Company: Aruba Networks, Inc.

Test of: APIN0224, APIN0225
To: FCC CFR 47 Part 15 Subpart E 15.407

Report No.: ARUB206–U19 Rev A

CONDUCTED, RADIATED TEST REPORT

CONDUCTED, RADIATED TEST REPORT

FROM

Test of: Aruba Networks, Inc. APIN0224, APIN0225
to

To: FCC CFR 47 Part 15 Subpart E 15.407

Test Report Serial No.: ARUB206–U19 Rev A

This report supersedes: NONE

Applicant:	Aruba Networks, Inc. 1344 Crossman Ave. Sunnyvale, California 94089 USA
Product Function:	Wireless Access Point
Issue Date:	30th April 2016

This Test Report is Issued Under the Authority of:

MiCOM Labs, Inc.
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Pleasanton California 94566
USA
Phone: +1 (925) 462-0304
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www.micomlabs.com

TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

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1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. Testing Accreditation

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

ilac-MRA A2LA

Accredited Laboratory

A2LA has accredited

MICOM LABS

Pleasanton, CA

for technical competence in the field of

Electrical Testing

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

Presented this 4th day of February 2016.

Senior Director of Quality & Communications
For the Accreditation Council
Certificate Number 2381.01
Valid to November 30, 2017

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

1.2. Recognition

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

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

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

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

1.3. Product Certification

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

Accredited Product Certification Body

A2LA has accredited

MICOM LABS

Pleasanton, CA

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC 17065:2012 *Requirements for bodies certifying products, processes and services*. This accreditation demonstrates technical competence for a defined scope and the operation of a management system.

Presented this 4th day of February 2016.

Senior Director of Quality & Communications
For the Accreditation Council
Certificate Number 2381.02
Valid to November 30, 2017

For the product certification schemes to which this accreditation applies, please refer to the organization's Product Certification Scope of Accreditation.

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

2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft	9th January 2016	Document updated to take into account FCC new rules; 1).. increased power 5150 – 5250 MHz 2).. introduced 5725 – 5850 MHz into the UNII band 3).. additional channel(s) straddling the 5725 MHz band-edge frequency
Rev A	30th April 2016	Initial Release
This document was originally under MiCOM Labs tracker ARUB145-U2.		
Rev A	15th May 2013	Initial Release

In the above table the latest report revision will replace all earlier versions.

3. TEST RESULT CERTIFICATE

Manufacturer:	Aruba Networks, Inc. 1344 Crossman Ave. Sunnyvale California, 94089 USA	**Tested By:**	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Model:	APIN0224, APIN0225	**Telephone:**	+1 925 462 0304
Type Of Equipment:	Wireless LAN Access Point	**Fax:**	+1 925 462 0306
S/N's:	BX0104938		
Test Date(s):	7th Dec 2015 – 7th Jan 2016	**Website:**	www.micomlabs.com

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

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

Notes:

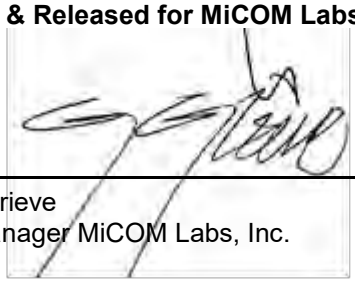
1. This document reports conditions under which testing was conducted and the results of testing performed.

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

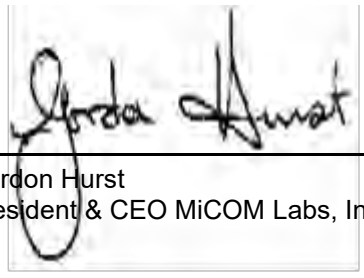
3. Test results apply only to the item(s) tested.

A2LA ACCREDITED
TESTING CERT #2381.01

Approved & Released for MiCOM Labs, Inc. by:



Graeme Grieve
Quality Manager MiCOM Labs, Inc.



Gordon Hurst
President & CEO MiCOM Labs, Inc.

4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
I	FCC 47 CFR Part 15.407	2014	Radio Frequency Devices; Subpart E –Unlicensed National Information Infrastructure Devices
II	KDB 662911	31st Oct 2013	Guidance for measurement of output emission of devices that employ single transmitter with multiple outputs or systems with multiple transmitters operating simultaneously in the same frequency band
III	KDB 905462	10th June 2015	Test guidance to demonstrate compliance for U-NII devices subject to DFS requirements.
IV	KDB 926956	19th October 2015	U-NII Device Transition Plan
V	KDB 789033	6th June 2014	General UNII Test Procedures New Rules V01
VI	KDB 644545	August 15th 2014	Guidance for IEEE 802.11ac New Rules
VII	A2LA	June 2015	R105 - Requirement's When Making Reference to A2LA Accreditation Status
VIII	ANSI C63.10	2013	American National Standard for Testing Unlicensed Wireless Devices
IX	ANSI C63.4	2009	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
X	CISPR 22	2008	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
XI	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
XII	FCC 06-96	Jun 3 2006	Memorandum Opinion and Order
XIII	M 3003	Edition 3 Nov. 2012	Expression of Uncertainty and Confidence in Measurements
XIV	FCC 47 CFR Part 2.1033	2014	FCC requirements and rules regarding photographs and test setup diagrams.

4.2. Test and Uncertainty Procedure

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

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

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

5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the Aruba Networks, Inc. APIN0224 and APIN0225 to FCC CFR 47 Part 15 Subpart E 15.407.Radio Frequency Devices; Subpart E –Unlicensed National Information Infrastructure Devices
Applicant:	Aruba Networks, Inc. 1344 Crossman Ave. Sunnyvale, California, 94089 USA
Manufacturer:	As Applicant
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton, California, 94566 USA
Test report reference number:	ARUB206–U19 Draft
Date EUT received:	4th December 2015
Standard(s) applied:	FCC CFR 47 Part 15 Subpart E 15.407 (new rules)
Dates of test (from - to):	7th December 2015 – 7th January 2016
No of Units Tested:	1
Type of Equipment:	802.11a/b/g/n/ac Wireless Access Point 3x3 Spatial Multiplexing MIMO configuration
Product Family Name:	Wireless Access Point
Model(s):	APIN0224, APIN0225
Location for use:	Indoor
Declared Frequency Range(s):	5150 - 5250; 5250 - 5350; 5470 - 5725; 5725 - 5850 MHz;
Primary function of equipment:	Wireless Access Point for transmitting data and voice.
Secondary function of equipment:	None Provided
Type of Modulation:	Per 802.11 – OFDM
EUT Modes of Operation:	802.11a; 802.11ac-80; 802.11n HT-20; 802.11n HT-40;
Declared Nominal Output Power (Ave):	+28 dBm
Transmit/Receive Operation:	Transceiver - Half Duplex
Rated Input Voltage and Current:	POE (POE adaptor sold with unit) 48Vdc
Operating Temperature Range:	Declared Range -20°C to 40°C
ITU Emission Designator:	802.11a 17M7D1D 802.11n HT-20 17M7D1D 802.11n HT-40 36M4D1D 802.11ac-40 36M9D1D 802.11ac-80 75M9D1D
Equipment Dimensions:	203mm x 203mm x 65mm / 8.0”x8.0”x2.6” (WxDxH)
Weight:	750 g / 27 oz
Hardware Rev:	6.3.0.0
Software Rev:	37654

5.2. Scope Of Test Program

Aruba Networks, Inc. APIN0224 & APIN0225

The scope of the test program was to test the Aruba Networks, Inc. APIN0224 and APIN0225, 802.11a/b/g/n/ac Wireless Access Point 3x3 Spatial Multiplexing MIMO configurations in the frequency ranges 5150 - 5250 MHz and 5725 - 5850 MHz; for compliance against the following specification:

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

Compliance was to the FCC new rules for;

a).. increased power in the 5150 – 5250 MHz band

b).. introduction of the 5725 – 5850 MHz band into UNII band regulations, and

c).. add additional channel(s) straddling the 5725 MHz band-edge frequency

Test Suite
To prove compliance with the FCC's new rules the following tests were completed;
i).. Full Conducted Testing

ii).. Full Radiated Testing on all antenna's (Radiated Spurious Emissions and Radiated Band-Edge)

Model Identification
APIN0224: External Antenna (Reverse SMA)
APIN0225: Integral

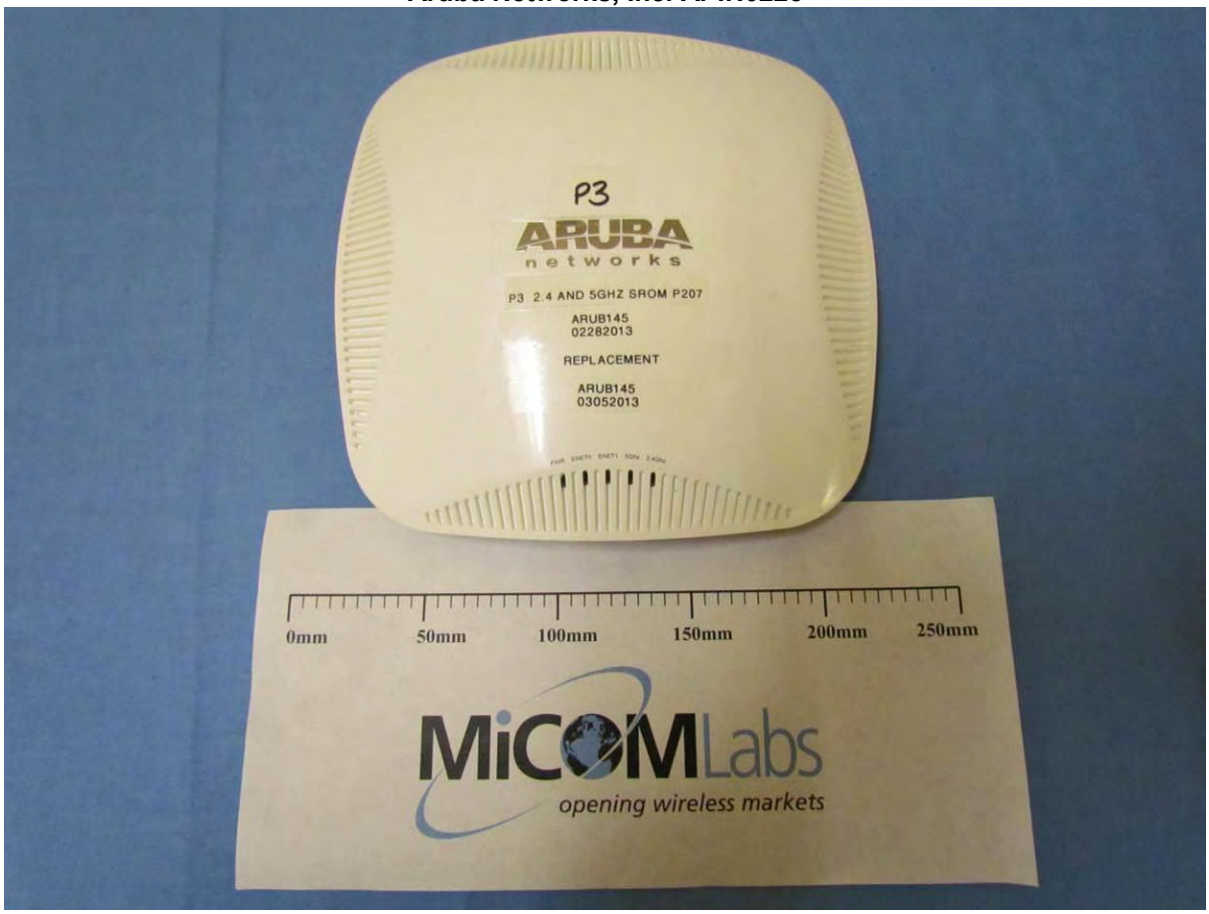
APIN0224 and APIN0225 Operational Modes
Client did not provide software capability for the following operational modes and claimed these were covered under 802.11n HT-20 and 802.11n HT-40.

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

Aruba Networks, Inc. APIN0224

Top View

Aruba Networks, Inc. APIN0225



Top View

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

Type	Description	Manufacturer	Model	Serial no.	Delivery Date
EUT	External Antenna (Reverse SMA)	Aruba Networks, Inc.	APIN0224	BX0104938	4th December 2015
EUT	Integral Antenna	Aruba Networks, Inc.	APIN0225	Test Sample	4th December 2015
Support	Laptop PC	Dell	E5440	None	--

5.4. Antenna Details

5.4.1. APIN0224 External Antennas

Type	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
External	Aruba Networks	AP-ANT-1B	OMNI	5.8	-	360	-	4900 - 5875
External	Aruba Networks	AP-ANT-13B	OMNI	3.3	-	360	-	4900 - 5900
External	Aruba Networks	AP-ANT16	OMNI	4.7	-	360	-	4900 - 5900
External	Aruba Networks	AP-ANT17	Directional 120 degr.	5.0	-	120	-	4900 - 5875
External	Aruba Networks	AP-ANT18	Directional 60 degr.	7.5	-	60	-	5150 - 5875
External	Aruba Networks	AP-ANT-19	OMNI	6.0	-	360	-	5150 - 5875

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

Not Tested Antennas
AP-ANT-17 (5.0 dBi) was not tested as part of the compliance program as this antenna was a lower directional gain antenna covered by AP-ANT-18 (7.5 dBi)

5.4.2. APIN0225 Integral Antennas

Type	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
Integral	Aruba Networks	Metal Sheet	OMNI	4.5	-	360	-	5150 - 5875

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

5.5. Cabling and I/O Ports

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

5.6. Test Configurations

Results for the following configurations are provided in this report:

Operational Mode(s) (802.11a/b/g/n/ac)	Data Rate with Highest Power MBit/s	Channel Frequency (MHz)		
		Low	Mid	High
5150 - 5250 MHz				
802.11a	6.00	5180.00	5200.00	5240.00
802.11ac-80	29.30	--	5210.00	--
802.11n HT-20	6.50	5180.00	5200.00	5240.00
802.11n HT-40	13.50	5190.00	--	5230.00
5725 - 5850 MHz				
802.11a	6.00	5745.00	5785.00	5825.00
802.11ac-80	29.30	--	5775.00	--
802.11n HT-20	6.50	5745.00	5785.00	5825.00
802.11n HT-40	13.50	5755.00	--	5795.00

5.7. Equipment Modifications

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

5.8. Deviations from the Test Standard

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

6. TEST SUMMARY

List of Measurements

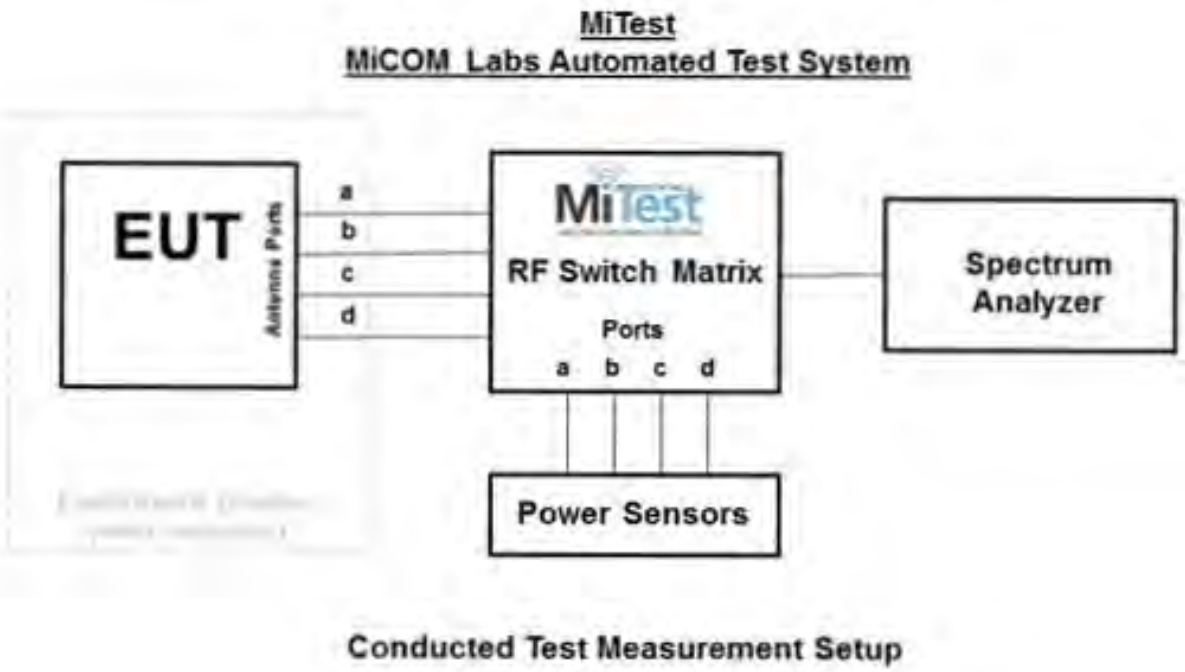
Test Header	Result	Data Link
Conducted Test Result		
Peak Transmit Power	Complies	View Data
26 dB & 99% Bandwidth	Complies	View Data
Power Spectral Density	Complies	View Data
Radiated Emissions		
i).. Restricted Band Emissions	-	View Data
ii).. Restricted Band-Edge Emissions	-	View Data
Digital Emissions		
Digital Emissions (0.03 – 1 GHz)	Not Tested*	-
ac Wireline Emissions		
Powerline Emissions (0.15 – 30 MHz)	Not Tested*	-

* Tested as part of the original compliance test program, see Section 5.2 Scope of Test Program

7. TEST EQUIPMENT CONFIGURATION(S)

7.1. Conducted

Conducted RF Emission Test Set-up(s)
The following tests were performed using the conducted test set-up shown in the diagram below.
1. Peak Transmit Power
2. 26 dB & 99% Bandwidth
3. Power Spectral Density



Conducted Test Measurement Setup

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

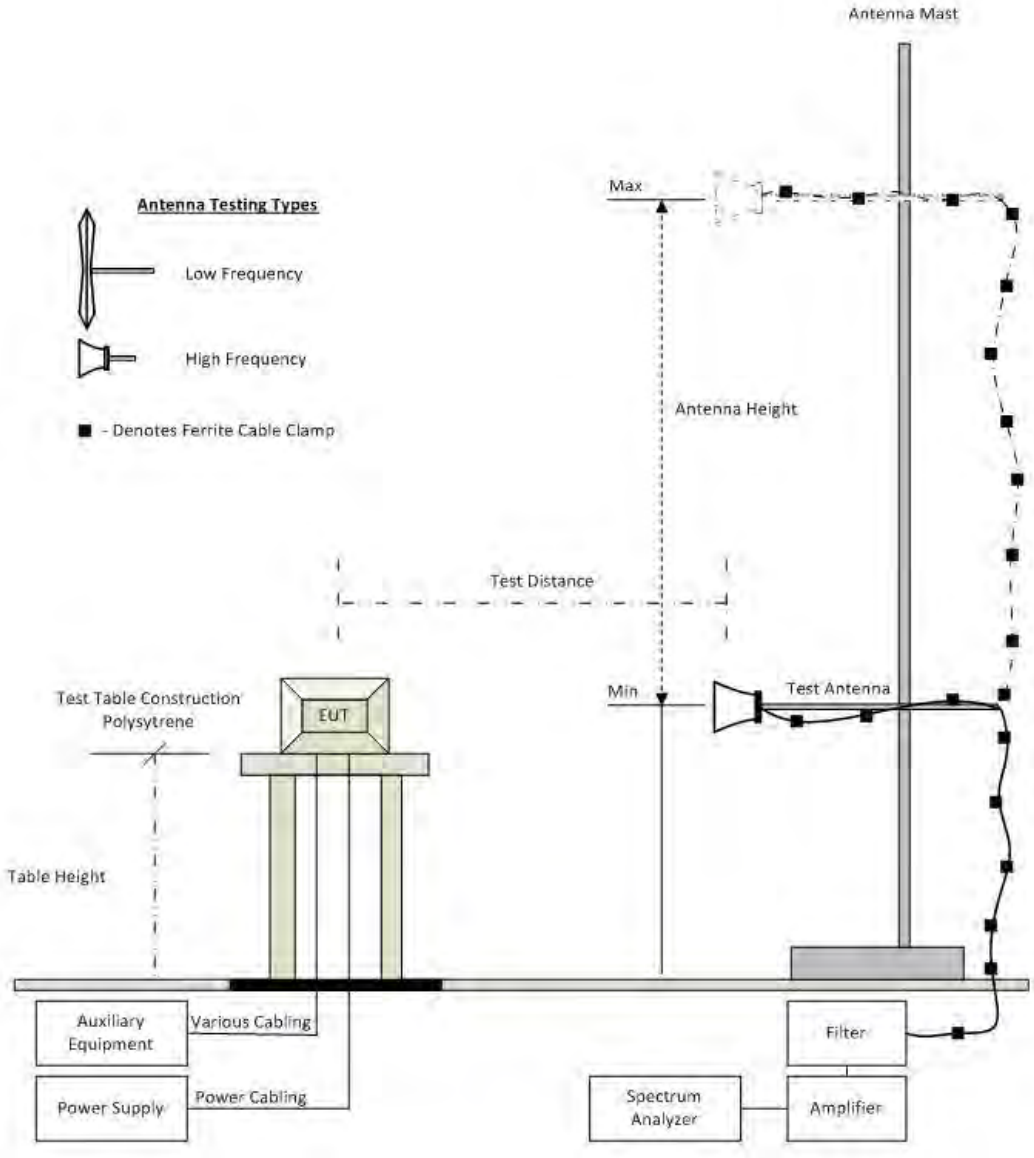
Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
127	Power Supply	HP	6674A	US36370530	Cal when used
158	Barometer/Thermometer	Control Company	4196	E2846	01 Dec 2016
248	Resistance Thermometer	Thermotronics	GR2105-02	9340 #1	21 Oct 2016
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	27 Aug 2016
376	USB 10MHz - 18GHz Average Power Sensor	Agilent	U2000A	MY51440005	23 Oct 2016
378	Rohde & Schwarz 40 GHz Receiver with Generator	Rhode & Schwarz	ESIB40	100107/040	04 Aug 2016
381	4x4 RF Switch Box	MiCOM Labs	MiTest RF Switch Box	MIC002	18 Jun 2015
419	Laptop with Labview Software	Lenova	W520	TS02	Not Required
420	USB to GPIB Interface	National Instruments	GPIB-USB HS	1346738	Not Required
RF#2 GPIB#1	GPIB cable to Power Supply	HP	GPIB	None	Not Required
RF#2 SMA#1	EUT to Mitest box port 1	Flexco	SMA Cable port1	None	18 Jun 2016
RF#2 SMA#2	EUT to Mitest box port 2	Flexco	SMA Cable port2	None	18 Jun 2016
RF#2 SMA#3	EUT to Mitest box port 3	Flexco	SMA Cable port3	None	18 Jun 2016
RF#2 SMA#4	EUT to Mitest box port 4	Flexco	SMA Cable port4	None	18 Jun 2016
RF#2 SMA#SA	Mitest box to SA	Flexco	SMA Cable SA	None	18 Jun 2016
RF#2 USB#1	USB Cable to Mitest Box	Dynex	USB Cable	None	Not Required

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

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

10.7 Radiated Spurious Emissions (1 – 10 GHz)
10.8 Radiated Digital Emissions (0.03 – 1 GHz)

Radiated Emission Measurement Setup



Radiated Emission Test Setup

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
158	Barometer/Thermometer	Control Company	4196	E2846	01 Dec 2016
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CY101	04R08507	Not Required
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	27 Aug 2016
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	15 Aug 2016
342	2.4 GHz Notch Filter	EWT	EWT-14-0203	H1	18 Aug 2016
396	2.4 GHz Notch Filter	Microtronics	BRM50701	001	18 Aug 2016
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	10 Oct 2016
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	28 May 2016
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Sciences	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
415	Turntable Controller	Sunol Sciences	Turntable Controller	None	Not Required
447	Rad Emissions Test Software	MiCOM	Version 1.0.73	447	Not Required
480	Cable - Bulkhead to Amp	SRC Haverhill	157-157-3050360	480	11 Aug 2016
481	Cable - Bulkhead to Receiver	SRC Haverhill	151-151-3050787	481	11 Aug 2016
482	Cable - Amp to Antenna	SRC Haverhill	157-157-3051574	482	11 Aug 2016

8. MEASUREMENT AND PRESENTATION OF TEST DATA

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

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

Test and report automation was performed by MiTest. MiTest is an automated test system developed by MiCOM Labs. MiTest is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.

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

9. TEST RESULTS

9.1. Peak Transmit Power

Conducted Test Conditions for Maximum Conducted Output Power			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Maximum Conducted Output Power	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.407 (a)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Maximum Conducted Output Power Measurement
Method PM (Measurement using an RF average power meter). KDB 789033 defines a methodology using an average wideband power meter. Measurements were made while the EUT was operating in a continuous transmission mode (100% duty cycle) at the appropriate center frequency. All operational modes and frequency bands were measured independently and the resultant calculated. Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured and reported separately. A summation (Σ) of each antenna port output power is provided which includes any offset due to Duty Cycle Correction Factor (DCCF). Testing was performed under ambient conditions at nominal voltage.

Test configuration and setup used for the measurement was per the Conducted Test Set-up section specified in this document.
Supporting Information
Calculated Power = A + G + Y+ 10 log (1/x) dBm

A = Total Power [10*Log10 ($10^{a/10}$ + $10^{b/10}$ + $10^{c/10}$ + $10^{d/10}$)]
G = Antenna Gain
Y = Beamforming Gain
x = Duty Cycle (average power measurements only)

Limits Maximum Conducted Output Power

Operating Frequency Band 5150-5250 MHz

15. 407 (a)(1)
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Operating Frequency Band 5250-5350 and 5470 – 5725 MHz

15. 407 (a)(2)
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Operating Frequency Band 5725 – 5850 MHz

15. 407 (a)(3)
For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Peak Transmit Power Setting

To maximize Peak Transmit Power the lowest gain antenna was used and reported. The following measurement results have been modified to take into account measurement data from Radiated Spurious Emissions (Section 9.4.1) and Radiated Band-Edge Emissions (Section 9.4.2) for the AP-ANT-13B (3.30 dBi) antenna.

For the remaining antennas a power setting measurement table is provided in Section 9.4.1 Restricted Band Emissions and 9.4.2 Restricted Band-Edge Emissions for each antenna type, channel frequency and operating mode

Equipment Configuration for Peak Transmit Power

Variant:	802.11a	**Duty Cycle (%):**	55.0
Data Rate:	6.00 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power + DCCF (+2.6 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5180.0	15.35	16.31	16.18	--	20.73	--	30.00	-9.27	26.00
5200.0	22.19	23.12	23.08	--	27.58	--	30.00	-2.42	23.00
5240.0	22.00	23.06	23.09	--	27.51	--	30.00	-2.49	23.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power

Variant:	802.11ac-80	**Duty Cycle (%):**	62.0
Data Rate:	29.30 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power + DCCF (+2.08 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5210.0	15.66	17.01	16.69	--	21.26	--	30.00	-8.74	17.25

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-20	**Duty Cycle (%):**	92.0
Data Rate:	6.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power + DCCF (+0.36 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5180.0	17.94	18.96	18.85	--	23.38	--	30.00	-6.62	21.00
5200.0	19.60	20.91	20.99	--	25.32	--	30.00	-4.68	23.00
5240.0	20.03	20.85	20.85	--	25.37	--	30.00	-4.63	23.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-40	**Duty Cycle (%):**	55.0
Data Rate:	13.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power + DCCF (+2.6 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5190.0	16.75	18.02	17.74	--	22.30	--	30.00	-7.70	18.00
5230.0	21.80	22.86	22.70	--	27.25	--	30.00	-2.75	23.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power

Variant:	802.11a	**Duty Cycle (%):**	55.0
Data Rate:	6.00 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power + DCCF (+2.6 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5745.0	21.56	20.72	21.24	--	25.95	--	30.00	-4.05	21.00
5785.0	23.26	22.52	22.80	--	27.64	--	30.00	-2.36	23.00
5825.0	22.87	22.59	22.56	--	27.44	--	30.00	-2.56	23.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power			
Variant:	802.11ac-80	**Duty Cycle (%):**	62.0
Data Rate:	29.30 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power + DCCF (+2.08 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5775.0	21.62	20.70	21.12	--	25.93	--	30.00	-4.07	22.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-20	**Duty Cycle (%):**	92.0
Data Rate:	6.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power + DCCF (+0.36 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5745.0	21.36	20.28	20.96	--	25.66	--	30.00	-4.34	23.00
5785.0	21.06	20.15	20.55	--	25.38	--	30.00	-4.62	23.00
5825.0	20.60	20.18	20.43	--	25.18	--	30.00	-4.82	23.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-40	**Duty Cycle (%):**	55.0
Data Rate:	13.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power + DCCF (+2.6 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5755.0	22.44	21.63	22.11	--	26.84	--	30.00	-3.16	22.00
5795.0	23.15	22.64	22.66	--	27.59	--	30.00	-2.41	23.00

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

DCCF - Duty Cycle Correction Factor

9.2. 26 dB & 99% Bandwidth

Conducted Test Conditions for 26 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	26 dB and 99 % Bandwidth	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.407 (a)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for 26 dB and 99% Bandwidth Measurement
The bandwidth at 26 dB and 99 % is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency. The Resolution Bandwidth was set to approximately 1% of the emission bandwidth.
Testing was performed under ambient conditions at nominal voltage. Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured and reported.

Test configuration and setup used for the measurement was per the Conducted Test Set-up section specified in this document.

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11a	**Duty Cycle (%):**	55.0
Data Rate:	6.00 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5180.0	36.172	36.172	36.172	--	36.172	36.172		
5200.0	36.172	36.172	36.172	--	36.172	36.172		
5240.0	35.972	36.172	36.172	--	36.172	35.972		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5180.0	19.439	20.240	20.240	--	20.240	19.439		
5200.0	19.339	20.140	20.240	--	20.240	19.339		
5240.0	18.537	19.639	19.339	--	19.639	18.537		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11ac-80	**Duty Cycle (%):**	62.0
Data Rate:	29.30 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5210.0	175.952	176.353	176.353	--	176.353	175.952		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5210.0	89.780	90.581	89.780	--	90.581	89.780		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11n HT-20	**Duty Cycle (%):**	92.0
Data Rate:	6.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5180.0	36.172	36.172	36.373	--	36.373	36.172		
5200.0	36.172	36.172	36.373	--	36.373	36.172		
5240.0	36.072	36.172	36.172	--	36.172	36.072		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5180.0	19.439	20.341	20.341	--	20.341	19.439		
5200.0	19.038	20.441	20.441	--	20.441	19.038		
5240.0	18.537	19.138	19.639	--	19.639	18.537		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11n HT-40	**Duty Cycle (%):**	55.0
Data Rate:	13.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5190.0	82.365	87.174	85.170	--	87.174	82.365		
5230.0	80.561	83.166	82.766	--	83.166	80.561		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5190.0	46.693	50.902	46.894	--	50.902	46.693		
5230.0	41.884	47.295	46.693	--	47.295	41.884		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11a	**Duty Cycle (%):**	55.0
Data Rate:	6.00 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5745.0	39.279	36.373	36.373	--	39.279	36.373		
5785.0	39.279	37.575	36.373	--	39.279	36.373		
5825.0	41.283	37.575	36.473	--	41.283	36.473		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5745.0	23.747	18.337	18.236	--	23.747	18.236		
5785.0	24.749	19.940	18.236	--	24.749	18.236		
5825.0	26.854	20.140	19.138	--	26.854	19.138		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11ac-80	**Duty Cycle (%):**	62.0
Data Rate:	29.30 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5775.0	194.790	194.790	192.786	--	194.790	192.786		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5775.0	92.585	92.585	89.780	--	92.585	89.780		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11n HT-20	**Duty Cycle (%):**	92.0
Data Rate:	6.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5745.0	39.279	33.166	36.373	--	39.279	33.166		
5785.0	41.182	36.473	36.373	--	41.182	36.373		
5825.0	41.283	36.673	36.473	--	41.283	36.473		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5745.0	24.749	18.236	18.537	--	24.749	18.236		
5785.0	25.551	20.040	18.637	--	25.551	18.637		
5825.0	27.355	20.240	19.238	--	27.355	19.238		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11n HT-40	**Duty Cycle (%):**	55.0
Data Rate:	13.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5755.0	91.383	82.164	80.762	--	91.383	80.762		
5795.0	91.383	85.772	80.962	--	91.383	80.962		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5755.0	59.719	46.693	42.084	--	59.719	42.084		
5795.0	61.924	53.106	42.886	--	61.924	42.886		

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

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

9.3. Power Spectral Density

Conducted Test Conditions for Power Spectral Density			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Power Spectral Density	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.407 (a)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Power Spectral Density
The in-band power spectral density was measured using the test technique specified in KDB 789033. A 1 MHz measurement bandwidth was implemented for the analyzer sweep. Once the sweep is complete the analyzer trace data is downloaded and used for post processing purposes.
Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured separately. The Peak Power Spectral Density is the highest level found across the emission bandwidth. With multiple antenna port measurements the numerical analyzer data from each port is summed (å) and a link to this additional graphic is provided.

