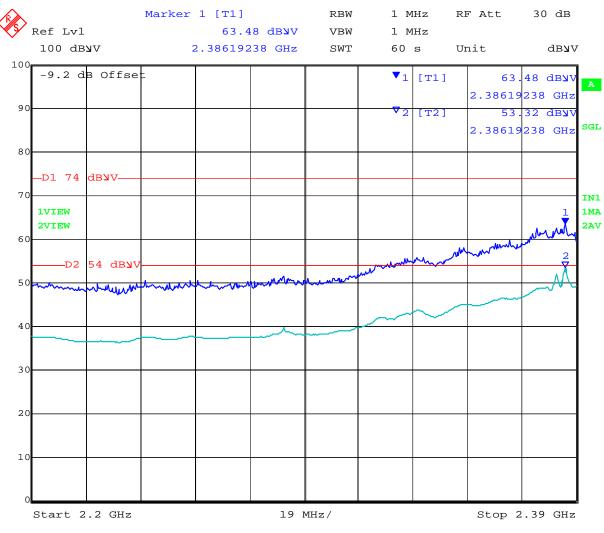
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7.3.6 AP-ANT-85 2.4GHz - Transmitter Band Edge Emissions

BE 802.11b 2412 MHz 2.2-2.39GHz



Date:

4.OCT.2010 09:58:29

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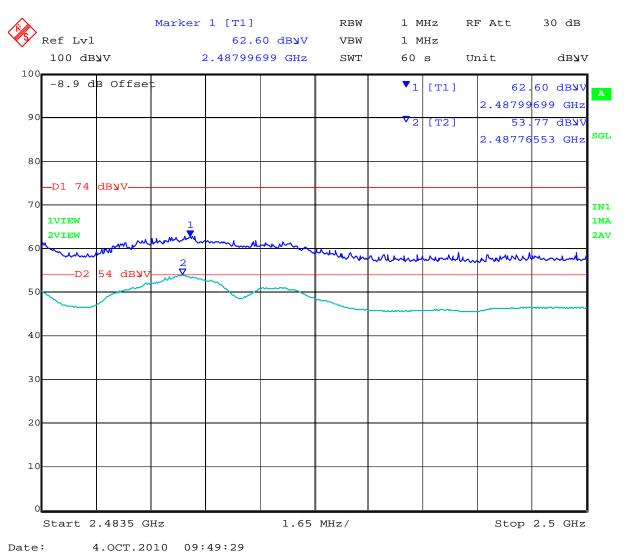
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BE 802.11b 2462 MHz 2.4835-2.5GHz



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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

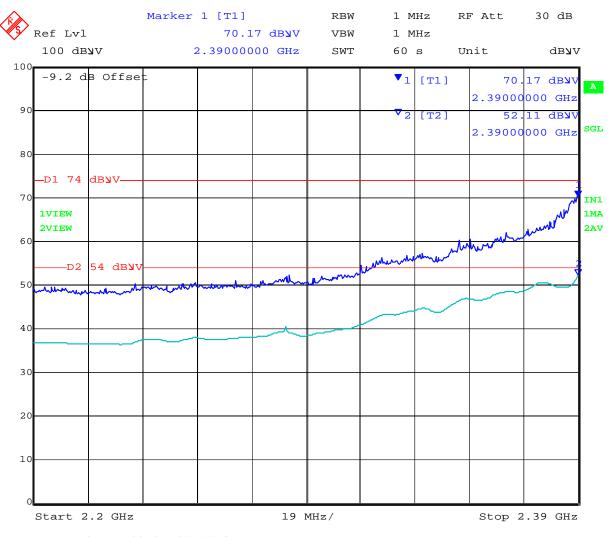
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BE 802.11g 2412 MHz 2.2-2.39GHz



Date:

4.OCT.2010 09:33:41

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

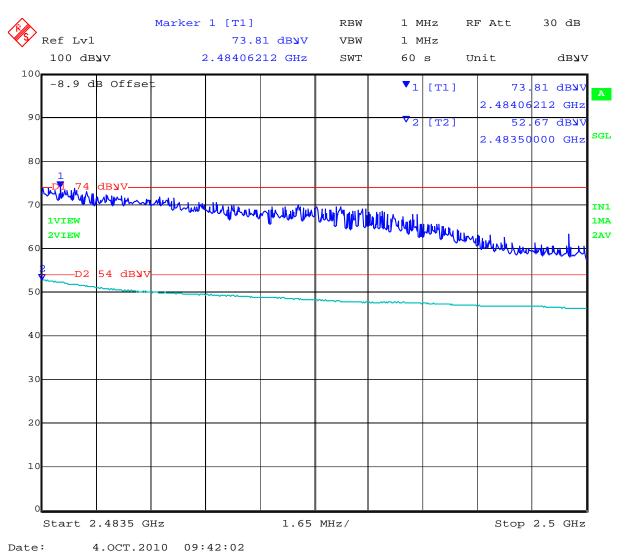
 To:
 FCC 47 CFR Part 15.247 & IC RSS-210

 Serial #:
 ARUB61-U1 Rev A

 Issue Date:
 1st November 2010

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BE 802.11g 2462 MHz 2.4835-2.5GHz



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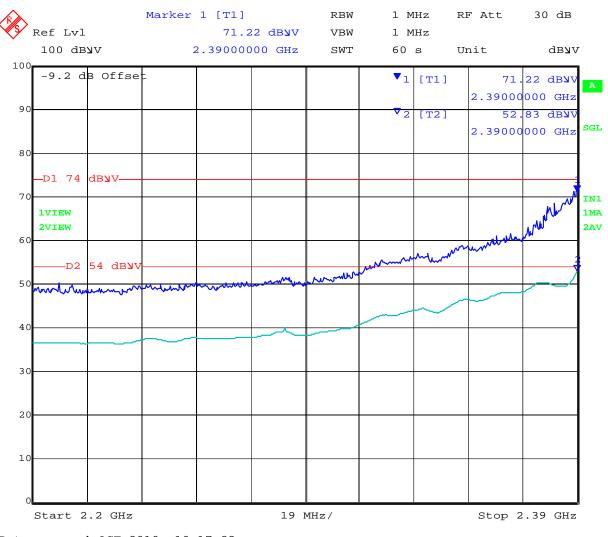
 To:
 FCC 47 CFR Part 15.247 & IC RSS-210

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BE 802.11n HT20 2412 MHz 2.2-2.39GHz



Date:

4.OCT.2010 10:17:23

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

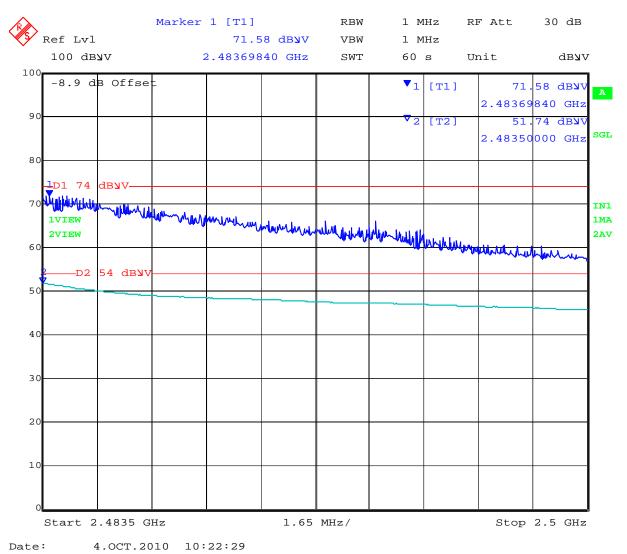
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 FCC 47 CFR Part 15.247 & IC RSS-210

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BE 802.11n HT20 2462 MHz 2.4835-2.5GHz



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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

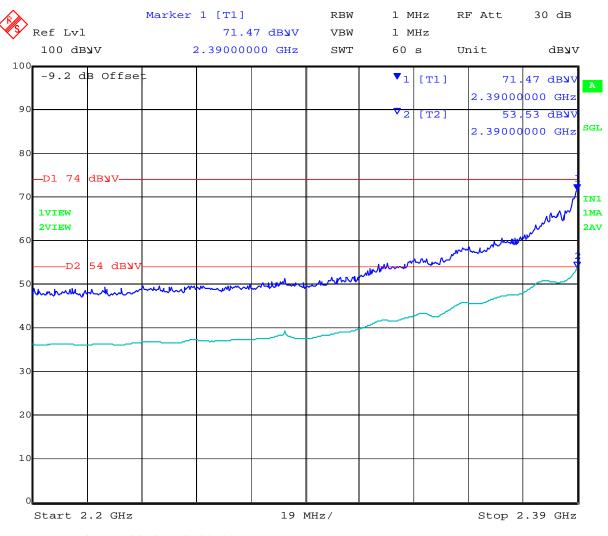
 To:
 FCC 47 CFR Part 15.247 & IC RSS-210

 Serial #:
 ARUB61-U1 Rev A

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BE 802.11n HT40 2422 MHz 2.2-2.39GHz



Date:

4.OCT.2010 10:28:32

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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

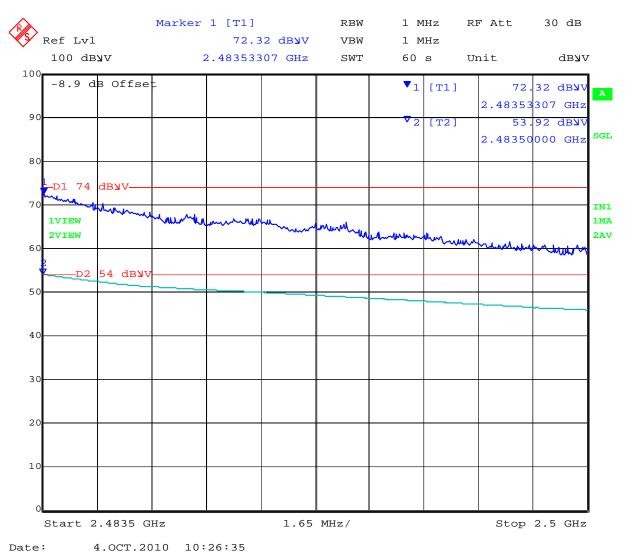
 To:
 FCC 47 CFR Part 15.247 & IC RSS-210

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BE 802.11n HT40 2452 MHz 2.4835-2.5GHz



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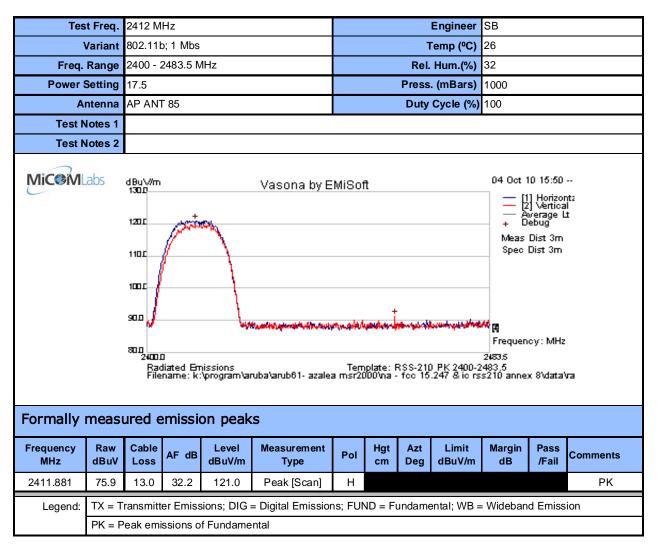
 To:
 FCC 47 CFR Part 15.247 & IC RSS-210

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7.3.7 AP-ANT-85 2.4GHz - Transmitter Peak Emissions



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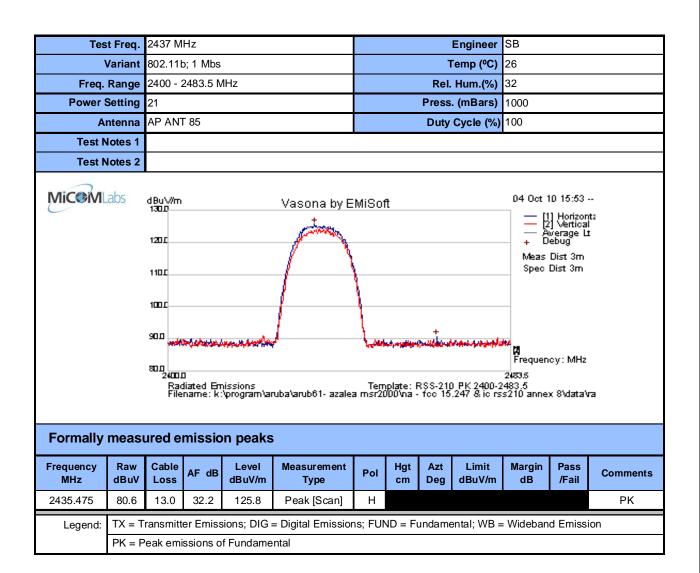
 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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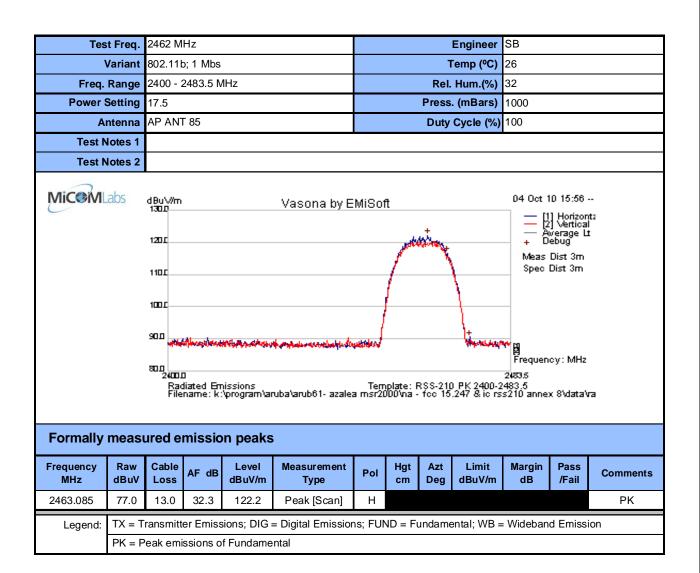
 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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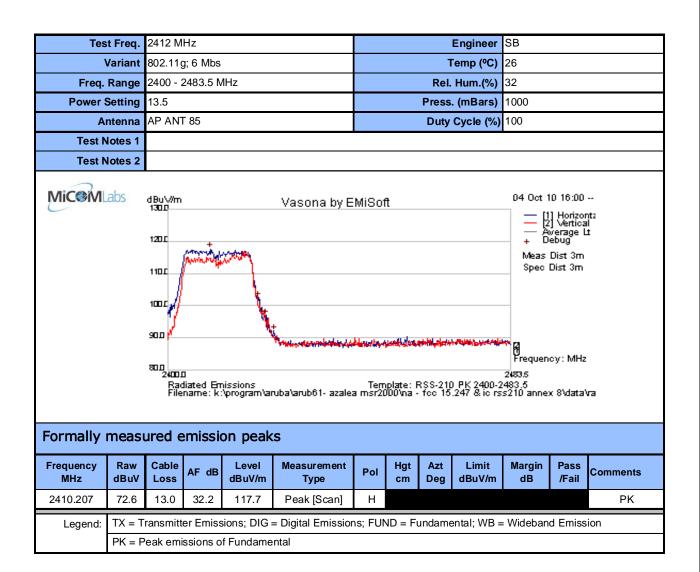
 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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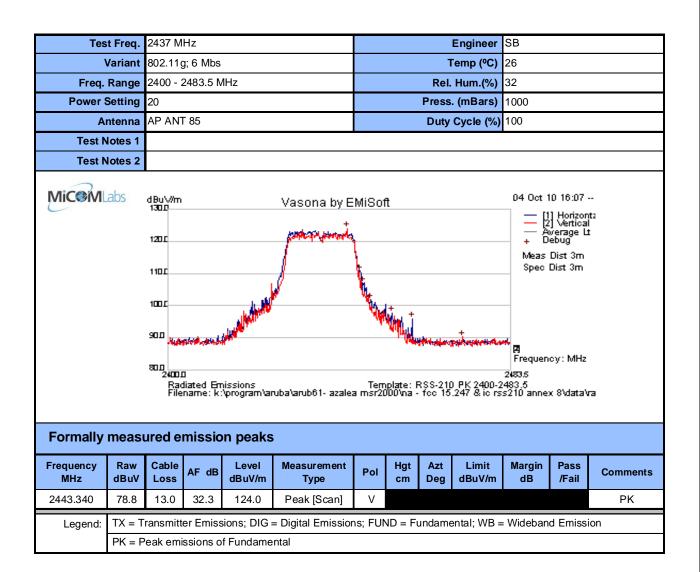
 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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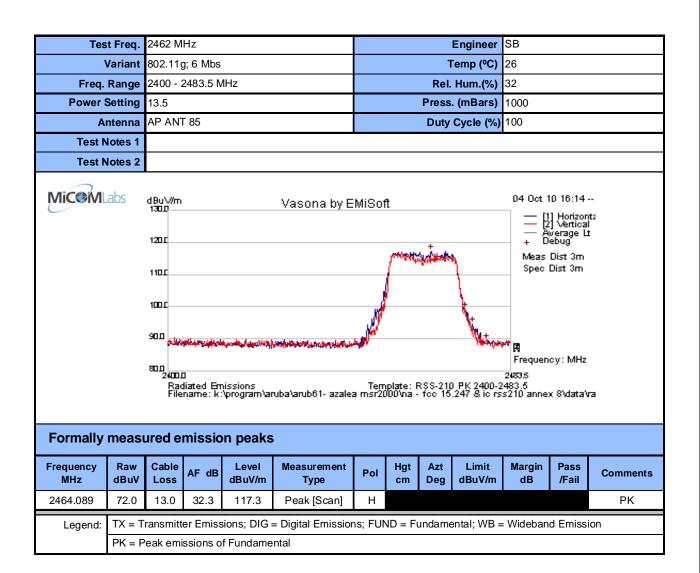
 Title:
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Tes	t Freq.	2412 M	Hz						Engineer	SB		
١	/ariant	802.11r	hHT-20;	6.5 MCS				Т	emp (⁰C)	26		
Freq.	Range	2400 - 2	2483.5 N	/Hz				Rel.	Hum.(%)	32		
Power S	Setting	14						Press	. (mBars)	1000		
Ar	ntenna	AP AN	T 85					Duty	Cycle (%)	100		
Test N	lotes 1											
Test N	lotes 2											
MiC®ML		dBu√/m 1302 1201 1101 1001 1001 1001 800 24001 Rad File	iated En	pissions program\ar	Vasona by E	No,raisa	ahlar feb			Meas Spec	10 16:18 Horizor Vertica verage L ebug Dist 3m Dist 3m Dist 3m	ntz l t
Formally I	measu	ured e	missi	on peak	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
2411.379	73.1	13.0	32.2	118.2	Peak [Scan]	Н						PK
Legend:					= Digital Emission	ns; FUN	ND = Fu	undame	ental; WB =	: Wideban	d Emiss	ion
	PK = P	eak emi	ssions o	f Fundame	ntai							

