166 South Carter, Genoa City, WI 53128

Company:	Cambium Networks
Model Tested:	C058900P112A
Report Number:	120126
DLS Project:	6619

Code of Federal Regulations 47 Part 15 – Radio Frequency Devices

Subpart E – Unlicensed National Information Infrastructure Devices
Section 15.407
General Technical Requirements.

THE FOLLOWING **MEETS** THE ABOVE TEST SPECIFICATION
(DFS not tested by DLS Electronic Systems Inc.)

Formal Name:	ePMP AP 5.1GHz (or 5.2GHz, 5.4GHz or 5.7GHz) Radio
Kind of Equipment:	Point-to-Point or Point-to-Multipoint Digital Transmission Transceiver
Frequency Range:	**5160 to 5245 MHz (5.1 GHz xcvr in this report)** 5270 to 5330 MHz (5.2 GHz xcvr in reported to the FCC in CFR 47 Part 15 Subpart C Section 15.407 report # 19274) or 5495 to 5705 MHz (5.4 GHz xcvr reported to the FCC in CFR 47 Part 15 Subpart C Section 15.407 report # 19220) or 5740 to 5835 MHz (5.7 GHz xcvr reported to the FCC in CFR 47 Part 15 Subpart C Section 15.247 report # 19128)
Test Configuration:	Stand-alone
Model Number(s):	C058900P112A
Model(s) Tested:	C058900P112A
Serial Number(s):	000456C005E4
Date of Tests:	May & June 2014
Test Conducted For:	Cambium Networks 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA

NOTICE: "This test report relates only to the items tested and must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government". Please see the "Description of Test Sample" page listed inside of this report.

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SIGNATURE PAGE

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United States Department of Commerce
National Institute of Standards and Technology

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Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 100276-0

D.L.S. Electronic Systems, Inc.
Wheeling, IL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

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

2013-10-01 through 2014-09-30
Effective dates

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

1.0 Summary of Test Report

It was determined that the Cambium Networks ePMP AP 5.1GHz Radio, Model: C058900P112A, complies with the requirements of CFR 47 Part 15 Subpart E Section 15.407. The data demonstrating FCC compliance of the 5.2GHz, 5.4GHz and 5.7GHz radios is found in D.L.S. Electronics, Inc. Reports #19274, #19220 and #19128.

Subpart E Section 15.407 Applicable Technical Requirements Tested:

Section	Description	Procedure	Note	Compliant?
Informative	Duty Cycle	FCC KDB 789033 D02 General UNII Test Procedures v01 Section II.B(2)(b)	1	NA
Informative	Emission Bandwidth – 26 dB bandwidth	FCC KDB 789033 D02 General UNII Test Procedures v01 Section II.C.1	1	NA
Informative	99 Percent Occupied Bandwidth	FCC KDB 789033 D02 General UNII Test Procedures v01 Section II.D	1	NA
15.407(a)(1)	Maximum Conducted Output Power	FCC KDB 789033 D02 General UNII Test Procedures v01 Section II.E(3)(a)	1	Yes
15.407(a)(1)	Maximum Power Spectral Density (PSD) - Conducted	FCC KDB 789033 D02 General UNII Test Procedures v01 Sections II.F & II.E(2)(b)	1	Yes
15.407(b)(1)	Unwanted Emission Levels – Radiated Band-Edge	FCC KDB 789033 D02 General UNII Test Procedures v01 Sections II.G(1), G(3), G(5), G(6) & G(6)(c)	2	Yes
15.407(b)(1)	Unwanted Emission Levels – RF Conducted Band-Edge	FCC KDB 789033 D02 General UNII Test Procedures v01 Sections II.G(1), G(3), G(5), G(6) & G(6)(c)	1	Yes
15.407(b)(1) & 15.407(b)(6)	Unwanted Emission Levels – RF Conducted	FCC KDB 789033 D02 General UNII Test Procedures v01 Sections II.G(1), G(2), G(3), G(4), G(5), G(6) & G(6)(c)	1	Yes
15.407(b)(3) & 15.407(b)(6)	Unwanted Emission Levels – Radiated from cabinet	FCC KDB 789033 D02 General UNII Test Procedures v01 Sections II.G(1), G(2), G(3)	2	Yes