Test configuration and setup used for the measurement was per the Conducted Test Set-up section specified in this document.

Measure and sum the spectra across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The individual spectra are then summed mathematically in linear power units. Unlike in-band power measurements, in which the sum involves a single measured value (output power) from each output, measurements for compliance with PSD limits involve summing entire spectra across corresponding frequency bins on the various outputs. Consistency is maintained for any device with multiple transmitter outputs to be certain the individual outputs are all aligned with the same span and same number of points. In this instance, the linear power spectrum value within the first spectral bin of output 0 is summed with that in the first spectral bin of output 1, and the first spectral bin of output 2, and so on up to the Nth output to obtain the true value for the first frequency bin of the summed spectrum. The summed spectrum value for each frequency bin is computed in this fashion. These summed spectral values were post processed and the resulting numerical and graphical data presented.

NOTE: It may be observed that spectrum in some plots break the limit line however this in itself does NOT constitute a failure. In all cases a spectrum summation plot is provided in order to prove compliance. A failure occurs only after the summation of all spectrum plots have been summed and are found to be greater than the limit line.

Supporting Information
Calculated Power = A + 10 log (1/x) dBm
A = Total Power Spectral Density [10*Log10 ($10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10}$)]
x = Duty Cycle

Limits Power Spectral Density

Operating Frequency Band 5150-5250 MHz

15. 407 (a)(1)
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Operating Frequency Band 5250-5350 and 5470 – 5725 MHz

15. 407 (a)(2)
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Operating Frequency Band 5725 – 5850 MHz

15. 407 (a)(3)
For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Equipment Configuration for Power Spectral Density			
Variant:	802.11a	**Duty Cycle (%):**	55.0
Data Rate:	6.00 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+2.6 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5180.0	-1.166	-1.582	-3.876	--	3.684	17.0	-13.3
5200.0	-2.817	-0.459	-2.874	--	4.009	17.0	-13.0
5240.0	-0.944	-0.650	-2.239	--	4.853	17.0	-12.1

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11ac-80	**Duty Cycle (%):**	62.0
Data Rate:	29.30 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+2.08 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5210.0	-10.404	-7.504	-8.368	--	-2.770	17.0	-19.7

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11n HT-20	**Duty Cycle (%):**	92.0
Data Rate:	6.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+0.36 dB)	Limit	Margin
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
5180.0	-0.817	-3.623	-4.091	--	1.670	17.0	-15.3
5200.0	-2.685	-3.251	-2.572	--	1.389	17.0	-15.6
5240.0	-1.526	0.048	-1.220	--	3.316	17.0	-13.7

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11n HT-40	**Duty Cycle (%):**	55.0
Data Rate:	13.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+2.6 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5190.0	-6.853	-4.006	-3.380	--	1.916	17.0	-15.1
5230.0	-6.409	-4.130	-6.566	--	1.005	17.0	-16.0

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11a	**Duty Cycle (%):**	55.0
Data Rate:	6.00 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/500 KHz)				Amplitude Summation + DCCF (+2.6 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/500 KHz**	**dBm/500 KHz**	**dB**
5745.0	-4.666	-5.692	-5.391	--	0.846	30.0	-29.1
5785.0	-2.652	-5.231	-2.123	--	3.347	30.0	-26.6
5825.0	-4.529	-6.367	1.334	--	4.677	30.0	-25.3

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11ac-80	**Duty Cycle (%):**	62.0
Data Rate:	29.30 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/500 KHz)				Amplitude Summation + DCCF (+2.08 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/500 KHz**	**dBm/500 KHz**	**dB**
5775.0	-10.830	-9.552	-9.824	--	-4.313	30.0	-34.3

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11n HT-20	**Duty Cycle (%):**	92.0
Data Rate:	6.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/500 KHz)				Amplitude Summation + DCCF (+0.36 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/500 KHz**	**dBm/500 KHz**	**dB**
5745.0	-3.845	-4.440	-3.857	--	-0.177	30.0	-30.1
5785.0	-2.540	-3.783	-5.101	--	-0.153	30.0	-30.1
5825.0	-5.629	-4.970	-5.013	--	-1.026	30.0	-31.0

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11n HT-40	**Duty Cycle (%):**	55.0
Data Rate:	13.50 MBit/s	**Antenna Gain (dBi):**	3.30
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/500 KHz)				Amplitude Summation + DCCF (+2.6 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/500 KHz**	**dBm/500 KHz**	**dB**
5755.0	-7.807	-6.525	-7.080	--	-1.745	30.0	-31.7
5795.0	-7.161	-7.566	-7.480	--	-1.645	30.0	-31.6

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

DCCF - Duty Cycle Correction Factor

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

9.4. Radiated Spurious Emissions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

where P is the EIRP in Watts

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

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

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

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

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

12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

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

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

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

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

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

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

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

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

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

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

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

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

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

9.4.1. Restricted Band Emissions

9.4.1.1 Antenna AP-ANT-1B

Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5182.48	74.71	3.69	-11.50	66.90	Fundamental	Vertical	151	19	--	--	
#2	6906.74	54.95	4.11	-7.54	51.52	Peak (NRB)	Vertical	151	19	--	--	Pass
#3	10363.25	53.87	5.58	-5.25	54.20	Peak (NRB)	Vertical	151	0	--	--	Pass
#4	15543.04	39.37	5.97	-0.56	44.78	Max Avg	Horizontal	158	348	54.0	-9.2	Pass
#5	15543.04	56.36	5.97	-0.56	61.77	Max Peak	Horizontal	158	348	74.0	-12.2	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5200.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4764.81	46.94	3.59	-11.11	39.42	Max Avg	Vertical	152	325	54.0	-14.6	Pass
#2	4764.81	58.50	3.59	-11.11	50.98	Max Peak	Vertical	152	325	74.0	-23.0	Pass
#3	5202.04	79.28	3.66	-11.46	71.48	Fundamental	Vertical	151	17	--	--	
#4	6933.32	55.03	4.11	-7.49	51.65	Peak (NRB)	Vertical	151	360	--	--	Pass
#5	10405.74	52.53	5.45	-4.99	52.99	Peak (NRB)	Vertical	151	360	--	--	Pass
#6	15603.01	39.80	6.03	-0.22	45.61	Max Avg	Vertical	161	297	54.0	-8.4	Pass
#7	15603.01	56.51	6.03	-0.22	62.32	Max Peak	Vertical	161	297	74.0	-11.7	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5240.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5238.28	83.29	3.63	-11.37	75.55	Fundamental	Vertical	200	1	--	--	
#2	6986.65	56.28	4.13	-7.45	52.96	Peak (NRB)	Vertical	200	0	--	--	Pass
#3	10478.72	50.72	5.43	-4.46	51.69	Peak (NRB)	Vertical	200	101	--	--	Pass
#4	15722.88	40.90	6.12	0.17	47.19	Max Avg	Horizontal	198	291	54.0	-6.8	Pass
#5	15722.88	57.16	6.12	0.17	63.45	Max Peak	Horizontal	198	291	74.0	-10.6	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5752.58	66.80	3.84	-10.61	60.03	Fundamental	Vertical	200	1	--	--	
#2	6218.31	62.11	3.92	-8.80	57.23	Peak (NRB)	Vertical	200	39	--	--	Pass
#3	11489.90	42.59	5.45	-4.84	43.20	Max Avg	Vertical	131	21	54.0	-10.8	Pass
#4	11489.90	55.31	5.45	-4.84	55.92	Max Peak	Vertical	131	21	74.0	-18.1	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5783.93	73.16	3.80	-10.45	66.51	Fundamental	Vertical	200	1	--	--	
#2	6261.60	58.76	3.93	-8.54	54.15	Peak (NRB)	Vertical	200	1	--	--	Pass
#3	11571.58	45.60	5.42	-4.63	46.39	Max Avg	Vertical	196	0	54.0	-7.6	Pass
#4	11571.58	58.59	5.42	-4.63	59.38	Max Peak	Vertical	196	0	74.0	-14.6	Pass
#5	17359.84	49.64	6.28	-0.04	55.88	Peak (NRB)	Vertical	200	360	--	--	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5823.29	72.59	3.83	-10.25	66.17	Fundamental	Vertical	151	1	--	--	
#2	6067.77	62.02	3.88	-9.61	56.29	Peak (NRB)	Vertical	200	360	--	--	Pass
#3	6308.90	64.18	3.92	-8.38	59.72	Peak (NRB)	Vertical	200	360	--	--	Pass
#4	11651.07	46.77	5.46	-4.47	47.76	Max Avg	Vertical	164	353	54.0	-6.2	Pass
#5	11651.07	58.63	5.46	-4.47	59.62	Max Peak	Vertical	164	353	74.0	-14.4	Pass
#6	17479.60	55.30	6.34	-0.60	61.04	Peak (NRB)	Vertical	200	246	--	--	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

9.4.1.2 Antenna AP-ANT-13B

Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5179.12	72.13	3.69	-11.51	64.31	Fundamental	Horizontal	151	1	--	--	
#2	6906.59	55.43	4.11	-7.54	52.00	Peak (NRB)	Horizontal	151	9	--	--	Pass
#3	10362.69	52.44	5.58	-5.25	52.77	Peak (NRB)	Vertical	151	9	--	--	Pass
#4	15533.54	42.24	5.89	-0.60	47.53	Max Avg	Vertical	172	141	54.0	-6.5	Pass
#5	15533.54	57.59	5.89	-0.60	62.88	Max Peak	Vertical	172	141	74.0	-11.1	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5200.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4765.01	46.92	3.59	-11.11	39.40	Max Avg	Horizontal	100	332	54.0	-14.6	Pass
#2	4765.01	59.03	3.59	-11.11	51.51	Max Peak	Horizontal	100	332	74.0	-22.5	Pass
#3	5199.00	79.56	3.66	-11.47	71.75	Fundamental	Horizontal	101	1	--	--	
#4	6933.35	53.62	4.11	-7.49	50.24	Peak (NRB)	Horizontal	148	0	--	--	Pass
#5	10400.28	50.75	5.40	-5.03	51.12	Peak (NRB)	Horizontal	148	48	--	--	Pass
#6	15602.89	39.23	6.03	-0.22	45.04	Max Avg	Horizontal	157	346	54.0	-9.0	Pass
#7	15602.89	55.50	6.03	-0.22	61.31	Max Peak	Horizontal	157	346	74.0	-12.7	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5240.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5239.16	76.19	3.63	-11.37	68.45	Fundamental	Horizontal	151	1	--	--	
#2	6986.52	54.29	4.13	-7.45	50.97	Peak (NRB)	Horizontal	151	18	--	--	Pass
#3	10482.92	55.07	5.40	-4.44	56.03	Peak (NRB)	Horizontal	151	18	--	--	Pass
#4	15723.20	40.11	6.12	0.17	46.40	Max Avg	Horizontal	147	292	54.0	-7.6	Pass
#5	15723.20	58.09	6.12	0.17	64.38	Max Peak	Horizontal	147	292	74.0	-9.6	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5738.00	61.24	3.82	-10.67	54.39	Fundamental	Horizontal	101	21	--	--	
#2	6220.64	57.20	3.92	-8.77	52.35	Peak (NRB)	Horizontal	151	21	--	--	Pass
#3	11494.79	47.79	5.45	-4.83	48.41	Max Avg	Horizontal	146	315	54.0	-5.6	Pass
#4	11494.79	61.35	5.45	-4.83	61.97	Max Peak	Horizontal	146	315	74.0	-12.0	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5784.17	67.27	3.80	-10.45	60.62	Fundamental	Horizontal	101	1	--	--	
#2	6261.76	58.87	3.93	-8.54	54.26	Peak (NRB)	Horizontal	101	55	--	--	Pass
#3	11568.70	46.81	5.48	-4.65	47.64	Max Avg	Horizontal	196	327	54.0	-6.4	Pass
#4	11568.70	61.40	5.48	-4.65	62.23	Max Peak	Horizontal	196	327	74.0	-11.8	Pass
#5	17355.35	47.68	6.27	-0.01	53.94	Peak (NRB)	Horizontal	200	16	--	--	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5817.36	62.46	3.82	-10.29	55.99	Fundamental	Horizontal	151	1	--	--	
#2	6067.57	58.62	3.88	-9.61	52.89	Peak (NRB)	Horizontal	151	65	--	--	Pass
#3	6309.78	61.99	3.91	-8.37	57.53	Peak (NRB)	Horizontal	151	16	--	--	Pass
#4	11651.15	47.45	5.46	-4.47	48.44	Max Avg	Vertical	152	354	54.0	-5.6	Pass
#5	11651.15	60.48	5.46	-4.47	61.47	Max Peak	Vertical	152	354	74.0	-12.5	Pass
#6	17478.24	55.37	6.31	-0.60	61.08	Peak (NRB)	Horizontal	151	20	--	--	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

9.4.1.3 Antenna AP-ANT-16

Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5181.32	73.53	3.69	-11.50	65.72	Fundamental	Horizontal	101	9	--	--	
#2	6906.74	56.26	4.11	-7.54	52.83	Peak (NRB)	Horizontal	151	9	--	--	Pass
#3	10365.81	51.98	5.59	-5.23	52.34	Peak (NRB)	Horizontal	151	9	--	--	Pass
#4	15542.64	39.03	5.97	-0.56	44.44	Max Avg	Horizontal	166	349	54.0	-9.6	Pass
#5	15542.64	54.31	5.97	-0.56	59.72	Max Peak	Horizontal	166	349	74.0	-14.3	Pass

Test Notes: EUT on 150cm Table, powered by PDsine 9001GR

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5200.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5201.48	75.21	3.66	-11.46	67.41	Fundamental	Horizontal	100	0	--	--	
#2	6933.35	57.14	4.11	-7.49	53.76	Peak (NRB)	Horizontal	151	19	--	--	Pass
#3	10405.90	52.96	5.45	-4.99	53.42	Peak (NRB)	Horizontal	151	0	--	--	Pass
#4	15602.28	41.42	6.03	-0.23	47.22	Max Avg	Vertical	150	316	54.0	-6.8	Pass
#5	15602.28	55.50	6.03	-0.23	61.30	Max Peak	Vertical	150	316	74.0	-12.7	Pass
Test Notes: EUT on 150cm Table, powered by PDsine 9001GR												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5240.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5241.32	76.09	3.63	-11.36	68.36	Fundamental	Horizontal	100	0	--	--	
#2	6986.65	57.56	4.13	-7.45	54.24	Peak (NRB)	Horizontal	151	23	--	--	Pass
#3	10485.45	53.84	5.41	-4.42	54.83	Peak (NRB)	Horizontal	151	0	--	--	Pass
#4	15722.32	44.69	6.11	0.17	50.97	Max Avg	Vertical	146	316	54.0	-3.0	Pass
#5	15722.32	58.50	6.11	0.17	64.78	Max Peak	Vertical	146	316	74.0	-9.2	Pass
Test Notes: EUT on 150cm Table, powered by PDsine 9001GR												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5752.74	62.56	3.84	-10.61	55.79	Fundamental	Horizontal	148	30	--	--	
#2	6063.88	56.20	3.89	-9.62	50.47	Peak (NRB)	Horizontal	151	30	--	--	Pass
#3	6222.00	61.85	3.92	-8.76	57.01	Peak (NRB)	Horizontal	151	30	--	--	Pass
#4	11495.68	45.64	5.45	-4.82	46.27	Max Avg	Horizontal	163	306	54.0	-7.7	Pass
#5	11495.68	60.50	5.45	-4.82	61.13	Max Peak	Horizontal	163	306	74.0	-12.9	Pass

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5785.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5783.13	71.81	3.80	-10.46	65.15	Fundamental	Horizontal	151	38	--	--	
#2	6103.69	58.07	3.87	-9.48	52.46	Peak (NRB)	Horizontal	151	0	--	--	Pass
#3	6266.93	60.82	3.93	-8.52	56.23	Peak (NRB)	Horizontal	151	38	--	--	Pass
#4	11580.28	43.56	5.41	-4.60	44.37	Max Avg	Vertical	170	356	54.0	-9.6	Pass
#5	11580.28	59.30	5.41	-4.60	60.11	Max Peak	Vertical	170	356	74.0	-13.9	Pass
#6	17365.45	50.58	6.37	-0.06	56.89	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5823.01	70.94	3.83	-10.25	64.52	Fundamental	Horizontal	151	28	--	--	
#2	6063.24	61.01	3.89	-9.62	55.28	Peak (NRB)	Horizontal	151	28	--	--	Pass
#3	6308.10	62.77	3.92	-8.39	58.30	Peak (NRB)	Horizontal	151	28	--	--	Pass
#4	11641.93	45.83	5.48	-4.47	46.84	Max Avg	Vertical	139	321	54.0	-7.2	Pass
#5	11641.93	59.87	5.48	-4.47	60.88	Max Peak	Vertical	139	321	74.0	-13.1	Pass
#6	17481.65	54.51	6.38	-0.62	60.27	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

NRB: Non-Restricted Band Emissions

9.4.1.4 Antenna AP-ANT-18

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	7.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	17.25	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4752.26	46.67	3.56	-11.11	39.12	Max Avg	Vertical	143	18	54.0	-14.9	Pass
#2	4752.26	58.23	3.56	-11.11	50.68	Max Peak	Vertical	143	18	74.0	-23.3	Pass
#3	5184.49	76.09	3.68	-11.49	68.28	Fundamental	Vertical	151	1	--	--	
#4	6906.66	53.64	4.11	-7.54	50.21	Peak (NRB)	Vertical	148	360	--	--	Pass
#5	10359.77	52.09	5.57	-5.27	52.39	Peak (NRB)	Vertical	151	0	--	--	Pass
#6	10359.77	52.09	5.57	-5.27	52.39	Peak (NRB)	Vertical	151	0	--	--	Pass
#7	15543.04	40.80	5.97	-0.56	46.21	Max Avg	Vertical	125	187	54.0	-7.8	Pass
#8	15543.04	57.25	5.97	-0.56	62.66	Max Peak	Vertical	125	187	74.0	-11.3	Pass

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	7.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5200.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4759.80	48.14	3.57	-11.11	40.60	Max Avg	Vertical	151	17	54.0	-13.4	Pass
#2	4759.80	60.06	3.57	-11.11	52.52	Max Peak	Vertical	151	17	74.0	-21.5	Pass
#3	5196.99	80.24	3.66	-11.47	72.43	Fundamental	Vertical	151	13	--	--	
#4	6933.35	56.72	4.11	-7.49	53.34	Peak (NRB)	Horizontal	151	25	--	--	Pass
#5	10401.41	52.54	5.41	-5.03	52.92	Peak (NRB)	Vertical	151	0	--	--	Pass
#6	15603.21	41.38	6.03	-0.22	47.19	Max Avg	Horizontal	155	235	54.0	-6.8	Pass
#7	15603.21	58.48	6.03	-0.22	64.29	Max Peak	Horizontal	155	235	74.0	-9.7	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	7.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5240.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5232.59	82.16	3.63	-11.39	74.40	Fundamental	Vertical	200	0	--	--	
#2	6986.65	55.08	4.13	-7.45	51.76	Peak (NRB)	Horizontal	200	31	--	--	Pass
#3	10486.57	54.15	5.43	-4.41	55.17	Peak (NRB)	Horizontal	200	0	--	--	Pass
#4	15722.96	40.79	6.12	0.17	47.08	Max Avg	Horizontal	197	249	54.0	-6.9	Pass
#5	15722.96	57.69	6.12	0.17	63.98	Max Peak	Horizontal	197	249	74.0	-10.0	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5750.78	64.90	3.84	-10.63	58.11	Fundamental	Horizontal	151	26	--	--	
#2	6219.59	61.57	3.92	-8.78	56.71	Peak (NRB)	Horizontal	148	0	--	--	Pass
#3	6702.56	53.54	4.04	-7.95	49.63	Peak (NRB)	Vertical	148	360	--	--	Pass
#4	11492.79	45.44	5.44	-4.84	46.04	Max Avg	Vertical	140	339	54.0	-8.0	Pass
#5	11492.79	59.48	5.44	-4.84	60.08	Max Peak	Vertical	140	339	74.0	-13.9	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5789.30	72.21	3.79	-10.42	65.58	Fundamental	Vertical	151	1	--	--	
#2	6267.17	57.74	3.93	-8.52	53.15	Peak (NRB)	Vertical	151	1	--	--	Pass
#3	11570.82	48.58	5.44	-4.64	49.38	Max Avg	Vertical	192	357	54.0	-4.6	Pass
#4	11570.82	61.26	5.44	-4.64	62.06	Max Peak	Vertical	192	357	74.0	-11.9	Pass
#5	17359.03	48.12	6.28	-0.04	54.36	Peak (NRB)	Horizontal	151	0	--	--	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5819.44	72.27	3.82	-10.28	65.81	Fundamental	Vertical	151	1	--	--	
#2	6069.22	60.30	3.88	-9.60	54.58	Peak (NRB)	Vertical	151	1	--	--	Pass
#3	6310.50	60.47	3.91	-8.37	56.01	Peak (NRB)	Horizontal	151	1	--	--	Pass
#4	11649.02	46.71	5.44	-4.47	47.68	Max Avg	Vertical	197	1	54.0	-6.3	Pass
#5	11649.02	60.49	5.44	-4.47	61.46	Max Peak	Vertical	197	1	74.0	-12.5	Pass
#6	17479.00	53.63	6.33	-0.60	59.36	Peak (NRB)	Horizontal	151	1	--	--	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

9.4.1.5 Antenna AP-ANT-19

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5183.53	78.89	3.68	-11.49	71.08	Fundamental	Vertical	151	1	--	--	
#2	6906.64	58.79	4.11	-7.54	55.36	Peak (NRB)	Vertical	151	1	--	--	Pass
#3	10362.05	52.00	5.58	-5.26	52.32	Peak (NRB)	Vertical	151	1	--	--	Pass
#4	15543.48	33.68	5.97	-0.56	39.09	Max Avg	Horizontal	168	277	54.0	-14.9	Pass
#5	15543.48	49.34	5.97	-0.56	54.75	Max Peak	Horizontal	168	277	74.0	-19.3	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5200.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4764.93	48.22	3.59	-11.11	40.70	Max Avg	Vertical	169	347	54.0	-13.3	Pass
#2	4764.93	59.67	3.59	-11.11	52.15	Max Peak	Vertical	169	347	74.0	-21.9	Pass
#3	5202.68	82.81	3.65	-11.45	75.01	Fundamental	Vertical	151	1	--	--	
#4	6933.43	56.20	4.11	-7.49	52.82	Peak (NRB)	Vertical	151	49	--	--	Pass
#5	10403.25	53.15	5.42	-5.02	53.55	Peak (NRB)	Vertical	151	49	--	--	Pass
#6	15603.41	41.20	6.03	-0.22	47.01	Max Avg	Vertical	154	315	54.0	-7.0	Pass
#7	15603.41	57.55	6.03	-0.22	63.36	Max Peak	Vertical	154	315	74.0	-10.6	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5240.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5238.04	79.76	3.63	-11.37	72.02	Fundamental	Vertical	151	1	--	--	
#2	6986.73	57.58	4.13	-7.45	54.26	Peak (NRB)	Vertical	151	14	--	--	Pass
#3	10480.12	49.36	5.42	-4.46	50.32	Peak (NRB)	Vertical	151	0	--	--	Pass
#4	15722.56	40.32	6.12	0.17	46.61	Max Avg	Vertical	187	111	54.0	-7.4	Pass
#5	15722.56	55.25	6.12	0.17	61.54	Max Peak	Vertical	187	111	74.0	-12.5	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5739.52	67.22	3.83	-10.67	60.38	Fundamental	Vertical	151	1	--	--	
#2	6069.38	58.43	3.88	-9.60	52.71	Peak (NRB)	Vertical	151	1	--	--	Pass
#3	6219.27	64.35	3.92	-8.78	59.49	Peak (NRB)	Vertical	151	1	--	--	Pass
#4	11491.59	44.43	5.44	-4.84	45.03	Max Avg	Horizontal	156	13	54.0	-9.0	Pass
#5	11491.59	57.62	5.44	-4.84	58.22	Max Peak	Horizontal	156	13	74.0	-15.8	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5789.22	72.36	3.79	-10.42	65.73	Fundamental	Vertical	101	1	--	--	
#2	6099.52	57.46	3.88	-9.51	51.83	Peak (NRB)	Vertical	151	1	--	--	Pass
#3	6272.98	61.74	3.92	-8.50	57.16	Peak (NRB)	Vertical	151	1	--	--	Pass
#4	11571.90	47.27	5.42	-4.63	48.06	Max Avg	Vertical	110	322	54.0	-5.9	Pass
#5	11571.90	59.89	5.42	-4.63	60.68	Max Peak	Vertical	110	322	74.0	-13.3	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

NRB: Non-Restricted Band Emissions

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5819.36	73.50	3.82	-10.28	67.04	Fundamental	Vertical	101	1	--	--	
#2	6070.18	63.98	3.88	-9.60	58.26	Peak (NRB)	Vertical	151	1	--	--	Pass
#3	6310.10	63.10	3.91	-8.37	58.64	Peak (NRB)	Vertical	151	1	--	--	Pass
#4	11652.59	42.70	5.49	-4.46	43.73	Max Avg	Vertical	114	324	54.0	-10.3	Pass
#5	11652.59	57.53	5.49	-4.46	58.56	Max Peak	Vertical	114	324	74.0	-15.4	Pass
#6	17478.28	51.64	6.31	-0.60	57.35	Peak (NRB)	Vertical	151	1	--	--	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

NRB: Non-Restricted Band Emissions

9.4.1.6 Antenna Integral (APIN0225)

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5187.37	77.32	3.68	-11.49	69.51	Fundamental	Vertical	101	64	--	--	
#2	6906.61	55.96	4.11	-7.54	52.53	Peak (NRB)	Horizontal	151	64	--	--	Pass
#3	10362.53	60.04	5.58	-5.25	60.37	Peak (NRB)	Horizontal	151	64	--	--	Pass
#4	15543.04	41.68	5.97	-0.56	47.09	Max Avg	Horizontal	191	202	54.0	-6.9	Pass
#5	15543.04	58.72	5.97	-0.56	64.13	Max Peak	Horizontal	191	202	74.0	-9.9	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5200.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4768.09	51.18	3.61	-11.12	43.67	Max Avg	Horizontal	157	76	54.0	-10.3	Pass
#2	4768.09	62.00	3.61	-11.12	54.49	Max Peak	Horizontal	157	76	74.0	-19.5	Pass
#3	5198.60	82.52	3.66	-11.47	74.71	Fundamental	Horizontal	151	119	--	--	
#4	6933.51	55.16	4.11	-7.49	51.78	Peak (NRB)	Horizontal	151	119	--	--	Pass
#5	10402.53	54.25	5.42	-5.02	54.65	Peak (NRB)	Horizontal	151	119	--	--	Pass
#6	15603.29	40.37	6.03	-0.22	46.18	Max Avg	Horizontal	169	239	54.0	-7.8	Pass
#7	15603.29	57.41	6.03	-0.22	63.22	Max Peak	Horizontal	169	239	74.0	-10.8	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5240.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4796.43	49.11	3.53	-11.11	41.53	Max Avg	Horizontal	133	320	54.0	-12.5	Pass
#2	4796.43	61.06	3.53	-11.11	53.48	Max Peak	Horizontal	133	320	74.0	-20.5	Pass
#3	5240.84	82.10	3.63	-11.36	74.37	Fundamental	Horizontal	101	39	--	--	
#4	6986.57	57.84	4.13	-7.45	54.52	Peak (NRB)	Horizontal	151	92	--	--	Pass
#5	10482.60	58.42	5.40	-4.44	59.38	Peak (NRB)	Horizontal	151	92	--	--	Pass
#6	15723.20	39.75	6.12	0.17	46.04	Max Avg	Horizontal	186	200	54.0	-8.0	Pass
#7	15723.20	56.51	6.12	0.17	62.80	Max Peak	Horizontal	186	200	74.0	-11.2	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5750.10	65.37	3.85	-10.63	58.59	Peak (NRB)	Horizontal	151	43	--	--	Pass
#2	6223.92	61.50	3.92	-8.75	56.67	Peak (NRB)	Horizontal	151	43	--	--	Pass
#3	11493.75	48.55	5.44	-4.84	49.15	Max Avg	Horizontal	157	98	54.0	-4.9	Pass
#4	11493.75	62.07	5.44	-4.84	62.67	Max Peak	Horizontal	157	98	74.0	-11.3	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE. Power reduction to 21 failing harm with 23

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5788.98	74.92	3.79	-10.42	68.29	Fundamental	Horizontal	151	77	--	--	
#2	6100.08	61.42	3.88	-9.51	55.79	Peak (NRB)	Horizontal	148	77	--	--	Pass
#3	6264.01	61.69	3.93	-8.53	57.09	Peak (NRB)	Horizontal	148	77	--	--	Pass
#4	11569.18	52.75	5.48	-4.65	53.58	Max Avg	Horizontal	160	78	54.0	-0.4	Pass
#5	11569.18	65.93	5.48	-4.65	66.76	Max Peak	Horizontal	160	78	74.0	-7.2	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5819.52	71.79	3.83	-10.26	65.36	Fundamental	Horizontal	151	25	--	--	
#2	6065.53	62.56	3.88	-9.61	56.83	Peak (NRB)	Horizontal	151	39	--	--	Pass
#3	6307.54	61.27	3.92	-8.39	56.80	Peak (NRB)	Horizontal	151	25	--	--	Pass
#4	11644.93	49.81	5.46	-4.47	50.80	Max Avg	Horizontal	146	87	54.0	-3.2	Pass
#5	11644.93	63.63	5.46	-4.47	64.62	Max Peak	Horizontal	146	87	74.0	-9.4	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

9.4.2. Restricted Band-Edge Emissions

9.4.2.1 Antenna AP-ANT-1B

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

Aruba Networks AP-ANT-1B		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	64.71	53.71	13.25
802.11ac-80	5210.00	5150.00	72.94	49.53	16.50
802.11n HT-20	5180.00	5150.00	67.36	49.23	19.00
802.11n HT-40	5190.00	5150.00	73.80	48.41	16.75

Aruba Networks AP-ANT-1B		Band-Edge Freq	Peak (Limit 68.2dBµV/m)	Average (Limit 78.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	65.56	74.93	21.00
802.11ac-80	5775.00	5725.00	66.95	69.05	22.00
802.11n HT-20	5745.00	5725.00	62.63	70.65	23.00
802.11n HT-40	5755.00	5725.00	66.83	70.25	22.00