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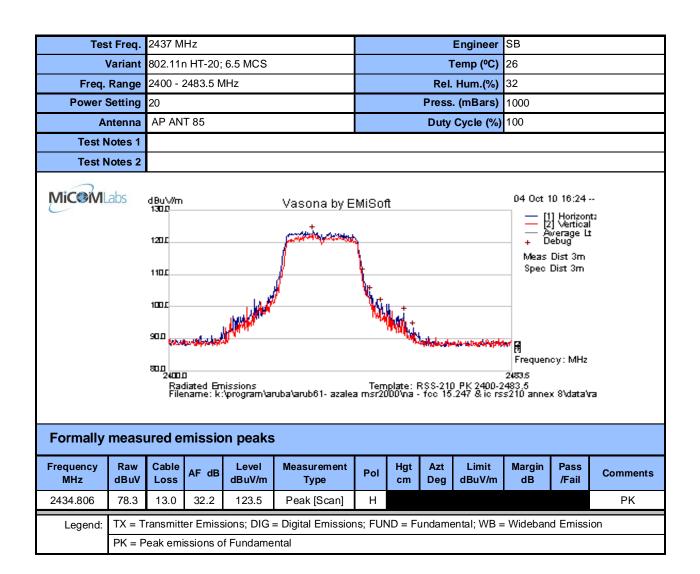
 Title:
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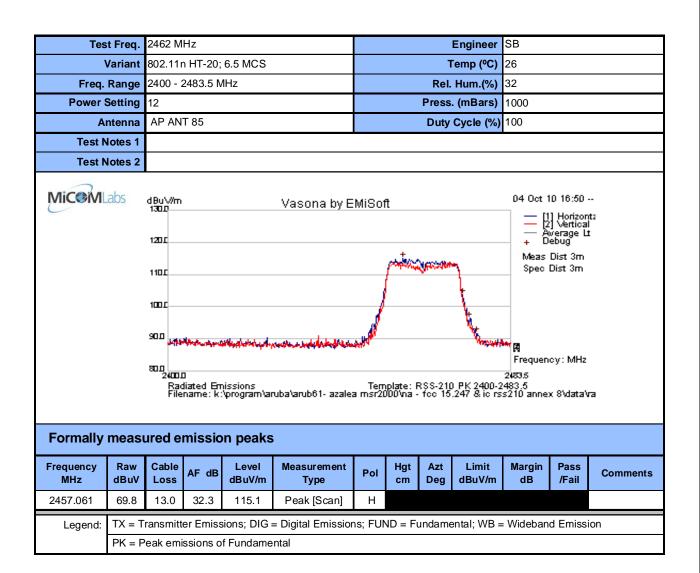
 Title:
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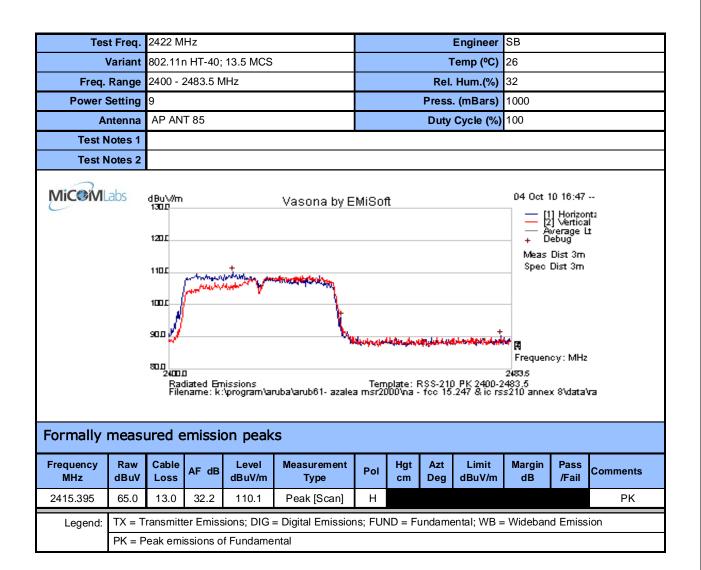
 Title:
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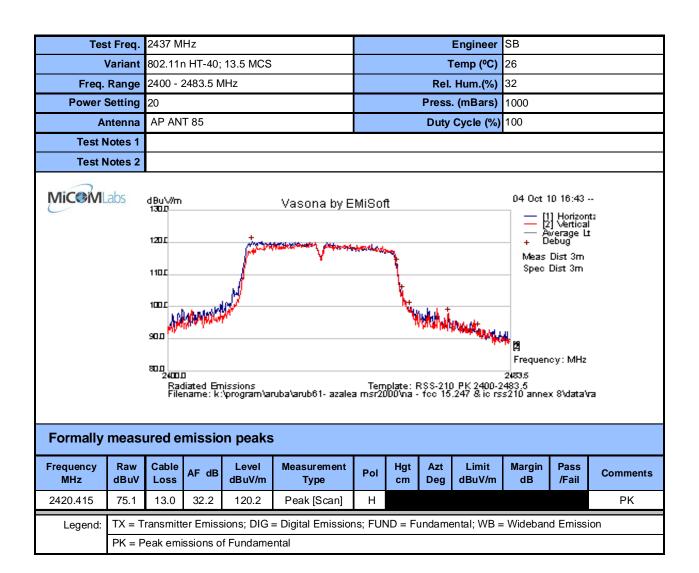
 Title:
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_		0450 14								0.5		
		2452 M								SB		
		802.11r	n HT-40;	13.5 MCS						26		
Freq.	Range	2400 - 2	2483.5 N	1Hz				Rel.	Hum.(%)	32		
Power S	Setting	9						Press	. (mBars)	1000		
Ar	ntenna	AP AN	Т 85					Duty	Cycle (%)	100		
Test N	lotes 1											
Test N	lotes 2											
MiCOML	abs	dBu\//m 1300 1200 1000 900 900 900 900 900 900 900 900		issions program ar	Vasona by E	ten	-	255-210 fcc 15	0 PK 2400-2 247 & ic rs	Heads Frequen 2483.5	10 16:45 - 1) Horizon 2) Vertical werage Li lebug Dist 3m Dist 3m Dist 3m x 8\data\v	tz t
Formally	meası	ured ei	missio	on 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
2446.184	65.4	13.0	32.3	110.7	Peak [Scan]	Н						PK
Legend:	TX = T	ransmitte	er Emiss	sions; DIG :	= Digital Emissior	ns; FUN	ID = Fi	undame	ental; WB =	Wideban	d Emissi	ion
				, -	5	, -						

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 Title:
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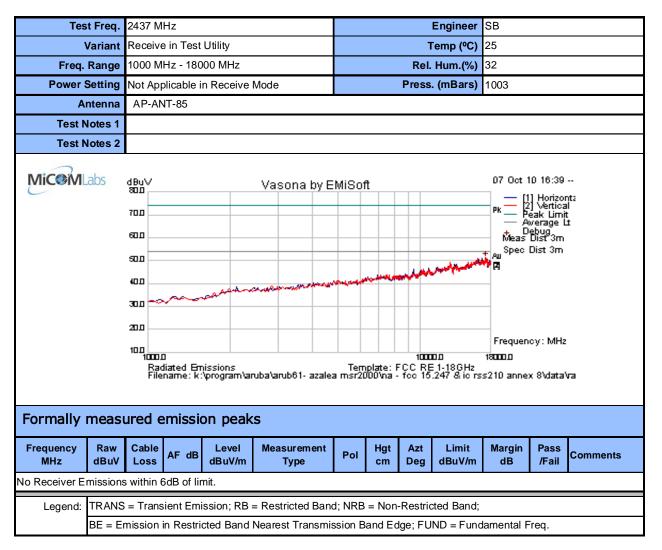
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7.3.8 AP-ANT-85 2.4GHz - Receiver Emissions



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7.3.9 AP-ANT-86D 5.8GHz - Transmitter Radiated Spurious Emissions – Above 1 GHz

	st Freq.	5745 M	Hz						Engineer	SB		
	Variant	802.11a	a; 6.5 Mb	os				Т	ſemp (⁰C)	27.5		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	16.5						Press	. (mBars)	996		
Α	ntenna	AP-AN	T-86D					Duty	Cycle (%)	100		
Test N	lotes 1	Fundan	nental at	tenuated b	y band-stop filter.							
Test N	lotes 2											
Micem	abs	dBu√ 800 600 800 800 800 800 200			Vasona by E		t 		an an an an an an an an an an an an an a	PK P D D D D D D D D D D D D D D D D D D D	10 10:15) Horizor) Vertica ebug uebug UHSAB Dist 3m Dist 3m	nta il t
			liated Err name: k:		ruba'arub61- azale:	Terr a msr2(plate: F 100 vna -	1000 FCC RE fee 15		180000 s210 anne:	x 8\data\	va
Formally	measu	Rac File	liated Err name: k:			Terr a msr2(iplate: F 100 ma -				x 8\data\	va
Formally Frequency MHz	meası Raw dBuV	Rac File	liated Err name: k:			Terr a msr20 Pol	Hgt cm				x 8\data\ Pass /Fail	Comments
Frequency	Raw	Rac File	iiated Em name: k: emissio	on peak	S		Hgt	Azt	1-18GHz .247 & ic rs Limit	s210 anne: Margin	Pass	
Frequency MHz	Raw dBuV	Rac File	emissio	on peak Level dBuV	S Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	s210 anne: Margin dB	Pass /Fail	Comments
Frequency MHz 3829.950	Raw dBuV 60.2	Cable Loss 3.8	emission AF dB -10.1	Dn peak Level dBuV 53.9	S Measurement Type Peak Max	Pol H	Hgt cm 98	Azt Deg 275	Limit dBuV 74.0	s210 anne: Margin dB -20.1	Pass /Fail Pass	Comments RB
Frequency MHz 3829.950 3829.94996	Raw dBuV 60.2 58.1	Cable Loss 3.8 3.8	emission AF dB -10.1 -10.1	Dn peak Level dBuV 53.9 51.8	Measurement Type Peak Max Average Max	Pol H H	Hgt cm 98 98	Azt Deg 275 275 	Limit dBuV 74.0	Margin dB -20.1 -2.2 	Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 3829.950 3829.94996 5735.471	Raw dBuV 60.2 58.1 70.1	Cable Loss 3.8 4.8	inated Em name: k: emissic AF dB -10.1 -10.1 -8.2	DN Peak Level dBuV 53.9 51.8 66.6	S Measurement Type Peak Max Average Max Peak [Scan]	Pol H H V	Hgt cm 98 98 >2	Azt Deg 275 275 20dB be	Limit dBuV 74.0 54.0	S210 anne: Margin dB -20.1 -2.2 mental	Pass /Fail Pass Pass n/a	Comments RB RB Fund
Frequency MHz 3829.950 3829.94996 5735.471 5326.653	Raw dBuV 60.2 58.1 70.1 67.7	Cable Loss 3.8 3.8 4.8 4.6	inated Emi name: k: emissic AF dB -10.1 -10.1 -8.2 -9.5	Level dBuV 53.9 51.8 66.6 62.8	S Measurement Type Peak Max Average Max Peak [Scan] Peak [Scan]	Pol H H V V	Hgt cm 98 98 >2 >2	Azt Deg 275 275 	Limit dBuV 74.0 54.0 elow fundar	Margin dB -20.1 -2.2 nental nental	Pass /Fail Pass Pass n/a Pass	Comments RB RB Fund NRB
Frequency MHz 3829.950 3829.94996 5735.471 5326.653 5531.062	Raw dBuV 60.2 58.1 70.1 67.7 60.7	Cable Loss 3.8 4.8 4.6 4.6	inarme: k: missic AF dB -10.1 -10.1 -8.2 -9.5 -8.7	DN Peak Level dBuV 53.9 51.8 66.6 62.8 56.7	S Measurement Type Peak Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol H H V V V	Hgt cm 98 98 > 2 > 2 > 2 > 2	Azt Deg 275 275 20dB be 20dB be	Limit dBuV 74.0 54.0 elow fundar	s210 anne: Margin dB -20.1 -2.2 mental mental mental	Pass /Fail Pass Pass n/a Pass Pass	Comments RB RB Fund NRB NRB
Frequency MHz 3829.950 3829.94996 5735.471 5326.653 5531.062 16773.547	Raw dBuV 60.2 58.1 70.1 67.7 60.7 41.0 54.6	Cable Loss 3.8 3.8 3.8 4.8 4.6 4.6 4.6 8.6 4.9	inarde Emi name: k: emissic AF dB -10.1 -10.1 -8.2 -9.5 -8.7 1.7 -8.2	DN PEAK Level dBuV 53.9 51.8 66.6 62.8 56.7 51.4 51.3	S Measurement Type Peak Max Average Max Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol H H V V V H V	Hgt cm 98 98 > 2 > 2 > 2 > 2 > 2	Azt Deg 275 275 20dB be 20dB be 20dB be	Limit dBuV 74.0 54.0 elow fundar elow fundar	s210 anne: Margin dB -20.1 -2.2 mental mental mental mental	Pass /Fail Pass Pass n/a Pass Pass Pass Pass	Comments RB RB Fund NRB NRB NRB

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	st Freq.	5785 M	Hz						Engineer	SB		
	Variant	802.11a	a; 6.5 Mb	S				٦	ſemp (⁰C)	27.5		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	20.0						Press	. (mBars)	996		
A	ntenna	AP-AN	T-86D					Duty	Cycle (%)	100		
Test	Notes 1	Fundan	nental att	tenuated b	y band-stop filter.							
Test	Notes 2											
Miceim	Labs	dBu√ 80.0 60.0 50.0 40.0 30.0 20.0			Vasona by E	MiSo	ft		‡ ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	PK A	10 11:14.) Horizon) Vertical eak Limit werage Li ebug diffaßm Dist 3m Dist 3m	tz
Formally	meas		liated Em name: k:		ruba\arub61- azale	Tem a msr2(nplate: I 000\na -	1000 FCC RE fcc 15		18000.0 s210 anne	x 8\data\	73
Formally Frequency MHz	r measu Raw dBuV	Rac File	liated Em name: k:			Tem a msr2i	Hgt cm				x 8\data\ Pass /Fail	Comments
Frequency MHz	Raw	Rac File ured e Cable	iated Em name: k: missio	n peaks	Measurement		Hgt	FCC RE fcc 15	1-18GHz .247 & ic rs Limit	s210 anne Margin	Pass	
Frequency MHz	Raw dBuV	Cable Loss	diated Em name: k: missio AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	E 1-18GHz .247 & ic rs Limit dBuV	s210 anne Margin dB	Pass <i>I</i> Fail	Comments
Frequency MHz 11569.910	Raw dBuV 49.8	Cable Loss 6.8	diated Em name: k: missio AF dB -1.2	n peaks Level dBuV 55.4	Measurement Type Peak Max	Pol V	Hgt cm 101	Azt Deg 341	E 1-18GHz .247 & ic rs Limit dBuV 74.0	s210 anne Margin dB -18.6	Pass /Fail Pass	Comments RB
Frequency MHz 11569.910 3856.613	Raw dBuV 49.8 58.4	Cable Loss 6.8 3.8	diated Emname: k: missio AF dB -1.2 -10.2	n peaks Level dBuV 55.4 52.1	Measurement Type Peak Max Peak Max	Pol V H	Hgt cm 101 99	Azt Deg 341 338	Limit dBuV 74.0 74.0	Margin dB -18.6 -21.9	Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 11569.910 3856.613 11569.910	Raw dBuV 49.8 58.4 42.7	Cable Loss 6.8 3.8 6.8	diated Emname: k: missio AF dB -1.2 -10.2 -1.2	n peaks Level dBuV 55.4 52.1 48.3	Measurement Type Peak Max Peak Max Average Max	Pol V H V	Hgt cm 101 99 101	Azt Deg 341 338 341	Limit dBuV 74.0 54	s210 anne Margin dB -18.6 -21.9 -5.7	Pass /Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 11569.910 3856.613 11569.910 3856.613	Raw dBuV 49.8 58.4 42.7 55.4	Cable Loss 6.8 3.8 6.8 3.8	diated Emname: k: missio AF dB -1.2 -10.2 -10.2 -10.2	n peaks Level dBuV 55.4 52.1 48.3 49.0	Measurement Type Peak Max Peak Max Average Max Average Max	Pol V H V	Hgt cm 101 99 101 99 	Azt Deg 341 338 341 338 	Limit dBuV 74.0 54	Margin dB -18.6 -21.9 -5.7 -5.0 	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 11569.910 3856.613 11569.910 3856.613 5769.539	Raw dBuV 49.8 58.4 42.7 55.4 68.9	Cable Loss 6.8 3.8 6.8 3.8 4.8	diated Emname: k: missio AF dB -1.2 -10.2 -10.2 -10.2 -8.3	n peaks Level dBuV 55.4 52.1 48.3 49.0 65.4	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan]	Pol V H V H	Hgt cm 101 99 101 99 >2	Azt Deg 341 338 341 338 20dB be	Limit dBuV 74.0 54 	Margin dB -18.6 -21.9 -5.7 -5.0 mental	Pass /Fail Pass Pass Pass n/a	Comments RB RB RB RB Fund
Frequency MHz 11569.910 3856.613 11569.910 3856.613 5769.539 5531.062	Raw dBuV 49.8 58.4 42.7 55.4 68.9 64.3	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 4.6	iated Emname: k: missio AF dB -1.2 -10.2 -10.2 -10.2 -10.2 -8.3 -8.7	n peaks Level dBuV 55.4 52.1 48.3 49.0 65.4 60.2	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V H V H V V	Hgt cm 101 99 101 99 >2 >2	Azt Deg 341 338 341 338 	Limit dBuV 74.0 74.0 54 54 elow fundat	Margin dB -18.6 -21.9 -5.7 -5.0 mental mental	Pass /Fail Pass Pass Pass Pass n/a Pass	Comments RB RB RB RB Fund NRB
Frequency MHz 11569.910 3856.613 11569.910 3856.613 5769.539 5531.062 6042.084	Raw dBuV 49.8 58.4 42.7 55.4 68.9 64.3 55.9 40.4	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 4.9 8.7	diated Emname: k: missio AF dB -1.2 -10.2	n peaks Level dBuV 55.4 52.1 48.3 49.0 65.4 60.2 52.6 50.8	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V H V H V V V V	Hgt 101 99 101 99 > 2 > 2 > 2	Azt Deg 341 338 341 338 20dB be 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 elow fundar	Margin dB -18.6 -21.9 -5.7 -5.0 mental mental mental	Pass /Fail Pass Pass Pass n/a Pass Pass Pass	Comments RB RB RB RB Fund NRB NRB NRB

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 FCC 47 CFR Part 15.247 & IC RSS-210

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 ARUB61-U1 Rev A

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	st Freq.	5825 M	Hz						Engineer	SB		
	Variant	802.11a	a; 6.5 Mb)S				٦	ſemp (⁰C)	27.5		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	20.0						Press	. (mBars)	996		
A	ntenna	AP-AN	T-86D					Duty	Cycle (%)	100		
Test I	Notes 1	Fundan	nental att	tenuated b	y band-stop filter.							
Test I	Notes 2											
Micem	.abs	dBuV 800 600 800 800 800 800 800	~~~~		Vasona by E		t		, Improvedi	Pk 	10 11:25 Vertical Vertical eak Limit werage Li werage Li bist 3m Dist 3m	tz.
			name: k:		ruba'arub61- azale:	Terr a msr2i	iplate: f 000/na -	1000 FCC RE • fcc 15		18000.0	cy:MHz x 8\data\	a
Formally	meas	100 1000) Rac File	name: k:			Terr a msr2i	nplate: I DDD\na -			18000.0		a
Formally Frequency MHz	measu Raw dBuV	100 1000) Rac File	name: k:			Tem a msr21	Hgt			18000.0		Comments
Frequency	Raw	100 Rad File	missio	n peaks	Measurement		Hgt	FCC RE fee 15	1-18GHz .247 & ic rs Limit	120000 s210 anne Margin	x 8\data\ Pass	
Frequency MHz	Raw dBuV	ured e	missio	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz .247 & ic rs Limit dBuV	18000 s210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 11649.990	Raw dBuV 49.1	Loss 6.8	AF dB -1.9	n peaks Level dBuV 54.0	Measurement Type Peak Max	Pol V	Hgt cm 113	Azt Deg 158	E 1-18GHz .247 & ic rs Limit dBuV 74.0	18000 s210 anne Margin dB -20.0	x 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz 11649.990 3883.322	Raw dBuV 49.1 57.9	Cable Loss 6.8 3.8	AF dB -1.9 -10.4	Level dBuV 54.0 51.4	Measurement Type Peak Max Peak Max	Pol V H	Hgt cm 113 98	Azt Deg 158 321	Limit dBuV 74.0 74.0	Margin dB -20.0 -22.6	× 8\data\ Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 11649.990 3883.322 11649.990	Raw dBuV 49.1 57.9 40.8	Cable Loss 6.8 3.8 6.8	AF dB -1.9 -10.4 -1.9 -1.9	Level dBuV 54.0 51.4 45.7	Measurement Type Peak Max Peak Max Average Max	Pol V H	Hgt cm 113 98 113	Azt Deg 158 321 158	Limit dBuV 74.0 54	Margin dB -20.0 -22.6 -8.3	× 8\data\ Pass /Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 11649.990 3883.322 11649.990 3883.322	Raw dBuV 49.1 57.9 40.8 55.0	Cable Loss 6.8 3.8 6.8 3.8	AF dB -1.9 -10.4 -1.9 -10.4	Level dBuV 54.0 51.4 45.7 48.5	Measurement Type Peak Max Peak Max Average Max Average Max	Pol V H V	Hgt cm 113 98 113 98 	Azt Deg 158 321 158 321 	Limit dBuV 74.0 54	Margin dB -20.0 -22.6 -8.3 -5.5 	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 11649.990 3883.322 11649.990 3883.322 5803.607	Raw dBuV 49.1 57.9 40.8 55.0 63.5	Cable Loss 6.8 3.8 6.8 3.8 4.8	AF dB -1.9 -10.4 -10.4 -8.3	n peaks Level dBuV 54.0 51.4 45.7 48.5 60.0	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan]	Pol V H V H V	Hgt cm 1113 98 1113 98 >2	Azt Deg 158 321 158 321 	Limit dBuV 74.0 54 	Margin dB -20.0 -22.6 -8.3 -5.5 mental	x 8\data\ Pass Pass Pass Pass n/a	Comments RB RB RB RB Fund
Frequency MHz 11649.990 3883.322 11649.990 3883.322 5803.607 6042.084	Raw dBuV 49.1 57.9 40.8 55.0 63.5 56.3 40.7	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.9 8.7	AF dB -1.9 -10.4 -1.9 -10.4 -1.9 -10.4 -8.3 -8.2 1.4	n peaks Level dBuV 54.0 51.4 45.7 48.5 60.0 52.9 50.8	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V H V H V V V V V	Hgt cm 113 98 113 98 >2 >2 >2	Azt Deg 158 321 158 321 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 elow fundar	Margin dB -20.0 -22.6 -8.3 -5.5 mental mental	x 8\data\ Pass /Fail Pass Pass Pass Pass n/a Pass Pass Pass	Comments RB RB RB RB Fund NRB NRB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