Subpart E Section 15.407 Applicable Technical Requirements: continued

15.407(b)6) & 15.207(a)	AC Line Conducted Emissions	ANSI C63.10:2009	3	Yes
15.407(h)(2)	Dynamic Frequency Selection (DFS)	Not tested by DLS		NA

Note 1: RF Conducted emission measurement.
Note 2: Radiated emission measurement.
Note 3: In data included in original test report #19274

2.0 Introduction

In May & June 2014 the ePMP AP 5.1GHz Radio, Model: C058900P112A, as provided from Cambium Networks, was tested to the requirements of CFR 47 Part 15 Subpart E Section 15.407. To meet these requirements, the procedures contained within this report were performed by personnel of D.L.S Electronic Systems, Inc.

3.0 Test Facilities

D.L.S. Electronic Systems, Inc. is a full service EMC/Safety Testing Laboratory accredited to ISO 17025. NVLAP Certificate and Scope can be viewed at http://www.dlsemc.com/certificate. Our facilities are registered with the FCC, Industry Canada, and VCCI.

Wisconsin Test Facility:
D.L.S. Electronic Systems, Inc.
166 S. Carter Street
Genoa City, Wisconsin 53128

Wheeling Test Facility:
D.L.S. Electronic Systems, Inc.
1250 Peterson Drive
Wheeling, IL 60090

4.0 Description of Test Sample

Description:

Point-to-Point or Point-to-Multipoint 5.1GHz (or 5.2GHz or 5.4GHz or 5.7GHz) 802.11 fixed indoor/outdoor transceiver with either 5 MHz or 40 MHz channel bandwidth (20 MHz or 40 MHz channel bandwidth for the 5.2GHz or 5.4GHz or 5.7GHz radios). The 5.1GHz radio is tested for use with a 2dBi, 3dBi, or 16dBi antenna for Point-to-Multipoint operation, or for use with a 23dBi or 30dBi antenna for Point-to-Point operation. OFDM modulation.

Type of Equipment / Frequency Range:

Stand-Alone / **5160 to 5245 MHz (5 MHz bandwidth) (in this report)**
5190 to 5230 MHz (40 MHz bandwidth) (in this report)

5270 to 5330 MHz (5.2 GHz xcvr) reported to the FCC in report # 19274
5495 to 5705 MHz (5.4 GHz xcvr) reported to the FCC in report # 19220
5740 to 5835 MHz (5.7 GHz xcvr) reported to the FCC in report # 19128

Physical Dimensions of Equipment Under Test:

Internal Module Board Length: 6 in. Width: 2.75 in. Height: .75 in.

Power Source:

30 VDC (Power Over Ethernet to Radio)
120 Vac, 60 Hz using Phihong power supply model: PSA15M-300(AP)

Internal Frequencies:

292 kHz, 940 - 1000 kHz, 4 MHz (Switching Power Supply Frequency)
25 MHz, 40 MHz

Transmit / Receive Frequencies Used For Test Purpose:

5 MHz Channel Bandwidth:	Low channel: 5160 MHz (5170 MHz for 23 and 30 dBi antennas), Middle channel: 5200 MHz, High channel: 5245 MHz
40 MHz Channel Bandwidth:	Low channel: 5190 MHz, Middle channel: 5200 MHz, High channel: 5230 MHz

Type of Modulation(s):

5 MHz Channel Bandwidth:	OFDM:		Legacy 54 Mbit/s
40 MHz Channel Bandwidth:	OFDM:	802.11n:	MCS15

Description of Circuit Board(s) / Part Number:

AP PCB	84009654001

5.0 Test Equipment

A list of the equipment used can be found in the table below. All primary equipment was calibrated against known reference standards with a verified traceable path to NIST.