Aruba Networks AP-ANT-1B		Band-Edge Freq	Peak (Limit 78.2dBµV/m)	Average (Limit 68.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	71.64	66.96	23.00
802.11ac-80	5775.00	5725.00	65.77	64.91	22.00
802.11n HT-20	5825.00	5850.00	66.04	60.31	23.00
802.11n HT-40	5795.00	5850.00	62.78	60.57	23.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	13.25	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5097.90	16.00	3.58	34.13	53.71	Max Avg	Vertical	165	359	54.0	-0.3	Pass
#2	5099.20	27.00	3.58	34.13	64.71	Max Peak	Vertical	165	359	74.0	-9.3	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5135.67	35.13	3.69	34.12	72.94	Max Peak	Vertical	165	359	74.0	-1.1	Pass
#2	5148.70	11.75	3.67	34.11	49.53	Max Avg	Vertical	165	359	54.0	-4.5	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5099.20	29.65	3.58	34.13	67.36	Max Peak	Vertical	165	359	74.0	-6.6	Pass
#2	5150.00	11.45	3.67	34.11	49.23	Max Avg	Vertical	165	359	54.0	-4.8	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	16.75	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5148.70	10.63	3.67	34.11	48.41	Max Avg	Vertical	165	359	54.0	-5.6	Pass
#2	5148.70	36.02	3.67	34.11	73.80	Max Peak	Vertical	165	359	74.0	-0.2	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	27.41	3.81	34.34	65.56	Marker	Vertical	160	3	68.2	-2.7	Pass
#2	5725.00	36.79	3.79	34.35	74.93	Marker	Vertical	160	3	78.2	-3.3	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5714.52	28.80	3.81	34.34	66.95	Marker	Vertical	160	3	68.2	-1.3	Pass
#2	5724.03	30.91	3.79	34.35	69.05	Marker	Vertical	160	3	78.2	-9.2	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	24.48	3.81	34.34	62.63	Marker	Vertical	160	3	68.2	-5.6	Pass
#2	5725.00	32.51	3.79	34.35	70.65	Marker	Vertical	160	3	78.2	-7.6	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5714.27	28.67	3.82	34.34	66.83	Marker	Vertical	160	3	68.2	-1.4	Pass
#2	5725.00	32.11	3.79	34.35	70.25	Marker	Vertical	160	3	78.2	-8.0	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	33.20	3.81	34.63	71.64	Marker	Vertical	182	2	78.2	-6.6	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	28.45	3.86	34.65	66.96	Marker	Vertical	182	2	68.2	-1.3	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5854.00	27.30	3.83	34.64	65.77	Marker	Vertical	182	2	78.2	-12.5	Pass
#3	5864.00	26.41	3.84	34.66	64.91	Marker	Vertical	182	2	68.2	-3.3	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	27.60	3.81	34.63	66.04	Marker	Vertical	182	2	78.2	-12.2	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	21.80	3.86	34.65	60.31	Marker	Vertical	182	2	68.2	-7.9	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-1B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	24.34	3.81	34.63	62.78	Marker	Vertical	182	2	78.2	-15.5	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	22.06	3.86	34.65	60.57	Marker	Vertical	182	2	68.2	-7.7	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

9.4.2.2 Antenna AP-ANT-13B

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

Aruba Networks AP-ANT-13B		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	64.06	53.73	16.00
802.11ac-80	5210.00	5150.00	73.11	49.96	17.25
802.11n HT-20	5180.00	5150.00	71.60	53.05	21.00
802.11n HT-40	5190.00	5150.00	72.46	51.17	18.00

Aruba Networks AP-ANT-13B		Band-Edge Freq	Peak (Limit 68.2dBµV/m)	Average (Limit 78.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	64.70	73.29	21.00
802.11ac-80	5775.00	5725.00	67.95	69.23	22.00
802.11n HT-20	5745.00	5725.00	63.01	70.65	23.00
802.11n HT-40	5755.00	5725.00	67.52	70.01	22.00

Aruba Networks AP-ANT-13B		Band-Edge Freq	Peak (Limit 78.2dBµV/m)	Average (Limit 68.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	71.71	67.32	23.00
802.11ac-80	5775.00	5725.00	68.82	67.67	23.00
802.11n HT-20	5825.00	5850.00	65.62	60.82	23.00
802.11n HT-40	5795.00	5850.00	62.39	61.78	23.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5104.41	16.02	3.58	34.13	53.73	Max Avg	Vertical	195	-3	54.0	-0.3	Pass
#2	5105.71	26.36	3.57	34.13	64.06	Max Peak	Vertical	195	-3	74.0	-9.9	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	17.25	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5144.79	12.16	3.69	34.11	49.96	Max Avg	Vertical	195	-3	54.0	-4.0	Pass
#2	5144.79	35.31	3.69	34.11	73.11	Max Peak	Vertical	195	-3	74.0	-0.9	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5147.39	33.81	3.68	34.11	71.60	Max Peak	Vertical	195	-3	74.0	-2.4	Pass
#2	5150.00	15.27	3.67	34.11	53.05	Max Avg	Vertical	195	-3	54.0	-1.0	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5150.00	13.39	3.67	34.11	51.17	Max Avg	Vertical	195	-3	54.0	-2.8	Pass
#2	5150.00	34.68	3.67	34.11	72.46	Max Peak	Vertical	195	-3	74.0	-1.5	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5714.27	26.54	3.82	34.34	64.70	Marker	Vertical	186	360	68.2	-3.5	Pass
#2	5724.03	35.15	3.79	34.35	73.29	Marker	Vertical	186	360	78.2	-4.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5713.30	29.79	3.82	34.34	67.95	Marker	Vertical	186	360	68.2	-0.3	Pass
#2	5724.03	31.09	3.79	34.35	69.23	Marker	Vertical	186	360	78.2	-9.0	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	24.86	3.81	34.34	63.01	Marker	Vertical	186	360	68.2	-5.2	Pass
#2	5725.00	32.51	3.79	34.35	70.65	Marker	Vertical	186	360	78.2	-7.6	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5714.27	29.36	3.82	34.34	67.52	Marker	Vertical	186	360	68.2	-0.7	Pass
#2	5725.00	31.87	3.79	34.35	70.01	Marker	Vertical	186	360	78.2	-8.2	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	33.27	3.81	34.63	71.71	Marker	Vertical	189	3	78.2	-6.5	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.21	28.81	3.86	34.65	67.32	Marker	Vertical	189	3	68.2	-0.9	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5857.79	30.32	3.85	34.65	68.82	Marker	Vertical	189	3	78.2	-9.4	Pass
#3	5862.74	29.16	3.85	34.66	67.67	Marker	Vertical	189	3	68.2	-0.6	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	27.18	3.81	34.63	65.62	Marker	Vertical	189	3	78.2	-12.6	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	22.31	3.86	34.65	60.82	Marker	Vertical	189	3	68.2	-7.4	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5852.74	23.94	3.82	34.63	62.39	Marker	Vertical	189	3	78.2	-15.8	Pass
#3	5867.79	23.28	3.82	34.68	61.78	Marker	Vertical	189	3	68.2	-6.5	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

9.4.2.3 Antenna AP-ANT-16

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

Aruba Networks AP-ANT-16		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	64.05	53.81	14.00
802.11ac-80	5210.00	5150.00	73.49	49.37	17.25
802.11n HT-20	5180.00	5150.00	73.61	52.75	21.00
802.11n HT-40	5190.00	5150.00	73.56	51.17	18.00

Aruba Networks AP-ANT-16		Band-Edge Freq	Peak (Limit 68.2dBµV/m)	Average (Limit 78.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	67.08	77.49	22.00
802.11ac-80	5775.00	5725.00	64.56	65.32	21.00
802.11n HT-20	5745.00	5725.00	64.67	73.95	23.00
802.11n HT-40	5755.00	5725.00	66.01	68.60	21.00

Aruba Networks AP-ANT-16		Band-Edge Freq	Peak (Limit 78.2dBµV/m)	Average (Limit 68.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	74.11	67.62	22.00
802.11ac-80	5775.00	5725.00	65.37	65.90	22.00
802.11n HT-20	5825.00	5850.00	65.37	60.07	23.00
802.11n HT-40	5795.00	5850.00	62.73	60.95	23.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	14	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5101.80	16.10	3.58	34.13	53.81	Max Avg	Horizontal	101	320	54.0	-0.2	Pass
#2	5101.80	26.34	3.58	34.13	64.05	Max Peak	Horizontal	101	320	74.0	-10.0	Pass

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11ac-80
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	17.25	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5142.18	11.55	3.70	34.12	49.37	Max Avg	Horizontal	101	320	54.0	-4.6	Pass
#2	5142.18	35.67	3.70	34.12	73.49	Max Peak	Horizontal	101	320	74.0	-0.5	Pass

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5150.00	14.97	3.67	34.11	52.75	Max Avg	Horizontal	101	320	54.0	-1.3	Pass
#2	5150.00	35.83	3.67	34.11	73.61	Max Peak	Horizontal	101	320	74.0	-0.4	Pass

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5150.00	13.39	3.67	34.11	51.17	Max Avg	Horizontal	101	320	54.0	-2.8	Pass
#2	5150.00	35.78	3.67	34.11	73.56	Max Peak	Horizontal	101	320	74.0	-0.4	Pass

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	28.93	3.81	34.34	67.08	Marker	Horizontal	131	295	68.2	-1.2	Pass
#2	5725.00	39.35	3.79	34.35	77.49	Marker	Horizontal	131	295	78.2	-0.7	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	26.41	3.81	34.34	64.56	Marker	Horizontal	131	295	68.2	-3.7	Pass
#2	5723.80	27.18	3.79	34.35	65.32	Marker	Horizontal	131	295	78.2	-12.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	26.52	3.81	34.34	64.67	Marker	Horizontal	131	295	68.2	-3.6	Pass
#2	5725.00	35.81	3.79	34.35	73.95	Marker	Horizontal	131	295	78.2	-4.3	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	27.86	3.81	34.34	66.01	Marker	Horizontal	131	295	68.2	-2.2	Pass
#2	5725.00	30.46	3.79	34.35	68.60	Marker	Horizontal	131	295	78.2	-9.6	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDsine 9001GR

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5851.10	35.67	3.81	34.63	74.11	Marker	Horizontal	188	291	78.2	-4.1	Pass
#3	5861.62	29.11	3.85	34.66	67.62	Marker	Horizontal	188	291	68.2	-0.6	Pass
Test Notes: EUT on 150cm table, powered by PDsine 9001GR												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5851.00	26.93	3.81	34.63	65.37	Marker	Horizontal	188	291	78.2	-12.9	Pass
#3	5861.00	27.38	3.86	34.66	65.90	Marker	Horizontal	188	291	68.2	-2.3	Pass
Test Notes: EUT on 150cm table, powered by PDsine 9001GR												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	26.93	3.81	34.63	65.37	Marker	Horizontal	188	291	78.2	-12.9	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	21.56	3.86	34.65	60.07	Marker	Horizontal	188	291	68.2	-8.2	Pass
Test Notes: EUT on 150cm table, powered by PDsine 9001GR												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-16	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5851.25	24.29	3.81	34.63	62.73	Marker	Horizontal	188	291	78.2	-15.5	Pass
#3	5861.25	22.43	3.86	34.66	60.95	Marker	Horizontal	188	291	68.2	-7.3	Pass
Test Notes: EUT on 150cm table, powered by PDsine 9001GR												

9.4.2.4 Antenna AP-ANT-18

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

Aruba Networks AP-ANT-18		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	64.44	53.80	16.50
802.11ac-80	5210.00	5150.00	73.51	47.70	17.00
802.11n HT-20	5180.00	5150.00	71.86	47.71	20.00
802.11n HT-40	5190.00	5150.00	72.43	49.07	18.00

Aruba Networks AP-ANT-18		Band-Edge Freq	Peak (Limit 68.2dBµV/m)	Average (Limit 78.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	65.96	75.61	23.00
802.11ac-80	5775.00	5725.00	67.74	68.95	22.00
802.11n HT-20	5745.00	5725.00	64.22	72.63	23.00
802.11n HT-40	5755.00	5725.00	68.16	71.17	22.00

Aruba Networks AP-ANT-18		Band-Edge Freq	Peak (Limit 78.2dBµV/m)	Average (Limit 68.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	72.46	66.85	23.00
802.11ac-80	5775.00	5725.00	65.90	65.36	22.00
802.11n HT-20	5825.00	5850.00	68.70	63.19	23.00
802.11n HT-40	5795.00	5850.00	63.54	61.99	23.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	7.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	16.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5096.59	16.09	3.58	34.13	53.80	Max Avg	Vertical	196	39	54.0	-0.2	Pass
#2	5105.71	26.74	3.57	34.13	64.44	Max Peak	Vertical	196	39	74.0	-9.6	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11ac-80
Antenna Gain (dBi):	7.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	17	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5136.97	35.70	3.69	34.12	73.51	Max Peak	Vertical	196	39	74.0	-0.5	Pass
#2	5147.39	9.91	3.68	34.11	47.70	Max Avg	Vertical	196	39	54.0	-6.3	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	7.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	20	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5148.70	34.08	3.67	34.11	71.86	Max Peak	Vertical	196	39	74.0	-2.1	Pass
#2	5150.00	9.93	3.67	34.11	47.71	Max Avg	Vertical	196	39	54.0	-6.3	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	7.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5146.09	34.63	3.69	34.11	72.43	Max Peak	Vertical	196	39	74.0	-1.6	Pass
#2	5148.70	11.29	3.67	34.11	49.07	Max Avg	Vertical	196	39	54.0	-4.9	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	27.81	3.81	34.34	65.96	Marker	Vertical	191	317	68.2	-2.3	Pass
#2	5724.76	37.47	3.79	34.35	75.61	Marker	Vertical	191	317	78.2	-2.6	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	29.59	3.81	34.34	67.74	Marker	Vertical	191	317	68.2	-0.5	Pass
#2	5723.79	30.81	3.79	34.35	68.95	Marker	Vertical	191	317	78.2	-9.3	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	26.07	3.81	34.34	64.22	Marker	Vertical	191	317	68.2	-4.0	Pass
#2	5725.00	34.49	3.79	34.35	72.63	Marker	Vertical	191	317	78.2	-5.6	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	30.01	3.81	34.34	68.16	Marker	Vertical	191	317	68.2	-0.1	Pass
#2	5725.00	33.03	3.79	34.35	71.17	Marker	Vertical	191	317	78.2	-7.1	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5852.53	34.01	3.82	34.63	72.46	Marker	Vertical	180	289	78.2	-5.8	Pass
#3	5862.10	28.34	3.85	34.66	66.85	Marker	Vertical	180	289	68.2	-1.4	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5851.26	27.46	3.81	34.63	65.90	Marker	Vertical	180	289	78.2	-12.3	Pass
#3	5861.68	26.85	3.85	34.66	65.36	Marker	Vertical	180	289	68.2	-2.9	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	30.26	3.81	34.63	68.70	Marker	Vertical	180	289	78.2	-9.5	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	24.68	3.86	34.65	63.19	Marker	Vertical	180	289	68.2	-5.0	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-18	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5851.47	25.10	3.81	34.63	63.54	Marker	Vertical	180	289	78.2	-14.7	Pass
#3	5862.31	23.48	3.85	34.66	61.99	Marker	Vertical	180	289	68.2	-6.2	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE												

9.4.2.5 Antenna AP-ANT-19

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

Aruba Networks AP-ANT-19		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	55.09	53.82	11.00
802.11ac-80	5210.00	5150.00	72.89	52.64	15.25
802.11n HT-20	5180.00	5150.00	70.76	53.35	18.00
802.11n HT-40	5190.00	5150.00	73.21	50.79	15.50

Aruba Networks AP-ANT-19		Band-Edge Freq	Peak (Limit 68.2dBµV/m)	Average (Limit 78.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	67.41	77.33	21.00
802.11ac-80	5775.00	5725.00	65.96	67.20	21.00
802.11n HT-20	5745.00	5725.00	65.56	74.45	23.00
802.11n HT-40	5755.00	5725.00	66.35	68.77	21.00

Aruba Networks AP-ANT-19		Band-Edge Freq	Peak (Limit 78.2dBµV/m)	Average (Limit 68.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	74.73	67.44	21.00
802.11ac-80	5775.00	5725.00	66.94	66.20	21.00
802.11n HT-20	5825.00	5850.00	70.90	64.09	23.00
802.11n HT-40	5795.00	5850.00	67.53	64.75	23.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	11	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5103.11	16.11	3.58	34.13	53.82	Max Avg	Vertical	159	38	54.0	-0.2	Pass
#2	5147.39	17.30	3.68	34.11	55.09	Max Peak	Vertical	159	38	74.0	-18.9	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15.25	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5143.49	14.82	3.70	34.12	52.64	Max Avg	Vertical	159	38	54.0	-1.4	Pass
#2	5150.00	35.11	3.67	34.11	72.89	Max Peak	Vertical	159	38	74.0	-1.1	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5103.11	15.64	3.58	34.13	53.35	Max Avg	Vertical	159	38	54.0	-0.7	Pass
#2	5147.39	32.97	3.68	34.11	70.76	Max Peak	Vertical	159	38	74.0	-3.2	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5150.00	13.01	3.67	34.11	50.79	Max Avg	Vertical	159	38	54.0	-3.2	Pass
#2	5150.00	35.43	3.67	34.11	73.21	Max Peak	Vertical	159	38	74.0	-0.8	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5714.76	29.26	3.81	34.34	67.41	Marker	Vertical	152	6	68.2	-0.8	Pass
#2	5724.76	39.19	3.79	34.35	77.33	Marker	Vertical	152	6	78.2	-0.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5713.06	27.80	3.82	34.34	65.96	Marker	Vertical	152	6	68.2	-2.3	Pass
#2	5724.03	29.06	3.79	34.35	67.20	Marker	Vertical	152	6	78.2	-11.0	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	27.41	3.81	34.34	65.56	Marker	Vertical	152	6	68.2	-2.7	Pass
#2	5725.00	36.31	3.79	34.35	74.45	Marker	Vertical	152	6	78.2	-3.8	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	28.20	3.81	34.34	66.35	Marker	Vertical	152	6	68.2	-1.9	Pass
#2	5724.03	30.63	3.79	34.35	68.77	Marker	Vertical	152	6	78.2	-9.5	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5851.26	36.29	3.81	34.63	74.73	Marker	Vertical	150	362	78.2	-3.5	Pass
#3	5860.84	28.92	3.86	34.66	67.44	Marker	Vertical	150	362	68.2	-0.8	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5850.21	28.50	3.81	34.63	66.94	Marker	Vertical	150	362	78.2	-11.3	Pass
#3	5861.26	27.68	3.86	34.66	66.20	Marker	Vertical	150	362	68.2	-2.0	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	32.46	3.81	34.63	70.90	Marker	Vertical	150	362	78.2	-7.3	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	25.58	3.86	34.65	64.09	Marker	Vertical	150	362	68.2	-4.1	Pass
Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5851.26	29.09	3.81	34.63	67.53	Marker	Vertical	150	362	78.2	-10.7	Pass
#3	5861.26	26.23	3.86	34.66	64.75	Marker	Vertical	150	362	68.2	-3.5	Pass

Test Notes: EUT on 150cm table. Powered by PDSine 9001GR POE

9.4.2.6 Antenna Integral (APIN0225)

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

Aruba Networks Metal Sheet		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	63.73	53.54	10.00
802.11ac-80	5210.00	5150.00	73.98	51.40	14.00
802.11n HT-20	5180.00	5150.00	70.55	53.90	15.75
802.11n HT-40	5190.00	5150.00	73.04	50.79	15.25

Aruba Networks Metal Sheet		Band-Edge Freq	Peak (Limit 68.2dBµV/m)	Average (Limit 78.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	68.23	78.23	22.00
802.11ac-80	5775.00	5725.00	68.23	78.23	20.00
802.11n HT-20	5745.00	5725.00	68.23	78.23	23.00
802.11n HT-40	5755.00	5725.00	68.23	78.23	21.00

Aruba Networks Metal Sheet		Band-Edge Freq	Peak (Limit 78.2dBµV/m)	Average (Limit 68.2dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	72.06	65.21	21.00
802.11ac-80	5775.00	5725.00	68.60	67.21	21.00
802.11n HT-20	5825.00	5850.00	72.65	66.46	23.00
802.11n HT-40	5795.00	5850.00	68.91	66.72	23.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	10	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5099.20	26.02	3.58	34.13	63.73	Max Peak	Horizontal	152	79	74.0	-10.3	Pass
#2	5103.11	15.83	3.58	34.13	53.54	Max Avg	Horizontal	152	79	54.0	-0.5	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11ac-80
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	14	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5143.49	13.58	3.70	34.12	51.40	Max Avg	Horizontal	152	79	54.0	-2.6	Pass
#2	5147.39	36.19	3.68	34.11	73.98	Max Peak	Horizontal	152	79	74.0	0.0	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	15.75	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5099.20	16.19	3.58	34.13	53.90	Max Avg	Horizontal	152	79	54.0	-0.1	Pass
#2	5150.00	32.77	3.67	34.11	70.55	Max Peak	Horizontal	152	79	74.0	-3.5	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	15.25	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5148.70	35.26	3.67	34.11	73.04	Max Peak	Horizontal	152	79	74.0	-1.0	Pass
#2	5150.00	13.01	3.67	34.11	50.79	Max Avg	Horizontal	152	79	54.0	-3.2	Pass

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	22	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5714.52	27.94	3.81	34.34	66.09	Marker	Horizontal	163	86	68.2	-2.1	Pass
#2	5724.52	35.74	3.79	34.35	73.88	Marker	Horizontal	163	86	78.2	-4.4	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11ac-80
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	20	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5709.18	26.19	3.84	34.34	64.37	Marker	Horizontal	163	86	68.2	-3.9	Pass
#2	5718.94	28.21	3.80	34.34	66.35	Marker	Horizontal	163	86	78.2	-11.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	29.15	3.81	34.34	67.30	Marker	Horizontal	163	86	68.2	-0.9	Pass
#2	5725.00	38.22	3.79	34.35	76.36	Marker	Horizontal	163	86	78.2	-1.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	29.80	3.81	34.34	67.95	Marker	Horizontal	163	86	68.2	-0.3	Pass
#2	5725.00	32.51	3.79	34.35	70.65	Marker	Horizontal	163	86	78.2	-7.6	Pass
#3	5725.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	

Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	33.62	3.81	34.63	72.06	Marker	Horizontal	193	87	78.2	-6.2	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	26.70	3.86	34.65	65.21	Marker	Horizontal	193	87	68.2	-3.0	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11ac-80
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	30.16	3.81	34.63	68.60	Marker	Horizontal	193	87	78.2	-9.6	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	28.70	3.86	34.65	67.21	Marker	Horizontal	193	87	68.2	-1.0	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	34.21	3.81	34.63	72.65	Marker	Horizontal	193	87	78.2	-5.6	Pass
#2	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#3	5860.00	27.95	3.86	34.65	66.46	Marker	Horizontal	193	87	68.2	-1.8	Pass
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.												

Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	4.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	23	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5850.00	0.00	0.00	0.00	--	Frequency Line 1		0	0	--	--	
#2	5852.74	30.46	3.82	34.63	68.91	Marker	Horizontal	193	87	78.2	-9.3	Pass
#3	5860.00	28.21	3.86	34.65	66.72	Marker	Horizontal	193	87	68.2	-1.5	Pass

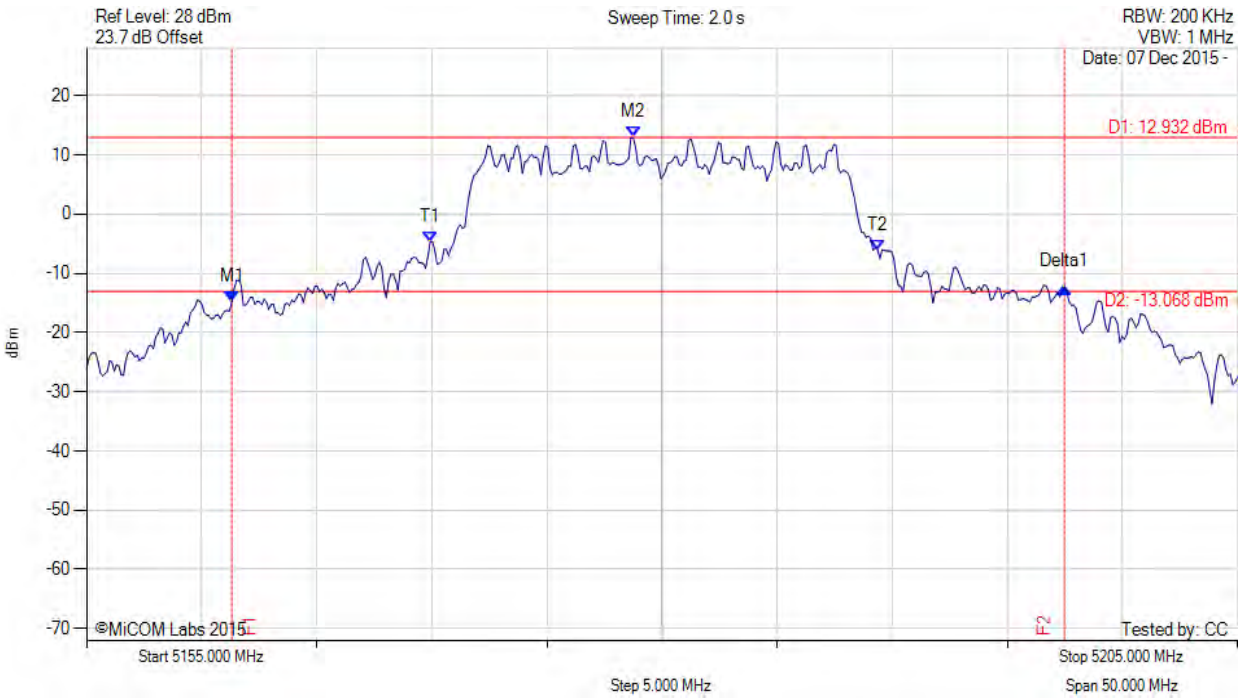
Test Notes: EUT on 150cm table, powered by PDSine 9001GR POE.

A. APPENDIX - GRAPHICAL IMAGES

A.1. 26 dB & 99% Bandwidth

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

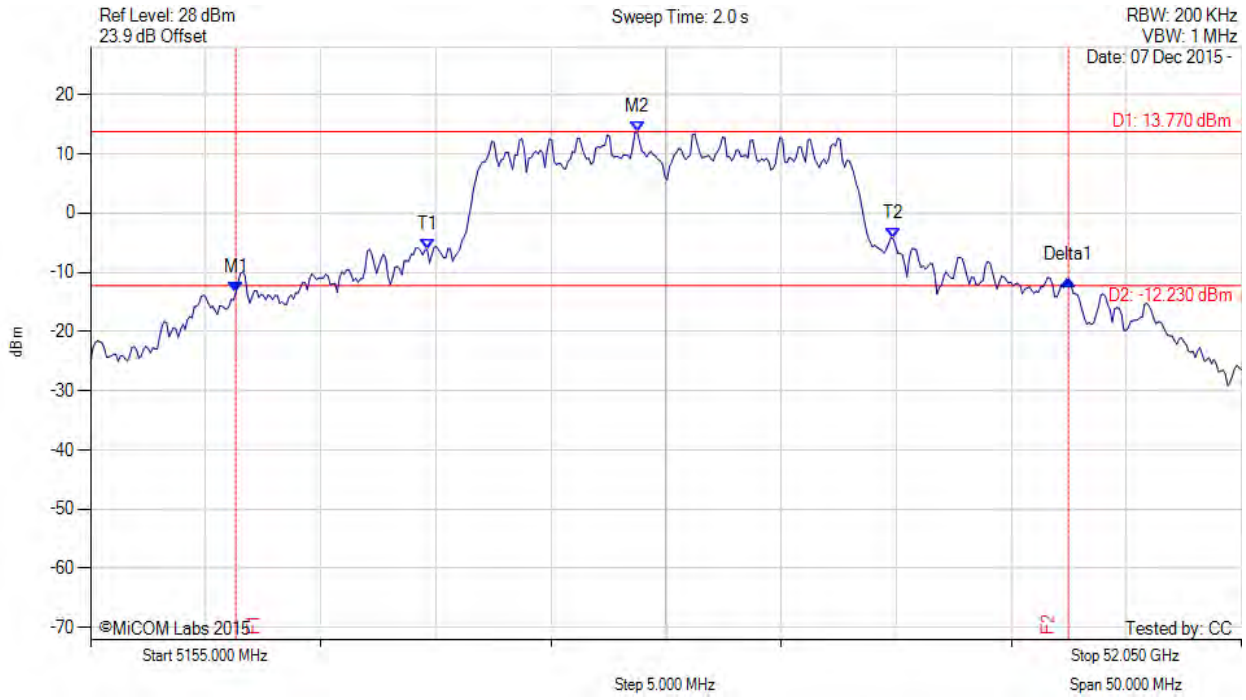


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5161.313 MHz : -14.715 dBm M2 : 5178.747 MHz : 12.932 dBm Delta1 : 36.172 MHz : 2.361 dB T1 : 5169.930 MHz : -4.646 dBm T2 : 5189.369 MHz : -6.106 dBm OBW : 19.439 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 19.439 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

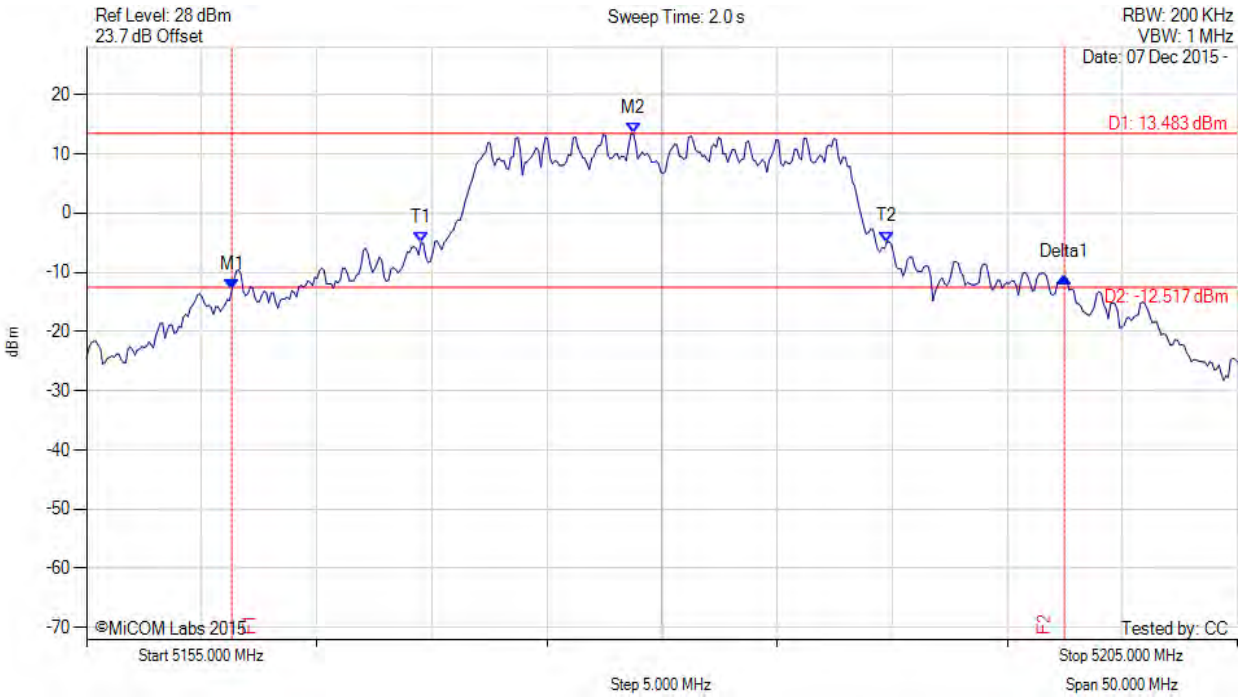


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5161.313 MHz : -13.464 dBm M2 : 5178.747 MHz : 13.770 dBm Delta1 : 36.172 MHz : 2.241 dB T1 : 5169.629 MHz : -6.177 dBm T2 : 5189.870 MHz : -4.318 dBm OBW : 20.240 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 20.240 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