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Variant	5745 M	Hz						Engineer	SB		
5	802.11r	n; HT-20;	6.5 MCS				Т	ſemp (⁰C)	28		
Freq. Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	30		
Power Setting	16.5						Press	. (mBars)	997		
Antenna	AP-AN	T-86D					Duty	Cycle (%)	100		
Test Notes 1	Fundam	nental att	tenuated b	y band-stop filter.							
Test Notes 2											
MiceMLabs	dBu∨ 80.0 60.0 80.0 80.0 80.0 30.0	_^^		Vasona by E		t		الاحبومي	PK 2 PK A D Weas	10 11:58] Horizor J Vertica eak Limi werage L ebug Mittaβm Dist 3m	nta Il t
Formally meas		name: k:		ruba'arub61- azale: (S	Terr a msr2(iplate: I 000 vna -	1000 FCC RE fcc 15		18000.0	cy:MHz x 8\data\	
Formally meas Frequency Raw MHz dBuV	100 10001 Rac File	name: k:			Terr a msr20 Pol	hplate: 1000'na - Hgt cm			18000.0		
Frequency Raw			on peak	(S Measurement		Hgt	FCC RE fec 15	1-18GHz .247 & ic rs Limit	120000 s210 anne Margin	x 8\data\ Pass	
Frequency Raw MHz dBuV	sured e	emissic	Dn peak	S Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	18000 s210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHzRaw dBuV3830.00559.5	Cable Loss 3.8	AF dB	Dn peak	S Measurement Type Peak Max	Pol H	Hgt cm 98	Azt Deg 277	Limit dBuV 74.0	18000 s210 anne Margin dB -20.8	x 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz Raw dBuV 3830.005 59.5 3830.005 57.2	Cable Loss 3.8 3.8	AF dB -10.1 -10.1	Dn peak Level dBuV 53.2 50.9	Measurement Type Peak Max Average Max	Pol H	Hgt cm 98 98	Azt Deg 277 	Limit dBuV 74.0	Margin dB -20.8 -3.1 	Pass /Fail Pass Pass	Comments RB RB
Frequency MHz Raw dBuV 3830.005 59.5 3830.005 57.2 5735.471 70.4	Cable Loss 3.8 3.8 4.8	AF dB -10.1 -8.2	DN Peak Level dBuV 53.2 50.9 66.9	S Measurement Type Peak Max Average Max Peak [Scan]	Pol H H V	Hgt cm 98 98 >2	Azt Deg 277 277 20dB be	Limit dBuV 74.0 	Margin dB -20.8 -3.1 mental	× 8\data\ Pass /Fail Pass Pass n/a	Comments RB RB Fund
Frequency MHz Raw dBuV 3830.005 59.5 3830.005 57.2 5735.471 70.4 5292.585 67.3	Cable Loss 3.8 3.8 4.8 4.6	AF dB -10.1 -8.2 -9.5	Dn peak Level dBuV 53.2 50.9 66.9 62.5	S Measurement Type Peak Max Average Max Peak [Scan] Peak [Scan]	Pol H H V V	Hgt cm 98 98 >2 >2	Azt Deg 277 277 20dB be	Limit dBuV 74.0 54.0 elow fundar	Margin dB -20.8 -3.1 mental mental	× 8\data\ Pass /Fail Pass n/a Pass	Comments RB RB Fund NRB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

 To:
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 To:
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Test	t Freq.	5825 M	Hz						Engineer	SB		
V	/ariant	802.11r	n; HT-20;	6.5 MCS				٦	ſemp (⁰C)	28		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	30		
Power S	Setting	20						Press	. (mBars)	997		
Ar	ntenna	AP-AN	T-86D					Duty	Cycle (%)	100		
Test N	lotes 1	Fundan	nental att	tenuated b	y band-stop filter.							
Test N	lotes 2											
MiCOM	abs	dBu∨ 800 600 800 800 400 300 2			Vasona by E		t		* , , , , , , , , , , , , , , , , , , ,	PK A PK A D D D D D D D D D D D D D	10 12:39 1) Ventica eak Limit werage Liebug offmaßm Dist 3m Dist 3m	ntz I t
Formally	measu	File	diated Em marne: k:	\program\a	ruba'arub61- azale:	Terr a msr2(iplate: F 100 vna -	1000 FCC RE fcc 15	E 1-18GHz		x 8\data\	a
Formally Frequency MHz	meas u Raw dBuV	1000J Rac File	diated Em marne: k:	\program\a		Tem a msr20 Pol	iplate: F 100 vna - Hgt cm	CC RE	E 1-18GHz		x 8\data\ Pass /Fail	Comments
Frequency	Raw	ured e	diated Em iname: k: missio	iprogramia in peaks Level	Measurement	a msr2()00\na - Hgt	CC RE fee 15	1-18GHz .247 & ic rs Limit	s210 anne Margin	Pass	
Frequency MHz	Raw dBuV	Cable Loss	missio	iprogramia n peaks Level dBuV	Measurement Type	a msr20 Pol)00∿na- Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	s210 anne Margin dB	Pass <i>I</i> Fail	Comments
Frequency MHz 5098.517	Raw dBuV 73.7	Loss 4.6	missio	vprogram va n peaks Level dBuV 69.6	Measurement Type Peak Max	Pol V	100'vna - Hgt cm 98	Azt Deg 247	Limit dBuV 74.0	Margin dB -4.5	Pass /Fail Pass	Comments RB
Frequency MHz 5098.517 11649.94	Raw dBuV 73.7 54.4	Loss 4.6 6.8	AF dB -8.8 -1.9	Vprogram Va n peaks Level dBuV 69.6 59.4	Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 98 151	Azt Deg 247 329	Limit dBuV 74.0 74.0	Margin dB -4.5 -14.7	Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 5098.517 11649.94 17899.399	Raw dBuV 73.7 54.4 42.2	Cable Loss 4.6 6.8 8.8	AF dB -8.8 -1.9 0.9	Vprogram Va In peaks Level dBuV 69.6 59.4 51.9	Measurement Type Peak Max Peak Max Peak Max	Pol V V	Hgt cm 98 151 170	Azt Deg 247 329 50	Limit dBuV 74.0 74	Margin dB -4.5 -14.7 -22.2	Pass /Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 5098.517 11649.94 17899.399 3883.342	Raw dBuV 73.7 54.4 42.2 58.2	Cable Loss 4.6 6.8 3.8	AF dB -8.8 -1.9 0.9 -10.4	Vprogram va n peaks Level dBuV 69.6 59.4 51.9 51.6	Measurement Type Peak Max Peak Max Peak Max Peak Max	Pol V V H H	Hgt cm 98 151 170 98	Azt Deg 247 329 50 317	Limit dBuV 74.0 74 74	Margin dB -4.5 -14.7 -22.2 -22.4	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 5098.517 11649.94 17899.399 3883.342 5098.517	Raw dBuV 73.7 54.4 42.2 58.2 56.7	Cable Loss 4.6 6.8 8.8 3.8 4.6	AF dB -8.8 -1.9 0.9 -10.4	vprogram va on peaks dBuV 69.6 59.4 51.9 51.6 52.5	Measurement Type Peak Max Peak Max Peak Max Peak Max Peak Max Average Max	Pol V V H H V	Hgt cm 98 151 170 98 98	Azt Deg 247 329 50 317 247	Limit dBuV 74.0 74 74 54	Margin dB -4.5 -14.7 -22.2 -22.4 -1.5	Pass /Fail Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB
Frequency MHz 5098.517 11649.94 17899.399 3883.342 5098.517 11649.940	Raw dBuV 73.7 54.4 42.2 58.2 56.7 44.1	Cable Loss 4.6 6.8 3.8 4.6 6.8	AF dB -8.8 -1.9 0.9 -10.4 -8.8 -1.9	vprogram va n peaks dBuV 69.6 59.4 51.9 51.6 52.5 49.0	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max	Pol V V H H V V	Hgt cm 98 151 170 98 98 151	Azt Deg 247 329 50 317 247 329	Limit dBuV 74.0 74 74 54 54	Margin dB -4.5 -14.7 -22.2 -22.4 -1.5 -5.0	Pass /Fail Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB
Frequency MHz 5098.517 11649.94 17899.399 3883.342 5098.517 11649.940 17899.399	Raw dBuV 73.7 54.4 42.2 58.2 56.7 44.1 29.5	Cable Loss 4.6 6.8 3.8 4.6 6.8 8.8 3.8 4.6	inarme: k: missio AF dB -8.8 -1.9 0.9 -10.4 -8.8 -1.9 0.9 0.9	Vprogram va on peaks Level dBuV 69.6 59.4 51.9 51.6 52.5 49.0 39.2	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max Average Max	Pol V V H H V V H	Hgt cm 98 151 170 98 98 151 170	Azt Deg 247 329 50 317 247 329 50	Limit dBuV 74.0 74 74 54 54 54	Margin dB -4.5 -14.7 -22.2 -22.4 -1.5 -5.0 -14.8	Pass /Fail Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB RB
Frequency MHz 5098.517 11649.94 17899.399 3883.342 5098.517 11649.940 17899.399 3883.342	Raw dBuV 73.7 54.4 42.2 58.2 56.7 44.1 29.5 53.8	Cable Loss 4.6 6.8 3.8 4.6 6.8 3.8 3.8 3.8 3.8 3.8	AF dB -8.8 -1.9 0.9 -10.4 -8.8 -1.9 0.9 -10.4 -8.8 -1.9 0.9 -10.4	Vprogram va m peaks Level dBuV 69.6 59.4 51.9 51.6 52.5 49.0 39.2 47.3	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max Average Max Average Max Average Max	Pol V V H H V V H H H	Hgt cm 98 151 170 98 98 151 170 98 151 170 98 	Azt Deg 247 329 50 317 247 329 50 317 	Limit dBuV 74.0 74 74 54 54 54	Margin dB -4.5 -14.7 -22.2 -22.4 -1.5 -5.0 -14.8 -6.7 	Pass /Fail Pass Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB RB RB
Frequency MHz 5098.517 11649.94 17899.399 3883.342 5098.517 11649.940 17899.399 3883.342 5098.517 5098.518 5098.518 5098.518 5098.518 5098.518	Raw dBuV 73.7 54.4 42.2 58.2 56.7 44.1 29.5 53.8 67.1	Cable Loss 4.6 6.8 8.8 3.8 4.6 6.8 8.8 3.8 4.6 6.8 8.8 3.8 4.6	AF dB -8.8 -1.9 0.9 -10.4 -8.8 -1.9 0.9 -10.4 -8.3 -1.9	Vprogram va on peaks Level dBuV 69.6 59.4 51.9 51.6 52.5 49.0 39.2 47.3 63.6	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max Peak Iscan]	Pol V V H H V V V H H V V V V V V V V V V	Hgt cm 98 151 170 98 151 170 98 151 170 98 >2	Azt Deg 247 329 50 317 247 329 50 317 	Limit dBuV 74.0 74 74 54 54 54 54 54 54 	Margin dB -4.5 -14.7 -22.2 -22.4 -1.5 -5.0 -14.8 -6.7 mental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass n/a	Comments RB RB RB RB RB RB RB RB RB RB Fund
Frequency MHz 5098.517 11649.94 17899.399 3883.342 5098.517 11649.940 17899.399 3883.342 5098.517 1649.940 5098.517 6280.607 6246.493	Raw dBuV 73.7 54.4 42.2 58.2 56.7 44.1 29.5 53.8 67.1 61.4	Cable Loss 4.6 6.8 3.8 4.6 6.8 3.8 4.6 5.0	AF dB -8.8 -1.9 0.9 -10.4 -8.8 -1.9 0.9 -10.4 -8.8 -1.9 0.9 -10.4 -8.8 -1.9 0.9 -10.4	Vprogram va on peaks Level dBuV 69.6 59.4 51.9 51.6 52.5 49.0 39.2 47.3 63.6 59.7	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max Peak [Scan]	Pol V V H H V V H H V V V V V V V V V V V	Hgt cm 98 151 170 98 151 170 98 151 170 98 >2 >2 >2	Azt Deg 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 247 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 50 317 247 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 329 50 317 317 50 317 50 317 50 50 317 50 50 317 50 50 317 50 50 50 50 50 50 50 50 50 50 50 50 50	Limit dBuV 74.0 74.0 74 54 54 54 54 54 54 54 54	Margin dB -4.5 -14.7 -22.2 -22.4 -1.5 -5.0 -14.8 -6.7 mental mental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB RB RB RB RB RB RB RB RB RB RB RB RB
Frequency MHz 5098.517 11649.94 17899.399 3883.342 5098.517 11649.940 17899.399 3883.342 5098.517 1649.940 17899.399 3883.342 5036.07 6246.493 17488.978	Raw dBuV 73.7 54.4 42.2 58.2 56.7 44.1 29.5 53.8 67.1 61.4 48.9	Cable Loss 4.6 6.8 8.8 3.8 4.6 6.8 8.8 3.8 4.6 6.8 8.8 3.8 4.6 6.8 8.8 3.8 4.8 5.0 8.8	AF dB -8.8 -1.9 0.9 -10.4 -8.8 -1.9 0.9 -10.4 -8.3 -6.7 1.5 -6.7	Vprogram va n peaks Level dBuV 69.6 59.4 51.9 51.6 52.5 49.0 39.2 47.3 63.6 59.7 59.2	Measurement Type Peak Max Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V V H H V V V H H V V V H H V V V H	Hgt cm 98 151 170 98 151 170 98 151 170 98 22 > 2 > 2 > 2	Azt Deg 247 329 50 317 247 329 50 317 247 329 50 317 	Limit dBuV 74.0 74.0 74 54 54 54 54 54 54 54 54 60w fundar	Margin dB -4.5 -14.7 -22.2 -22.4 -1.5 -5.0 -14.8 -6.7 mental mental mental	Pass /Fail Pass Pass Pass Pass Pass Pass n/a Pass n/a	Comments RB RB RB RB RB RB RB RB RB RB RB RB RB

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Tes	st Freq.	5755 M	Hz						Engineer	SB		
١	Variant	802.11r	n; HT-40;	; 13.5 MCS	6			Т	ſemp (⁰C)	28.5		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	30		
Power	Setting	15						Press.	. (mBars)	998		
Α	ntenna	AP-AN	T-86D					Duty	Cycle (%)	100		
Test N	lotes 1	Fundan	nental att	tenuated b	y band-stop filter.							
Test N	lotes 2											
MiC@M Formally			liated Em name: k:		Vasona by E				00	РК 20000	10 13:56) Horizor) Vertica eak Limit verage L ebug uffind from Dist 3m Dist 3m cy: MHz x 8\data	nta I t
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
3836.621	58.3	3.8	-10.2	51.9	Peak Max	н	101	373	74.0	-22.1	Pass	RB
3836.621	55.4	3.8	-10.2	49.0	Average Max	Н	101	373	54.0	-5.0	Pass	RB
5735.471	70.2	4.8	-8.2	66.7	Peak [Scan]	V					n/a	Fund
5258.517	67.2	4.6	-9.5	62.4	Peak [Scan]	V	> 2	0dB be	elow fundar	mental	Pass	NRB
5531.062	60.5	4.6	-8.7	56.5	Peak [Scan]	V	> 2	0dB be	elow fundar	nental	Pass	NRB
17318.637	40.9	8.7	1.7	51.3	Peak [Scan]	Н	> 2	0dB be	elow fundar	nental	Pass	NRB
5973.948	53.8	4.9	-8.2	50.4	Peak [Scan]	V	> 2	0dB be	elow fundar	mental	Pass	NRB
Legend:	TX = T											