D.L.S. Wisconsin

Description	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Dates	Cal Due Dates
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	7-23-13	7-23-14
Preamp	Ciao	CA118-4010	101	1GHz-18GHz	2-14-14	2-14-15
Horn Antenna	EMCO	3115	6204	1-18GHz	6-5-13	6-5-15
High Pass Filter	Planar	HP8G-7G8-CD-SFF	PF1225/0728	7.5-18 GHz	8-14-13	8-14-14
Preamp	Miteq	AMF-8B-180265-40-10P-H/S	438727	18GHz-26GHz	8-12-13	8-12-14
Horn Antenna	ETS Lindgren	3116	00062917	18 – 40GHz	8-15-13	8-15-15
High Pass Filter	K&L	11SH10-18000/T40000-K-K	8	18-40 GHz	3-6-14	3-6-15
Preamp	Planar	PTB-60-2040-5R0-10-115VAC-292FF	PL3292	18-40 GHz	8-12-13	8-12-14
20 dB attenuator	Aeroflex/weinschel	75A-20-12	1071	DC – 40 GHz	8-14-13	8-14-14
10 dB attenuator	narda	4768-10	0702	DC – 40 GHz	8-14-13	8-14-14
2 dB attenuator	narda	4778-2	9712	DC – 26 GHz	8-14-13	8-14-14
Power Meter	Anritsu	ML2487A	6K00002069	N/A	2-27-14	2-27-15
Peak Power Sensor	Anritsu	MA2491A	031650	50MHz-18GHz	2-28-14	2-28-15
Thermal Power Sensor	Rohde & Schwarz	NRP-Z51	1138.0005.03-104290-Wq	DC - 18 GHz	12-12-13	12-12-14
Low Pass Filter	Mini-Circuits	VLFX-1125	UU92600920	30-1000 MHz	8-13-13	8-13-14

6.0 Test Arrangements

RF Conducted Emissions Measurement Arrangement:

All RF conducted emission measurements were performed at D.L.S. Electronic Systems, Inc. and set up according to FCC Publication KDB 789033 D02 General UNII test Procedures v01 and ANSI C63.10-2009, unless otherwise noted. Description of procedures and measurements can be found in Appendix B – Measurement Data. See Appendix A for photos of the test set up.

Radiated Emissions Measurement Arrangement:

All radiated emission measurements were performed at D.L.S. Electronic Systems, Inc. and set up according to ANSI C63.10-2009, unless otherwise noted. Description of procedures and measurements can be found in Appendix B – Measurement Data. See Appendix A for photos of the test set up.

Unless otherwise noted, the bandwidth of the measuring receiver / analyzer used during testing is shown below.

Frequency Range	Bandwidth (-6 dB)
10 to 150 kHz	200 Hz
150 kHz to 30 MHz	9 kHz
30 MHz to 1 GHz	120 kHz
Above 1 GHz	1 MHz

7.0 Test Conditions

Normal Test Conditions:

Temperature and Humidity:

70°F at 39% RH

Supply Voltage:

30 VDC (Power Over Ethernet to Radio)
120 Vac, 60 Hz using Phihong power supply model: PSA15M-300(AP)

8.0 Modifications Made To EUT For Compliance

No modifications were made to the EUT at the time of test.

9.0 Additional Descriptions

Testing was performed at low, mid, and high channels over 2 modulation bandwidths (5MHz & 40MHz). Only antenna port called Channel 0 was tested. It was determined to be either the same or worst-case during previous testing.

Emission Designators: 5M0x1D, 40M0x1D

Power Settings noted on the test data.

Cambium 5.1GHz Test Software:

1. Atheros Radio Test 2 (ART-GUI), version 2.3, build date: 2014/May/20, CART version 2.29, build date: 120515, build time: 100000.
2. Tera Term, version 4.74 (SVN#4957), build time: May 31 2012 21:53:11.
3. TFTPD32 version 4.00, build May 8 2011 00:05:37

Documentation for the FCC CFR 47 Part 15.407(a)(1)(i) requirement for the e.i.r.p. measurements at any elevation angle above 30 degrees will be provided by Cambium Networks.

Please note that Cambium Networks requested a new model number for the ePMP AP 5.2GHz (or 5.4GHz or 5.7GHz) Radio on August 22, 2013. The model number for the 5.7GHz radio was reported as C050900P12A in DLS Report # 19130. This number has been updated to C058900P112A. The same physical units were used to test the radio at all frequencies reported to the FCC.

10.0 Results

Measurements were performed in accordance with FCC Publication KDB 789033 D02 General UNII test Procedures v01 and ANSI C63.10-2009. Graphical and tabular data can be found in Appendix B at the end of this report.