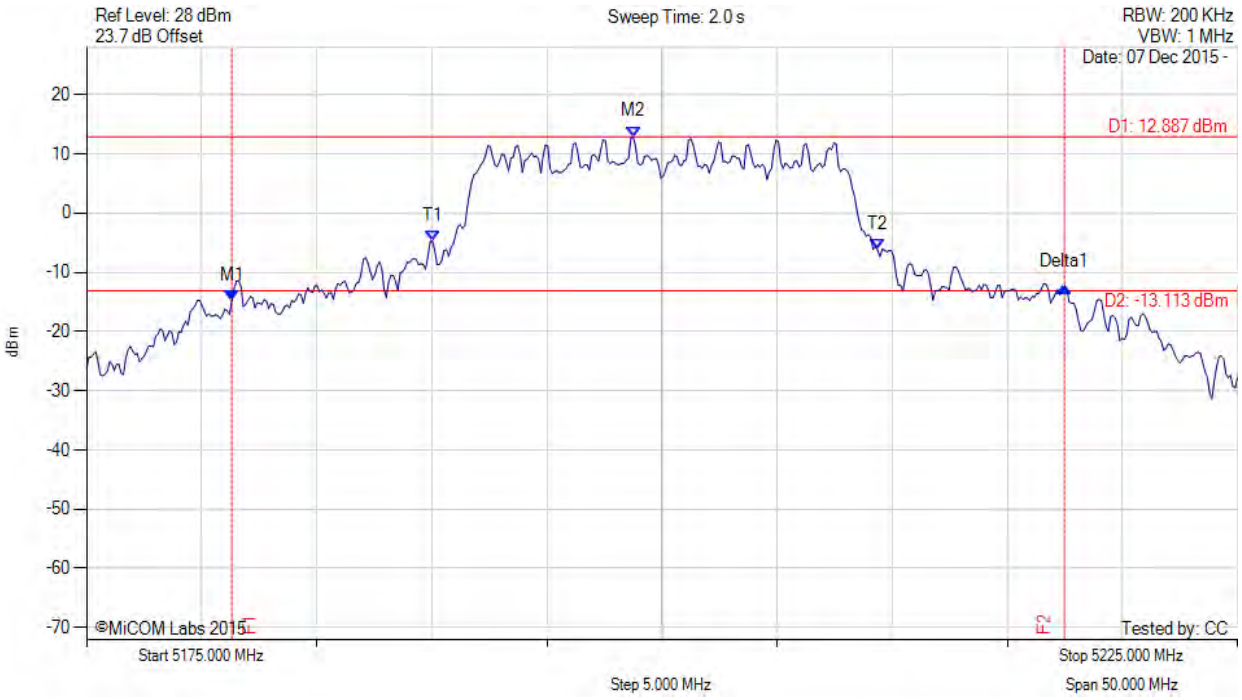


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5161.313 MHz : -12.943 dBm M2 : 5178.747 MHz : 13.483 dBm Delta1 : 36.172 MHz : 2.036 dB T1 : 5169.529 MHz : -5.016 dBm T2 : 5189.770 MHz : -4.853 dBm OBW : 20.240 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 20.240 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

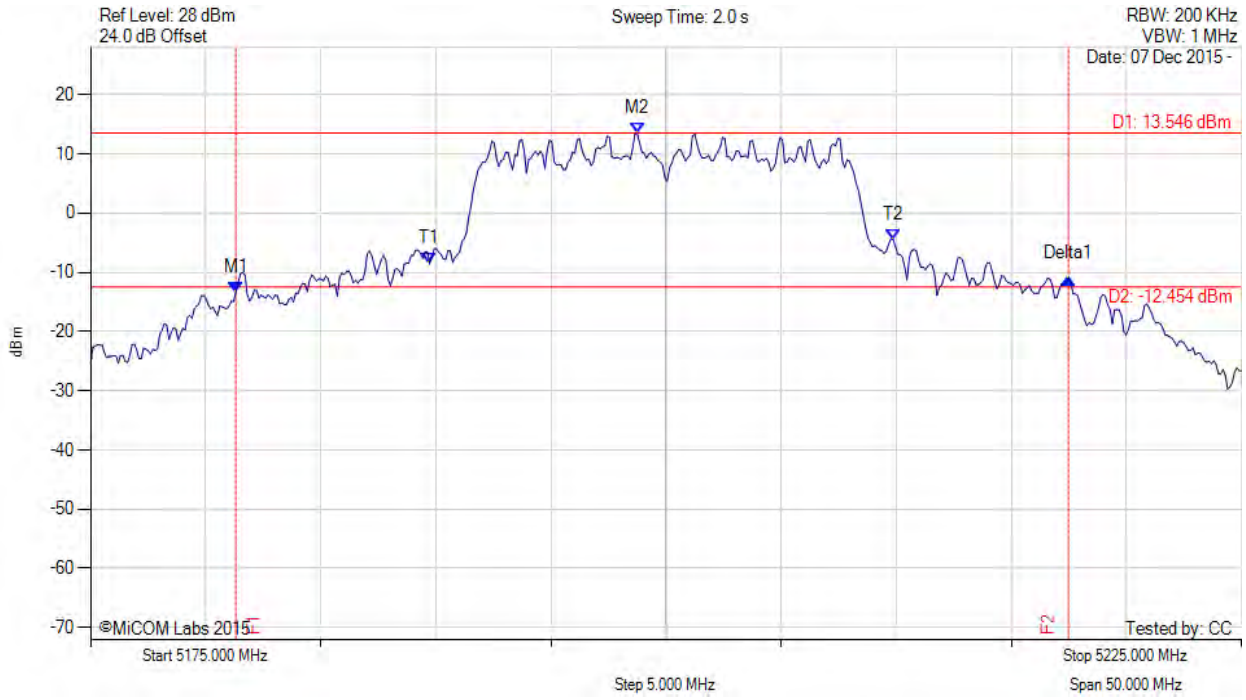


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5181.313 MHz : -14.719 dBm M2 : 5198.747 MHz : 12.887 dBm Delta1 : 36.172 MHz : 2.314 dB T1 : 5190.030 MHz : -4.762 dBm T2 : 5209.369 MHz : -6.250 dBm OBW : 19.339 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 19.339 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

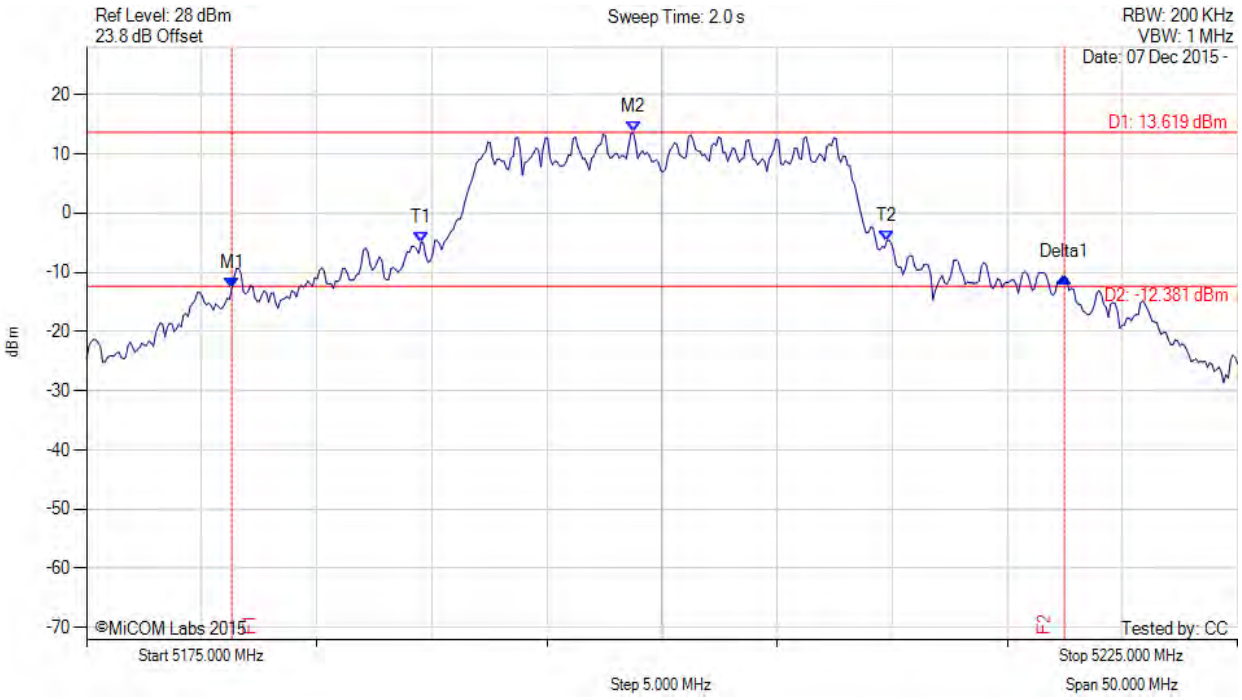


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5181.313 MHz : -13.362 dBm M2 : 5198.747 MHz : 13.546 dBm Delta1 : 36.172 MHz : 2.327 dB T1 : 5189.729 MHz : -8.585 dBm T2 : 5209.870 MHz : -4.473 dBm OBW : 20.140 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 20.140 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

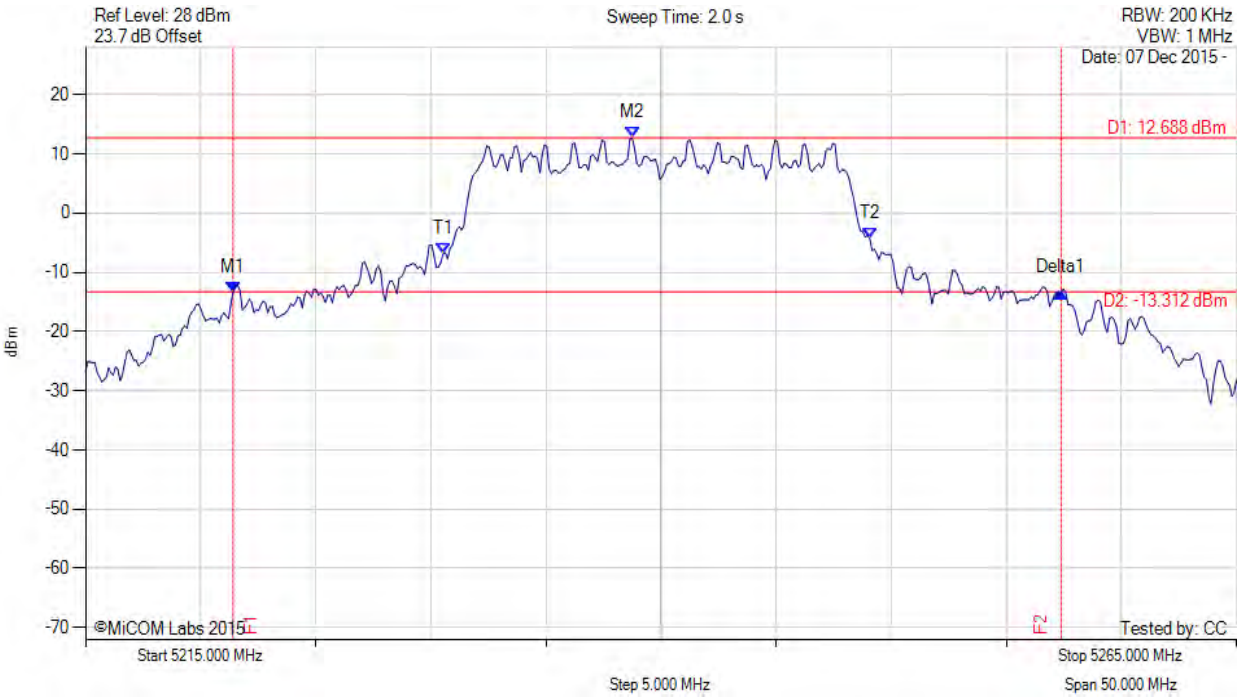


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5181.313 MHz : -12.634 dBm M2 : 5198.747 MHz : 13.619 dBm Delta1 : 36.172 MHz : 1.912 dB T1 : 5189.529 MHz : -4.967 dBm T2 : 5209.770 MHz : -4.709 dBm OBW : 20.240 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 20.240 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

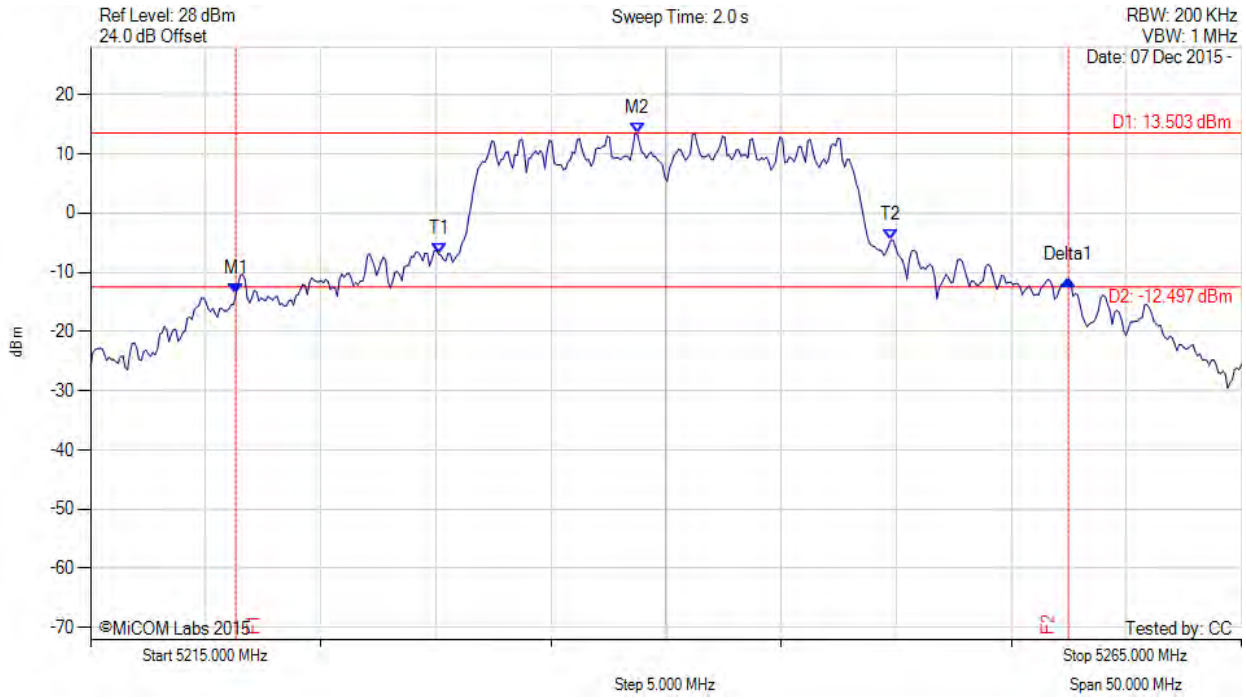


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5221.413 MHz : -13.330 dBm M2 : 5238.747 MHz : 12.688 dBm Delta1 : 35.972 MHz : -0.024 dB T1 : 5230.531 MHz : -6.867 dBm T2 : 5249.068 MHz : -4.219 dBm OBW : 18.537 MHz	Measured 26 dB Bandwidth: 35.972 MHz Measured 99% Bandwidth: 18.537 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

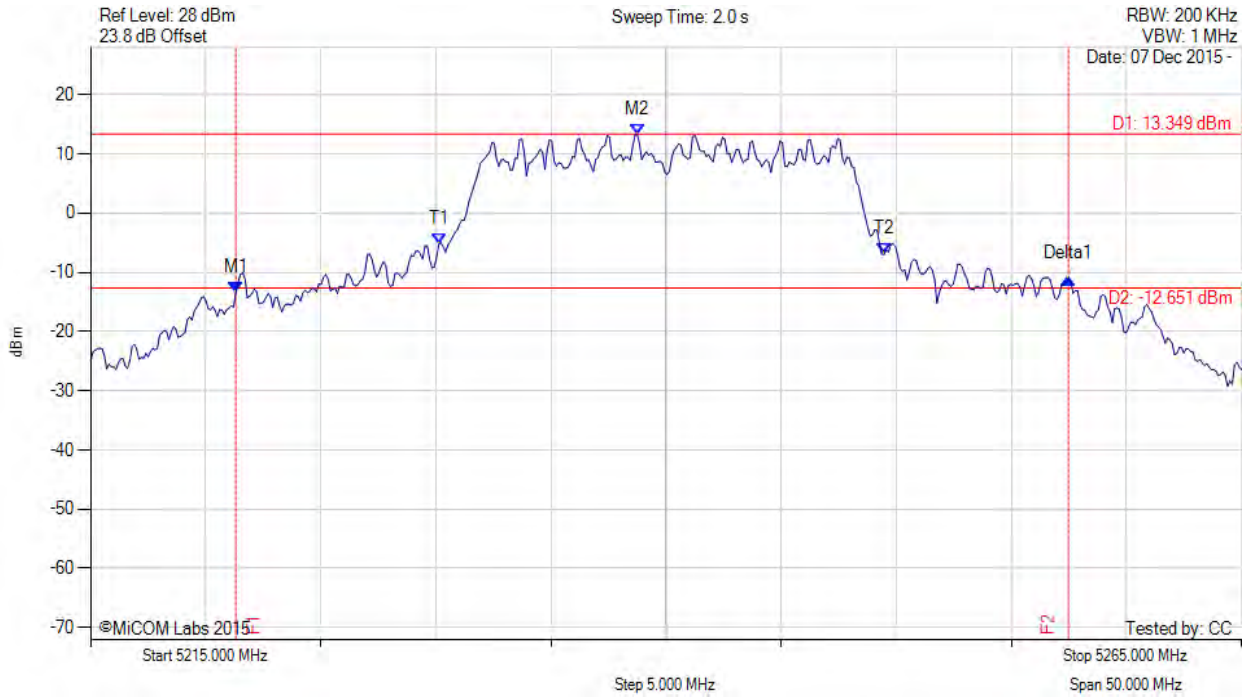


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5221.313 MHz : -13.710 dBm M2 : 5238.747 MHz : 13.503 dBm Delta1 : 36.172 MHz : 2.510 dB T1 : 5230.130 MHz : -6.913 dBm T2 : 5249.770 MHz : -4.544 dBm OBW : 19.639 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 19.639 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

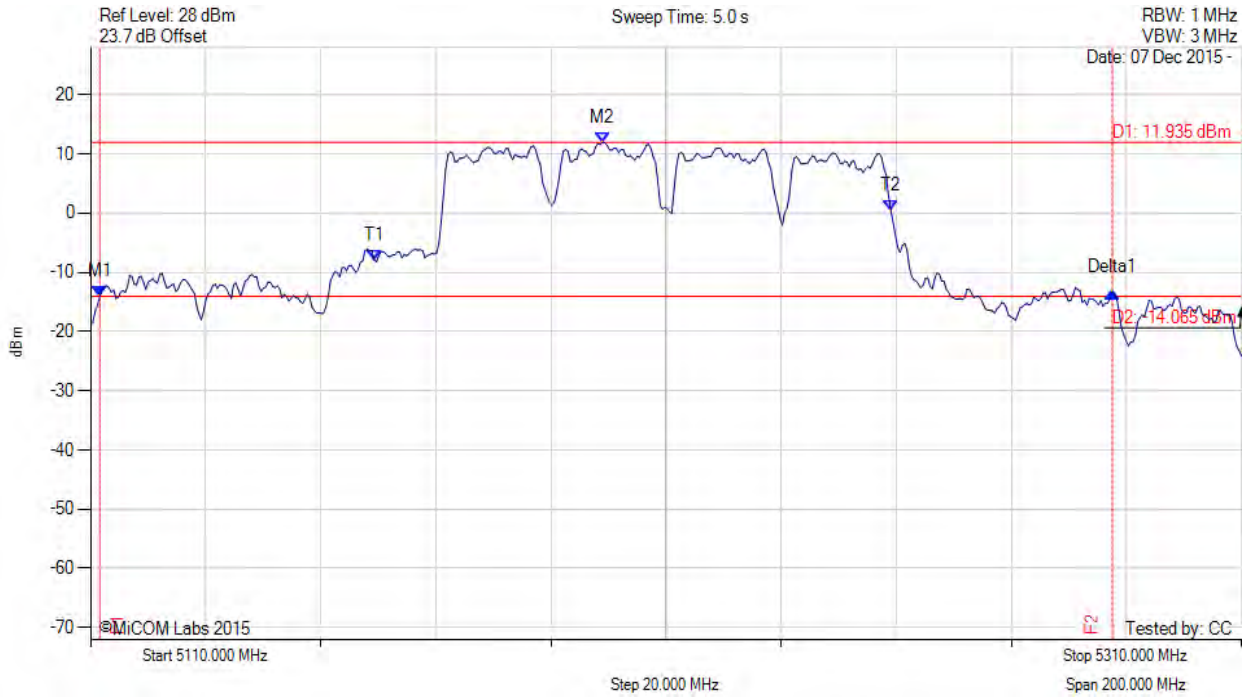


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5221.313 MHz : -13.356 dBm M2 : 5238.747 MHz : 13.349 dBm Delta1 : 36.172 MHz : 2.205 dB T1 : 5230.130 MHz : -5.252 dBm T2 : 5249.469 MHz : -6.954 dBm OBW : 19.339 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 19.339 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

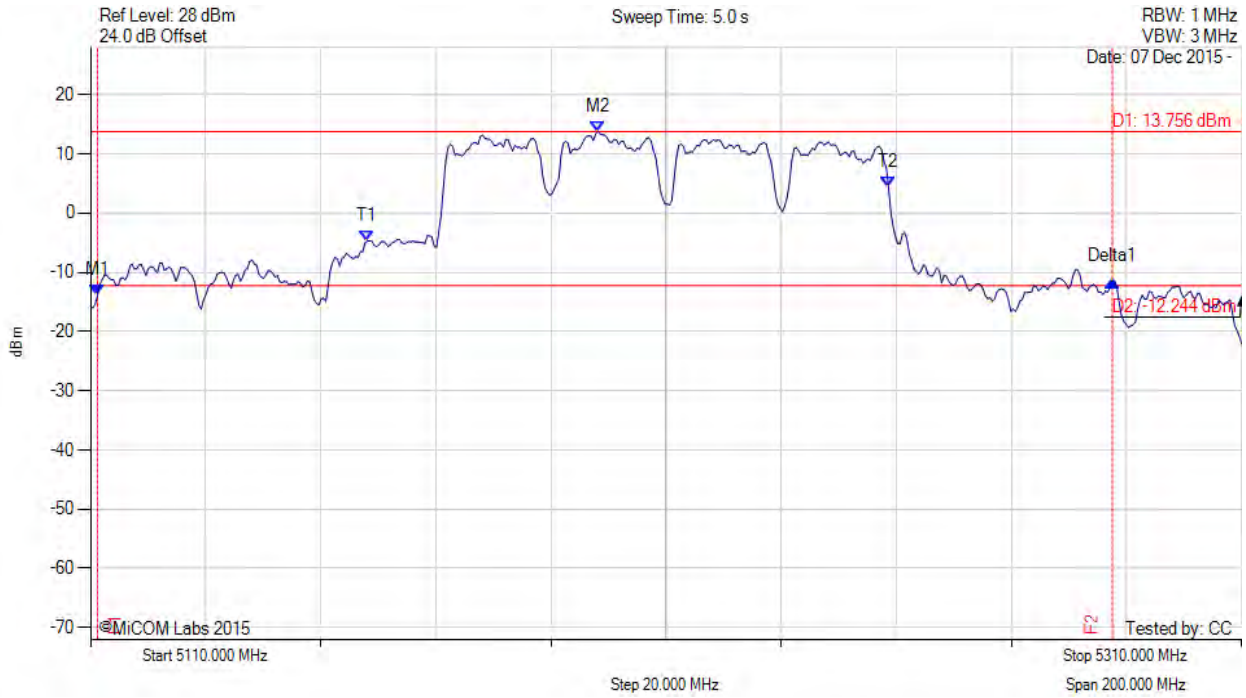


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5111.603 MHz : -14.082 dBm M2 : 5198.978 MHz : 11.935 dBm Delta1 : 175.952 MHz : 0.744 dB T1 : 5159.299 MHz : -7.922 dBm T2 : 5249.078 MHz : 0.406 dBm OBW : 89.780 MHz	Measured 26 dB Bandwidth: 175.952 MHz Measured 99% Bandwidth: 89.780 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

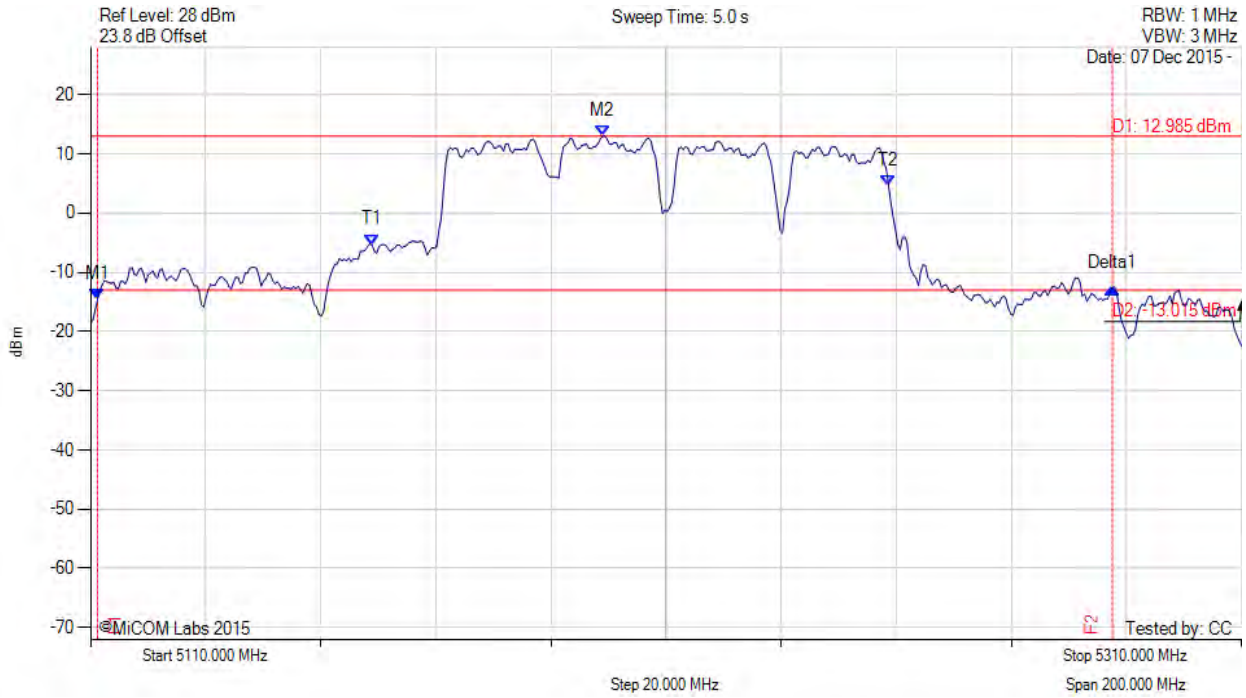


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5111.202 MHz : -13.897 dBm M2 : 5198.176 MHz : 13.756 dBm Delta1 : 176.353 MHz : 2.402 dB T1 : 5158.096 MHz : -4.747 dBm T2 : 5248.677 MHz : 4.297 dBm OBW : 90.581 MHz	Measured 26 dB Bandwidth: 176.353 MHz Measured 99% Bandwidth: 90.581 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

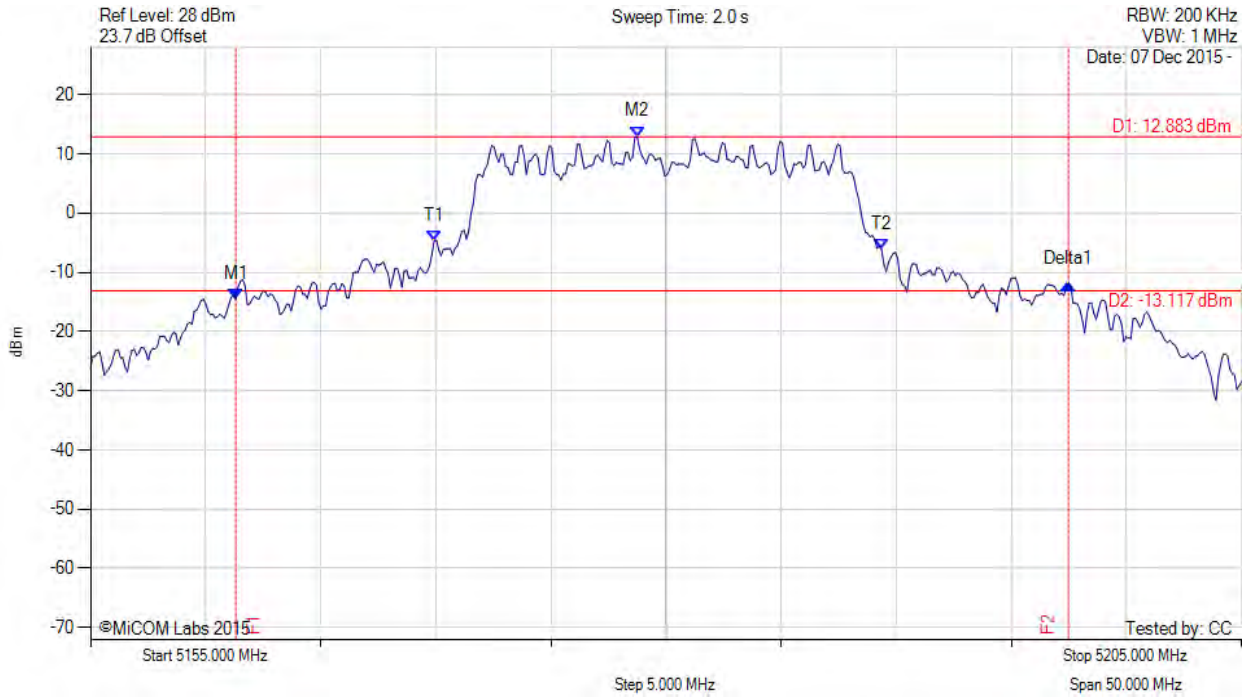


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5111.202 MHz : -14.619 dBm M2 : 5198.978 MHz : 12.985 dBm Delta1 : 176.353 MHz : 1.952 dB T1 : 5158.898 MHz : -5.331 dBm T2 : 5248.677 MHz : 4.524 dBm OBW : 89.780 MHz	Measured 26 dB Bandwidth: 176.353 MHz Measured 99% Bandwidth: 89.780 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