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Tes	st Freq.	5785 M	Hz						Engineer	SB		
	Variant	802.11r	n; HT-40;	; 13.5 MCS	6			٦	emp (°C)	28.5		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	30		
Power	Setting	20						Press	. (mBars)	998		
A	ntenna	AP-AN	NT-86D					Duty	Cycle (%)	100		
Test N	Notes 1	Fundan	nental att	tenuated b	y band-stop filter.	•						
Test N	Notes 2											
MiCem	.abs	dBuv 300 700 500 400 300 200			Vasona by E		t t		t turesset	PK A PK A D D D D D C D D D D D D D D D D D D D	10 14:21) Horizor) Vertica eak Umit werage U lebug Jimaβm Dist 3m Dist 3m	ntz I t
Formally	measu	File	diated Em marne: k:	\program\a	ruba'arub61- azale:	Terr a msr2t	iplate: F JDDVna -	FCC RE	E 1-18GHz		x 8\data\	га
Formally Frequency MHz	measo Raw dBuV	Rac File	diated Em marne: k:	\program\a		Tem a msr2i	Hgt cm	FCC RE	E 1-18GHz		x 8\data\ Pass /Fail	Comments
Frequency	Raw	Rac File ured e Cable	diated Em iname: k: missio	iprogramian n peaks Level	Measurement	a msr2i)00\na - Hgt	Azt	1-18GHz .247 & ic rs Limit	s210 anne Margin	Pass	
Frequency MHz	Raw dBuV	Rac File	diated Em marne: k: missio	iprogramia n peaks Level dBuV	Measurement Type	Pol)00∿na- Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	s210 anne Margin dB	Pass <i>I</i> Fail	Comments
Frequency MHz 11569.985	Raw dBuV 49.6	Cable Loss 6.8	diated Em mame: k: missio AF dB -1.2	hprogram var n peaks Level dBuV 55.2	Measurement Type Peak Max	Pol V	100'ma - Hgt cm 149	Azt Deg	Limit dBuV 74.0	Margin dB -18.8	Pass /Fail Pass	Comments RB
Frequency MHz 11569.985 3856.633	Raw dBuV 49.6 59.4	Cable Loss 6.8 3.8	AF dB -1.2 -10.2	Vprogram Val on peaks Level dBuV 55.2 53.0	Measurement Type Peak Max Peak Max	Pol V H	Hgt cm 149 98	Azt Deg 158 323	Limit dBuV 74.0 74.0	Margin dB -18.8 -21.0	Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 11569.985 3856.633 17354.970	Raw dBuV 49.6 59.4 45.4	Cable Loss 6.8 3.8 8.7	AF dB -1.2 -10.2 2.1	hprogram val m peaks dBuV 55.2 53.0 56.2	Measurement Type Peak Max Peak Max Peak Max	Pol V H	Hgt cm 149 98 111	Azt Deg 158 323 327	Limit dBuV 74.0 74	Margin dB -18.8 -21.0 -17.8	Pass /Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 11569.985 3856.633 17354.970 11569.985	Raw dBuV 49.6 59.4 45.4 41.6	Cable Loss 6.8 3.8 8.7 6.8	AF dB -1.2 -10.2 2.1 -1.2	Vprogram Val m peaks Level dBuV 55.2 53.0 56.2 47.2	Measurement Type Peak Max Peak Max Peak Max Average Max	Pol V H H V	Hgt cm 149 98 111 149	Azt Deg 158 323 327 158	Limit dBuV 74.0 74 54	Margin dB -18.8 -21.0 -17.8 -6.8	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 11569.985 3856.633 17354.970 11569.985 3856.633	Raw dBuV 49.6 59.4 45.4 41.6 56.0	Cable Loss 6.8 3.8 8.7 6.8 3.8	AF dB -1.2 -10.2 2.1 -1.2 -10.2 2.1	vprogram val m peaks dBuV 55.2 53.0 56.2 47.2 49.6	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max	Pol V H H V H	Hgt cm 149 98 111 149 98 111	Azt Deg 158 323 327 158 323 327	Limit dBuV 74.0 74 54 54	Margin dB -18.8 -21.0 -17.8 -6.8 -4.4 -9.0	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB RB
Frequency MHz 11569.985 3856.633 17354.970 11569.985 3856.633 17354.970	Raw dBuV 49.6 59.4 45.4 41.6 56.0 34.2	Cable Loss 6.8 3.8 8.7 6.8 3.8 8.7 6.8 3.8 8.7	AF dB -1.2 -10.2 2.1 -1.2 -10.2 2.1	hprogram values in peaks dBuV 55.2 53.0 56.2 47.2 49.6 45.0	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max	Pol V H H H H	Hgt cm 149 98 111 149 98 111	Azt Deg 158 323 327 158 323 327	Limit dBuV 74.0 74 54 54 54	Margin dB -18.8 -21.0 -17.8 -6.8 -4.4 -9.0	Pass /Fail Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB
Frequency MHz 11569.985 3856.633 17354.970 3856.633 17354.970 3856.633 5344.962	Raw dBuV 49.6 59.4 45.4 45.4 34.2 76.0	Cable Loss 6.8 3.8 8.7 6.8 3.8 8.7 4.6	Jiated Emmana missio AF dB -1.2 -10.2 2.1 -10.2 2.1 -9.4	Vprogram val on peaks Level dBuV 55.2 53.0 56.2 47.2 49.6 45.0 71.3	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	Pol V H H H V V	Hgt cm 149 98 111 149 98 111 22 	Azt Deg 158 323 327 158 323 327 20dB be 	Limit dBuV 74.0 74 54 54 54	Margin dB -18.8 -21.0 -17.8 -6.8 -4.4 -9.0 mental 	Pass /Fail Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB RB RB RB NRB
Frequency MHz 11569.985 3856.633 17354.970 3856.633 17354.970 5345.970 5344.962 5769.539	Raw dBuV 49.6 59.4 45.4 41.6 56.0 34.2 76.0 71.1	Cable Loss 6.8 3.8 8.7 6.8 3.8 8.7 4.6 4.8	Jiated Emmana missio AF dB -1.2 -10.2 2.1 -1.2 -10.2 2.1 -1.2 -10.2 -10.2 -10.2 -10.2 -10.2 -10.3	vprogram val m peaks dBuV 55.2 53.0 56.2 47.2 49.6 45.0 71.3 67.6	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V H H H V V V V V	Hgt cm 149 98 111 149 98 111 22 > 2	Azt Deg 158 323 327 158 323 327 158 323 327 00B be 20dB be	Limit dBuV 74.0 74.0 74 54 54 54 elow funda	Margin dB -18.8 -21.0 -17.8 -6.8 -4.4 -9.0 mental mental	Pass /Fail Pass Pass Pass Pass Pass Pass n/a	Comments RB RB RB RB RB RB RB NRB Fund
Frequency MHz 11569.985 3856.633 17354.970 3856.633 17354.970 5344.962 5769.539 5531.062	Raw dBuV 49.6 59.4 45.4 41.6 56.0 34.2 76.0 71.1 67.5	Cable Loss 6.8 3.8 8.7 6.8 3.8 8.7 6.8 4.6 4.8	AF dB -1.2 -10.2 -10.2	Vprogram val m peaks Level dBuV 55.2 53.0 56.2 47.2 49.6 45.0 71.3 67.6 63.5	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V H H V H V V V V V	Hgt cm 149 98 111 149 98 111 >2 >2 >2 >2	Azt Deg 158 323 327 158 323 327 20dB be 20dB be	Limit dBuV 74.0 74.0 74 54 54 54 54 54 54 elow fundar	Margin dB -18.8 -21.0 -17.8 -6.8 -4.4 -9.0 mental mental mental	Pass /Fail Pass Pass Pass Pass Pass Pass n/a Pass	Comments RB RB RB RB RB RB RB RB RB RB RB NRB Fund NRB
Frequency MHz 11569.985 3856.633 17354.970 3856.633 17354.970 5365.633 5344.962 5769.539 5531.062 6076.152	Raw dBuV 49.6 59.4 45.4 45.6 56.0 34.2 76.0 71.1 67.5 59.6	Cable Loss 6.8 3.8 8.7 6.8 3.8 4.6 4.9	Jiated Emmana: missio AF dB -1.2 -10.2 2.1 -1.2 -10.2 2.1 -1.2 -10.2 2.1 -1.2 -10.2 2.1 -7.9	Vprogram val m peaks Level dBuV 55.2 53.0 56.2 47.2 49.6 45.0 71.3 67.6 63.5 56.6	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol V H H V H V V V V V V	Hgt cm 149 98 111 149 98 111 >2 >2 >2 >2 >2 >2	Azt Deg 158 323 327 158 323 327 158 323 327 20dB be 20dB be 20dB be	Limit dBuV 74.0 74.0 74 54 54 54 elow fundar elow fundar	Margin dB -18.8 -21.0 -17.8 -6.8 -4.4 -9.0 mental mental mental mental	Pass /Fail Pass Pass Pass Pass Pass Pass n/a Pass Pass	Comments RB RB RB RB RB RB RB NRB Fund NRB NRB
Frequency MHz 11569.985 3856.633 17354.970 11569.985 3856.633 17354.970 5345.970 5344.962 5769.539 5531.062 6076.152 6450.902	Raw dBuV 49.6 59.4 45.4 41.6 56.0 34.2 76.0 71.1 67.5 59.6 54.2	Cable Loss 6.8 3.8 8.7 6.8 3.8 8.7 4.6 4.8 4.6 4.9 5.1	AF dB -1.2 -10.2 2.1 -10.2 2.1 -10.2 2.1 -10.2 2.1 -1.2 -10.2 2.1 -1.2	Vprogram val m peaks Level dBuV 55.2 53.0 56.2 47.2 49.6 45.0 71.3 67.6 63.5 56.6 52.5	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol V H H V H V V V V V V V V V	Hgt cm 149 98 111 149 98 111 >2 >2 >2 >2 >2 >2 >2 >2	Azt Deg 158 323 327 158 323 327 20dB be 20dB be 20dB be	Limit dBuV 74.0 74.0 74 54 54 54 54 54 54 0w fundation elow fundation elow fundation	Margin dB -18.8 -21.0 -17.8 -6.8 -4.4 -9.0 mental mental mental mental mental mental mental	Pass /Fail Pass Pass Pass Pass Pass Pass n/a Pass Pass Pass	Comments RB RB RB RB RB RB RB RB RB RB NRB Fund NRB NRB NRB
Frequency MHz 11569.985 3856.633 17354.970 3856.633 17354.970 5344.962 5769.539 5531.062 6076.152 6450.902 17897.796	Raw dBuV 49.6 59.4 45.4 41.6 56.0 34.2 76.0 71.1 67.5 59.6 54.2 40.0 50.3 TX = T	Cable Loss 6.8 3.8 8.7 6.8 3.8 8.7 4.6 4.9 5.1 8.8 5.2	AF dB -1.2 -10.2 -10.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2	Aprogram and Aprogram and Ap	Measurement Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol V H H V H H V V V V V V V V V V V V V	Hgt cm 149 98 111 149 98 111 >2 >2 >2 >2 >2 >2 >2 >2 >2 >2 >2 >2 >2	Azt Deg 158 323 327 158 323 327 158 323 327 20dB be 20dB be 20dB be 20dB be 20dB be	Limit dBuV 74.0 74.0 74.0 74 54 54 54 54 6low fundar elow fundar elow fundar elow fundar	Margin dB -18.8 -21.0 -17.8 -6.8 -4.4 -9.0 mental mental mental mental mental mental mental mental mental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	Comments RB RB RB RB RB RB RB NRB NRB NRB NRB NR

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	st Freq.	5815 M	Hz						Engineer	SB		
	Variant	802.11r	n; HT-40	; 13.5 MCS	6			٦	[−] emp (ºC)	28.5		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	30		
Power	Setting	20						Press	. (mBars)	998		
A	ntenna	AP-AN	T-86D					Duty	Cycle (%)	100		
Test	Notes 1	Fundan	nental at	tenuated b	y band-stop filter.							
Test	Notes 2											
Micem	Labs	dBuV 800 600 800 400 300			Vasona by E		t		ي الإسماد الإلار ال	Pk A A A A A A	10 14:41 -] Horizon] Vertical eak Limit werage Li ebug dimaβm Dist 3m	tz
Formally	measu		diated Err marne: k:		ruba\arub61- azale:	Terr a msr2t	iplate: f 000'na -	1000 FCC RE fcc 15		18000.0	cy:MHz x8\data\	а
Formally Frequency MHz	meas Raw dBuV	1000J Rac File	diated Err marne: k:			Terr a msr2t Pol	hplate: 1 000 vna - Hgt cm			18000.0		a Comments
Frequency	Raw	ured e	diated Em iname: k: missio	n peaks	Measurement		Hgt	FCC RE fee 15	1-18GHz .247 & ic rs Limit	130000 ss210 anne Margin	x 8\data\ Pass	
Frequency MHz	Raw dBuV	ured e	diated Err marne: k: missio AF dB	o n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	130000 s210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 17867.845	Raw dBuV 42.4	Loss 8.8	diated Em marne: k: missio AF dB 0.9	n peaks Level dBuV 52.1	Measurement Type Peak Max	Pol V	Hgt cm 141	Azt Deg 254	Limit dBuV 74.0	12000 10	x 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz 17867.845 3876.648	Raw dBuV 42.4 57.7	Cable Loss 8.8 3.8	Missio AF dB 0.9 -10.3	Evel dBuV 52.1 51.2	Measurement Type Peak Max Peak Max	Pol V H	Hgt cm 141 98	Azt Deg 254 314	Limit dBuV 74.0 74.0	Margin dB -21.9 -22.8	Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 17867.845 3876.648 17867.845	Raw dBuV 42.4 57.7 29.5	Cable Loss 8.8 3.8 8.8	diated Em marne: k: missio AF dB 0.9 -10.3 0.9	Example 2 Level dBuV 52.1 51.2 39.3	Measurement Type Peak Max Peak Max Average Max	Pol V H V	Hgt cm 141 98 141 98	Azt Deg 254 314 254 314	Limit dBuV 74.0 54	Margin dB -21.9 -22.8 -14.8 -6.0	Pass /Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 17867.845 3876.648 17867.845 3876.648	Raw dBuV 42.4 57.7 29.5 54.5	Cable Loss 8.8 3.8 3.8 3.8	diated Em marne: k: missio AF dB 0.9 -10.3 0.9 -10.3	Level dBuV 52.1 51.2 39.3 48.0	Measurement Type Peak Max Peak Max Average Max Average Max	Pol V H V	Hgt cm 141 98 141 98	Azt Deg 254 314 254 314	Limit dBuV 74.0 54 54	Margin dB -21.9 -22.8 -14.8 -6.0	Pass /Fail Pass Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 17867.845 3876.648 17867.845 3876.648 5088.176	Raw dBuV42.457.729.554.571.0	Cable Loss 8.8 3.8 3.8 4.6	diated Err marne: k: missio AF dB 0.9 -10.3 0.9 -10.3 -8.8	Den peaks Level dBuV 52.1 51.2 39.3 48.0 66.9	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan]	Pol V H V H	Hgt cm 141 98 141 98 >2 	Azt Deg 254 314 254 314 20dB be 	Limit dBuV 74.0 54 54	Margin dB -21.9 -22.8 -14.8 -6.0 mental	Pass /Fail Pass Pass Pass Pass Pass	Comments RB RB RB RB NRB
Frequency MHz 17867.845 3876.648 17867.845 3876.648 5088.176 5803.607	Raw dBuV 42.4 57.7 29.5 54.5 71.0 66.9	10000 Rac File Cable Loss 8.8 3.8 3.8 3.8 4.6 4.8	diated Emmanae: k: missio AF dB 0.9 -10.3 0.9 -10.3 -8.8 -8.3	Den peaks Level dBuV 52.1 51.2 39.3 48.0 66.9 63.4	Measurement Type Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V H V H V H	Hgt cm 141 98 141 98 >2 >2	Azt Deg 254 314 254 314 20dB be 20dB be	Limit dBuV 74.0 74.0 54 elow funda	Margin dB -21.9 -22.8 -14.8 -6.0 mental mental	× 8\data\u Pass Pass Pass Pass Pass Pass n/a	Comments RB RB RB RB NRB Fund
Frequency MHz 17867.845 3876.648 17867.845 3876.648 5088.176 5803.607 6076.152	Raw dBuV 42.4 57.7 29.5 54.5 71.0 66.9 58.2 42.9	Cable Loss 8.8 3.8 8.8 3.8 4.6 4.8 4.9 8.7	diated Emmanae: k: missio AF dB 0.9 -10.3 0.9 -10.3 -8.8 -8.3 -7.9 2.0	Level dBuV 52.1 51.2 39.3 48.0 66.9 63.4 55.2 53.7	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V H V H V H V V V	Hgt cm 141 98 141 98 >2 >2 >2 >2	Azt Deg 254 314 254 314 254 314 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 elow fundar elow fundar	Margin dB -21.9 -22.8 -14.8 -6.0 mental mental mental	× 8\data\v Pass Pass Pass Pass Pass Pass n/a Pass Pass Pass	Comments RB RB RB RB NRB Fund NRB NRB

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

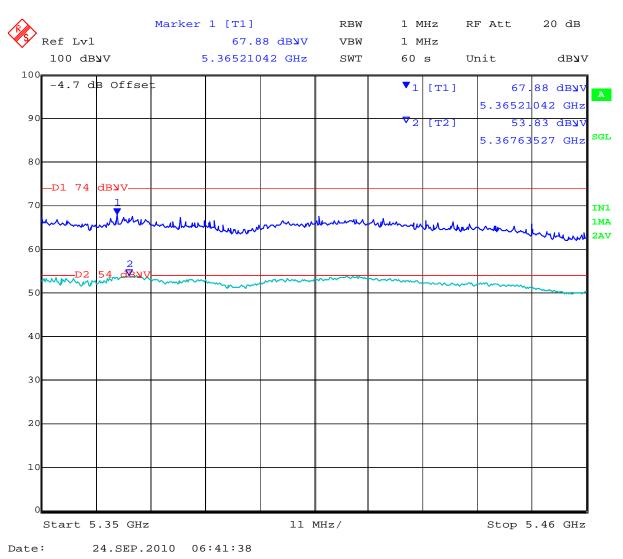
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7.3.10 AP-ANT-86D 5.8GHz - Transmitter Band Edge Emissions

ARUB61 Band Edge 5745 MHz; 802.11a 5350-5460 MHz ART=16.5



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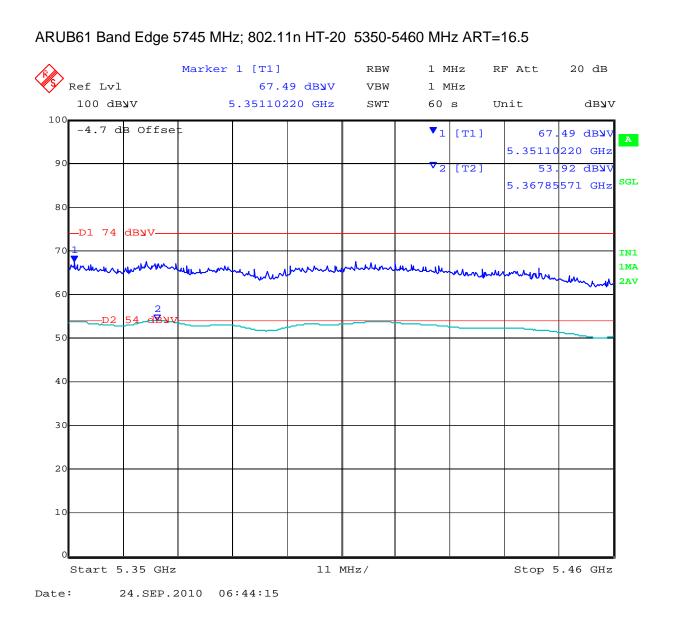
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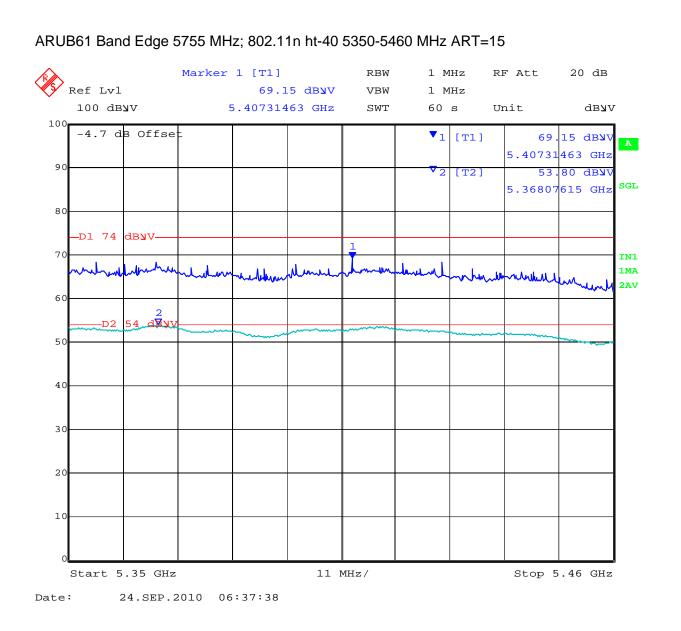
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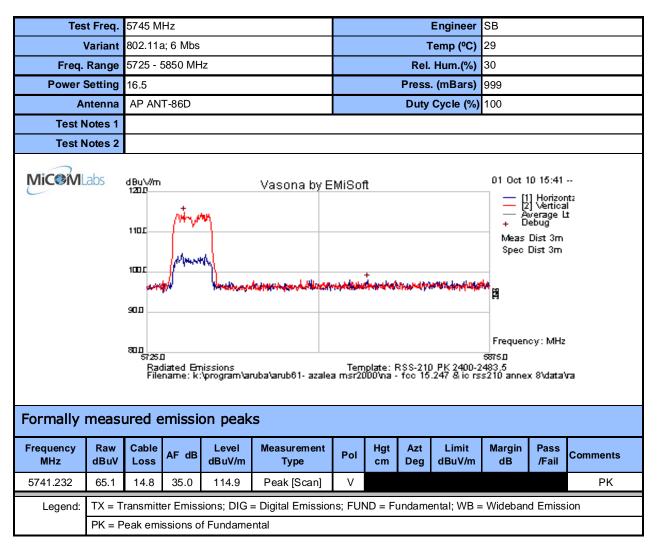
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7.3.11 AP-ANT-86D 5.8GHz - Transmitter Peak Emissions