11.0 Conclusion

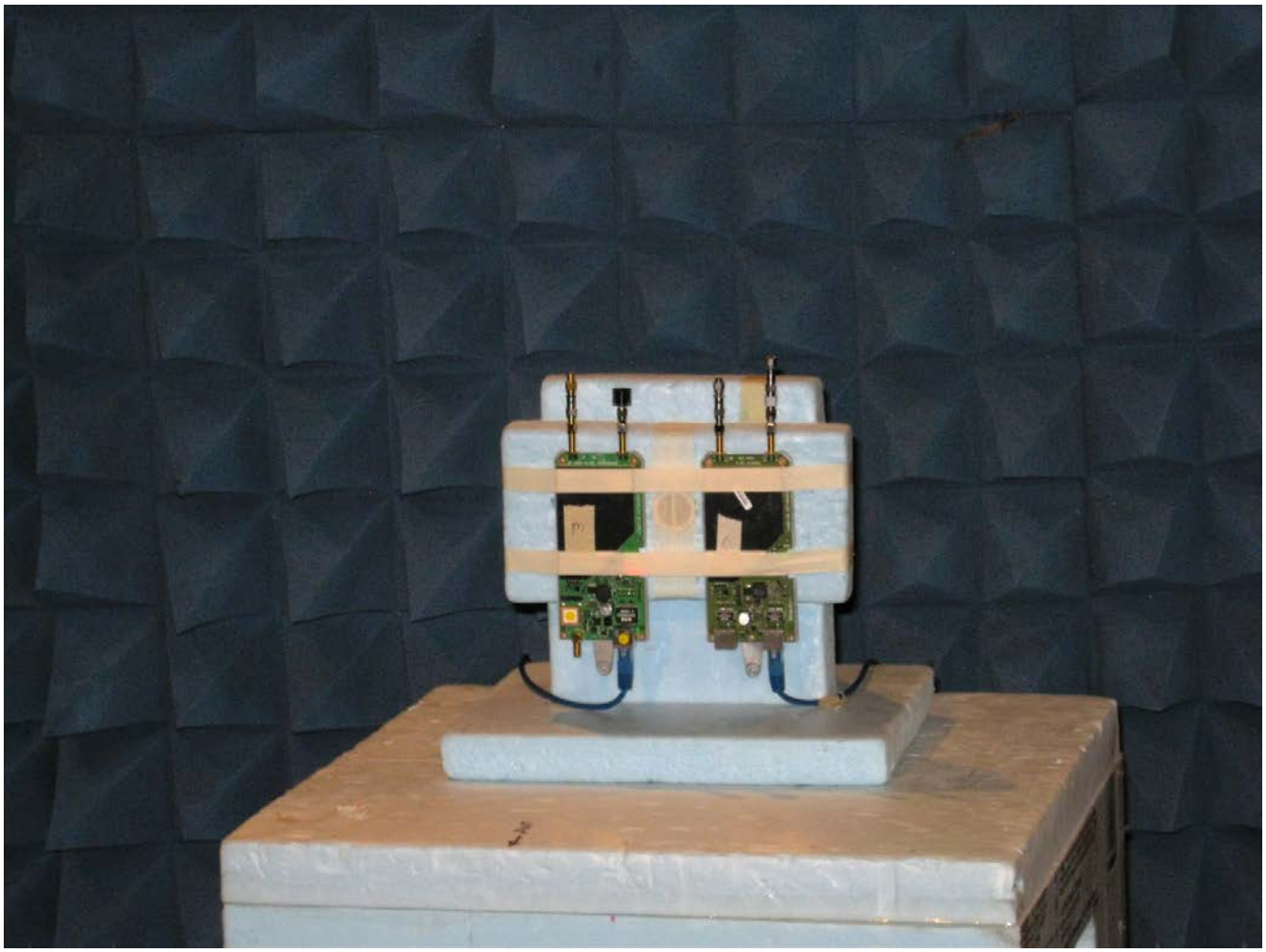
Dynamic Frequency Selection (DFS) testing was not performed by DLS Electronic Systems,Inc. Otherwise, the ePMP AP 5.1GHz Radio, Model C058900P112A, as provided from Cambium Networks tested in May & June 2014 **meets** the requirements of CFR 47 Part 15 Subpart E Section 15.407.