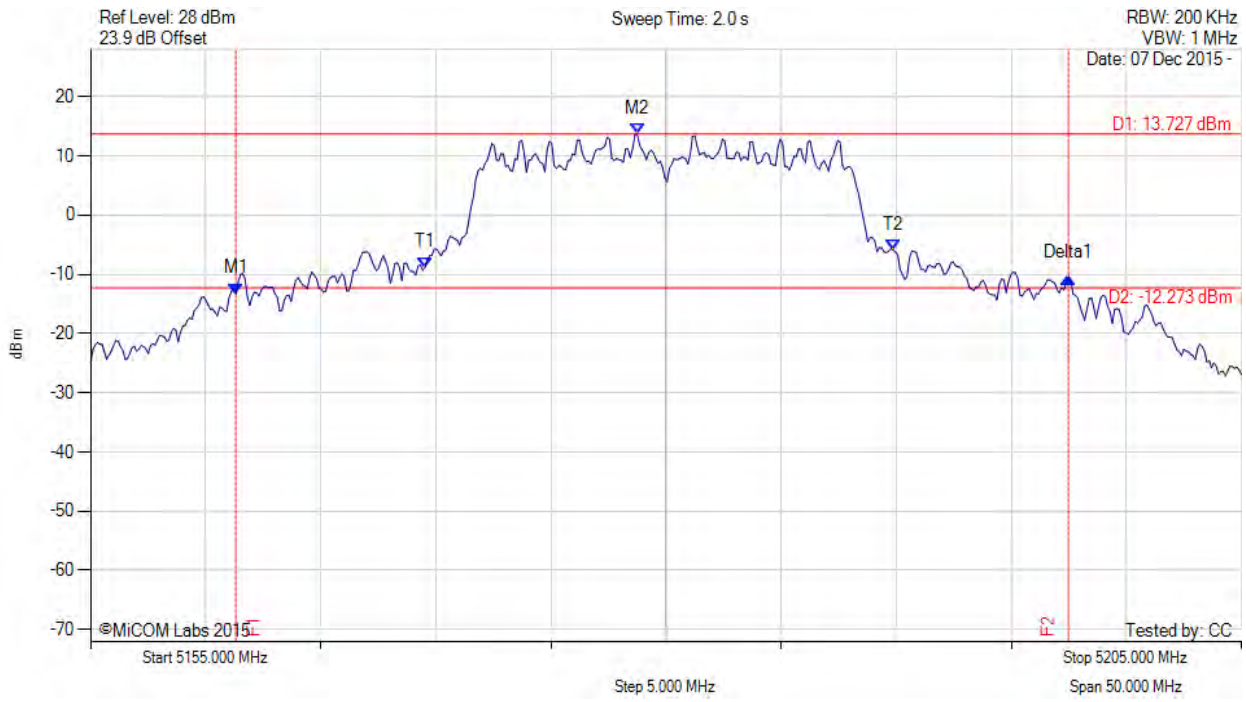


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5161.313 MHz : -14.542 dBm M2 : 5178.747 MHz : 12.883 dBm Delta1 : 36.172 MHz : 2.611 dB T1 : 5169.930 MHz : -4.711 dBm T2 : 5189.369 MHz : -6.161 dBm OBW : 19.439 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 19.439 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

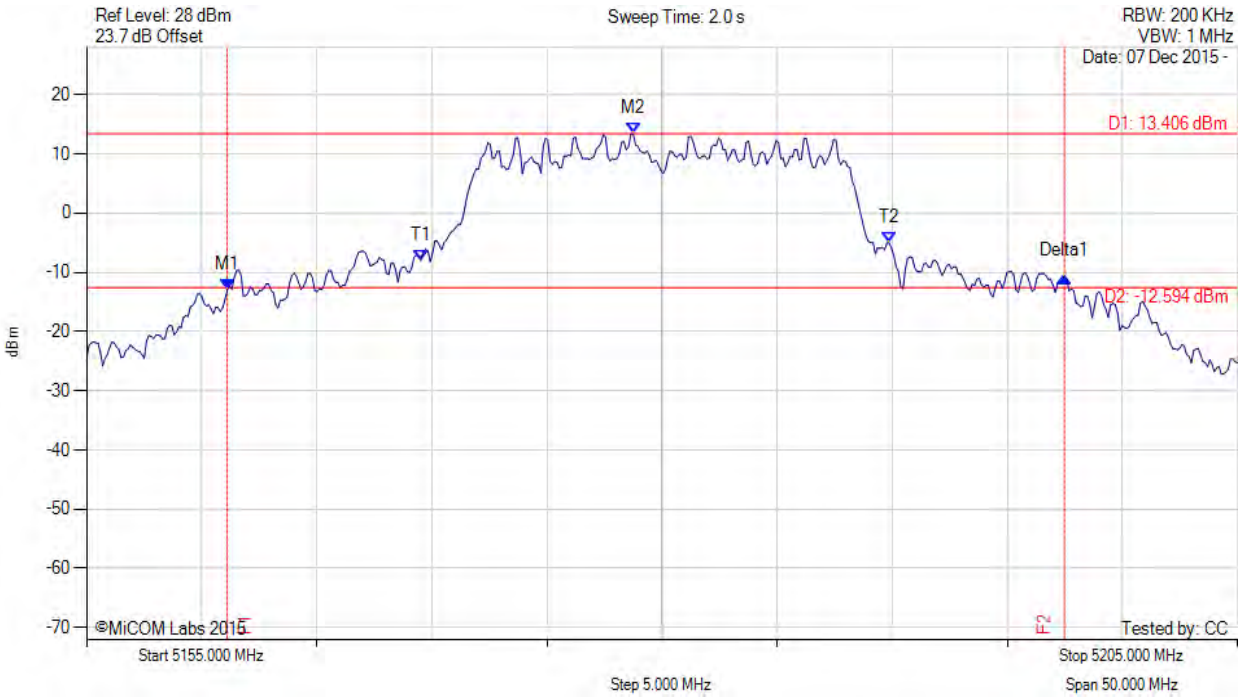


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5161.313 MHz : -13.269 dBm M2 : 5178.747 MHz : 13.727 dBm Delta1 : 36.172 MHz : 2.729 dB T1 : 5169.529 MHz : -8.829 dBm T2 : 5189.870 MHz : -5.921 dBm OBW : 20.341 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 20.341 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

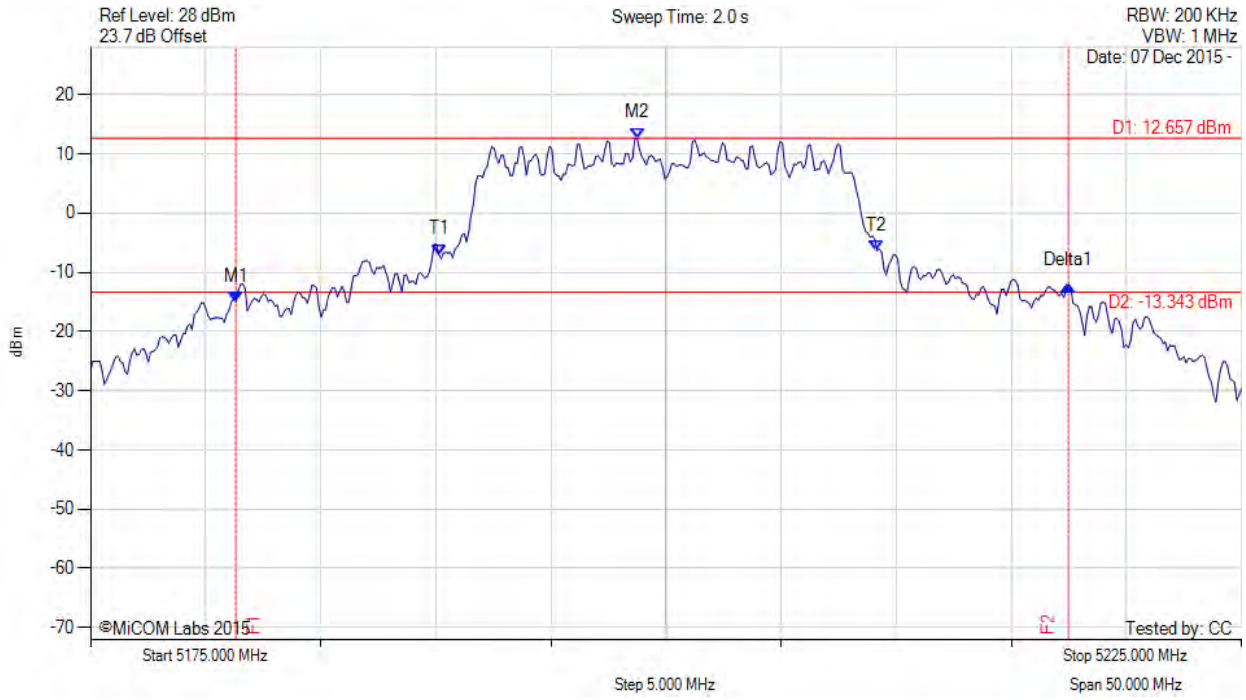


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5161.112 MHz : -12.992 dBm M2 : 5178.747 MHz : 13.406 dBm Delta1 : 36.373 MHz : 2.298 dB T1 : 5169.529 MHz : -7.920 dBm T2 : 5189.870 MHz : -5.038 dBm OBW : 20.341 MHz	Measured 26 dB Bandwidth: 36.373 MHz Measured 99% Bandwidth: 20.341 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

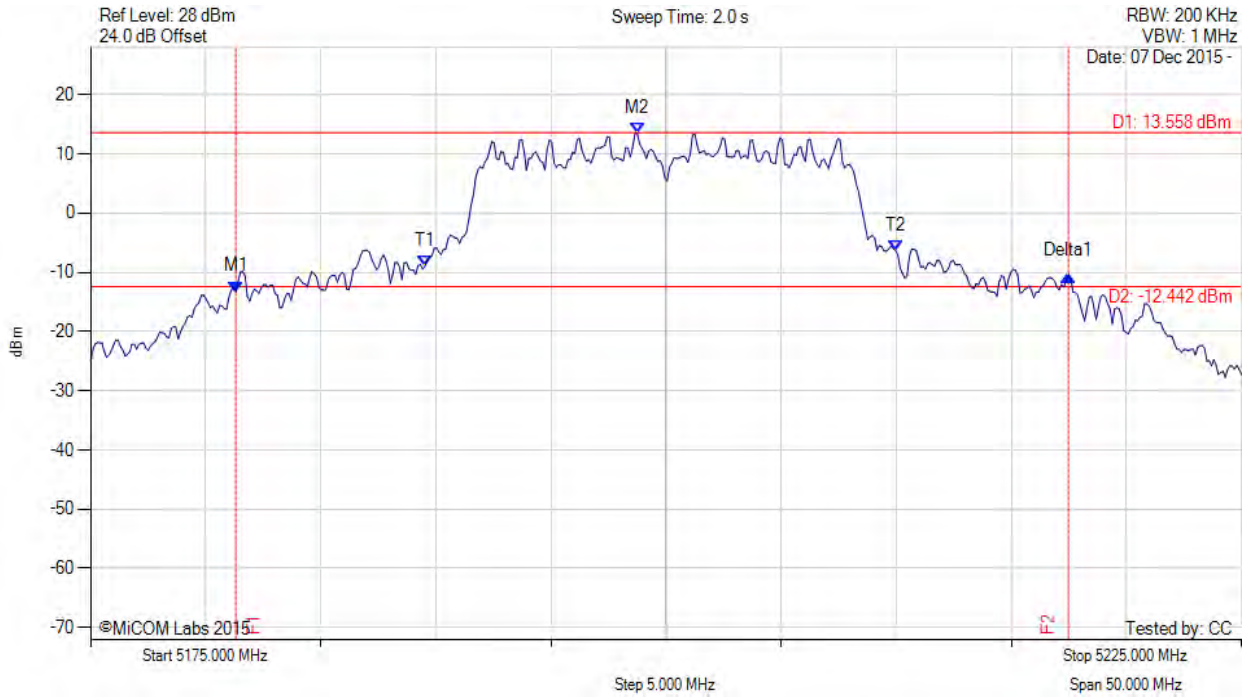


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5181.313 MHz : -14.951 dBm M2 : 5198.747 MHz : 12.657 dBm Delta1 : 36.172 MHz : 2.709 dB T1 : 5190.130 MHz : -6.956 dBm T2 : 5209.168 MHz : -6.299 dBm OBW : 19.038 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 19.038 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

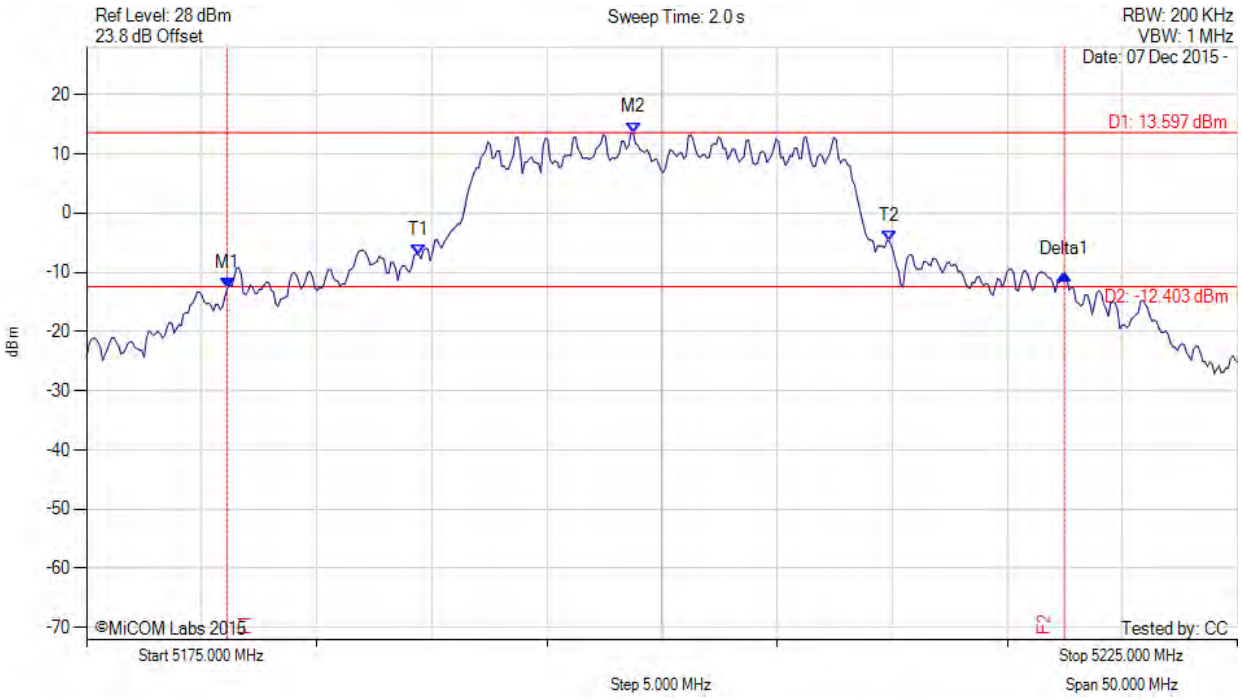


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5181.313 MHz : -13.267 dBm M2 : 5198.747 MHz : 13.558 dBm Delta1 : 36.172 MHz : 2.741 dB T1 : 5189.529 MHz : -8.965 dBm T2 : 5209.970 MHz : -6.303 dBm OBW : 20.441 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 20.441 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

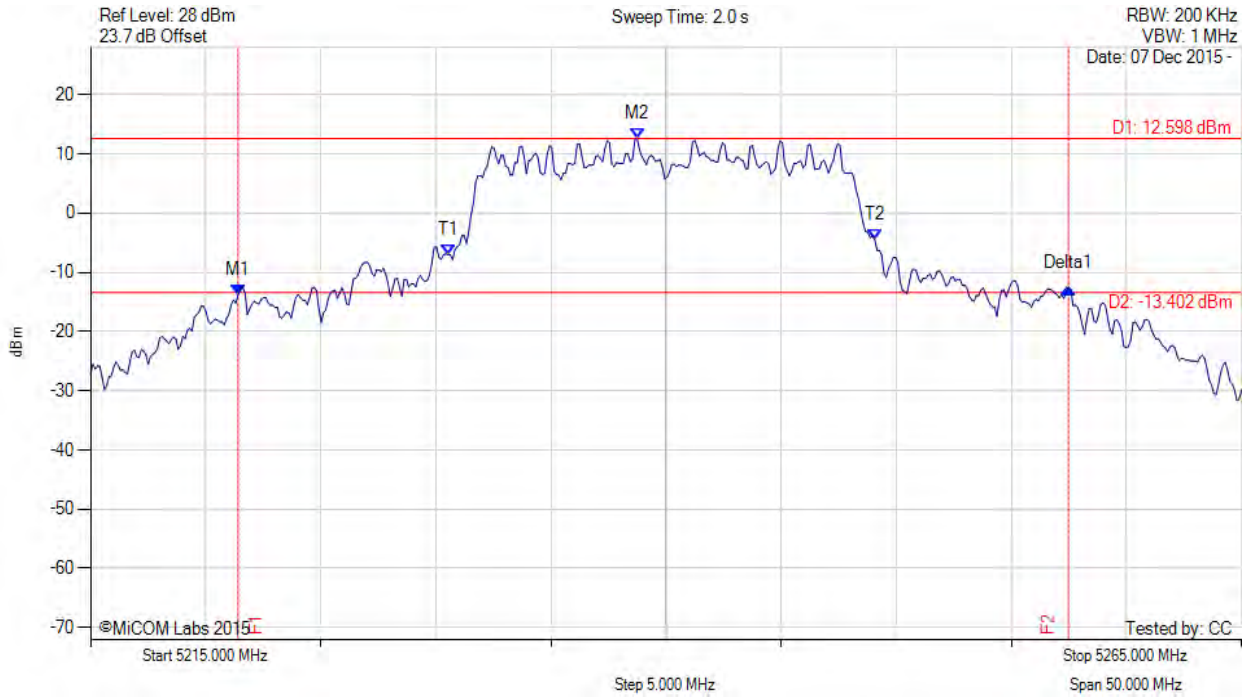


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5181.112 MHz : -12.726 dBm M2 : 5198.747 MHz : 13.597 dBm Delta1 : 36.373 MHz : 2.359 dB T1 : 5189.429 MHz : -7.019 dBm T2 : 5209.870 MHz : -4.758 dBm OBW : 20.441 MHz	Measured 26 dB Bandwidth: 36.373 MHz Measured 99% Bandwidth: 20.441 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

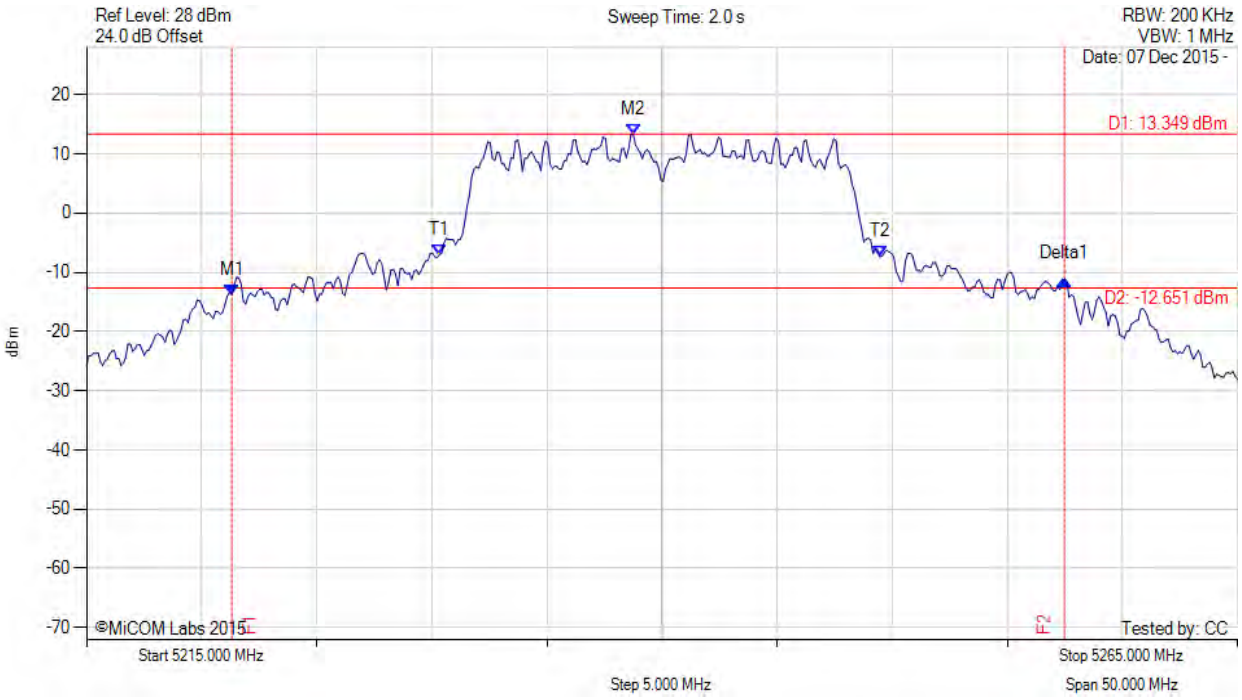


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5221.413 MHz : -13.769 dBm M2 : 5238.747 MHz : 12.598 dBm Delta1 : 36.072 MHz : 1.127 dB T1 : 5230.531 MHz : -6.991 dBm T2 : 5249.068 MHz : -4.432 dBm OBW : 18.537 MHz	Measured 26 dB Bandwidth: 36.072 MHz Measured 99% Bandwidth: 18.537 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

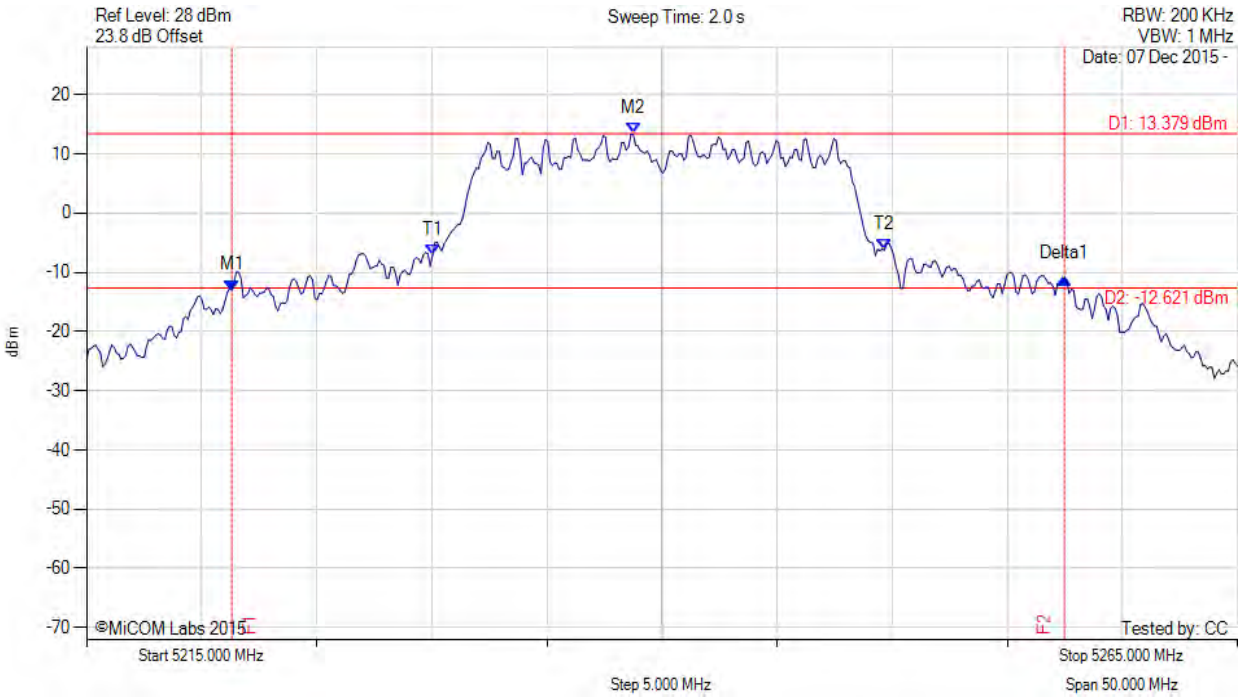


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5221.313 MHz : -13.796 dBm M2 : 5238.747 MHz : 13.349 dBm Delta1 : 36.172 MHz : 2.630 dB T1 : 5230.331 MHz : -6.999 dBm T2 : 5249.469 MHz : -7.393 dBm OBW : 19.138 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 19.138 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

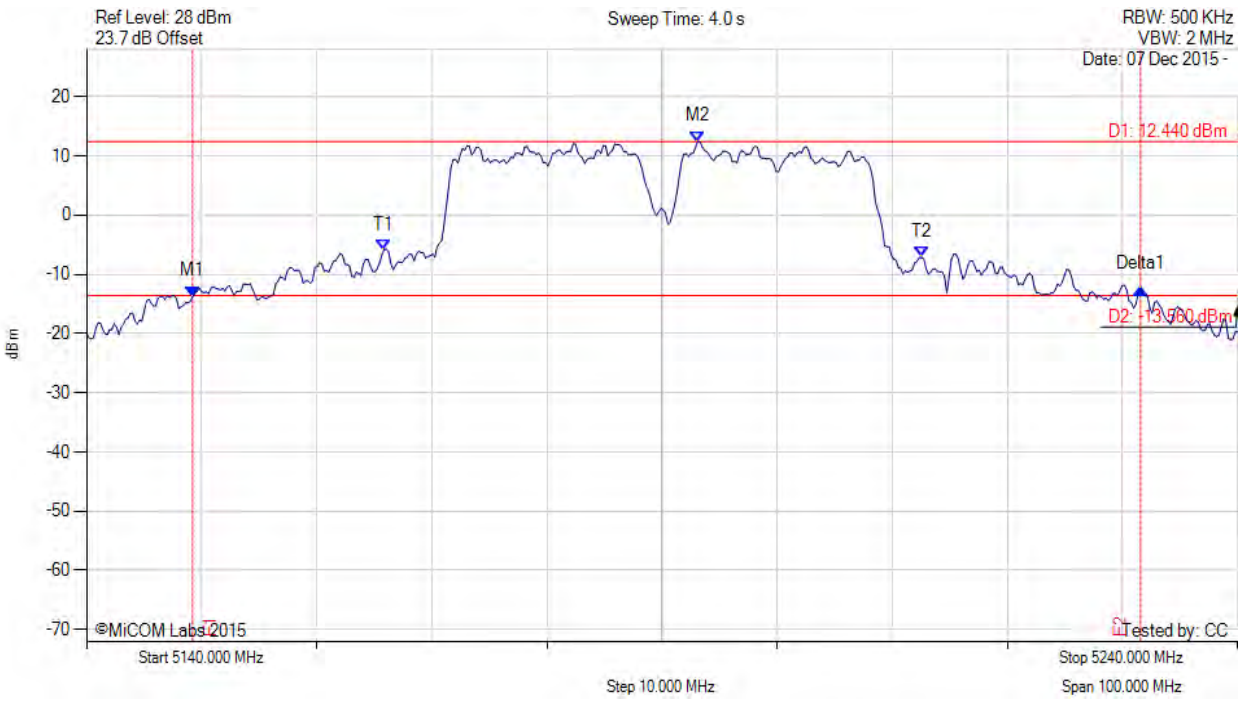


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5221.313 MHz : -13.037 dBm M2 : 5238.747 MHz : 13.379 dBm Delta1 : 36.172 MHz : 1.995 dB T1 : 5230.030 MHz : -7.180 dBm T2 : 5249.669 MHz : -6.248 dBm OBW : 19.639 MHz	Measured 26 dB Bandwidth: 36.172 MHz Measured 99% Bandwidth: 19.639 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

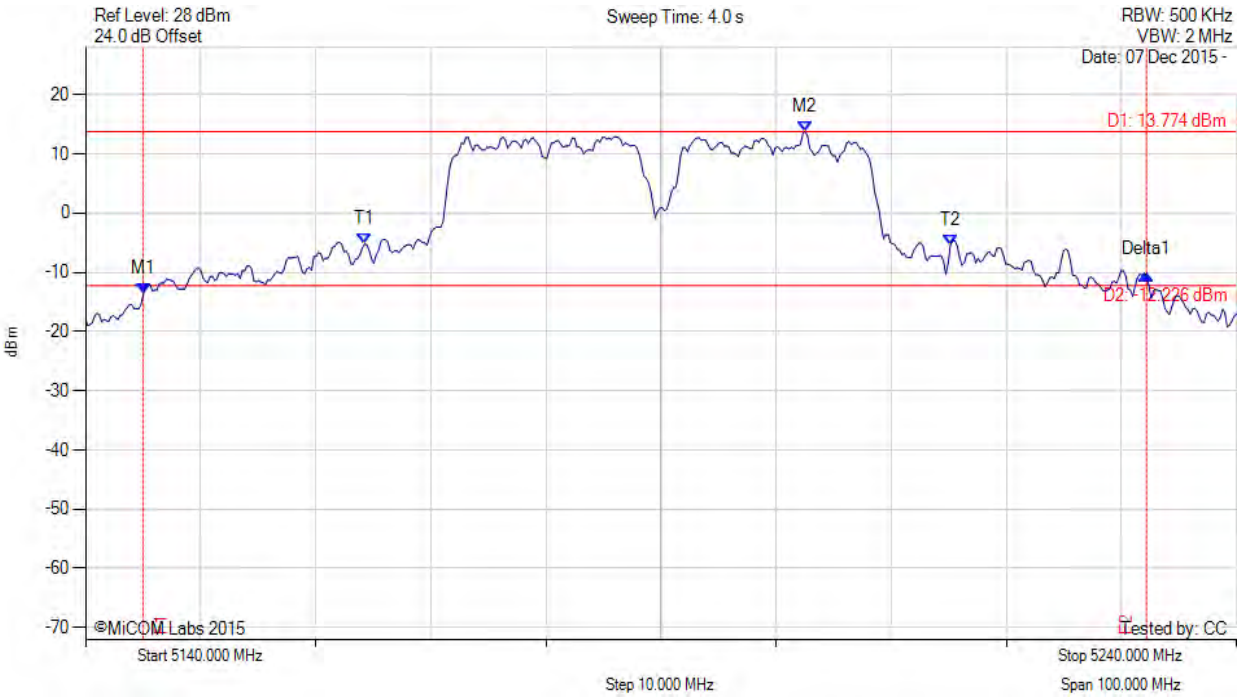


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5149.218 MHz : -13.747 dBm M2 : 5193.106 MHz : 12.440 dBm Delta1 : 82.365 MHz : 1.257 dB T1 : 5165.852 MHz : -5.856 dBm T2 : 5212.545 MHz : -7.133 dBm OBW : 46.693 MHz	Measured 26 dB Bandwidth: 82.365 MHz Measured 99% Bandwidth: 46.693 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

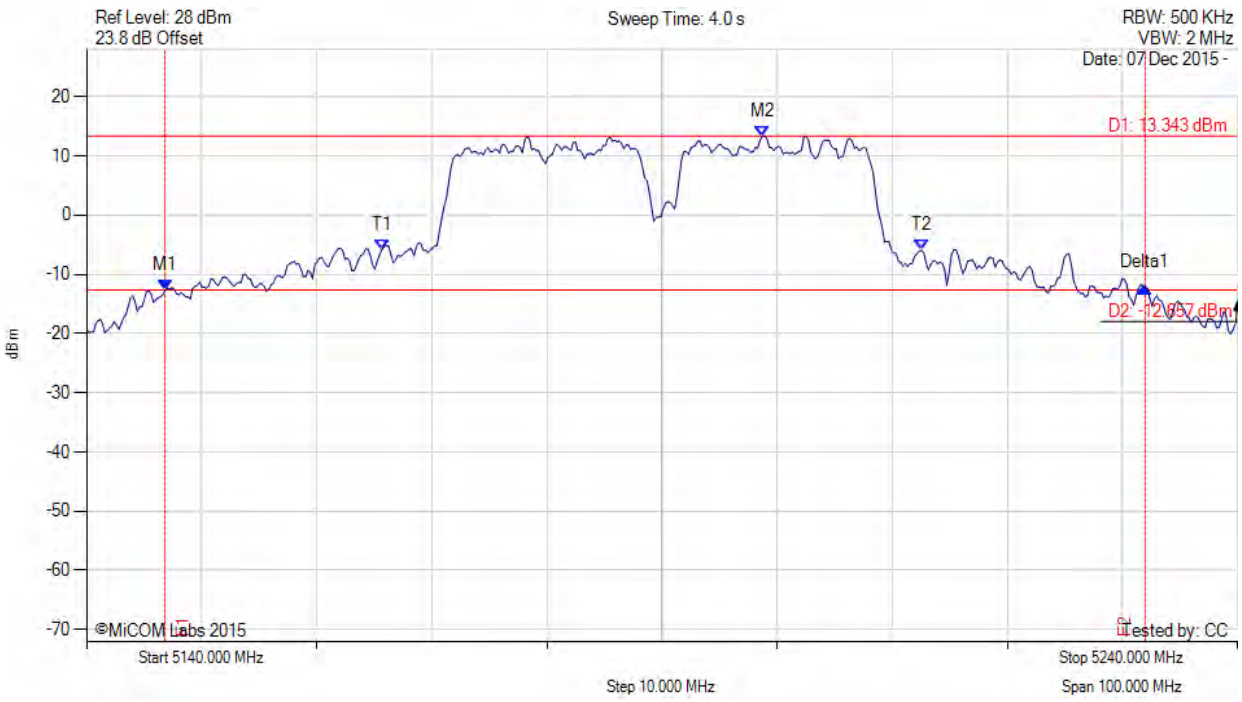


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5145.010 MHz : -13.694 dBm M2 : 5202.525 MHz : 13.774 dBm Delta1 : 87.174 MHz : 3.276 dB T1 : 5164.248 MHz : -5.211 dBm T2 : 5215.150 MHz : -5.351 dBm OBW : 50.902 MHz	Measured 26 dB Bandwidth: 87.174 MHz Measured 99% Bandwidth: 50.902 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