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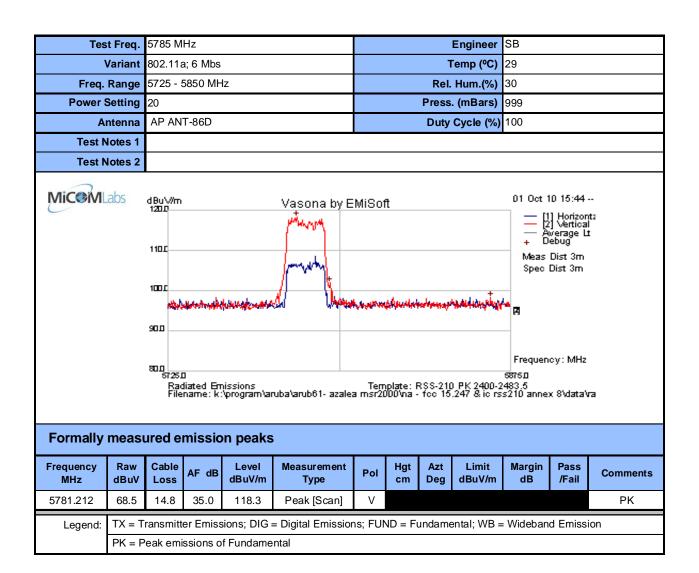
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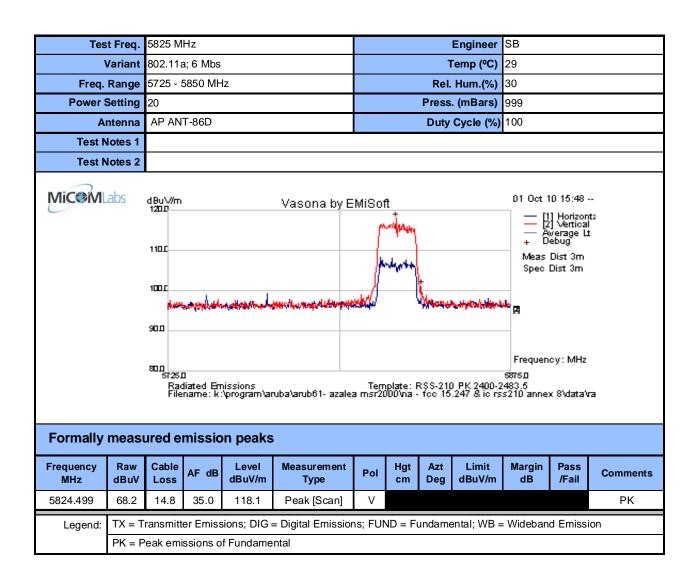
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										-		
Test	t Freq.	5745 M	Hz						Engineer	SB		
V	/ariant	802.11r	n HT-20;	6.5 MCS				Т	ſemp (⁰C)	29		
Freq.	Range	5725 - 5	5850 MH	lz				Rel.	Hum.(%)	30		
Power S	Setting	16.5						Press	. (mBars)	999		
Ar	ntenna	AP AN	T-86D					Duty	Cycle (%)	100		
Test N	otes 1					•						
Test N	otes 2											
MiCOM	abs	dBu\Vim 1200 11000 10000 9000 9000 9000 9000 90		-la betering	Vasona by E	hongul it a fai	<u>in t</u> raidh		. (비소 석수관) () PK 2400-2 .247 & ic rs	Heas Spec	10 15:52) Horizor) Vertica verage L lebug Dist 3m Dist 3m Dist 3m x 8\data	ntz il ±
Formally r	measi	ured e	missi	on peak	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
5738.527	65.2	14.8	35.0	114.9	Peak [Scan]	V						PK
Legend:				-	= Digital Emissio	ns; FUI	ND = Fu	undame	ental; WB =	Wideban	d Emiss	ion
	PK = P	eak emi	ssions o	f Fundame	ntal							

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Tes	t Freq.	5785 MHz					Engineer SB						
١	/ariant	802.11n HT-20; 6.5 MCS						٦	ſemp (⁰C)) 29			
Freq.	Range	5725 - 5850 MHz						Rel.	Hum.(%)	30			
Power S	Setting	20						Press	. (mBars)	999			
Aı	ntenna	AP ANT-86D						Duty	Cycle (%)	100			
Test N	lotes 1												
Test N	lotes 2												
MiC@M		900 800 57251]	issions program\ar	Vasona by E	n; b.t.n.dy	es.Minter	RSS-210 fcc 15		Heas Spec	10 15:56 1) Henticor Vertage Li Vebug Dist 3m Dist 3m Dist 3m x 8\data\	tz t	
Formally	meası	ured e	missio	n peaks	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	Comments	
5777.605	67.5	14.8	35.0	117.2	Peak [Scan]	V						PK	
Legend:	ТХ – Т	K = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission											

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T			1-						-	00		
		5825 M							J	SB		
N N	/ariant	802.11r	HT-20;	6.5 MCS				1	ſemp (⁰C)	29		
Freq.	Range	5725 - 5	5850 MH	z				Rel.	Hum.(%)	30		
Power S	Setting	20						Press	. (mBars)	999		
Ar	ntenna	AP AN	Г-86D					Duty	Cycle (%)	100		
Test N	otes 1											
Test N	otes 2											
MiCGML	abs	900 800 57251	1		Vasona by E	je Jen skoži	****			⊢ [2 ⊢ A + D Meas Spec Frequen S875 J	10 15:58 Horizor Vertical werage L by Dist 3m Dist 3m Dist 3m cy: MHz x 8\data\	rtz I t
Formally	meası	ured ei	nissio	n 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
5816.984	67.2	14.8	35.0	117.0	Peak [Scan]	V						pk
Legend:	TX = T	ransmitte	er Emiss	ions; DIG :	= Digital Emissio	ns: FUI	ND = Fi	undame	ental; WB =	Wideban	d Emiss	ion
	-			-, -	5	, .			- , -			

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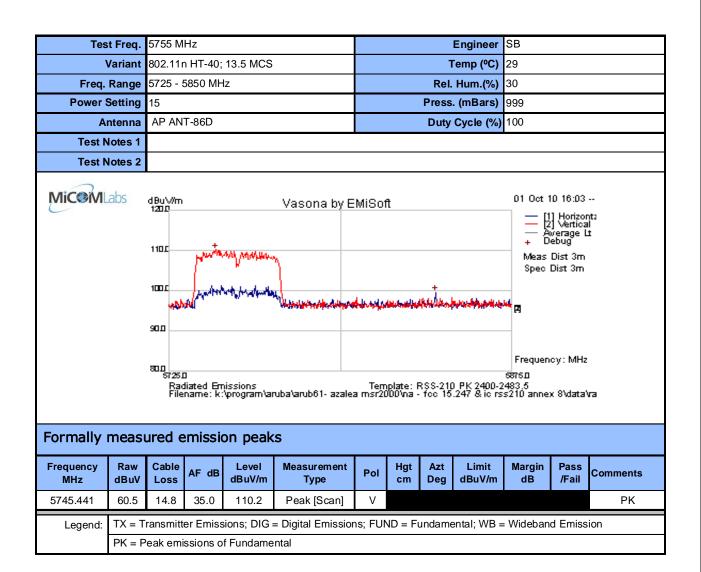
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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

 Serial #:
 ARUB61-U1 Rev A

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						-				1		
Tes	t Freq.	5785 M	Hz						Engineer	SB		
١	/ariant	802.11r	n HT-40;	13.5 MCS				٦	ſemp (⁰C)	29		
Freq.	Range	5725 - క	5850 MH	lz				Rel.	Hum.(%)	30		
Power S	Setting	20						Press	. (mBars)	999		
Ar	ntenna	AP AN	IT-86D					Duty	Cycle (%)	100		
Test N	lotes 1											
Test N	otes 2											
MiCOM		dBu\Vim 1200 1100 1000 900 900 57251 Rac File	liated En name: k:	nding (Vasona by I	hinstorius		4564 855-210 fcc 15		Heas Spec	10 16:06 - 1) Horizon 2) Vertical werage Li werage Li bist 3m Dist 3m Dist 3m dist 3m x 8\data\	tz t
Formally	meası	ured e	missio	on 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
5777.004	66.6	14.8	35.0	116.4	Peak [Scan]	V						pk
					District Exclusion							
Legend:	IX = I	ransmitt	er Emiss	sions; DiG :	 Digital Emission 	ns; Fur	ND = FU	undame	ental; WB =	: Wideban	d Emissi	on

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	_											
Tes		5815 M								SB		
	Variant	802.11r	ה HT-40;	13.5 MCS				٦	ſemp (⁰C)	29		
Freq.	Range	5725 - 5	5850 MH	lz				Rel.	Hum.(%)	30		
Power	Setting	20						Press	. (mBars)	999		
Α	ntenna	AP AN	IT-86D					Duty	Cycle (%)	100		
Test N	Notes 1											
Test N	Notes 2											
MiC®M	abs	dBu\//m 1200 1100 500 57251 Rac File	5	h u di u nu di hissions 'program ar	Vasona by E		when the) PK 2400-2 .247 & ic rs	Heas Spec	10 16:08] Horizon] Vertical werage Li lebug Dist 3m Dist 3m Dist 3m	ta
Formally	measu	ured e	missio	n peaks	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	Comments
				115.6	Deals (Cees)	V						nk
5800.451	65.8	14.8	35.0	115.6	Peak [Scan]	V						pk
5800.451 Legend:					= Digital Emission	. ·	ND = Fi	undame	ental; WB =	- Wideban	d Emissi	•

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 Title:
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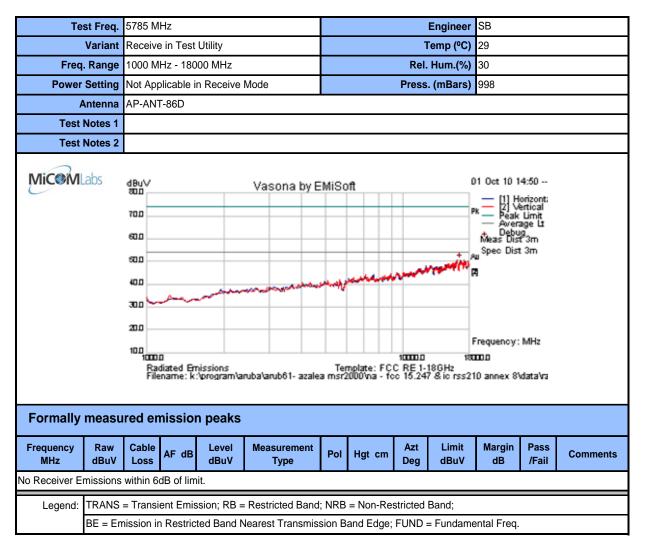
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7.3.12 AP-ANT-86D 5.8GHz - Receiver Emissions



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7.3.13 AP-ANT-89 5.8GHz - Transmitter Radiated Spurious Emissions – Above 1 GHz

	st Freq.	5745 M	Hz						Engineer	SB		
	Variant	802.11a	a; 6.5 Mb)S				٦	emp (⁰C)	25		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	18						Press	. (mBars)	1003		
Α	ntenna	AP-AN	T-89					Duty	Cycle (%)	100		
Test I	Notes 1	Funda	mental a	ttenuated b	by band-stop filter							
Test N	Notes 2											
Micem	Labs	dBuV Son Ton Eon Son Son Son			Vasona by E		i		+ 	[1 [2 [2] 10 10:31) Horizor) Verticz eak Limi werage L ebug difa Bm Dist 3m	nta al t	
Formally	meas		diated Err marne: k:		ruba'arub61- azale; (S	Terr a msr2(iplate: F 100 vna -	1000 FCC RE fcc 15		18000.0	cy:MHz x 8\data'	
Formally Frequency MHz	Raw dBuV	1000 10000 Rac File	diated Err marne: k:			Terr a msr21	plate: F 000 vna - Hgt cm			18000.0		
Frequency MHz	Raw		diated Em iname: k: emissio	on peak	(S Measurement		Hgt	Azt	1-18GHz 247 & ic rs Limit	130000 s210 anne: Margin	x 8\data' Pass	Vra
Frequency MHz	Raw dBuV	ured e	emissio	on peak Level dBuV	S Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	18000 s210 anne: Margin dB	x 8\data Pass /Fail	Comments
Frequency MHz 11489.960 3829.99	Raw dBuV 52.1	Cable Loss 6.8	diated Em name: k: emission AF dB -1.1	Dn peak Level dBuV 57.8	S Measurement Type Peak Max	Pol V	Hgt cm 194	Azt Deg 356	1-18GHz 247 & ic rs Limit dBuV 74.0	12000 \$210 anne: Margin dB -16.3	x 8\data Pass /Fail Pass	Vra Comments RB
Frequency MHz 11489.960 3829.99	Raw dBuV 52.1 57.3	Cable Loss 6.8 3.8	AF dB -1.1 -10.1	Dn peak	Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 194 100	Azt Deg 356 362	Limit dBuV 74.0 74.0	Margin dB -16.3 -23.0	× 8\data Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 11489.960 3829.99 11489.960	Raw dBuV 52.1 57.3 42.7	Cable Loss 6.8 3.8 6.8	diated Em marme: k: emissic AF dB -1.1 -10.1 -1.1	DN Peak Level dBuV 57.8 51.0 48.3	CS Measurement Type Peak Max Peak Max Average Max	Pol V V V	Hgt cm 194 100 194	Azt Deg 356 362 356	Limit dBuV 74.0 54	Margin dB -16.3 -23.0 -5.7	Research Pass /Fail Pass Pass Pass	Vra Comments RB RB RB
Frequency MHz 11489.960 3829.99 11489.960 3829.990	Raw dBuV 52.1 57.3 42.7 53.6	Cable Loss 6.8 3.8 6.8 3.8	diated Eminarne: k: emissic AF dB -1.1 -10.1 -10.1 -10.1	Level dBuV 57.8 51.0 48.3 47.4	Average Max	Pol V V V V V	Hgt cm 194 100 194 100 	Azt Deg 356 362 362 	Limit dBuV 74.0 54	Margin dB -16.3 -23.0 -5.7 -6.6 	Rest average and the second se	Va Comments RB RB RB RB RB
Frequency MHz 11489.960 3829.99 11489.960 3829.990 5735.471	Raw dBuV 52.1 57.3 42.7 53.6 84.3	Cable Loss 6.8 3.8 6.8 3.8 4.8	diated Em marme: k: emissic AF dB -1.1 -10.1 -10.1 -10.1 -8.2	Level dBuV 57.8 51.0 48.3 47.4 80.8	S Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan]	Pol V V V V V V V	Hgt cm 194 100 194 100 > 2	Azt Deg 356 362 356 362 20dB be	Limit dBuV 74.0 54 	Margin dB -16.3 -23.0 -5.7 -6.6 mental	× 8\data Pass /Fail Pass Pass Pass n/a	Vra Comments RB RB RB RB RB RB Fund
Frequency MHz 11489.960 3829.99 11489.960 3829.990 5735.471 5292.585	Raw dBuV 52.1 57.3 42.7 53.6 84.3 71.6	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6	diated Em marme: k: emissic -1.1 -10.1 -10.1 -10.1 -8.2 -9.5	Dn peak Level dBuV 57.8 51.0 48.3 47.4 80.8 66.7	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V V V V V V V V V V V V V V	Hgt cm 194 100 194 100 > 2 > 2 > 2	Azt Deg 356 362 356 362 	Limit dBuV 74.0 74.0 54 54 elow fundat	Margin dB -16.3 -23.0 -5.7 -6.6 mental mental	× 8\data Pass /Fail Pass Pass Pass Pass n/a Pass	Comments RB RB RB RB RB RB RB RD RB
Frequency MHz 11489.960 3829.99 11489.960 3829.990 5735.471 5292.585 6212.425 5496.994	Raw dBuV 52.1 57.3 42.7 53.6 84.3 71.6 62.7	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 5.0	diated Em marme: k: emissic AF dB -1.1 -10.1 -10.1 -10.1 -8.2 -9.5 -7.0	Level dBuV 57.8 51.0 48.3 47.4 80.8 66.7 60.7	S Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V V V V V V V V V V V V V V V V V V	Hgt cm 194 100 194 100 >2 >2 >2 >2	Azt Deg 356 362 356 362 362 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 elow funda	Margin dB -16.3 -23.0 -5.7 -6.6 mental mental mental	× 8\data Pass /Fail Pass Pass Pass Na Pass Pass	Comments RB RB RB RB RB RB RB RB NRB
Frequency MHz 11489.960 3829.99 11489.960 3829.990 5735.471 5292.585 6212.425	Raw dBuV 52.1 57.3 42.7 53.6 84.3 71.6 62.7 64.4	Cable Loss 6.8 3.8 6.8 3.8 4.6 5.0 4.6	diated Em marme: k: emissic -1.1 -10.1 -10.1 -10.1 -8.2 -9.5 -7.0 -8.7	Level dBuV 57.8 51.0 48.3 47.4 80.8 66.7 60.7 60.2	S Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol V	Hgt cm 194 100 194 100 > 2 > 2 > 2 > 2 > 2	Azt Deg 356 362 356 362 356 362 20dB be 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 elow funda	Margin dB -16.3 -23.0 -5.7 -6.6 mental mental mental mental mental mental	× 8\data Pass /Fail Pass Pass Pass Pass n/a Pass Pass Pass	ra Comments RB RB RB RB RB RB RB RB RB RB RB RB RB
Frequency MHz 11489.960 3829.99 11489.960 3829.990 5735.471 5292.585 6212.425 5496.994 17284.569	Raw dBuV 52.1 57.3 42.7 53.6 84.3 71.6 62.7 64.4 41.6 52.3	Imp Rac Rac Rac Rac Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 5.0 4.6 5.0	diated Emmane: k: emissic -1.1 -10.1 -10.1 -10.1 -10.1 -10.1 -8.2 -9.5 -7.0 -8.7 1.6 -6.8	Level dBuV 57.8 51.0 48.3 47.4 80.8 66.7 60.2 51.8 50.6	S Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol V	Hgt cm 194 100 194 100 > 2 > 2 > 2 > 2 > 2 > 2	Azt Deg 356 362 356 362 362 362 362 362 0dB be 20dB be 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 elow fundation elow fundation elow fundation elow fundation	Margin dB -16.3 -23.0 -5.7 -6.6 mental mental mental mental mental mental mental mental	× 8\data Pass /Fail Pass Pass Pass Pass Pass Pass Pass Pas	ra Comments RB RB RB RB RB RB RB RB NRB NRB NRB NRB