Appendix A – Test Photos

Photo Information and Test Setup:

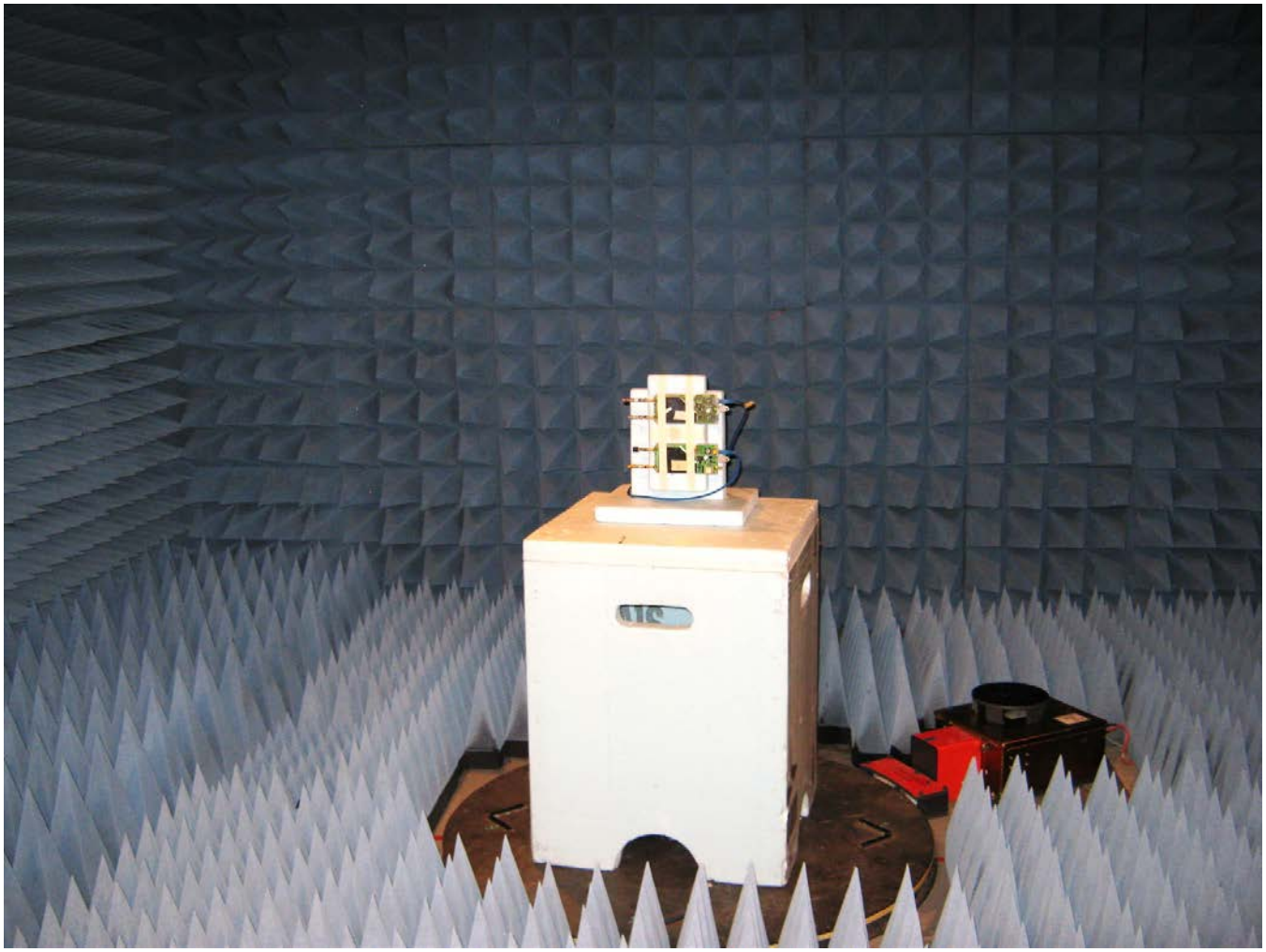
Item0: ePMP AP 5.1GHz (or 5.2GHz or 5.4GHz or 5.7GHz) Radio, Model C058900P112A