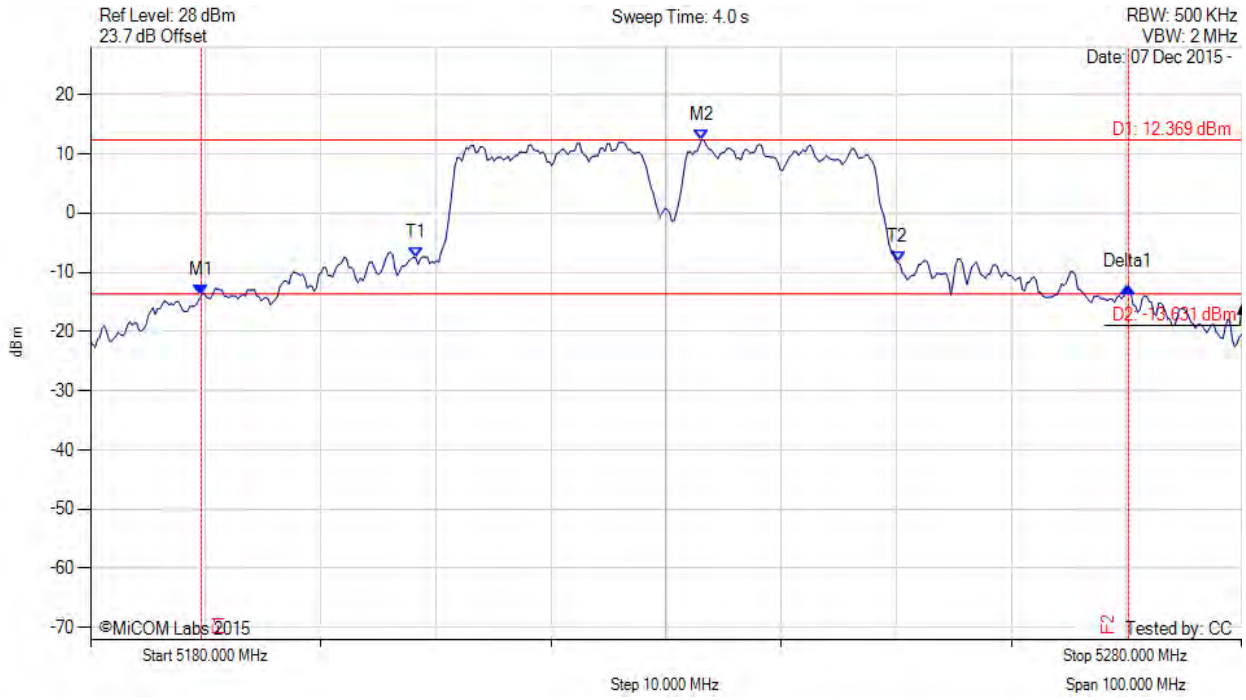


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5146.814 MHz : -12.744 dBm M2 : 5198.717 MHz : 13.343 dBm Delta1 : 85.170 MHz : 0.458 dB T1 : 5165.651 MHz : -5.862 dBm T2 : 5212.545 MHz : -5.939 dBm OBW : 46.894 MHz	Measured 26 dB Bandwidth: 85.170 MHz Measured 99% Bandwidth: 46.894 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

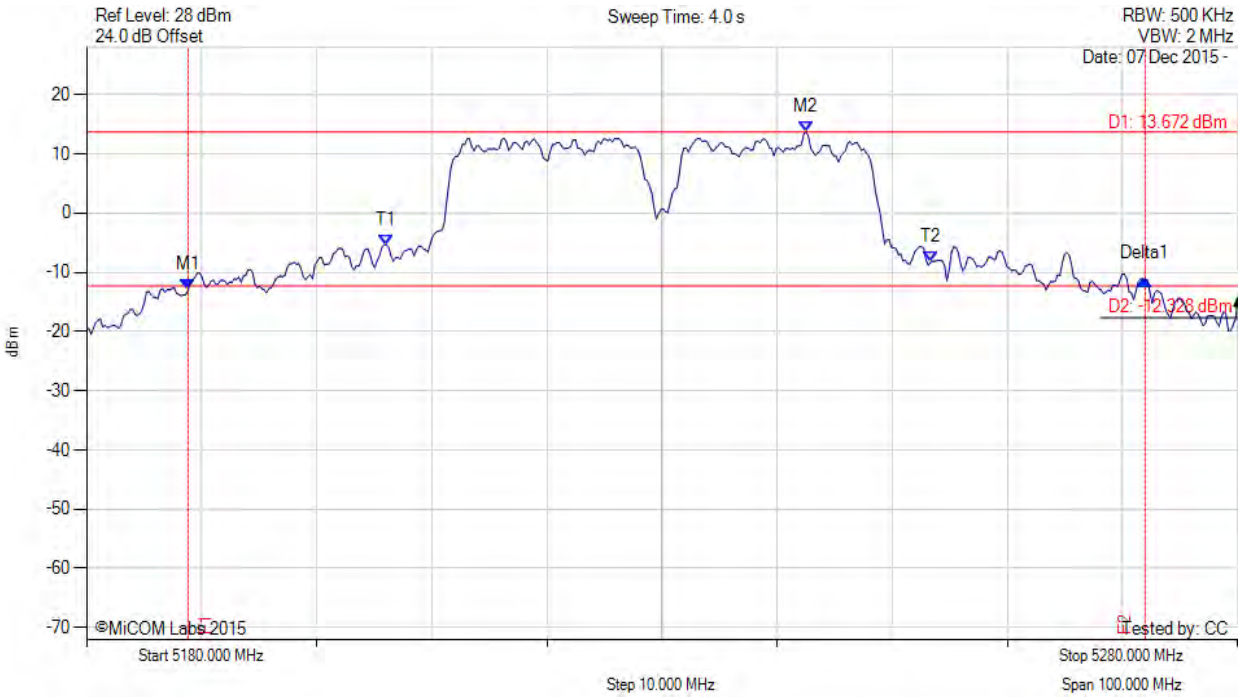


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5189.619 MHz : -13.942 dBm M2 : 5233.106 MHz : 12.369 dBm Delta1 : 80.561 MHz : 1.503 dB T1 : 5208.257 MHz : -7.560 dBm T2 : 5250.140 MHz : -8.327 dBm OBW : 41.884 MHz	Measured 26 dB Bandwidth: 80.561 MHz Measured 99% Bandwidth: 41.884 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

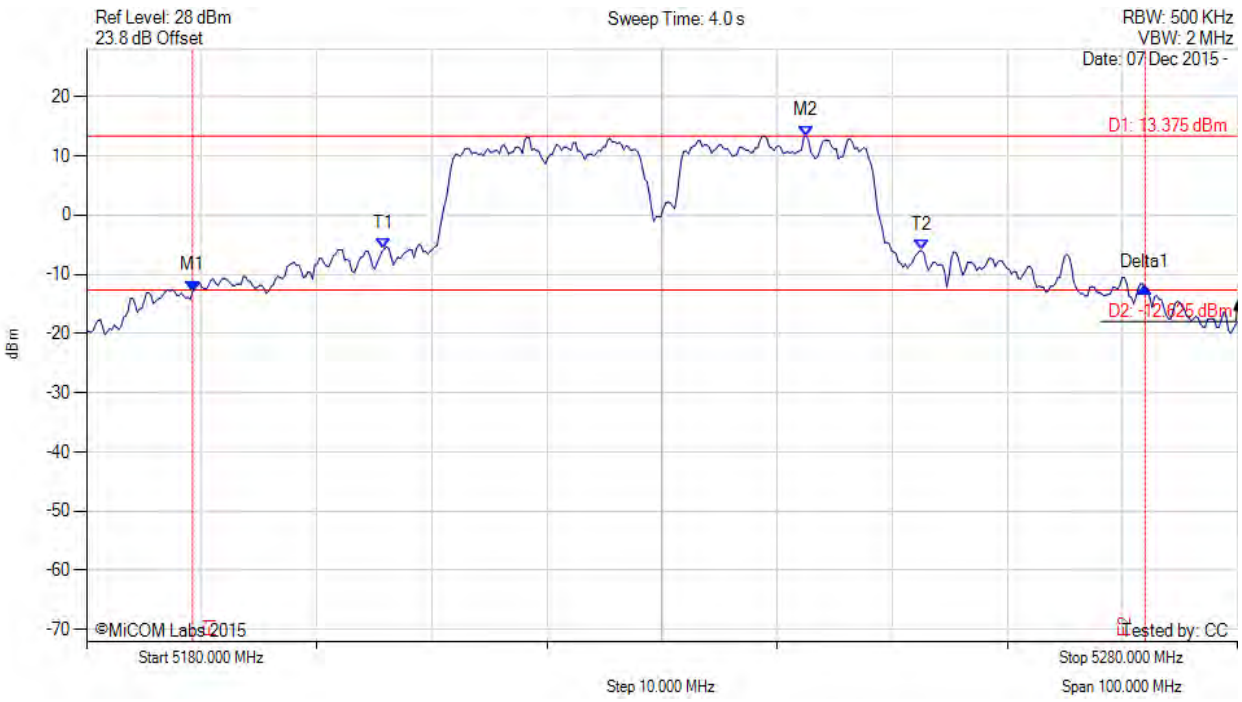


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5188.818 MHz : -13.021 dBm M2 : 5242.525 MHz : 13.672 dBm Delta1 : 83.166 MHz : 1.851 dB T1 : 5206.052 MHz : -5.347 dBm T2 : 5253.347 MHz : -8.325 dBm OBW : 47.295 MHz	Measured 26 dB Bandwidth: 83.166 MHz Measured 99% Bandwidth: 47.295 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

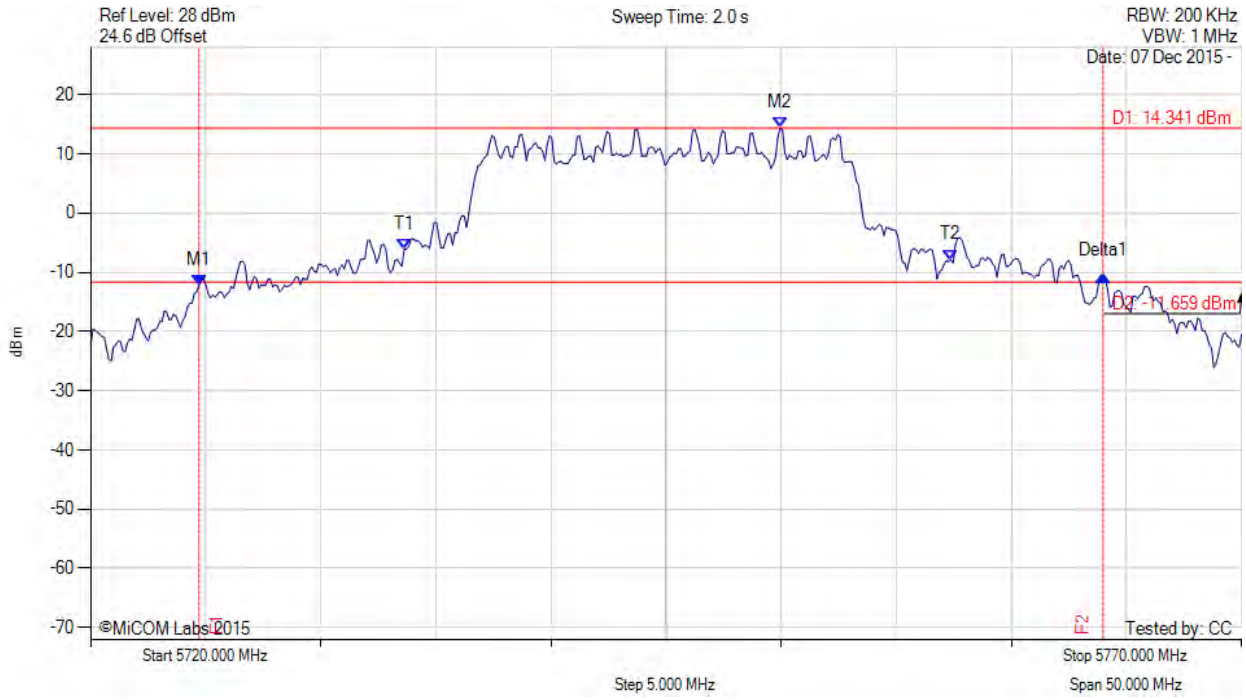


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5189.218 MHz : -12.811 dBm M2 : 5242.525 MHz : 13.375 dBm Delta1 : 82.766 MHz : 0.596 dB T1 : 5205.852 MHz : -5.711 dBm T2 : 5252.545 MHz : -5.988 dBm OBW : 46.693 MHz	Measured 26 dB Bandwidth: 82.766 MHz Measured 99% Bandwidth: 46.693 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

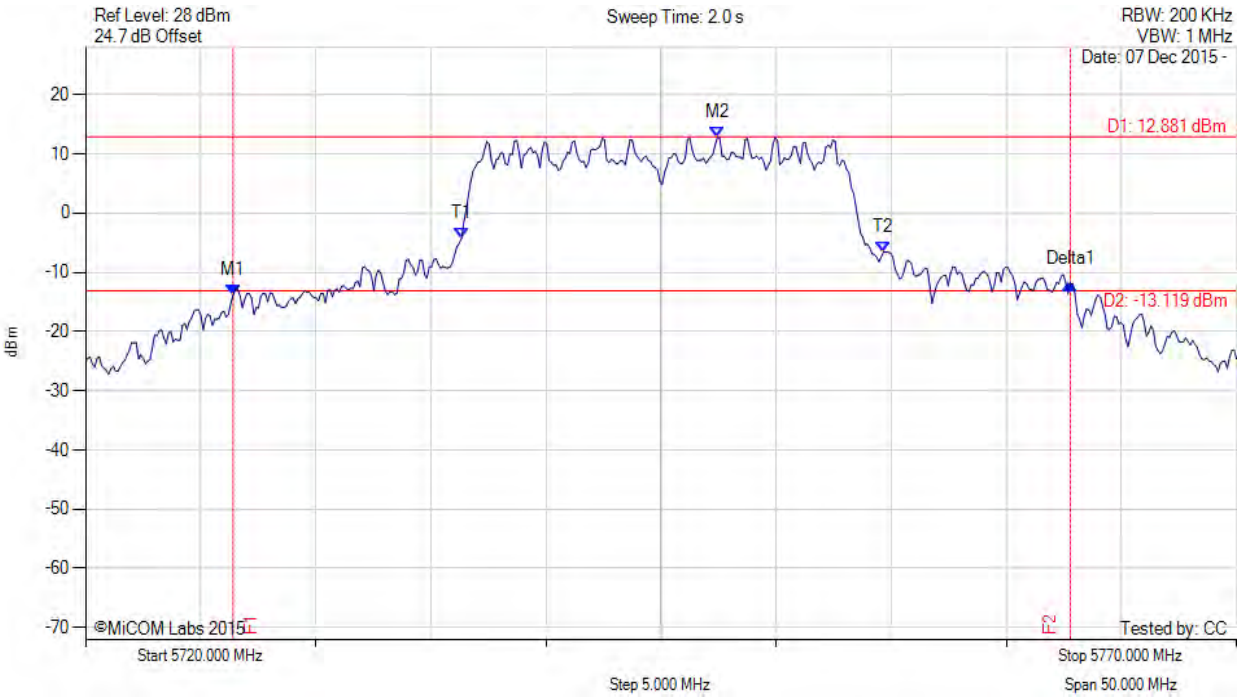


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5724.709 MHz : -12.132 dBm M2 : 5749.960 MHz : 14.341 dBm Delta1 : 39.279 MHz : 1.637 dB T1 : 5733.627 MHz : -6.126 dBm T2 : 5757.375 MHz : -7.898 dBm OBW : 23.747 MHz	Measured 26 dB Bandwidth: 39.279 MHz Measured 99% Bandwidth: 23.747 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

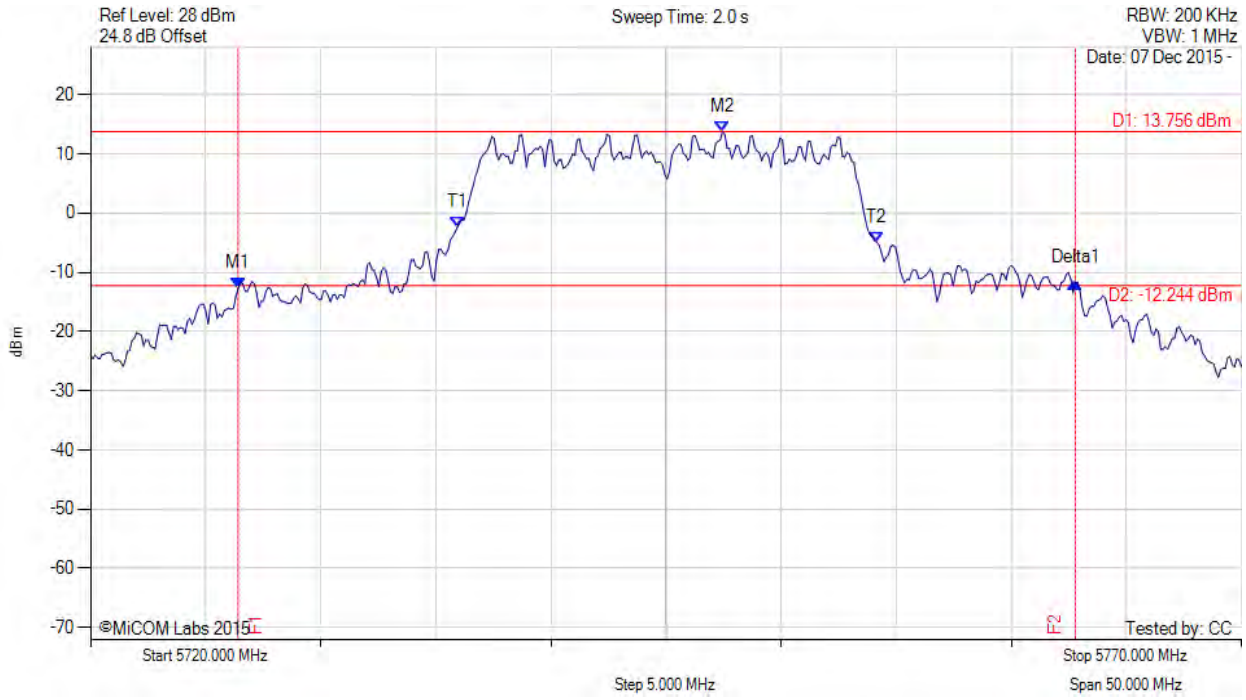


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5726.413 MHz : -13.873 dBm M2 : 5747.455 MHz : 12.881 dBm Delta1 : 36.373 MHz : 1.808 dB T1 : 5736.333 MHz : -4.292 dBm T2 : 5754.669 MHz : -6.541 dBm OBW : 18.337 MHz	Measured 26 dB Bandwidth: 36.373 MHz Measured 99% Bandwidth: 18.337 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

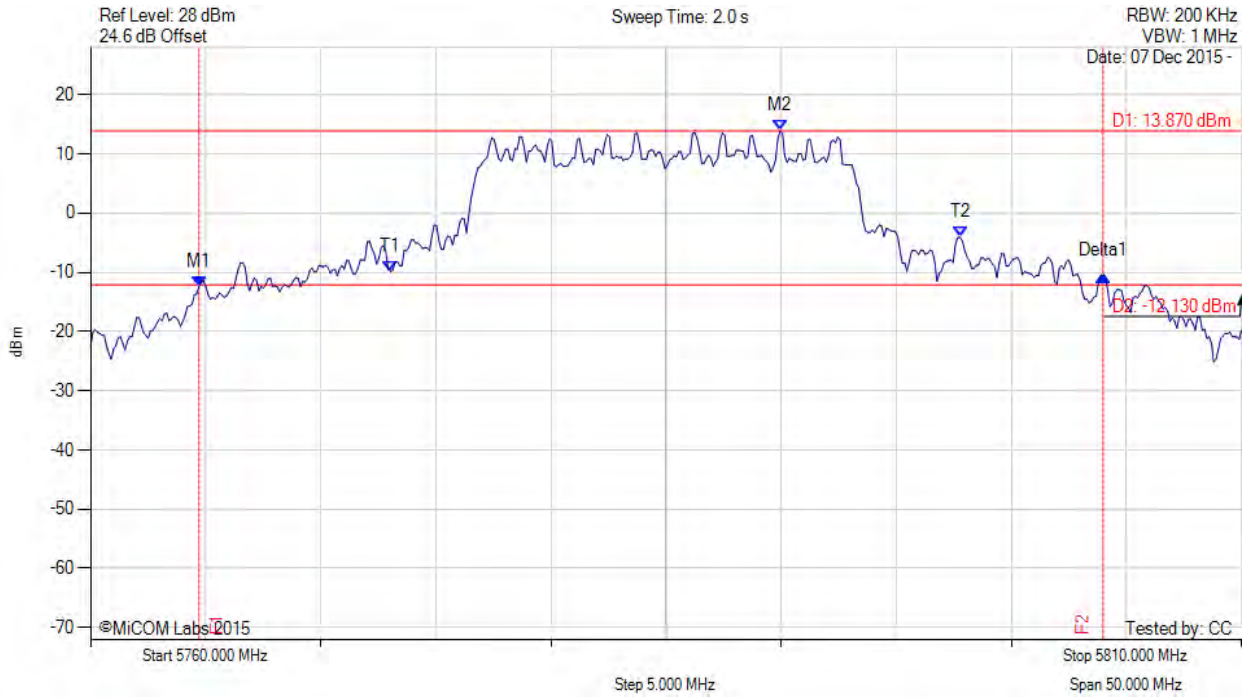


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5726.413 MHz : -12.742 dBm M2 : 5747.455 MHz : 13.756 dBm Delta1 : 36.373 MHz : 0.944 dB T1 : 5735.932 MHz : -2.427 dBm T2 : 5754.168 MHz : -4.967 dBm OBW : 18.236 MHz	Measured 26 dB Bandwidth: 36.373 MHz Measured 99% Bandwidth: 18.236 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

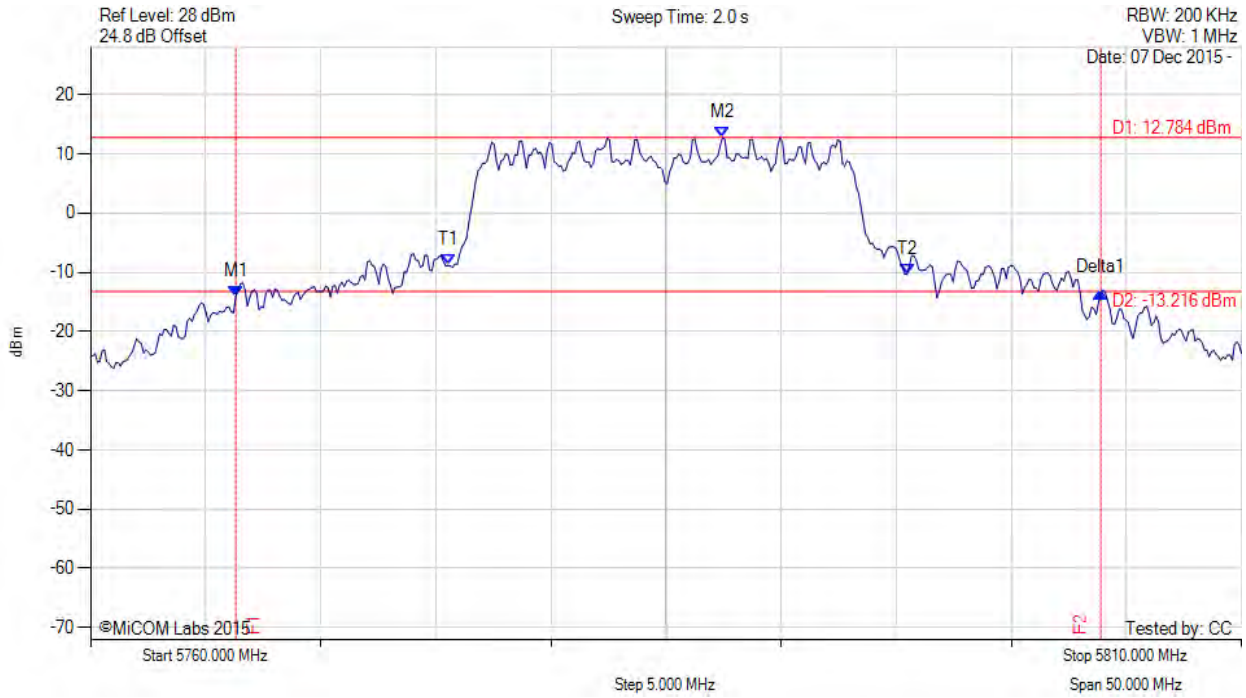


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5764.709 MHz : -12.388 dBm M2 : 5789.960 MHz : 13.870 dBm Delta1 : 39.279 MHz : 1.863 dB T1 : 5773.026 MHz : -9.838 dBm T2 : 5797.776 MHz : -4.095 dBm OBW : 24.749 MHz	Measured 26 dB Bandwidth: 39.279 MHz Measured 99% Bandwidth: 24.749 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

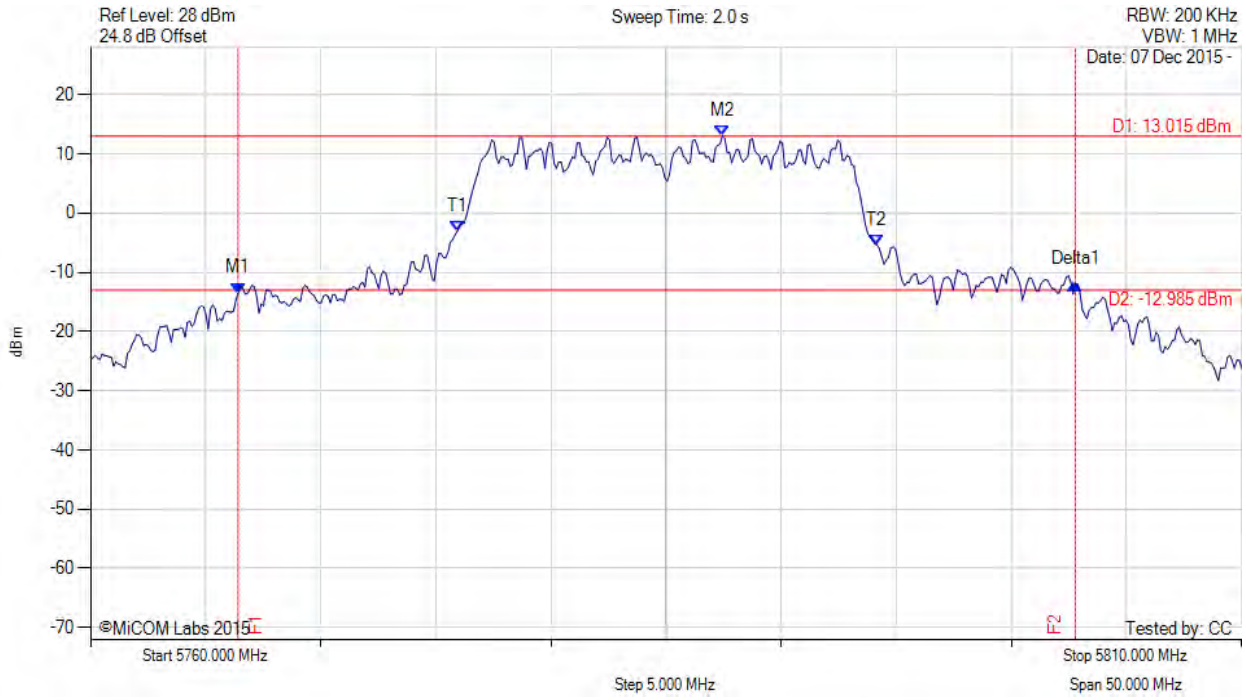


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5766.313 MHz : -14.044 dBm M2 : 5787.455 MHz : 12.784 dBm Delta1 : 37.575 MHz : 0.598 dB T1 : 5775.531 MHz : -8.821 dBm T2 : 5795.471 MHz : -10.356 dBm OBW : 19.940 MHz	Measured 26 dB Bandwidth: 37.575 MHz Measured 99% Bandwidth: 19.940 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

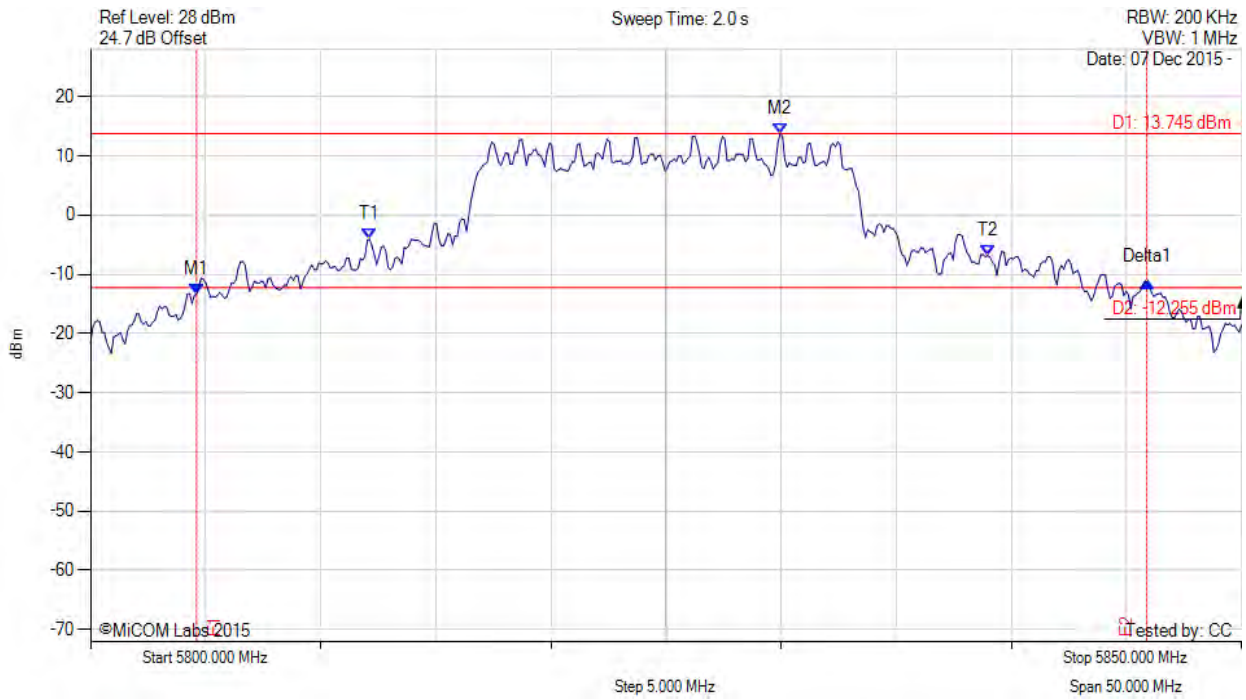


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5766.413 MHz : -13.499 dBm M2 : 5787.455 MHz : 13.015 dBm Delta1 : 36.373 MHz : 1.428 dB T1 : 5775.932 MHz : -3.065 dBm T2 : 5794.168 MHz : -5.351 dBm OBW : 18.236 MHz	Measured 26 dB Bandwidth: 36.373 MHz Measured 99% Bandwidth: 18.236 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