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	st Freq.	5785 M	Hz						Engineer	SB		
	Variant	802.11	a; 6.5 Mb)S				٦	Temp (ºC)	25		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	. Hum.(%)	32		
Power	Setting	20						Press	. (mBars)	1003		
А	ntenna	AP-AN	T-89					Duty	Cycle (%)	100		
Test N	Notes 1	Funda	mental at	ttenuated l	by band-stop filter	-						
Test N	Notes 2											
MiC®iM	Labs	dBu∨ 900 700 700 500 500 500 500 500 500 500 5		jissions program'a	Vasona by E		luloure			— [2 — Р Рк → О Феа⊊ Spec Фи 7 Г Frequen 1800000	10 10:46 1) Horizor 2) Vertica eak Limit werage Li ebug diffagm Dist 3m cy: MHz	ntz il t
Formally	meas	ured e	missio					- fcc 15	i.247 & ic rs	szib anne	x ovjatav	га
Formally Frequency MHz	meas Raw dBuV	u red e Cable Loss	MISSIO			Pol	Hgt	Azt Deg	Limit	Margin dB	Pass /Fail	Comments
Frequency	Raw	Cable		n peaks	Measurement		Hgt	Azt	Limit	Margin	Pass	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass <i>I</i> Fail	Comments
Frequency MHz 11569.829	Raw dBuV 50.1	Cable Loss 6.8	AF dB -1.2	n peaks Level dBuV 55.7	Measurement Type Peak Max	Pol V	Hgt cm 174	Azt Deg 0	Limit dBuV 74.0	Margin dB -18.3	Pass /Fail Pass	Comments RB
Frequency MHz 11569.829 3856.663	Raw dBuV 50.1 57.3	Cable Loss 6.8 3.8	AF dB -1.2 -10.2	Level dBuV 55.7 50.9	Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 174 176	Azt Deg 0	Limit dBuV 74.0 74.0	Margin dB -18.3 -23.1	Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 11569.829 3856.663 11569.829	Raw dBuV 50.1 57.3 37.4	Cable Loss 6.8 3.8 6.8	AF dB -1.2 -10.2 -1.2	Level dBuV 55.7 50.9 43.1	Measurement Type Peak Max Peak Max Average Max	Pol V V V	Hgt cm 174 176 174	Azt Deg 0 0	Limit dBuV 74.0 74.0 54	Margin dB -18.3 -23.1 -11.0	Pass /Fail Pass Pass Pass	Comments RB RB RB
Frequency MHz 11569.829 3856.663 11569.829 3856.663	Raw dBuV 50.1 57.3 37.4 53.3	Cable Loss 6.8 3.8 6.8 3.8	AF dB -1.2 -10.2 -1.2 -10.2	Level dBuV 55.7 50.9 43.1 47.0	Measurement Type Peak Max Peak Max Average Max Average Max	Pol V V V	Hgt cm 174 176 174 176 	Azt Deg 0 0 0 0 0	Limit dBuV 74.0 74.0 54	Margin dB -18.3 -23.1 -11.0 -7.0 	Pass /Fail Pass Pass Pass Pass	Comments RB RB RB RB RB
Frequency MHz 11569.829 3856.663 11569.829 3856.663 5769.539	Raw dBuV 50.1 57.3 37.4 53.3 82.8	Cable Loss 6.8 3.8 6.8 3.8 4.8	AF dB -1.2 -10.2 -1.2 -10.2 -8.3	n peaks Level dBuV 55.7 50.9 43.1 47.0 79.3	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan]	Pol V V V V V V V	Hgt cm 174 176 174 176 >2	Azt Deg 0 0 0 0 0 0 0 0 0 20dB be	Limit dBuV 74.0 74.0 54 54 	Margin dB -18.3 -23.1 -11.0 -7.0 mental	Pass /Fail Pass Pass Pass n/a	Comments RB RB RB RB RB Fund
Frequency MHz 11569.829 3856.663 11569.829 3856.663 5769.539 5156.313	Raw dBuV 50.1 57.3 37.4 53.3 82.8 72.1	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6	AF dB -1.2 -10.2 -10.2 -10.2 -8.3 -9.0	Level dBuV 55.7 50.9 43.1 47.0 79.3 67.8	Measurement Type Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V V V V V V V V V V V	Hgt cm 174 176 174 176 > 2 > 2	Azt Deg 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Limit dBuV 74.0 74.0 54 54 elow fundar	Margin dB -18.3 -23.1 -11.0 -7.0 mental mental	Pass /Fail Pass Pass Pass Pass n/a Pass	Comments RB RB RB RB RB Fund NRB
Frequency MHz 11569.829 3856.663 11569.829 3856.663 5769.539 5156.313 6212.425	Raw dBuV 50.1 57.3 37.4 53.3 82.8 72.1 63.0	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 5.0	AF dB -1.2 -10.2 -1.2 -10.2 -8.3 -9.0 -7.0	n peaks Level dBuV 55.7 50.9 43.1 47.0 79.3 67.8 60.9	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V V V V V V V V V V V V V V V	Hgt cm 174 176 174 176 >2 >2 >2 >2	Azt Deg 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Limit dBuV 74.0 74.0 54 54 elow funda	Margin dB -18.3 -23.1 -11.0 -7.0 mental mental mental	Pass /Fail Pass Pass Pass n/a Pass Pass	Comments RB RB RB RB Fund NRB NRB
Frequency MHz 11569.829 3856.663 11569.829 3856.663 5769.539 5156.313 6212.425 11561.122	Raw dBuV 50.1 57.3 37.4 53.3 82.8 72.1 63.0 50.8	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 5.0 6.8	AF dB -1.2 -10.2 -10.2 -10.2 -8.3 -9.0 -7.0 -7.0	n peaks Level dBuV 55.7 50.9 43.1 47.0 79.3 67.8 60.9 56.5	Measurement Type Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V V V V V V V V V V	Hgt cm 174 176 174 176 > 2 > 2 > 2 > 2	Azt Deg 0 0 0 0 0 0 0 0 20dB be 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 54 elow fundation	Margin dB -18.3 -23.1 -11.0 -7.0 -7.0 mental mental mental	Pass /Fail Pass Pass Pass Pass Pass Pass Pass	Comments RB RB RB RB RB Fund NRB NRB NRB
Frequency MHz 11569.829 3856.663 11569.829 3856.663 5769.539 5156.313 6212.425 11561.122 6314.629	Raw dBuV 50.1 57.3 37.4 53.3 82.8 72.1 63.0 50.8 57.0	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 5.0 6.8 5.0	AF dB -1.2 -10.2 -1.2 -1.2 -8.3 -9.0 -7.0 -1.2 -6.8	n peaks Level dBuV 55.7 50.9 43.1 47.0 79.3 67.8 60.9 56.5 55.2	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol V	Hgt cm 174 176 174 176 >2 >2 >2 >2 >2 >2 >2	Azt Deg 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Limit dBuV 74.0 74.0 54 54 elow fundan elow fundan	Margin dB -18.3 -23.1 -11.0 -7.0 mental mental mental mental	Pass /Fail Pass Pass Pass n/a Pass Pass Pass Pass	Comments RB RB RB RB Fund NRB NRB NRB NRB
Frequency MHz 11569.829 3856.663 11569.829 3856.663 5769.539 5156.313 6212.425 11561.122 6314.629 17284.569	Raw dBuV 50.1 57.3 37.4 53.3 82.8 72.1 63.0 50.8 57.0 41.0	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 5.0 6.8 5.0 8.6	AF dB -1.2 -1.2 -1.2 -1.2 -8.3 -9.0 -7.0 -7.0 -1.2 -6.8 1.6	n peaks Level dBuV 55.7 50.9 43.1 47.0 79.3 67.8 60.9 56.5 55.2 51.2	Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol V H	Hgt cm 174 176 174 176 > 2 > 2 > 2 > 2 > 2 > 2 > 2 > 2 > 2 > 2 > 2 > 2 > 2 > 2	Azt Deg 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Limit dBuV 74.0 74.0 54 54 elow fundar elow fundar elow fundar elow fundar	Margin dB -18.3 -23.1 -11.0 -7.0 mental mental mental mental mental mental	Pass /Fail Pass Pass Pass n/a Pass Pass Pass Pass	Comments RB RB RB RB RB Fund NRB NRB NRB NRB NRB

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	eq.	5825 M	Hz						Engineer	SB		
Varia	ant	802.11a	a; 6.5 Mb	S				٦	ſemp (⁰C)	25		
Freq. Ran	ge	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power Sett	ing	20						Press	. (mBars)	1003		
Anten	na	AP-AN	Г-89					Duty	Cycle (%)	100		
Test Note	s 1	Fundar	mental at	ttenuated b	by band-stop filter							
Test Note	s 2											
Formally me			liated Em name: k:		Vasona by E		+ 	1000 FCC RE fee 15		— [] — [2 — [2 — [2 — [2 — [2 — [2 — [2 — [2] — [2 — [2] — [10 11:06 -) Horizon) Vertical eak Limit verage Li ebug verage Limit ebug bist 3m Dist 3m cy: MHz x 8vdatav	tz :
Frequency Ra	aw uV	Cable		Level								
		Loss	AF dB	dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
	2.0		AF dB -1.9			Pol H	-			-		Comments RB
11649.925 52	2.0 2.8	Loss		dBuV	Туре		cm	Deg	dBuV	dB	/Fail	
11649.925 52 16151.744 42	-	Loss 6.8	-1.9	dBuV 56.9	Type Peak Max	Н	cm 105	Deg 20	dBuV 74.0	dB -17.1	/Fail Pass	RB
11649.925 52 16151.744 42 3883.332 55	2.8	Loss 6.8 9.0	-1.9 1.1	dBuV 56.9 52.8	Type Peak Max Peak Max	H	cm 105 157	Deg 20 0	dBuV 74.0 74.0	dB -17.1 -21.2	/Fail Pass Pass	RB RB
11649.925 52 16151.744 42 3883.332 55 11649.925 42	2.8 5.9	Loss 6.8 9.0 3.8	-1.9 1.1 -10.4	dBuV 56.9 52.8 49.3	Type Peak Max Peak Max Peak Max	H V V	cm 105 157 99	Deg 20 0 361	dBuV 74.0 74.0 74	dB -17.1 -21.2 -24.7	/Fail Pass Pass Pass	RB RB RB
11649.925 52 16151.744 42 3883.332 55 11649.925 42 16151.744 30	2.8 5.9 2.7	Loss 6.8 9.0 3.8 6.8	-1.9 1.1 -10.4 -1.9	dBuV 56.9 52.8 49.3 47.6	Type Peak Max Peak Max Peak Max Average Max	H V V H	cm 105 157 99 105	Deg 20 0 361 20	dBuV 74.0 74.0 74 54	dB -17.1 -21.2 -24.7 -6.4	/Fail Pass Pass Pass Pass	RB RB RB RB
11649.925 52 16151.744 42 3883.332 55 11649.925 42 16151.744 30 3883.332 51 3883.332 51	2.8 5.9 2.7 0.1	Loss 6.8 9.0 3.8 6.8 9.0	-1.9 1.1 -10.4 -1.9 1.1	dBuV 56.9 52.8 49.3 47.6 40.1	Type Peak Max Peak Max Peak Max Average Max Average Max	H V V H V	cm 105 157 99 105 157	Deg 20 0 361 20 0	dBuV 74.0 74.3 74.4 54 54	dB -17.1 -21.2 -24.7 -6.4 -13.9	/Fail Pass Pass Pass Pass Pass	RB RB RB RB RB
11649.925 52 16151.744 42 3883.332 55 11649.925 42 16151.744 30 3883.332 51 5803.607 73	2.8 5.9 2.7).1	Loss 6.8 9.0 3.8 6.8 9.0 3.8	-1.9 1.1 -10.4 -1.9 1.1 -10.4	dBuV 56.9 52.8 49.3 47.6 40.1 45.3	Type Peak Max Peak Max Peak Max Average Max Average Max Average Max	H V H V V	cm 105 157 99 105 157 99 	Deg 20 0 361 20 0 361	dBuV 74.0 74.3 74.4 54 54	dB -17.1 -21.2 -24.7 -6.4 -13.9 -8.7 	/Fail Pass Pass Pass Pass Pass Pass	RB RB RB RB RB RB
11649.925 52 16151.744 42 3883.332 55 11649.925 42 16151.744 30 3883.332 51 5803.607 73 5190.381 72	2.8 5.9 2.7 0.1 1.9 3.7	Loss 6.8 9.0 3.8 6.8 9.0 3.8 4.8	-1.9 1.1 -10.4 -1.9 1.1 -10.4 -8.3	dBuV 56.9 52.8 49.3 47.6 40.1 45.3 70.2	Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan]	H V V H V H	cm 105 157 99 105 157 99 >2	Deg 20 0 361 20 0 361 00dB bee	dBuV 74.0 74.0 74 54 54 54 54 	dB -17.1 -21.2 -24.7 -6.4 -13.9 -8.7 mental	/Fail Pass Pass Pass Pass Pass Pass n/a	RB RB RB RB RB RB Fund
11649.925 52 16151.744 42 3883.332 55 11649.925 42 16151.744 30 3883.332 51 5803.607 73 5190.381 72 5531.062 65	2.8 5.9 2.7 0.1 1.9 3.7 2.8	Loss 6.8 9.0 3.8 6.8 9.0 3.8 4.8 4.6	-1.9 1.1 -10.4 -1.9 1.1 -10.4 -8.3 -9.2	dBuV 56.9 52.8 49.3 47.6 40.1 45.3 70.2 68.3	Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan]	H > H V H V H	cm 105 157 99 105 157 99 > 2 > 2	Deg 20 0 361 20 0 361 00B be	dB uV 74.0 74.0 74 54 54 54 54 	dB -17.1 -21.2 -24.7 -6.4 -13.9 -8.7 nental nental	/Fail Pass Pass Pass Pass Pass n/a Pass	RB RB RB RB RB RB Fund NRB
11649.925 52 16151.744 42 3883.332 55 11649.925 42 16151.744 30 3883.332 51 5803.607 73 5190.381 72 5531.062 65 6246.493 54	2.8 5.9 2.7 0.1 1.9 3.7 2.8 5.8	Loss 6.8 9.0 3.8 6.8 9.0 3.8 4.8 4.6 4.6	-1.9 1.1 -10.4 -1.9 1.1 -10.4 -8.3 -9.2 -8.7	dBuV 56.9 52.8 49.3 47.6 40.1 45.3 70.2 68.3 61.8	Type Peak Max Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan]	H V V H V H V V	cm 105 157 99 105 157 99 > 2 > 2 > 2 > 2	Deg 20 0 361 20 0 361 00B be 00B be	dB uV 74.0 74.0 74 54 54 54 54 60w fundar	dB -17.1 -21.2 -24.7 -6.4 -13.9 -8.7 mental nental nental	/Fail Pass Pass Pass Pass Pass n/a Pass Pass	RB RB RB RB RB RB Fund NRB NRB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

 Serial #:
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 1st November 2010

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	st Freq.	5745 M	Hz						Engineer	SB		
	Variant	802.11r	n; HT-20;	6.5 MCS				٦	emp (⁰C)	25		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	18						Press	. (mBars)	1003		
Α	ntenna	AP-AN	Г-89					Duty	Cycle (%)	100		
Test I	lotes 1	Funda	mental at	ttenuated b	by band-stop filter							
Test M	lotes 2											
MiCem	.abs	dBu∨ 900 700 700 600 500 400			Vasona by E		t		Januar	Pk teas	10 11:20 Horizor Vertica eak Limi werage L lebug Jima Brn Dist 3m	ntz al t
Formally	meas		liated Em name: k:		ruba'arub61- azale: (S	Terr a msr2(iplate: F 100'na -	1000 FCC RE fcc 15		18000.0	ıcy:MHz x 8\data\	
	Raw dBuV	1000 10000 Rac File	liated Em name: k:			Terr a msr21	hplate: F DOVna - Hgt cm			18000.0		
Frequency MHz	Raw		iated Em name: k:	on peak	S Measurement		Hgt	Azt	1-18GHz .247 & ic rs Limit	130000 ss210 anne Margin	x 8\data\ Pass	Vra
Frequency MHz	Raw dBuV	ured e	diated Em name: k: emissio AF dB	D n peak Level dBuV	S Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	180000 ss210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 11490.010 3830.02	Raw dBuV 52.5	Cable Loss 6.8	diated Em name: k: emissic AF dB -1.1	Dn peak	S Measurement Type Peak Max	Pol V	Hgt cm 103	Azt Deg 352	1-18GHz 247 & ic rs Limit dBuV 74.0	120000 ss210 anne Margin dB -15.8	x 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz 11490.010 3830.02	Raw dBuV 52.5 57.8	Cable Loss 6.8 3.8	diated Emname: k: emission AF dB -1.1 -10.1	Con peak Level dBuV 58.2 51.5	S Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 103 133	Azt Deg 352 7	Limit dBuV 74.0 74.0	Margin dB -15.8 -22.5	× 8\data Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 11490.010 3830.02 11490.010	Raw dBuV 52.5 57.8 41.6	Cable Loss 6.8 3.8 6.8	diated Em name: k: emissic AF dB -1.1 -10.1 -1.1	DN Peak Level dBuV 58.2 51.5 47.2	S Measurement Type Peak Max Peak Max Average Max	Pol V V V V	Hgt cm 103 133 103	Azt Deg 352 7 352	Limit dBuV 74.0 54	Margin dB -15.8 -22.5 -6.8	× 8\data Pass /Fail Pass Pass Pass	Vra Comments RB RB RB RB
Frequency MHz 11490.010 3830.02 11490.010 3830.020	Raw dBuV 52.5 57.8 41.6 53.5	Cable Loss 6.8 3.8 6.8 3.8	diated Em name: k: emissic AF dB -1.1 -10.1 -10.1 -10.1	Level dBuV 58.2 51.5 47.2 47.2	Average Max Average Max	Pol V V V V V	Hgt cm 103 133 103 133 	Azt Deg 352 7 352 7 	Limit dBuV 74.0 54	Margin dB -15.8 -22.5 -6.8 -6.8 	× 8\data Pass /Fail Pass Pass Pass Pass	Va Comments RB RB RB RB RB
Frequency MHz 11490.010 3830.02 11490.010 3830.020 5735.471	Raw dBuV 52.5 57.8 41.6 53.5 85.2	Cable Loss 6.8 3.8 6.8 3.8 4.8	tiated Em name: k: emissic AF dB -1.1 -10.1 -10.1 -10.1 -8.2	DN Peak Level dBuV 58.2 51.5 47.2 47.2 81.7	S Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan]	Pol V V V V H	Hgt cm 103 133 103 133 >2	Azt Deg 352 7 352 7 	Limit dBuV 74.0 54 	Margin dB -15.8 -22.5 -6.8 -6.8 mental	× 8\data Pass /Fail Pass Pass Pass n/a	Vra Comments RB RB RB RB RB RB Fund
Frequency MHz 11490.010 3830.02 11490.010 3830.020 5735.471 5531.062	Raw dBuV 52.5 57.8 41.6 53.5 85.2 66.5	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6	tiated Emname: k: emissic AF dB -1.1 -10.1 -10.1 -10.1 -8.2 -8.7	Dn peak Level dBuV 58.2 51.5 47.2 47.2 81.7 62.5	S Measurement Type Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan]	Pol V V V H V	Hgt cm 103 133 103 133 > 2 > 2 > 2	Azt Deg 352 7 352 7 352 7 0dB be	Limit dBuV 74.0 74.0 54 54 elow fundal	Margin dB -15.8 -22.5 -6.8 mental	x 8\data Pass /Fail Pass Pass Pass Pass n/a Pass	Comments RB RB RB RB RB RB RB RB RD RB RD RB
Frequency MHz 11490.010 3830.02 11490.010 3830.020 5735.471 5531.062 6144.289 5633.267	Raw dBuV 52.5 57.8 41.6 53.5 85.2 66.5 63.9	Cable Loss 6.8 3.8 6.8 3.8 4.8 4.6 5.0	tiated Emname: k: emissic AF dB -1.1 -10.1 -10.1 -10.1 -8.2 -8.7 -7.3	DN PEAK Level dBuV 58.2 51.5 47.2 47.2 81.7 62.5 61.5	S Measurement Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V V V H V V	Hgt cm 103 133 103 133 >2 >2 >2 >2	Azt Deg 352 7 352 7 20dB be 20dB be	Limit dBuV 74.0 74.0 54 54 elow fundar	Margin dB -15.8 -22.5 -6.8 -6.8 -ender mental mental mental	× 8\data Pass /Fail Pass Pass Pass Na Pass Pass	Comments RB RB RB RB RB RB RB RB NRB
Frequency MHz 11490.010 3830.02 11490.010 3830.020 5735.471 5531.062 6144.289	Raw dBuV 52.5 57.8 41.6 53.5 85.2 66.5 63.9 57.2	Cable Loss 6.8 3.8 6.8 3.8 4.6 5.0 4.7	tiated Emname: k: emissic -1.1 -10.1 -10.1 -10.1 -8.2 -8.7 -7.3 -8.4	Level dBuV 58.2 51.5 47.2 81.7 62.5 61.5 53.5	S Measurement Type Peak Max Peak Max Average Max Average Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V	Hgt cm 103 133 103 133 > 2 > 2 > 2 > 2 > 2	Azt Deg 352 7 352 7 	Limit dBuV 74.0 74.0 54 54 elow funda	Margin dB -15.8 -22.5 -6.8 mental mental mental mental mental mental	x 8\data Pass /Fail Pass Pass Pass Pass n/a Pass Pass Pass	ra Comments RB RB RB RB RB RB RB RB NRB NRB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