Radiated Close-Up



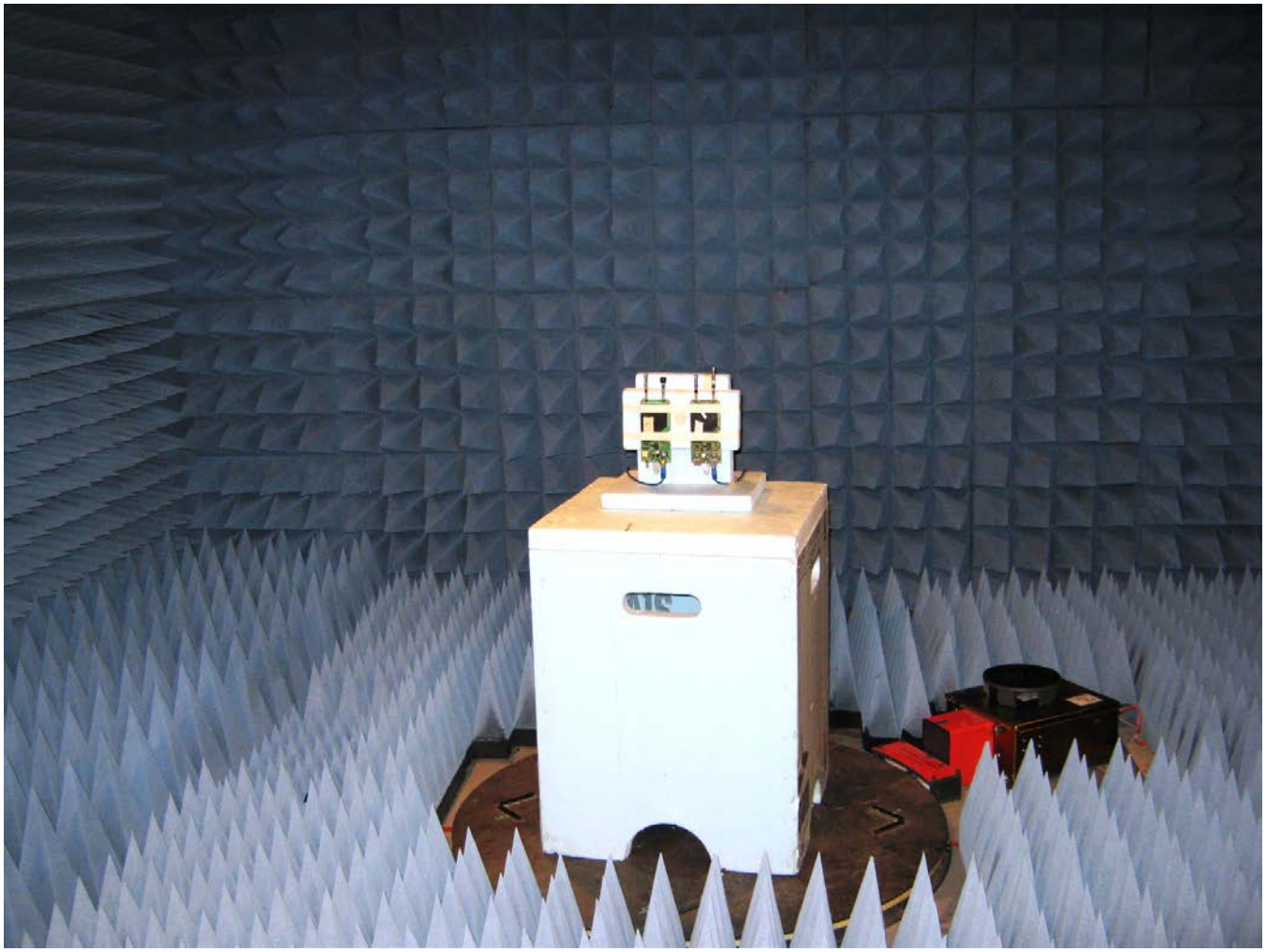
Appendix A – Test Photos

Radiated - Position X



Appendix A – Test Photos

Radiated - Position Y



Appendix A – Test Photos

Radiated - Position Z

Appendix A – Test Photos

RF Conducted / Output Power

Appendix B – Measurement Data

B1.0 Duty Cycle of Test Unit

Rule Part: FCC Section 15.35(c)

Test Procedure: FCC KDB 789033 D02 General UNII Test Procedures v01 Section B(2)(b)