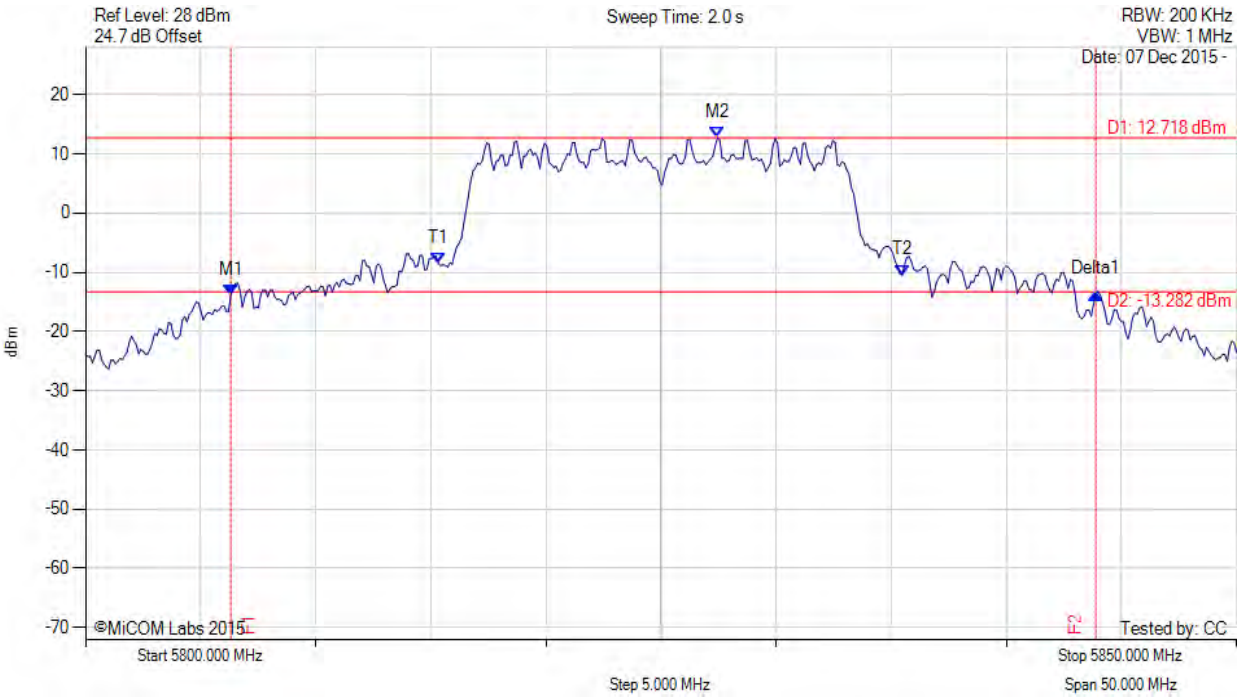


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5804.609 MHz : -13.320 dBm M2 : 5829.960 MHz : 13.745 dBm Delta1 : 41.283 MHz : 1.928 dB T1 : 5812.124 MHz : -4.109 dBm T2 : 5838.978 MHz : -6.826 dBm OBW : 26.854 MHz	Measured 26 dB Bandwidth: 41.283 MHz Measured 99% Bandwidth: 26.854 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

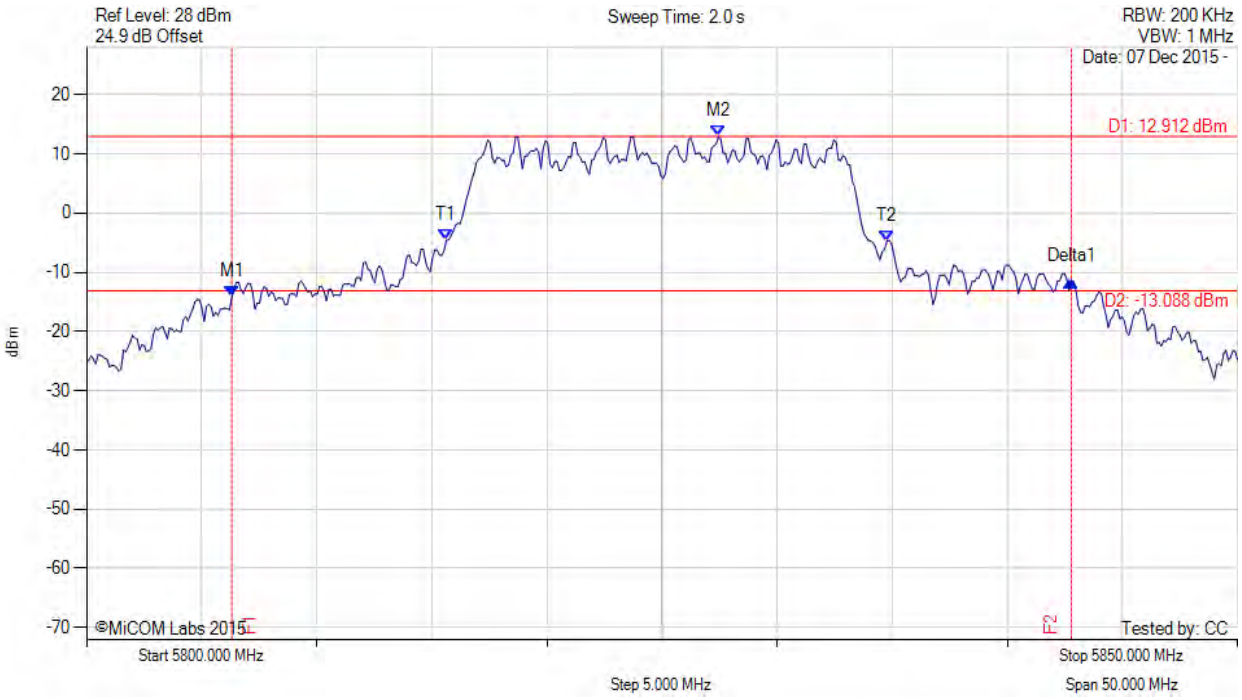


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5806.313 MHz : -13.798 dBm M2 : 5827.455 MHz : 12.718 dBm Delta1 : 37.575 MHz : 0.134 dB T1 : 5815.331 MHz : -8.516 dBm T2 : 5835.471 MHz : -10.460 dBm OBW : 20.140 MHz	Measured 26 dB Bandwidth: 37.575 MHz Measured 99% Bandwidth: 20.140 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

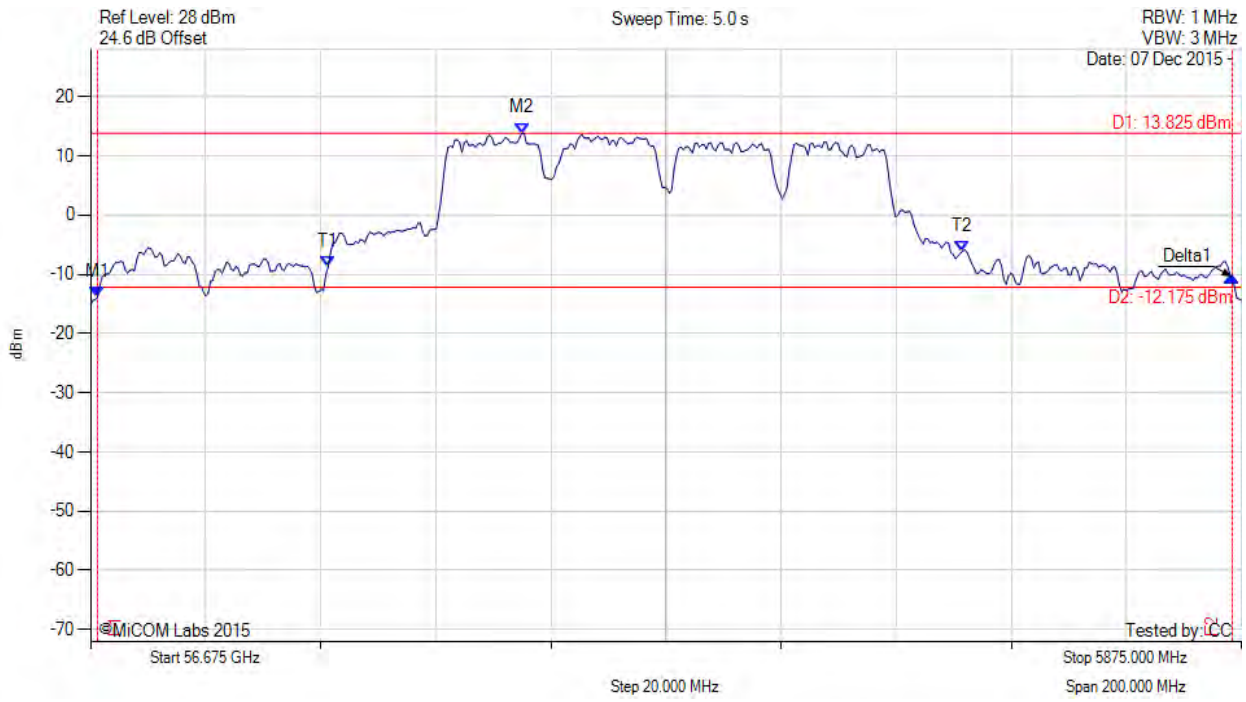


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5806.313 MHz : -14.090 dBm M2 : 5827.455 MHz : 12.912 dBm Delta1 : 36.473 MHz : 2.644 dB T1 : 5815.631 MHz : -4.572 dBm T2 : 5834.770 MHz : -4.758 dBm OBW : 19.138 MHz	Measured 26 dB Bandwidth: 36.473 MHz Measured 99% Bandwidth: 19.138 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

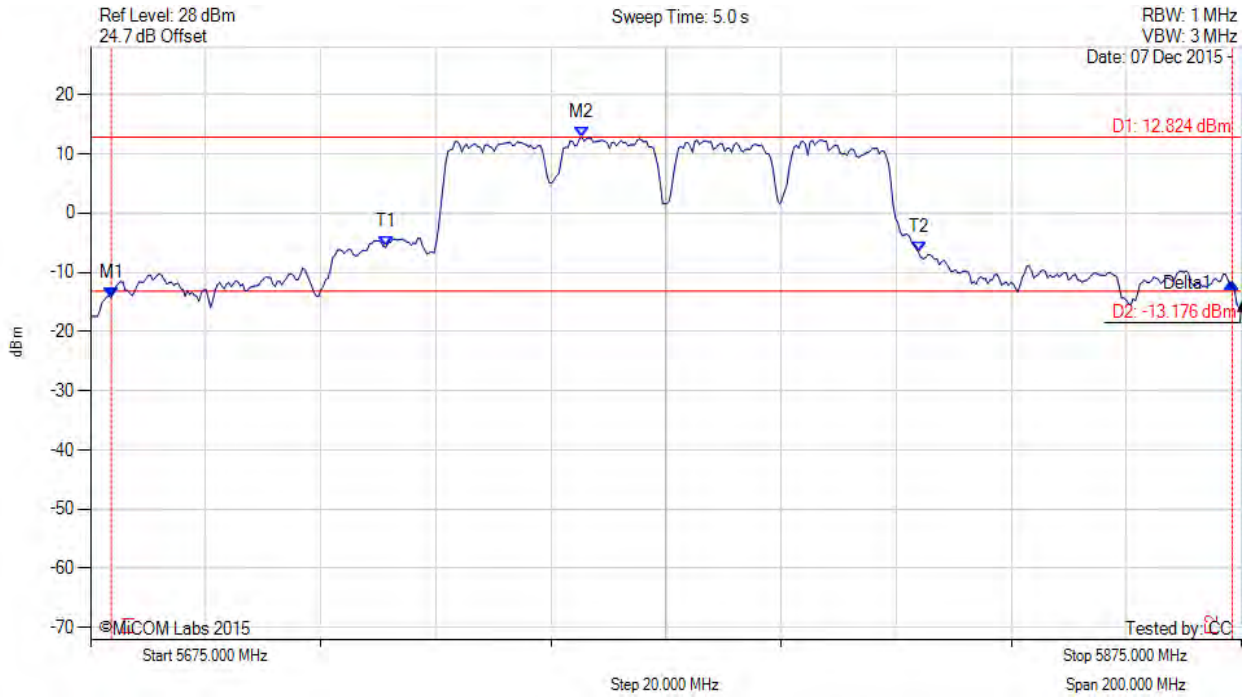


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5676.202 MHz : -13.916 dBm M2 : 5749.950 MHz : 13.825 dBm Delta1 : 197.194 MHz : 3.500 dB T1 : 5716.283 MHz : -8.805 dBm T2 : 5826.503 MHz : -6.102 dBm OBW : 110.220 MHz	Channel Frequency: 5775.00 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

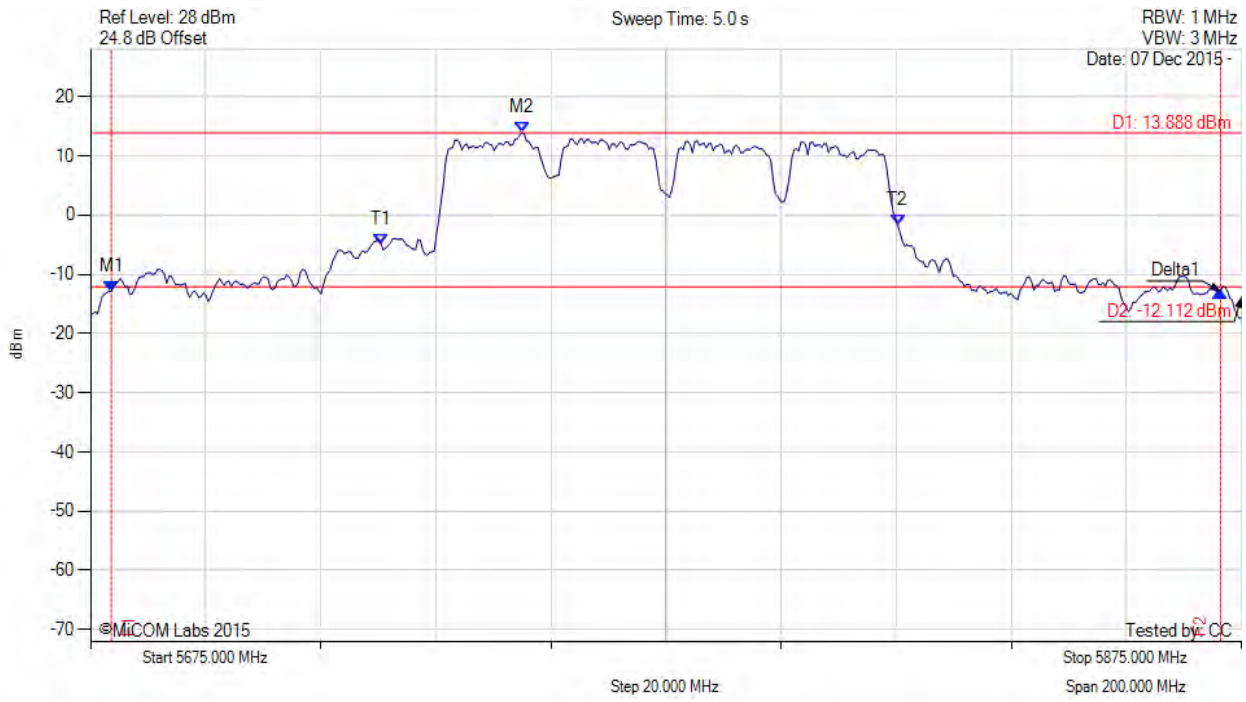


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	ERROR!!! MULTIPLE TEST RESULTS MATCHES...	Measured 26 dB Bandwidth: 194.790 MHz Measured 99% Bandwidth: 92.585 MHz ERROR!!! MULTIPLE TEST RESULTS MATCHES...

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

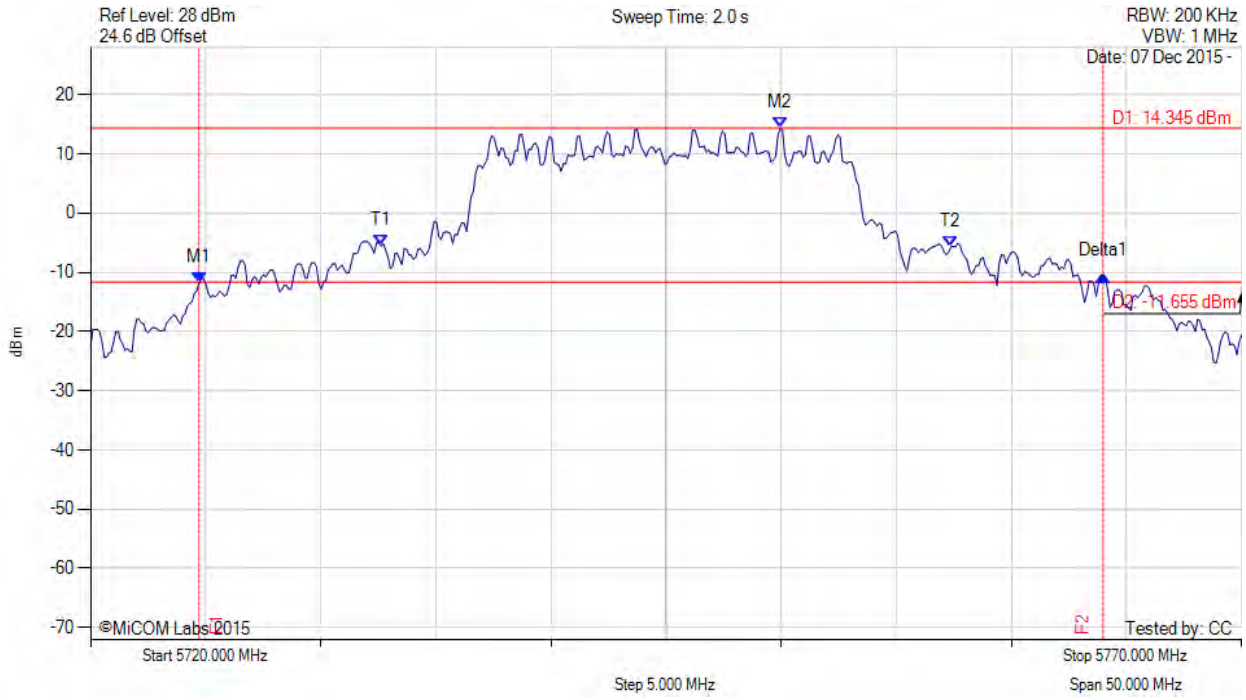


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5678.607 MHz : -12.854 dBm M2 : 5749.950 MHz : 13.888 dBm Delta1 : 192.786 MHz : 0.014 dB T1 : 5725.501 MHz : -4.943 dBm T2 : 5815.281 MHz : -1.705 dBm OBW : 89.780 MHz	Measured 26 dB Bandwidth: 192.786 MHz Measured 99% Bandwidth: 89.780 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

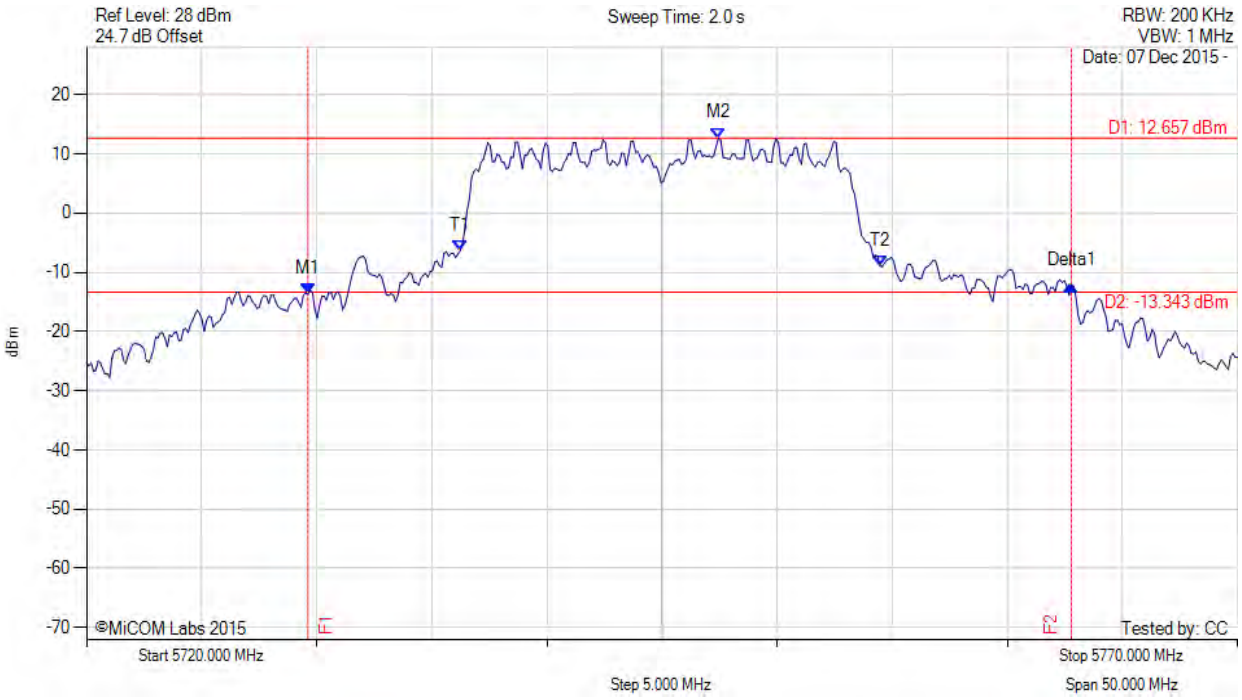


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5724.709 MHz : -11.843 dBm M2 : 5749.960 MHz : 14.345 dBm Delta1 : 39.279 MHz : 1.350 dB T1 : 5732.625 MHz : -5.551 dBm T2 : 5757.375 MHz : -5.728 dBm OBW : 24.749 MHz	Measured 26 dB Bandwidth: 39.279 MHz Measured 99% Bandwidth: 24.749 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

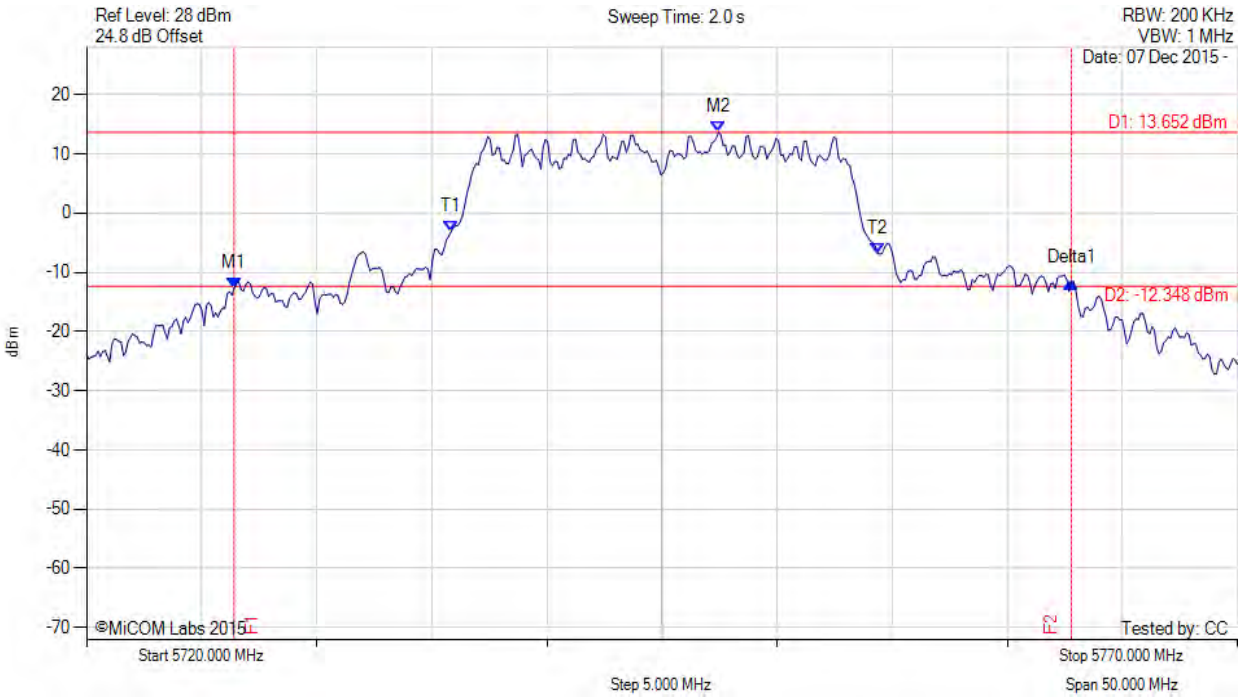


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5729.619 MHz : -13.669 dBm M2 : 5747.455 MHz : 12.657 dBm Delta1 : 33.166 MHz : 1.342 dB T1 : 5736.232 MHz : -6.362 dBm T2 : 5754.469 MHz : -8.912 dBm OBW : 18.236 MHz	Measured 26 dB Bandwidth: 33.166 MHz Measured 99% Bandwidth: 18.236 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

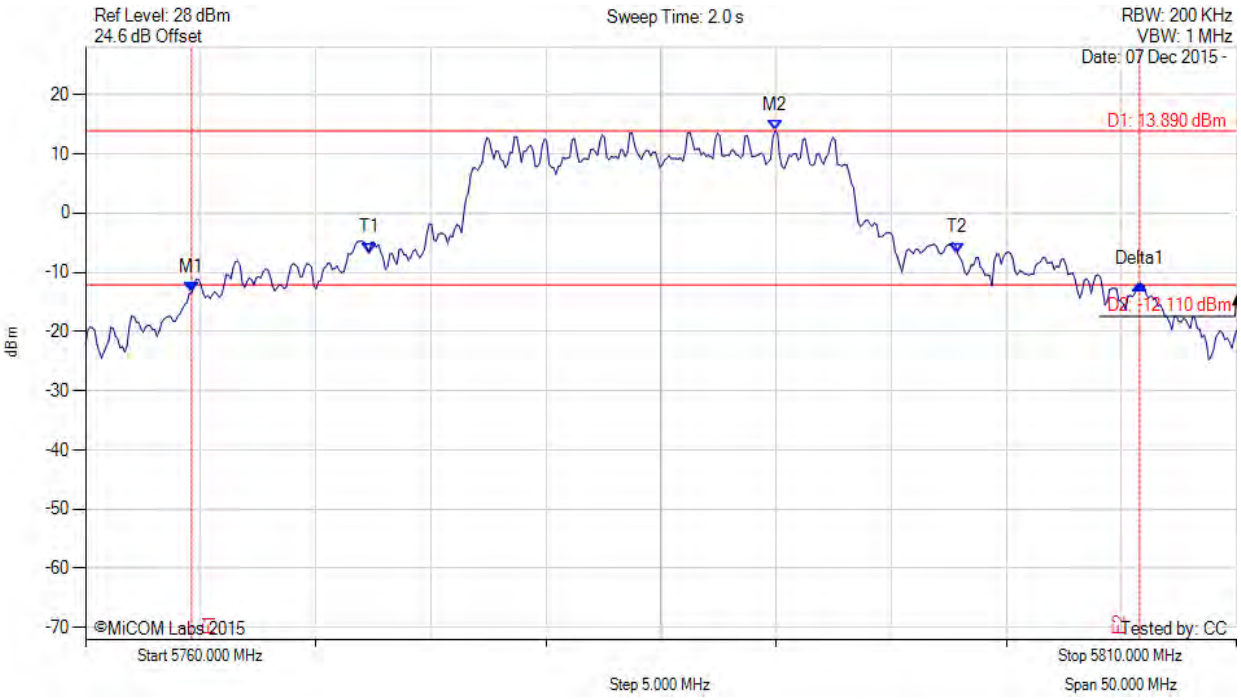


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5726.413 MHz : -12.695 dBm M2 : 5747.455 MHz : 13.652 dBm Delta1 : 36.373 MHz : 1.035 dB T1 : 5735.832 MHz : -3.198 dBm T2 : 5754.369 MHz : -6.791 dBm OBW : 18.537 MHz	Measured 26 dB Bandwidth: 36.373 MHz Measured 99% Bandwidth: 18.537 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

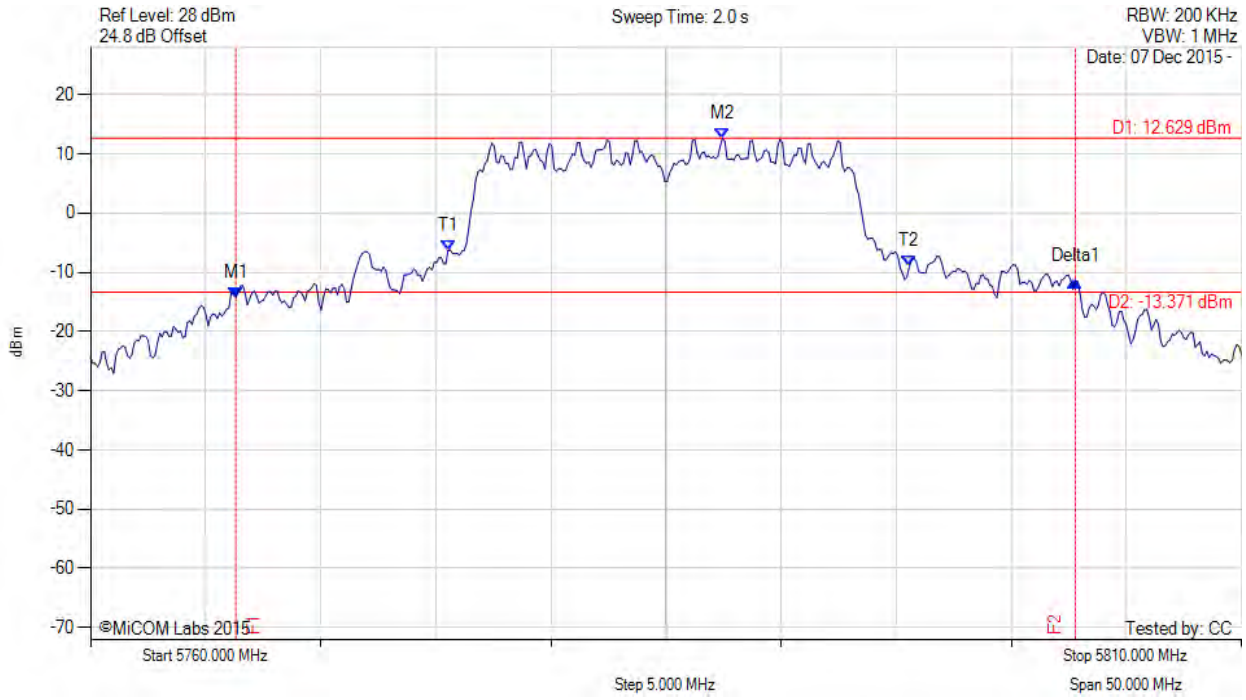


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5764.609 MHz : -13.413 dBm M2 : 5789.960 MHz : 13.890 dBm Delta1 : 41.182 MHz : 1.369 dB T1 : 5772.325 MHz : -6.734 dBm T2 : 5797.876 MHz : -6.724 dBm OBW : 25.551 MHz	Measured 26 dB Bandwidth: 41.182 MHz Measured 99% Bandwidth: 25.551 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc