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	t Freq.	5785 M	HZ						Engineer	SB		
	/ariant	802.11r	n; HT-20;	6.5 MCS				٦	ſemp (⁰C)	25		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power S	Setting	20						Press	. (mBars)	1003		
A	ntenna	AP-AN1	Г-89					Duty	Cycle (%)	100		
Test N	lotes 1	Fundar	mental at	tenuated b	by band-stop filter							
Test N	lotes 2											
MiCOM	abs	dBu√ 90.0 70.0 60.0 80.0 40.0 30.0 ≫ 20.0	~~~~~		Vasona by E		ī		Josephanet	2 2 2 2 	10 11:36 -] Horizon] Vertical eak Limit werage Li ebug Dist 3m Dist 3m	tz
		1000 100001 Bjac		issions .		Тед	iglate: l	1000 FÇC Re		18000.0	cy:MHz	
Formally Frequency MHz	measu Raw dBuV	10001 Rac File	liated Em name: k:		nuba'arub61- azales Measurement Type	Terr a msr20	plate: 1 000'na - Hgt cm			18000.0		Comment
Frequency	Raw	ured e	liated Em name: k: missio	n peaks	Measurement		Hgt	FCC RE	1-18GHz .247 & ic rs Limit	120000 s210 anne: Margin	x 8\data\r Pass	
Frequency MHz	Raw dBuV	Loss	name: k: missio AF dB	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	18000 s210 anne: Margin dB	x 8\data\ Pass /Fail	Comment
Frequency MHz 17842.966 3856.593	Raw dBuV 42.7	Loss 8.8	missio	n peaks Level dBuV 52.1	Measurement Type Peak Max	Pol V	Hgt cm 138	Azt Deg	Limit dBuV 74.0	Margin dB -21.9	x 8\data\v Pass /Fail Pass	Comment RB
Frequency MHz 17842.966 3856.593	Raw dBuV 42.7 56.4	Cable Loss 8.8 3.8	AF dB 0.6 -10.2	n peaks Level dBuV 52.1 50.0	Measurement Type Peak Max Peak Max	Pol V V	Hgt cm 138 196	Azt Deg 7	Limit dBuV 74.0 74.0	Margin dB -21.9 -24.0	Pass /Fail Pass Pass	Comment RB RB
Frequency MHz 17842.966 3856.593 17842.966	Raw dBuV 42.7 56.4 29.9	Cable Loss 8.8 3.8 8.8	Instead Emission AF dB 0.6 -10.2 0.6 -10.2	n peaks Level dBuV 52.1 50.0 39.3	Measurement Type Peak Max Peak Max Average Max Average Max	Pol V V V	Hgt cm 138 196 138	Azt Deg 7 0 7	Limit dBuV 74.0 54	Margin dB -21.9 -24.0 -14.7	x 8\data\v Pass /Fail Pass Pass Pass	Comment RB RB RB
Frequency MHz 17842.966 3856.593 17842.966 3856.593	Raw dBuV 42.7 56.4 29.9 52.9	Cable Loss 8.8 3.8 3.8 3.8	Interest in the second secon	n peaks Level dBuV 52.1 50.0 39.3 46.5	Measurement Type Peak Max Peak Max Average Max	Pol V V V V	Hgt cm 138 196 138 196 	Azt Deg 7 0 7 0 	Limit dBuV 74.0 54	Margin dB -21.9 -24.0 -14.7 -7.5 	Pass /Fail Pass Pass Pass Pass Pass	Comments RB RB RB RB RB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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Tes	st Freq.	5825 M	Hz						Engineer	SB		
١	Variant	802.11r	n; HT-20	; 6.5 MCS				٦	ſemp (⁰C)	25		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	20						Press	. (mBars)	1003		
А	ntenna	AP-AN	T-89					Duty	Cycle (%)	100		
Test N	Notes 1	Funda	mental a	ttenuated l	by band-stop filter					•		
Test N	Notes 2											
MiC®M	.abs	dBu∨ S00 700 500 500 300 200 1000 Rac File		iissions \program\a	Vasona by E			1000		PK D PK D PK D Spec Au Frequen 13000.0	10 11:49) Horizon (Vertical eak Limit werage Li ebug dimension dimension dimension cy: MHz x 8\data\v	tz t
Formally	measu	ured e	missio	on peaks	5							
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
16131.984	43.2	9.0	0.9	53.1	Peak Max	V	168	23	74.0	-20.9	Pass	RB
3883.339	56.1	3.8	-10.4	49.6	Peak Max	V	201	0	74.0	-24.4	Pass	RB
16131.984	29.9	9.0	0.9	39.8	Average Max	V	168	23	54	-14.2	Pass	RB
	52.6	3.8	-10.4	46.0	Average Max	V	201	0	54	-8.0	Pass	RB
3883.339		4.0	-8.3	71.2	Peak [Scan]	н					n/a	Fund
3883.339 5803.607	74.7	4.8	0.0					-	-	-		
	74.7 57.8	4.8 4.9	-8.4	54.3	Peak [Scan]	Н	> 2	20dB be	elow fundai	mental	Pass	NRB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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Tes	st Freq.	5755 M	Hz						Engineer	SB		
١	Variant	802.11r	n; HT-40	; 13.5 MCS	6			Г	⁻emp (ºC)	25		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	18						Press	. (mBars)	1003		
Α	ntenna	AP-AN ⁻	T-89					Duty	Cycle (%)	100		
Test N	lotes 1	Funda	mental a	ttenuated b	by band-stop filter							
Test N	lotes 2											
Formally			name: k:		Vasona by E			1000 FCC RE foc 15		— [2 — Р Феа⊊ Spec + Аи 7 Frequen 1300000	10 12:09 1) Vertica eak Limi werage L ebug JaseBrn Dist 3m cy: MHz x 8\data	ntz I t t
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV	Margin dB	Pass /Fail	Comments
3836.658	57.9	3.8	-10.2	51.5	Peak Max	V	197	361	74.0	-22.5	Pass	RB
3836.658	55.2	3.8	-10.2	48.8	Average Max	V	197	361	54.0	-5.2	Pass	RB
5735.471	82.3	4.8	-8.2	78.8	Peak [Scan]	V					n/a	Fund
5292.585	70.2	4.6	-9.5	65.3	Peak [Scan]	Н	> 2	20dB be	low fundar	mental	Pass	NRB
5531.062	64.4	4.6	-8.7	60.4	Peak [Scan]	Н	> 2	20dB be	elow fundar	mental	Pass	NRB
6144.289	56.3	5.0	-7.3	53.9	Peak [Scan]	Н	> 2	20dB be	elow fundar	mental	Pass	NRB
17318.637	41.2	8.7	1.7	51.6	Peak [Scan]	V	> 2	20dB be	elow fundar	mental	Pass	NRB
Legend:					= Digital Emissior hits); NRB = Non							

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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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	st Freq.	5785 M	Hz						Engineer	SB		
	Variant	802.11r	n; HT-40;	; 13.5 MCS	6			٦	ſemp (⁰C)	25		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	20						Press	. (mBars)	1003		
А	ntenna	AP-AN	T-89					Duty	Cycle (%)	100		
Test	Notes 1	Fundar	mental at	ttenuated b	by band-stop filter							
Test I	Notes 2											
MiC®M	.abs	dBu∨ 900 700 600 800 800 400 300			Vasona by E		ft		e a company	Pk deas	10 12:28 - 1) Horizon 2) Vertical eak Limit werage lebug Je	tz
		1000 10000 Rac File		iissions \program\ai	ruba'arub61- azale:	Terr a msr2i	plate: f 000\na -	1000 FCC RE fcc 15		18000.0		га
Formally	measu	10001 Rac File	liated Em name: k:			Terr a msr2i	oplate: I DDOvna -			18000.0		а
Formally Frequency MHz	measu Raw dBuV	10001 Rac File	liated Em name: k:			Tem a msr2(Pol	Hgt cm			18000.0		Comments
Frequency	Raw	ured e	name: k:	n peaks	Measurement		Hgt	Azt	1-18GHz .247 & ic rs Limit	180000 s210 anne Margin	x 8\data\r Pass	
Frequency MHz	Raw dBuV	Loss	name: k: missio	n peaks Level dBuV	Measurement Type	Pol	Hgt cm	Azt Deg	1-18GHz 247 & ic rs Limit dBuV	18000 s210 anne Margin dB	x 8\data\ Pass /Fail	Comments
Frequency MHz 3856.653	Raw dBuV 58.3	Cable Loss 3.8	missio	n peaks Level dBuV 51.9	Measurement Type Peak Max	Pol V	Hgt cm 148	Azt Deg	Limit dBuV 74.0	12000 210 anne Margin dB -22.1	x 8\data\ Pass /Fail Pass	Comments RB
Frequency MHz 3856.653 3856.653	Raw dBuV 58.3 55.7	Cable Loss 3.8 3.8	AF dB -10.2 -10.2	n peaks Level dBuV 51.9 49.3	Measurement Type Peak Max Average Max	Pol V V	Hgt cm 148 148 	Azt Deg 0 	Limit dBuV 74.0	Margin dB -22.1 -4.7 	x 8\data\u Pass /Fail Pass Pass	Comments RB RB
Frequency MHz 3856.653 3856.653 5769.539	Raw dBuV 58.3 55.7 78.8	Cable Loss 3.8 3.8 4.8	iated Em name: k: missio AF dB -10.2 -8.3	h peaks Level dBuV 51.9 49.3 75.3	Measurement Type Peak Max Average Max Peak [Scan]	Pol V V V V	Hgt cm 148 148 > 2	Azt Deg 0 0 20dB be	Limit dBuV 74.0 	Margin dB -22.1 -4.7 mental	x 8\data\u Pass /Fail Pass n/a	Comments RB RB Fund
Frequency MHz 3856.653 3856.653 5769.539 6008.016	Raw dBuV 58.3 55.7 78.8 57.1	Cable Loss 3.8 4.8 4.9	iated Em name: k: missio AF dB -10.2 -10.2 -8.3 -8.3	n peaks Level dBuV 51.9 49.3 75.3 53.7	Measurement Type Peak Max Average Max Peak [Scan] Peak [Scan]	Pol V V V	Hgt cm 148 148 > 2 > 2	Azt Deg 0 0 20dB be	Limit dBuV 74.0 54.0 elow fundar	Margin dB -22.1 -4.7 mental mental	× 8\data\u Pass /Fail Pass n/a Pass	Comments RB RB Fund NRB
Frequency MHz 3856.653 3856.653 5769.539 6008.016 17250.501	Raw dBuV 58.3 55.7 78.8 57.1 41.8 50.0	Cable Loss 3.8 3.8 4.8 4.9 8.6 5.1	Iated Emname: k: missio AF dB -10.2 -8.3 -8.3 -8.3 -6.6	n peaks Level dBuV 51.9 49.3 75.3 53.7 52.0 48.5	Measurement Type Peak Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V V V V V V V V V V V V V V V V V	Hgt cm 148 148 > 2 > 2 > 2 > 2	Azt Deg 0 0 20dB be 20dB be	Limit dBuV 74.0 54.0 elow fundar	Margin dB -22.1 -4.7 mental mental mental	× 8\data\u Pass /Fail Pass Pass Pass Pass Pass Pass	Comments RB RB Fund NRB NRB NRB

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 Title:
 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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

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 1st November 2010

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	st Freq.	5815 M	Hz						Engineer	SB		
	Variant	802.11r	n; HT-40;	; 13.5 MCS	6			٦	Гemp (⁰C)	25		
Freq.	Range	1000 M	Hz - 180	00 MHz				Rel.	Hum.(%)	32		
Power	Setting	20						Press	. (mBars)	1003		
A	ntenna	AP-AN	T-89					Duty	Cycle (%)	100		
Test I	Notes 1	Fundar	mental at	ttenuated b	by band-stop filter							
Test I	Notes 2											
MiC@M	.abs	dBu∨ 900 700 600 500 300 200	~~~~		Vasona by E	MiSot	t 		an an an an an an an an an an an an an a	— [] — Р. – Р. – Р. – Р. – Р. – Р. – Р. – Р. –	ID 12:43 -] Horizon J Vertical eak Limit verage L ebug offen Dist 3m Dist 3m	tz
		10001 Rad	- liated Err	issions \program\ai	ruba\arub61- azale:	Terr a msr2(iplate: F 100 vna -	1000 FCC RE fee 15	E 1-18GHz	18000.0 s210 anne:	x 8\data\v	га
Formally		IDDI Rac File	liated Em name: k:	iprogramia n peaks	;	Tem a msr2()00\na -	FCC RE	5 1-18GHz .247 & ic rs	s210 anne:		73
Formally Frequency MHz	measu Raw dBuV	1000 <i>1</i> Rac File	liated Em name: k:	\program\a		Tem a msr20 Pol	Hgt cm	FCC RE	E 1-18GHz		x 8\data\r Pass /Fail	Comments
Frequency	Raw	ICCOLI Rac File	name: k: missio	iprogramian n peaks Level	Measurement	a msr2(100 \na - Hgt	Azt	1-18GHz .247 & ic rs Limit	s210 anne: Margin	Pass	
Frequency MHz	Raw dBuV	Loss	missio	iprogramia n peaks Level dBuV	Measurement Type	Pol	/00∿na - Hgt cm	Azt Deg	E 1-18GHz .247 & ic rs Limit dBuV	s210 anne: Margin dB	Pass /Fail	Comment
Frequency MHz 3876.623	Raw dBuV 56.2	ITTEL Rad File Ured el Loss 3.8	missio	iprogramia n peaks Level dBuV 49.8	Measurement Type Peak Max	Pol V	Hgt cm 195	Azt Deg	E 1-18GHz .247 & ic rs Limit dBuV 74.0	Margin dB -24.2	Pass /Fail Pass	Comment RB
Frequency MHz 3876.623 3876.623	Raw dBuV 56.2 52.6	Cable Loss 3.8 3.8	AF dB -10.3 -10.3	hprogram var n peaks Level dBuV 49.8 46.2	Measurement Type Peak Max Average Max	Pol V V	Hgt cm 195 195 	Azt Deg 0 	E 1-18GHz .247 & ic rs Limit dBuV 74.0	Margin dB -24.2 -7.8 	Pass /Fail Pass Pass	Comment RB RB
Frequency MHz 3876.623 3876.623 5803.607	Raw dBuV 56.2 52.6 73.9	Cable Loss 3.8 3.8 4.8	iated Em name: k: missio AF dB -10.3 -8.3	hprogram var on peaks dBuV 49.8 46.2 70.4	Measurement Type Peak Max Average Max Peak [Scan]	Pol V V V	Hgt cm 195 195 > 2	Azt Deg 0 0 20dB be	Limit dBuV 74.0 	Margin dB -24.2 -7.8 mental	Pass /Fail Pass Pass n/a	Comment RB RB Fund
Frequency MHz 3876.623 3876.623 5803.607 6042.084	Raw dBuV 56.2 52.6 73.9 58.2	Cable Loss 3.8 3.8 4.8 4.9	Instant Image: No. missio AF dB -10.3 -10.3 -8.3 -8.2	vprogram var on peaks Level dBuV 49.8 46.2 70.4 54.9	Measurement Type Peak Max Average Max Peak [Scan] Peak [Scan]	Pol V V V H	Hgt cm 195 195 > 2 > 2	Azt Deg 0 0 20dB be	Limit dBuV 74.0 54.0 elow fundar	Margin dB -24.2 -7.8 mental mental	Pass /Fail Pass Pass n/a Pass	Comment RB RB Fund NRB
Frequency MHz 3876.623 3876.623 5803.607 6042.084 17250.501	Raw dBuV 56.2 52.6 73.9 58.2 41.1 52.6	10001 Rac File Cable Loss 3.8 3.8 4.8 4.9 8.6 5.0	Initiated Emmanane: k: missio AF dB -10.3 -8.3 -8.2 1.6 -7.0	hprogram values in peaks dBuV 49.8 46.2 70.4 54.9 51.3 50.5	Measurement Type Peak Max Average Max Peak [Scan] Peak [Scan] Peak [Scan]	Pol V V H H H	Hgt cm 195 195 > 2 > 2 > 2	Azt Deg 0 0 20dB be 20dB be	Limit dBuV 74.0 54.0 elow fundar	Margin dB -24.2 -7.8 mental mental mental	Pass /Fail Pass Pass n/a Pass Pass Pass	Comment RB RB Fund NRB NRB NRB

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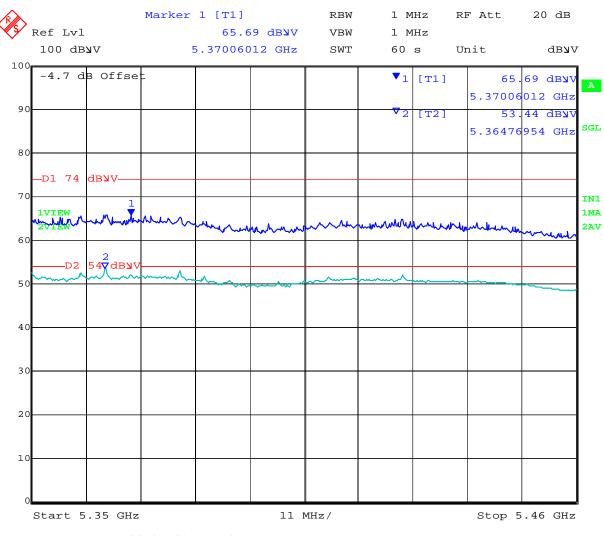
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7.3.14 AP-ANT-89 5.8GHz - Transmitter Band Edge Emissions

BE 5.35-5.46 GHz 802.11a 5745 MHz



Date:

7.OCT.2010 09:37:54

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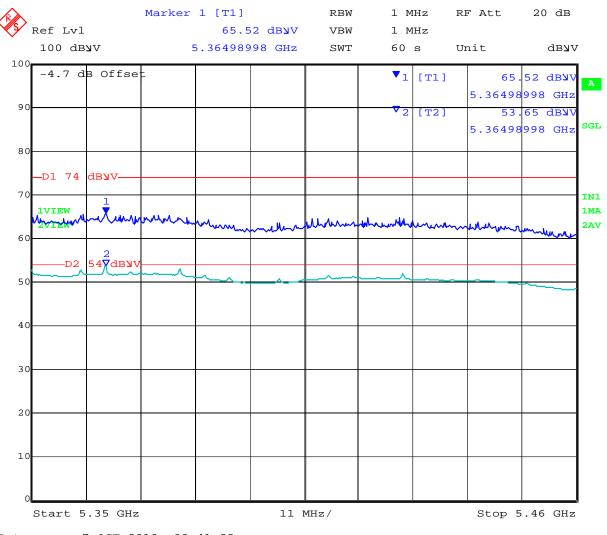
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BE 5.35-5.46 GHz 802.11n HT20 5745 MHz



Date:

7.OCT.2010 09:41:23

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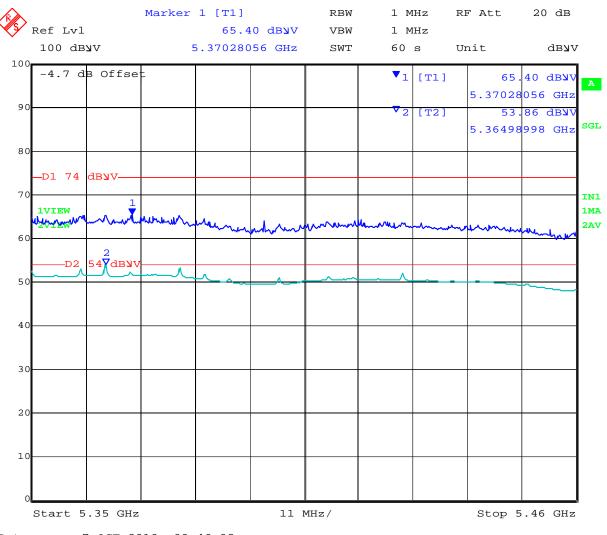
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BE 5.35-5.46 GHz 802.11n HT40 5755 MHz



Date:

7.OCT.2010 09:46:02

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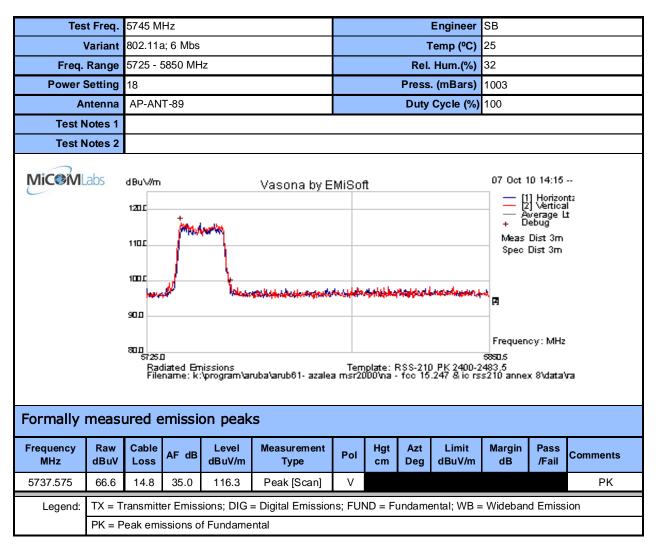
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7.3.15 AP-ANT-89 5.8GHz - Transmitter Peak Emissions



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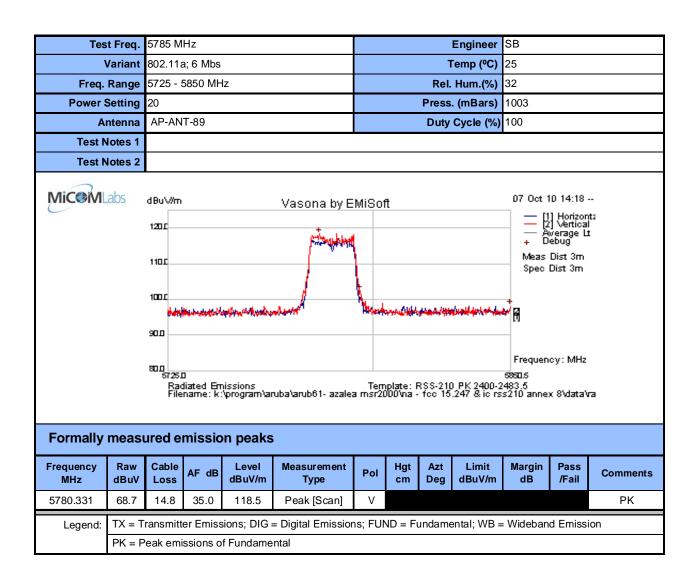
 Title:
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Tes	t Freq.	5825 M	Hz						Engineer	SB		
V	/ariant	802.11a	a; 6 Mbs					Т	emp (⁰C)	25		
Freq.	Range	5725 - 5	5850 MH	lz				Rel.	Hum.(%)	32		
Power S	Setting	20						Press	. (mBars)	1003		
Ar	ntenna	AP-AN	T-89					Duty	Cycle (%)	100		
Test N	otes 1											
Test N	otes 2											
MiCOML	abs	dBu√/m 1201 1101 5001 57251 Rad File	iated En name: k:	hissions program\ar	Vasona by E	- A	an de se de la constante	355-210 fcc 15	byterno	Heads Spec	10 14:22 - 1) Vertical verage Li lebug Dist 3m Dist 3m Dist 3m x 8\data\	dt z l t
Formally	meası	ured e	missio	n peaks	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	Comments
5817.805	68.5	14.8	35.0	118.3	Peak [Scan]	Н						PK
Legend:	TX – T	ransmitt	er Emiss	ions: DIG :	= Digital Emissior	ns: FUI		Indom	ntal: \//R	Widoban	d Emissi	ion
								illuallie	=======================================		u Lilioa	

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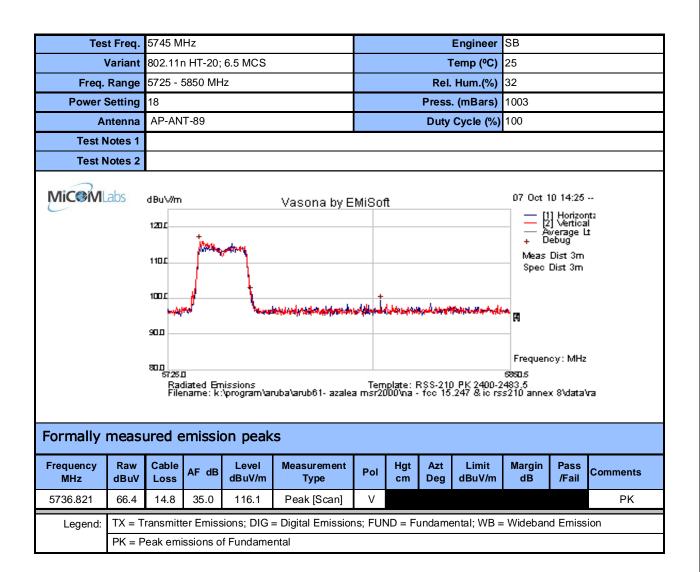
 Title:
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Test	t Freq.	5785 M	Hz						Engineer	SB				
V	/ariant	802.11r	n HT-20;	6.5 MCS				٦	ſemp (⁰C)	25				
Freq.	Range	5725 - 5	5850 MH	z				Rel.	Hum.(%)	32				
Power S	Setting	20						Press	. (mBars)	1003				
Ar	ntenna	AP-AN	T-89					Duty	Cycle (%)	100				
Test N	otes 1									•				
Test N	otes 2													
MiC®ML	abs	900 800 57251			Vasona by E	ham	\nfits		р К 2400-2 247 & ic гs	Frequen 5350.5	10 14:28 - 1) Horizon Vertical Vertical verage Li lebug Dist 3m Dist 3m Dist 3m cy: MHz x 8\data\	t:		
Formally	measu	ured ei	missio	n 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		
5777.564	68.4	14.8	35.0	118.2	Peak [Scan]	V						PK		
Legend:	TX = T	ransmitte	er Emiss	ions; DIG :	= Digital Emissior	ns; FUN	ND = Fu	undame	ental; WB =	- Wideban	d Emissi	on		
				f Fundame	5				•					

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	_	1								1		
Test	t Freq.	5825 M	Hz						Engineer	SB		
V	/ariant	802.11r	HT-20;	6.5 MCS				Т	ſemp (⁰C)	25		
Freq.	Range	5725 - 5	5850 MH	z				Rel.	Hum.(%)	32		
Power S	Setting	20						Press	. (mBars)	1003		
Ar	ntenna	AP-AN	Г-89					Duty	Cycle (%)	100		
Test N	otes 1											
Test N	otes 2											
MiCOM	abs	dBu\V/m 1201 1101 900 57251 Rad File		issions /program/ar	Vasona by E	Sign ya La Afr	und	355-21C fcc 15	No.	Heas Spec	10 14:46) Horizon Vertical werage Li ebug Dist 3m Dist 3m cy: MHz x 8\data\	tz
Formally	meası	ured ei	nissio	n 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
5817.553	66.9	14.8	35.0	116.7	Peak [Scan]	V						PK
Legend:	TX = T	ransmitte	er Emiss	ions: DIG :	= Digital Emissior	ns: FUI	ND = Fi	undame	ental: WB =	- Wideban	d Emissi	on
				-, -	5	,						

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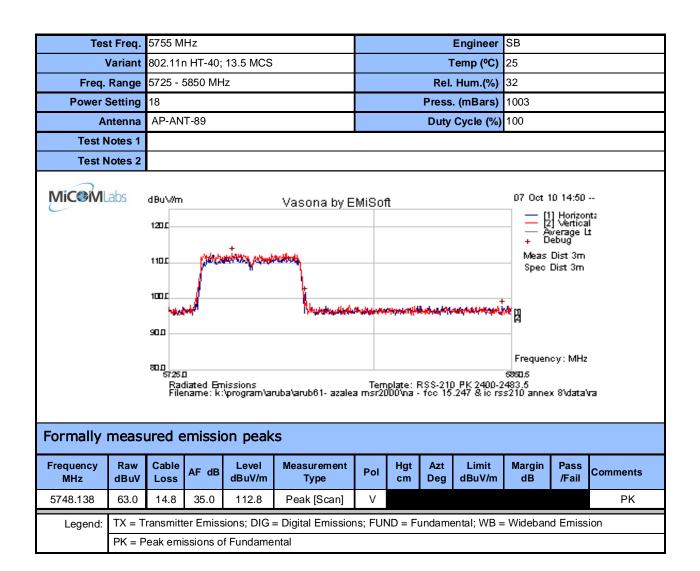
 Title:
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_	_												
		5785 M							Engineer				
v	/ariant	802.11r	n HT-40;	13.5 MCS				٦	ſemp (⁰C)	25			
Freq.	Range	5725 - 5	5850 MH	lz				Rel.	Hum.(%)	32			
Power S	Setting	20						Press	. (mBars)	1003			
Ar	ntenna	AP-AN	T-89					Duty	Cycle (%)	100			
Test N	otes 1												
Test N	otes 2												
MiCCM		dBu√/m 1201 1101 900 900 57251 Rad File	iated En name: k:	issions program\ar	Vasona by E		the starts) PK 2400-2 247 & ic rs	Heas Spec	10 14:53 : Heritical Vertical Vertical Verage Li ebug Dist 3m Dist 3m Dist 3m Very: MHz	rtz I t	
Formally	meası	ured e	missio	on 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	
5783.349	65.9	14.8	35.0	115.6	Peak [Scan]	V						PK	
Legend:	TX = T	ransmitte	er Emiss	ions; DIG :	= Digital Emissior	ns; FUN	ND = Fi	undame	ental; WB =	Wideban	d Emissi	ion	
				, -	5	· ·							

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Tes	t Freq.	5815 M	Hz						Engineer	SB		
V	/ariant	802.11r	n HT-40;	13.5 MCS				Т	ſemp (⁰C)	25		
Freq.	Range	5725 - 5	5850 MH	lz				Rel.	Hum.(%)	32		
Power S	Setting	20						Press	. (mBars)	1003		
Ar	ntenna	AP-AN	T-89					Duty	Cycle (%)	100		
Test N	otes 1											
Test N	otes 2											
MiCOM		dBu√/m 1201 1101 5001 57251 Rad File	iated En name: k:	issions program\ar	Vasona by E	ļ	::::::::::::::::::::::::::::::::::::::	RSS-210 fcc 15	0 PK 2400-2 247 & ic rs	Frequen 5850.5	10 15:00 - 1) Horizon 2) Vertical werage Li werage Li bist 3m Dist 3m Dist 3m dist 3m x 8\data\	tz t
Formally	meası	ured e	missio	on 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
5800.199	66.3	14.8	35.0	116.1	Peak [Scan]	V						PK
Legend:	TX = T	ransmitte	er Emiss	ions; DIG :	= Digital Emissior	ns; FUI	ND = Fi	undame	ental; WB =	Wideban	d Emissi	ion
				f Fundame	•	-						

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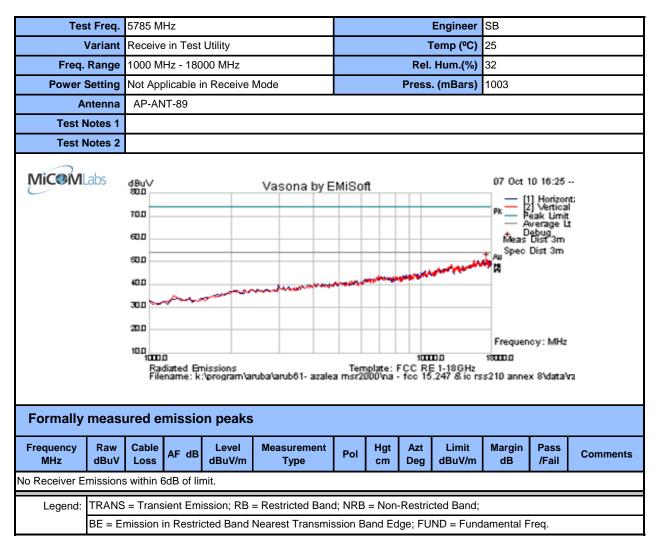
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7.3.16 AP-ANT-89 5.8GHz - Receiver Emissions



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7.4 Radiated Spurious Emissions – Digital Apparatus

Standard Reference

FCC, Part 15 Subpart B §15.109 Industry Canada ICES-003 §5

Test Procedure

Testing was performed in a 3-meter anechoic chamber. Preliminary radiated emissions were measured on every azimuth and with the receiving antenna in both horizontal and vertical polarizations. Preliminary emissions were recorded with in Spectrum Analyzer mode, using a maximum peak detector while in peak hold mode.

Emissions nearest the limits were chosen for maximization and formal measurement using a CISPR Compliant receiver. Emissions from 30 MHz – 1000 MHz are measured utilizing a CISPR compliant quasi-peak detector with a tuned receiver, using a bandwidth of 120 kHz. Emissions above 1000 MHz are measured utilizing a CISPR compliant average detector with a tuned receiver, using a bandwidth of 1 MHz. Only the highest emissions relative to the limit are listed.

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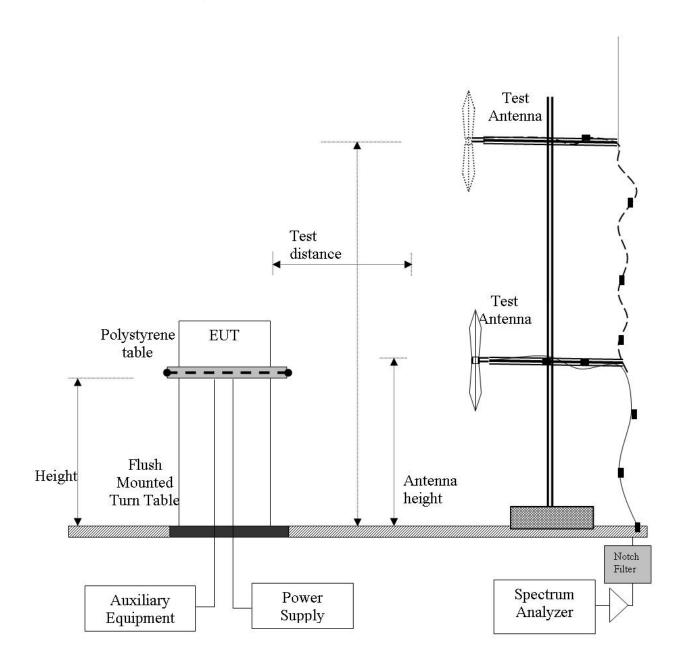
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Test Measurement Set up



Measurement set up for Radiated Emission Test

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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

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

Field Strength Calculation 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 $(dB\mu V/m) = 20 * Log (level (\mu V/m))$

40 dB μ V/m = 100 μ V/m 48 dB μ V/m = 250 μ V/m

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Specification

Radiated Spurious Emissions – Digital Apparatus

FCC, Part 15 Subpart B §15.109

A representative type or model of each digital apparatus shall be tested in accordance with the

measurement methods described in FCC Part 15; Subpart A - General and FCC Subpart B – Unintentional Radiators.

Industry Canada ICES-003

A representative type or model of each digital apparatus shall be tested in accordance with the

measurement method described in the publication referred to in Section 7.1 [Canadian Standards Association Standard CAN/CSA-CEI/IEC CISPR 22:02, "Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment."].

FCC, Part 15 Subpart B §15.109 Spurious Emissions Limits

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values.

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

Field Strength of radiated emissions for a Class A digital device are as follows.

Frequency (MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)	Measurement Distance (meters)
30-88	100	49.5	3
88-216	150	54.0	3
216-960	200	57.0	3
Above 960	500	60.0	3

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RSS-ICES §5 Spurious Emissions Limits

Class A Digital Device: The field intensity of radio noise emissions that are radiated from a Class A digital apparatus shall not exceed the limits specified in Table 5 of the publication referred to in Section 7.1, within the indicated frequency range.

Frequency range	Quasi-peak limits dB(µV/m) @	Quasi-peak limits dB(µV/m) @
MHz	10m	3m
30 to 230	40	50.5
230 to 1 000	47	57.5
NOTE 1	The lower limit shall apply at the tran	nsition frequency.
NOTE 2	Additional provisions may be require	ed for cases where interference
	occurs	

Class B Digital Device: The field intensity of radio noise emissions that are radiated from a Class B digital apparatus shall not exceed the limits specified in Table 6 of the publication referred to in Section 7.1, within the indicated frequency range.

Frequency range	Quasi-peak limits dB(µV/m) @	Quasi-peak limits dB(µV/m) @
MHz	10m	3m
30 to 230	30	40.5
230 to 1 000	37	47.5
NOTE 1	The lower limit shall apply at the tran	nsition frequency.
NOTE 2	Additional provisions may be require	ed for cases where interference
	occurs	

Laboratory Measurement Uncertainty for Spectrum Measurement

Measurement Uncertainty	+5.6/ -4.5 dB

Traceability

Method	Test Equipment Used
Work instruction WI-03	0088, 0158, 0134, 0304, 0311, 0315, 0310, 0312

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7.4.1 Measurement Results for Radiated Digital Apparatus

Tes	st Freq.	2437 M	Hz						Engineer	CSB			
١	Variant	Digital E	Emission	IS		Temp (ºC)				26.5			
Freq.	Range	30 MHz	- 1000 I	MHz		Rel. Hum.(%)				32			
Power S	Setting	Not App	licable f	or Digital E	missions			Press	. (mBars)	999			
A	ntenna	1 meter	cable te	erminated v	vith 50 Ohm loads	S							
Test N	lotes 1	EUT pl	aced in I	Receive mo	ode for Digital Err	nissions	s testing	g					
Test N	lotes 2	Shielde	d Ethern	et cable; L	inear POE supply	/							
MiC@M Formally		File	130.0 diated En name: k	nissions Vorogram'a	Vasona by E	a,		00 80 FCC 15	0.0 900 .209 RE 30. .109 & ices	Appino D Appino D Meas Spec Frequent 10000 Hz	uasi Lt lebug Dist 3m Dist 3m	nt: 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	Comments	
167.840	56.7	4.6	-18.8	42.5	Quasi Peak	н	205	258	43.5	-1.0	Pass		
205.559	54.7	4.8	-19.3	40.2	Quasi Peak	V	98	254	43.5	-3.3	Pass		
110.333	52.9	4.2	-18.2	38.9	Quasi Peak	V	102	112	43.5	-4.6	Pass		
38.946	43.7	3.6	-16.2	31.1	Quasi Peak	V	113	55	40	-9.0	Pass		
399.406	46.3	5.7	-14.5	37.5	Peak [Scan]	V	113	55	46	-8.5	Pass		
600.424	39.8	6.4	-11.3	34.8	Peak [Scan]	V	113	55	46	-11.2	Pass		
465.680	44.0	5.9	-13.0	36.8	Peak [Scan]	V	113	55	46	-9.2	Pass		
Legend:	DIG = I	Digital D	evice Er	nission; Rλ	K = Receiver Emis	ssions;	FUND	= Func	lamental Fi	requency			

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 AP-175P / MSR2K23N0-XX 802.11a/b/g/n AP

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Tes	t Freq.	2437 M	Hz						Engineer	CSB		
							Temp (°C) 26.5					
Freq.	Range								Hum.(%)			
Power	Setting	Not App	licable f	or Digital E	missions				. (mBars)			
A	ntenna											
Test N	lotes 1	EUT placed in Receive mode for Digital Emissions testing										
Test N	lotes 2											
MiC@M	abs	dBu∨ 800 600 500 300 200 100 Rac File		nissions Vorogram\ar	Vasona by E			1000		PK PK PK	10 13:20) Horizont eak Limit werage Li ebug Dist 3m Dist 3m Dist 3m oy: MHz source da	ıtı t
Formally	measi	ured ei	missio	n 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
o receiver em	nissions	above 1	GHz.									
Legend: DIG = Digital Device Emission; RX = Receiver Emissions; FUN							FUND	= Func	lamental F	requency		

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8 TEST EQUIPMENT DETAILS

Asset #	Instrument	Manufacturer	Part #	Serial #	
0134	Amplifier	Com Power	PA 122	181910	
0158	Barometer /Thermometer	Control Co.	4196	E2846	
0287	EMI Receiver	Rhode & Schwartz	ESIB 40	100201	
0252	SMA Cable	Megaphase	Sucoflex 104	None	
0310	2m SMA Cable	Micro-Coax	UFA210A-0-0787- 3G03G0	209089-001	
0312	3m SMA Cable	Micro-Coax	UFA210A-1-1181- 3G0300	209092-001	
0313	Coupler	Hewlett Packard	86205A	3140A01285	
0314	30dB N-Type Attenuator	ARRA	N9444-30	1623	
0070	Power Meter	Hewlett Packard	437B	3125U11552	
0116	Power Sensor	Hewlett Packard	8485A	3318A19694	
0117	Power Sensor	Hewlett Packard	8487D	3318A00371	
0184	Pulse Limiter	Rhode & Schwartz	ESH3Z2	357.8810.52	
0190	LISN	Rhode & Schwartz	ESH3Z5	836679/006	
0293	BNC Cable	Megaphase	1689 1GVT4	15F50B001	
0301	5.6 GHz Notch Filter	Micro-Tronics	RBC50704	001	
0302	5.25 GHz Notch Filter	Micro-Tronics	BRC50703	002	
0303	5.8 GHz Notch Filter	Micro-Tronics	BRC50705	003	
0304	2.4GHzHz Notch Filter	Micro-Tronics		001	
0307	BNC Cable	Megaphase	1689 1GVT4	15F50B002	
0335	1-18GHz Horn Antenna	ETS- Lindgren	3117	00066580	
0337	Amplifier	MiCOM Labs			
0338	Antenna	Sunol Sciences	JB-3	A052907	

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