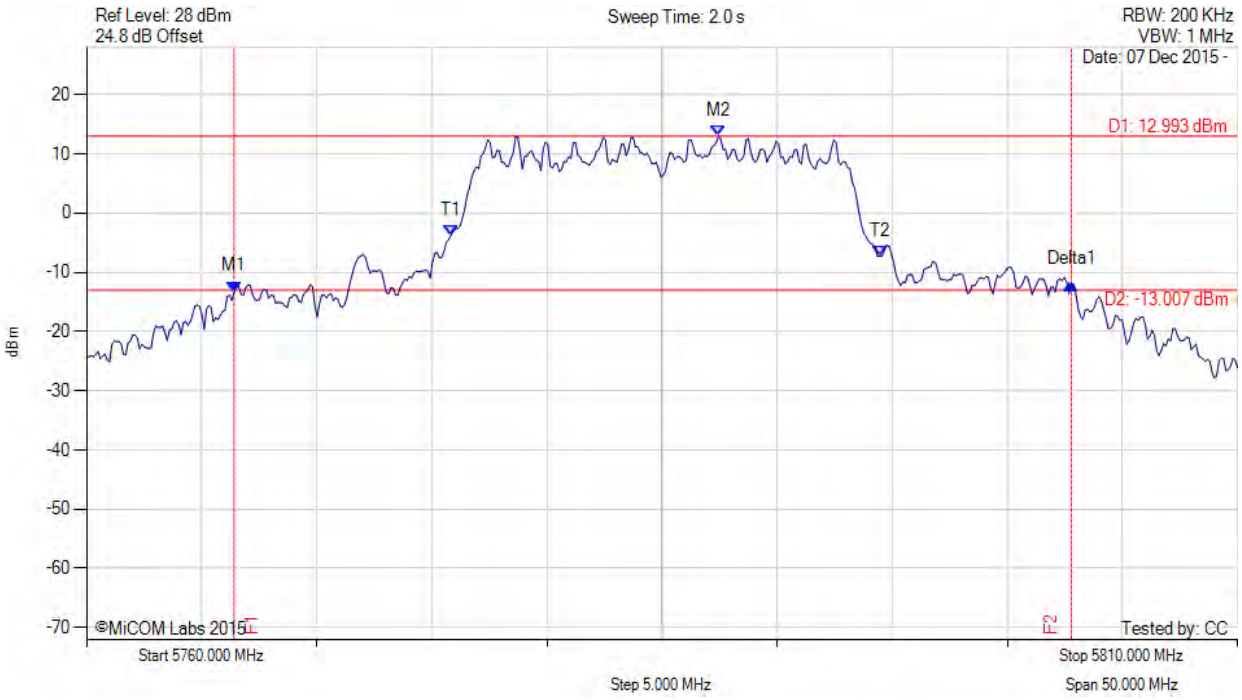


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5766.313 MHz : -14.241 dBm M2 : 5787.455 MHz : 12.629 dBm Delta1 : 36.473 MHz : 2.790 dB T1 : 5775.531 MHz : -6.313 dBm T2 : 5795.571 MHz : -9.039 dBm OBW : 20.040 MHz	Measured 26 dB Bandwidth: 36.473 MHz Measured 99% Bandwidth: 20.040 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc

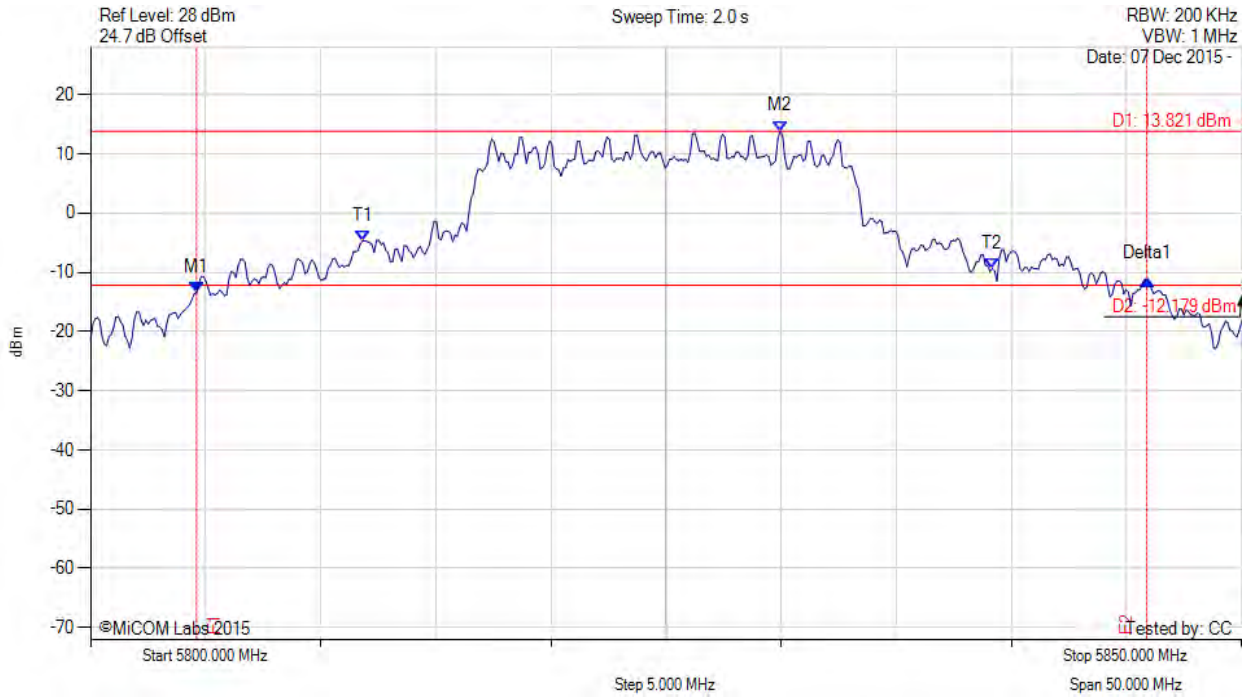


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5766.413 MHz : -13.271 dBm M2 : 5787.455 MHz : 12.993 dBm Delta1 : 36.373 MHz : 1.336 dB T1 : 5775.832 MHz : -3.733 dBm T2 : 5794.469 MHz : -7.229 dBm OBW : 18.637 MHz	Measured 26 dB Bandwidth: 36.373 MHz Measured 99% Bandwidth: 18.637 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc

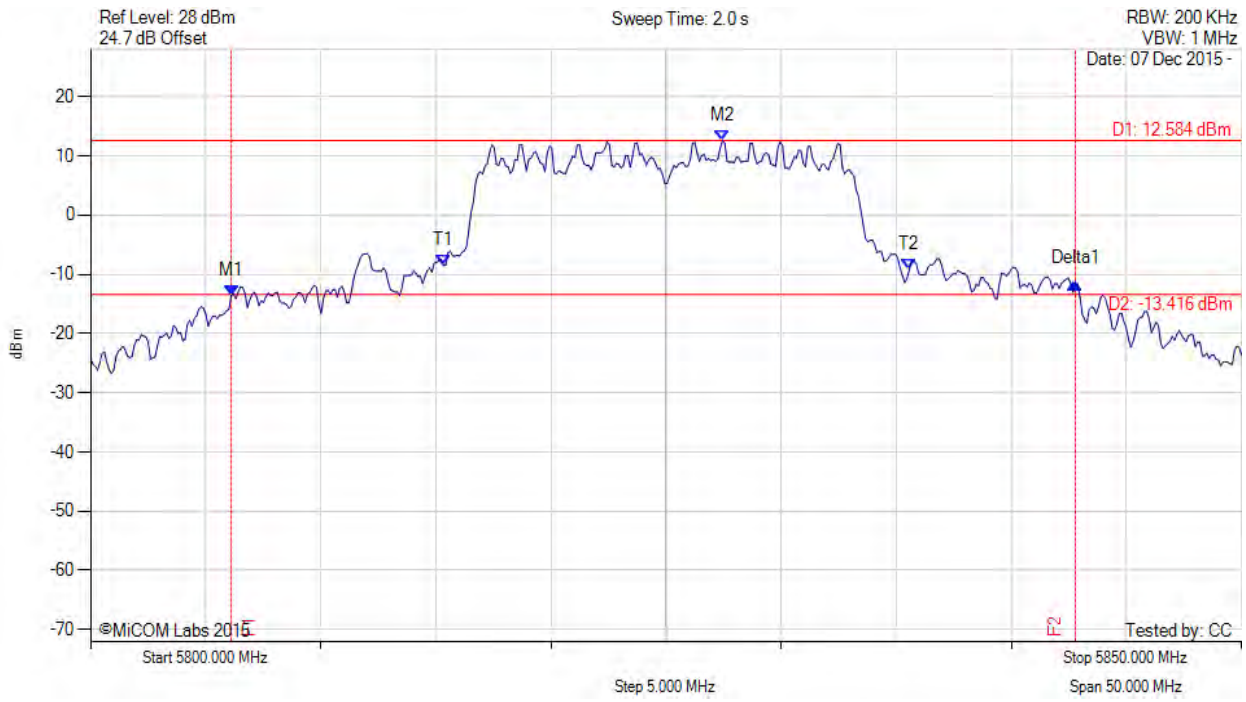


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5804.609 MHz : -13.360 dBm M2 : 5829.960 MHz : 13.821 dBm Delta1 : 41.283 MHz : 2.196 dB T1 : 5811.824 MHz : -4.682 dBm T2 : 5839.178 MHz : -9.374 dBm OBW : 27.355 MHz	Measured 26 dB Bandwidth: 41.283 MHz Measured 99% Bandwidth: 27.355 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5806.112 MHz : -13.543 dBm M2 : 5827.455 MHz : 12.584 dBm Delta1 : 36.673 MHz : 2.026 dB T1 : 5815.331 MHz : -8.520 dBm T2 : 5835.571 MHz : -9.183 dBm OBW : 20.240 MHz	Measured 26 dB Bandwidth: 36.673 MHz Measured 99% Bandwidth: 20.240 MHz

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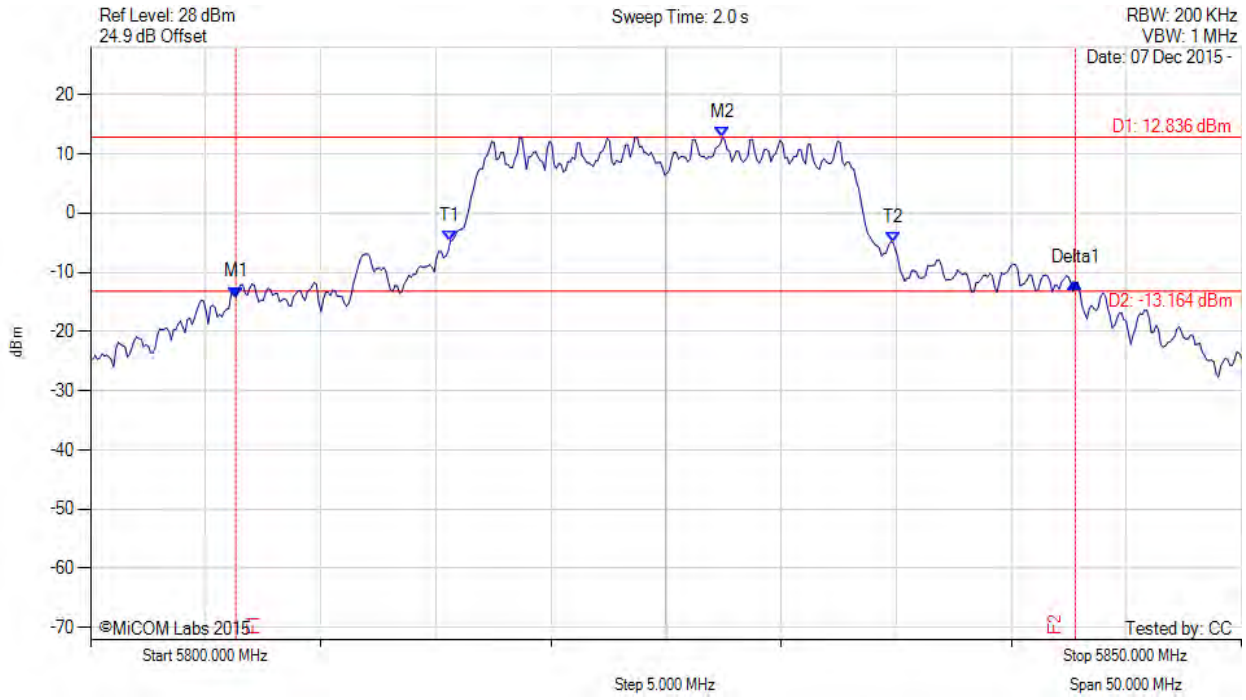
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5806.313 MHz : -14.200 dBm M2 : 5827.455 MHz : 12.836 dBm Delta1 : 36.473 MHz : 2.457 dB T1 : 5815.631 MHz : -4.721 dBm T2 : 5834.870 MHz : -5.030 dBm OBW : 19.238 MHz	Measured 26 dB Bandwidth: 36.473 MHz Measured 99% Bandwidth: 19.238 MHz

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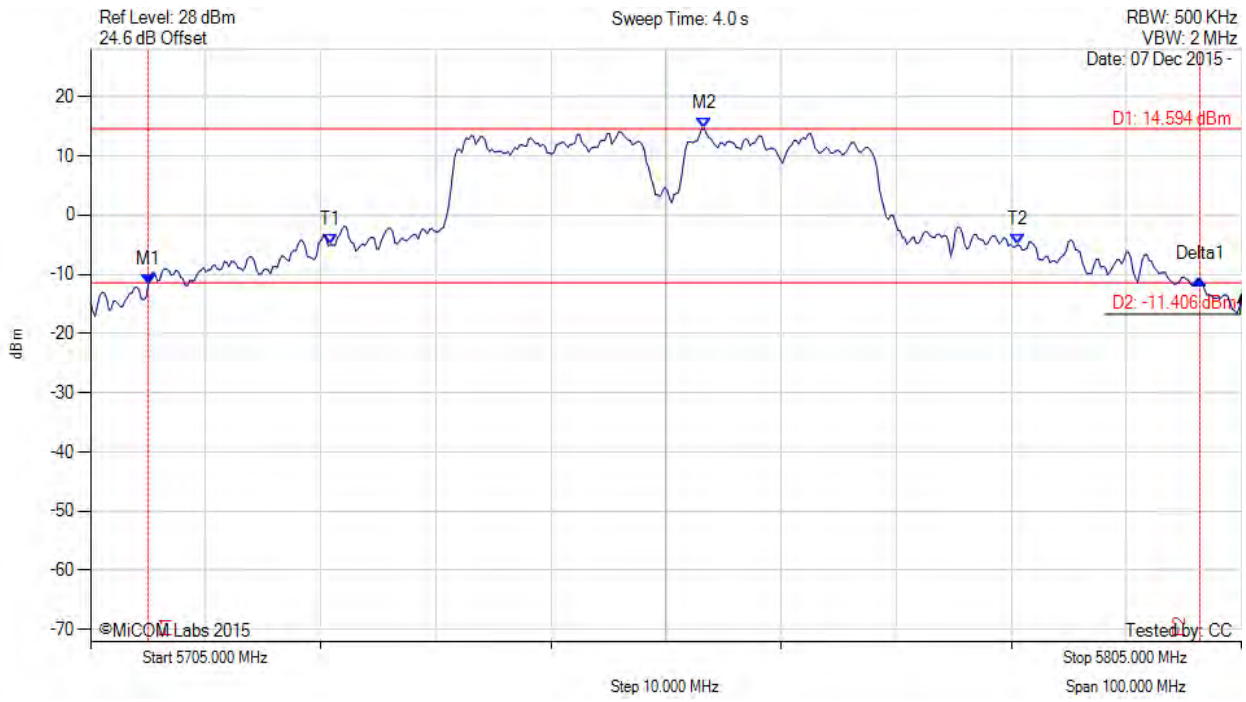
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5710.010 MHz : -11.829 dBm M2 : 5758.307 MHz : 14.594 dBm Delta1 : 91.383 MHz : 0.962 dB T1 : 5725.842 MHz : -5.008 dBm T2 : 5785.561 MHz : -4.998 dBm OBW : 59.719 MHz	Measured 26 dB Bandwidth: 91.383 MHz Measured 99% Bandwidth: 59.719 MHz

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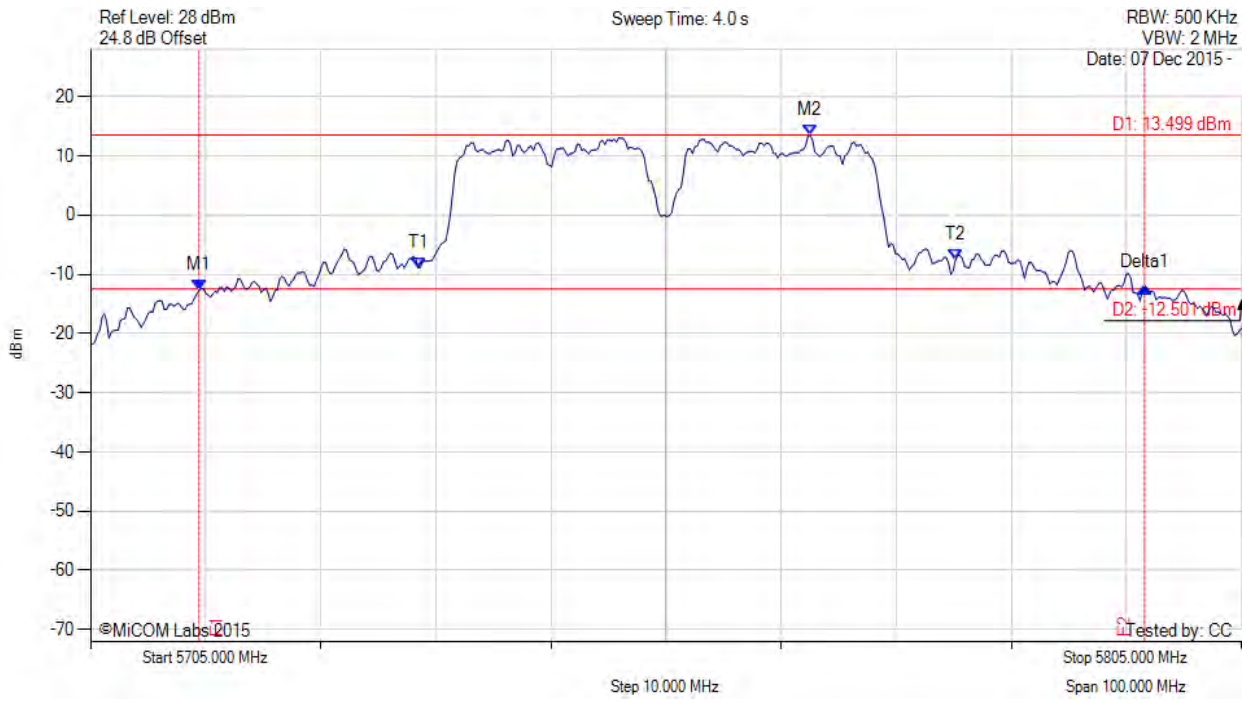
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5714.419 MHz : -12.791 dBm M2 : 5767.525 MHz : 13.499 dBm Delta1 : 82.164 MHz : 0.476 dB T1 : 5733.457 MHz : -8.898 dBm T2 : 5780.150 MHz : -7.625 dBm OBW : 46.693 MHz	Measured 26 dB Bandwidth: 82.164 MHz Measured 99% Bandwidth: 46.693 MHz

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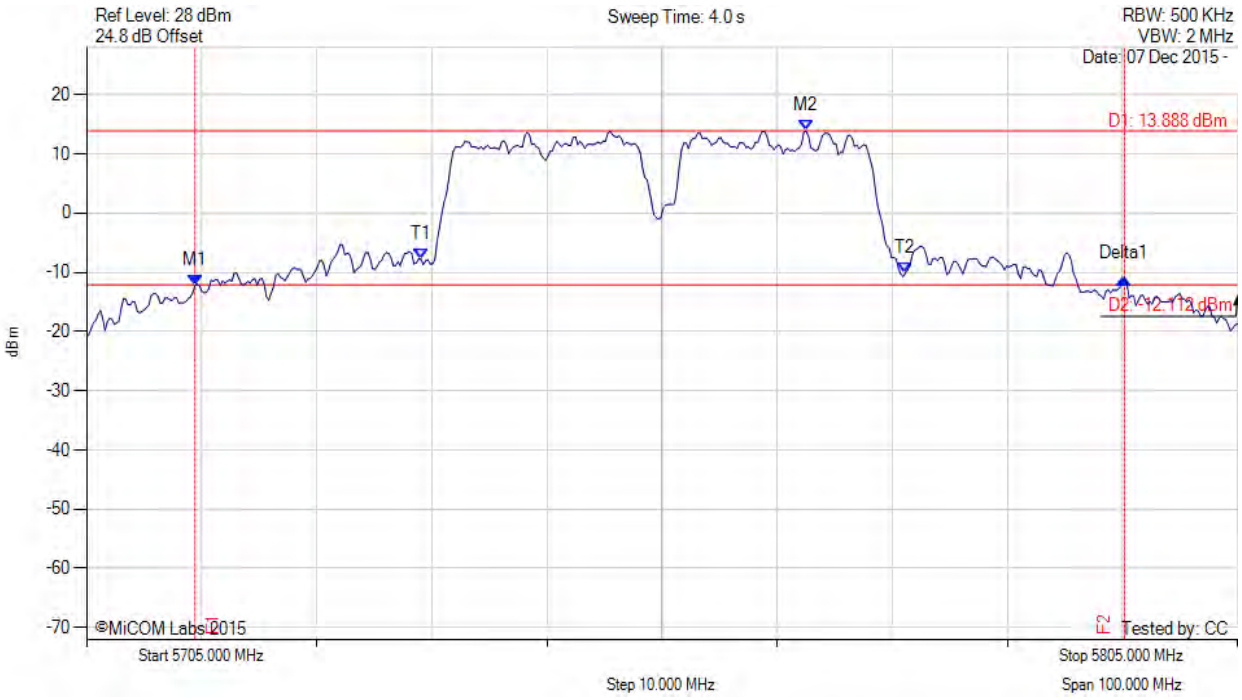
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5714.419 MHz : -12.266 dBm M2 : 5767.525 MHz : 13.888 dBm Delta1 : 80.762 MHz : 1.155 dB T1 : 5734.058 MHz : -7.772 dBm T2 : 5776.142 MHz : -10.139 dBm OBW : 42.084 MHz	Measured 26 dB Bandwidth: 80.762 MHz Measured 99% Bandwidth: 42.084 MHz

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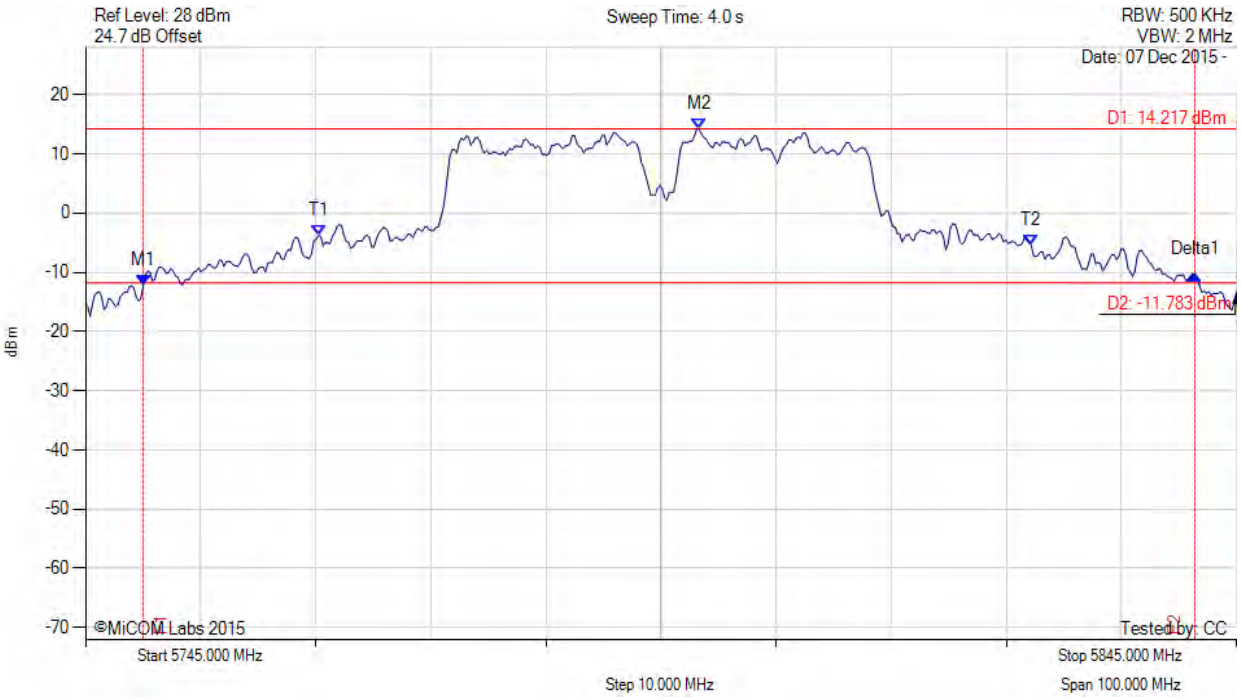
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5750.010 MHz : -12.242 dBm M2 : 5798.307 MHz : 14.217 dBm Delta1 : 91.383 MHz : 1.867 dB T1 : 5765.240 MHz : -3.826 dBm T2 : 5827.164 MHz : -5.396 dBm OBW : 61.924 MHz	Measured 26 dB Bandwidth: 91.383 MHz Measured 99% Bandwidth: 61.924 MHz

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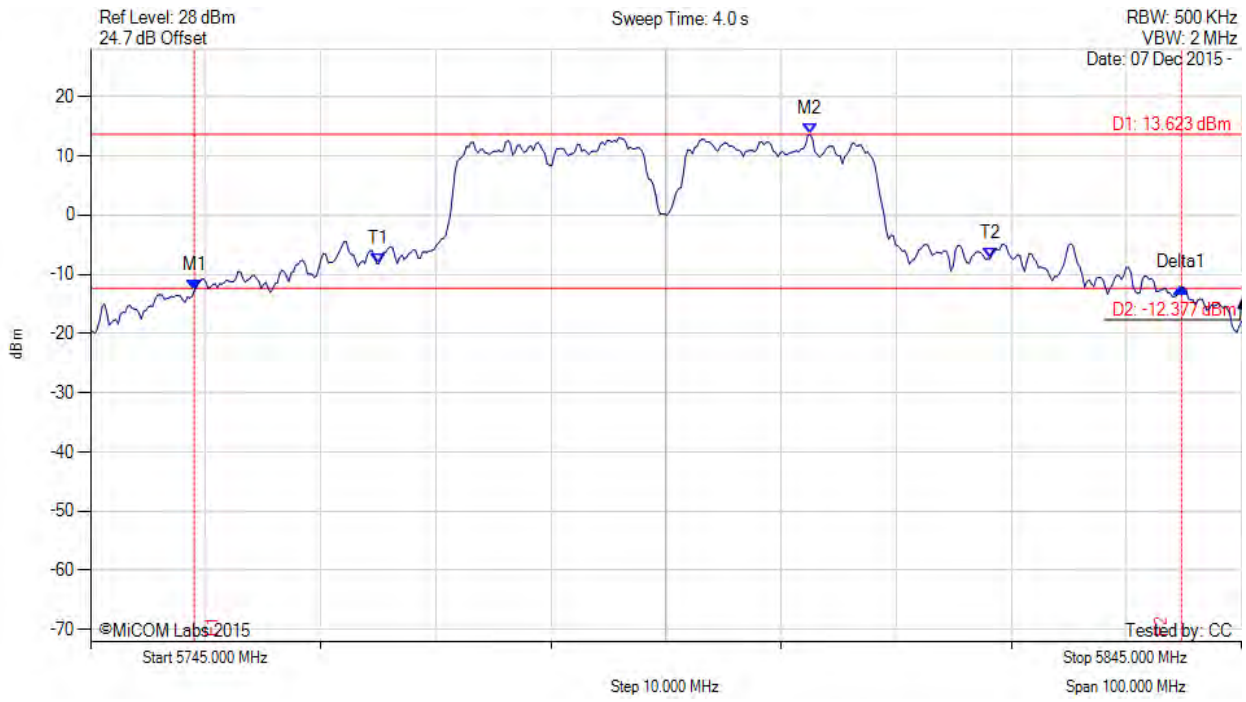
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5754.018 MHz : -12.795 dBm M2 : 5807.525 MHz : 13.623 dBm Delta1 : 85.772 MHz : 0.637 dB T1 : 5770.050 MHz : -8.199 dBm T2 : 5823.156 MHz : -7.359 dBm OBW : 53.106 MHz	Measured 26 dB Bandwidth: 85.772 MHz Measured 99% Bandwidth: 53.106 MHz

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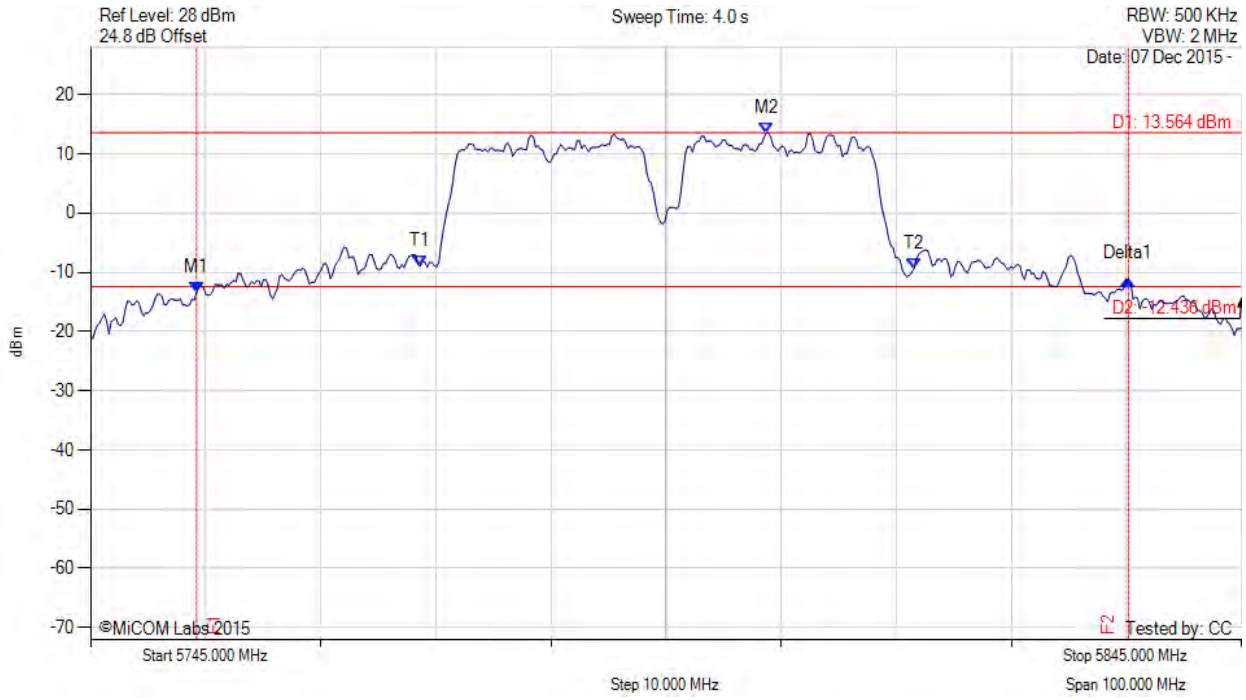
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain c, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5754.218 MHz : -13.344 dBm M2 : 5803.717 MHz : 13.564 dBm Delta1 : 80.962 MHz : 2.158 dB T1 : 5773.657 MHz : -8.982 dBm T2 : 5816.543 MHz : -9.372 dBm OBW : 42.886 MHz	Measured 26 dB Bandwidth: 80.962 MHz Measured 99% Bandwidth: 42.886 MHz

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