Limits: Informative

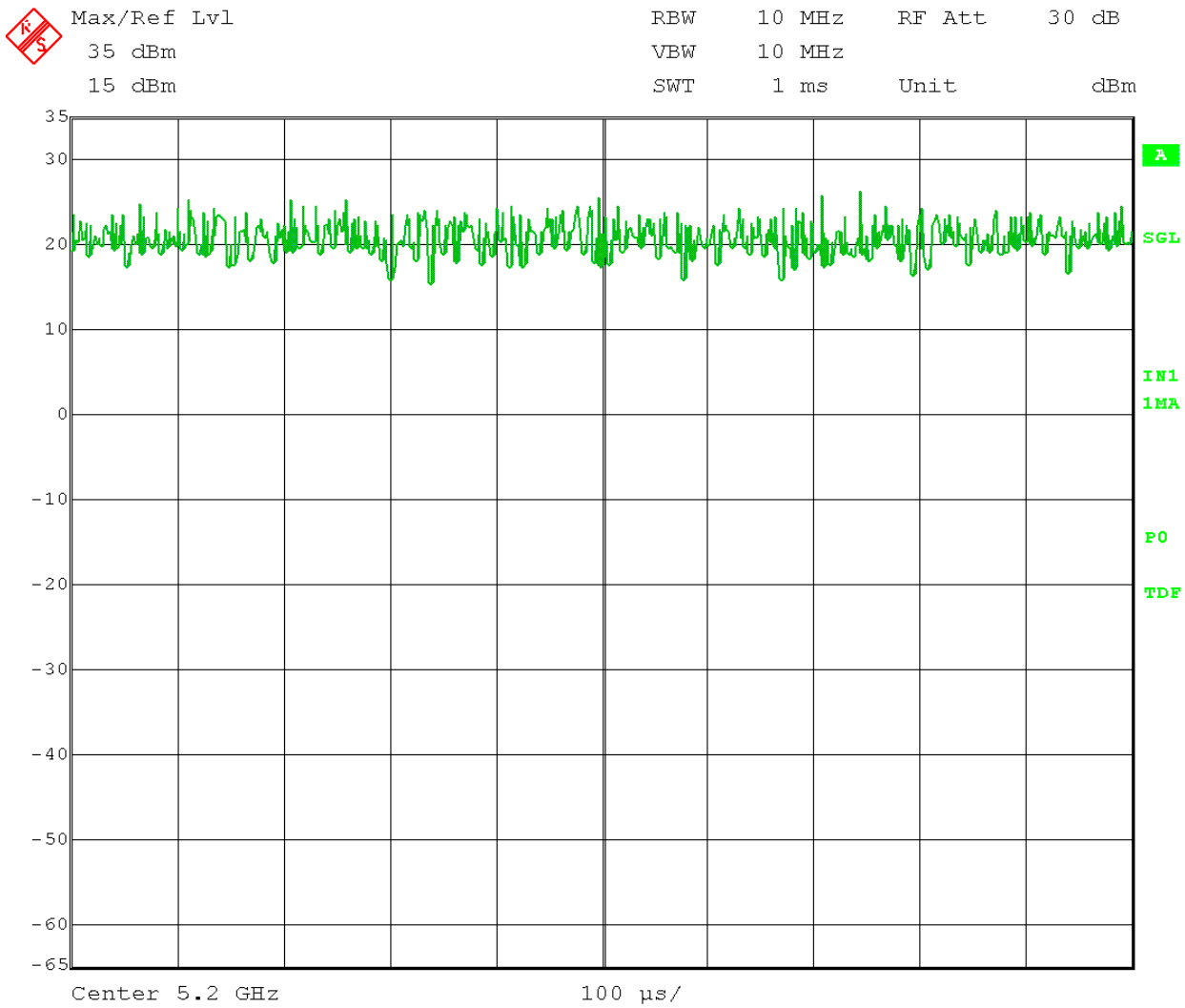
Results: EUT is continuously transmitting (duty cycle = 100%).

Sample Equations: None

Notes: No Duty cycle correction factor was applied to measurements for this device.

Test Date: 05-20-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII
Test: Duty Cycle during testing
Operator: Craig B / Paul L
5 MHz channel bandwidth; OFDM
RBW = 10 MHz VBW = 10 MHz
Mid Channel: Transmit = 5.200 GHz 5 MHz BW

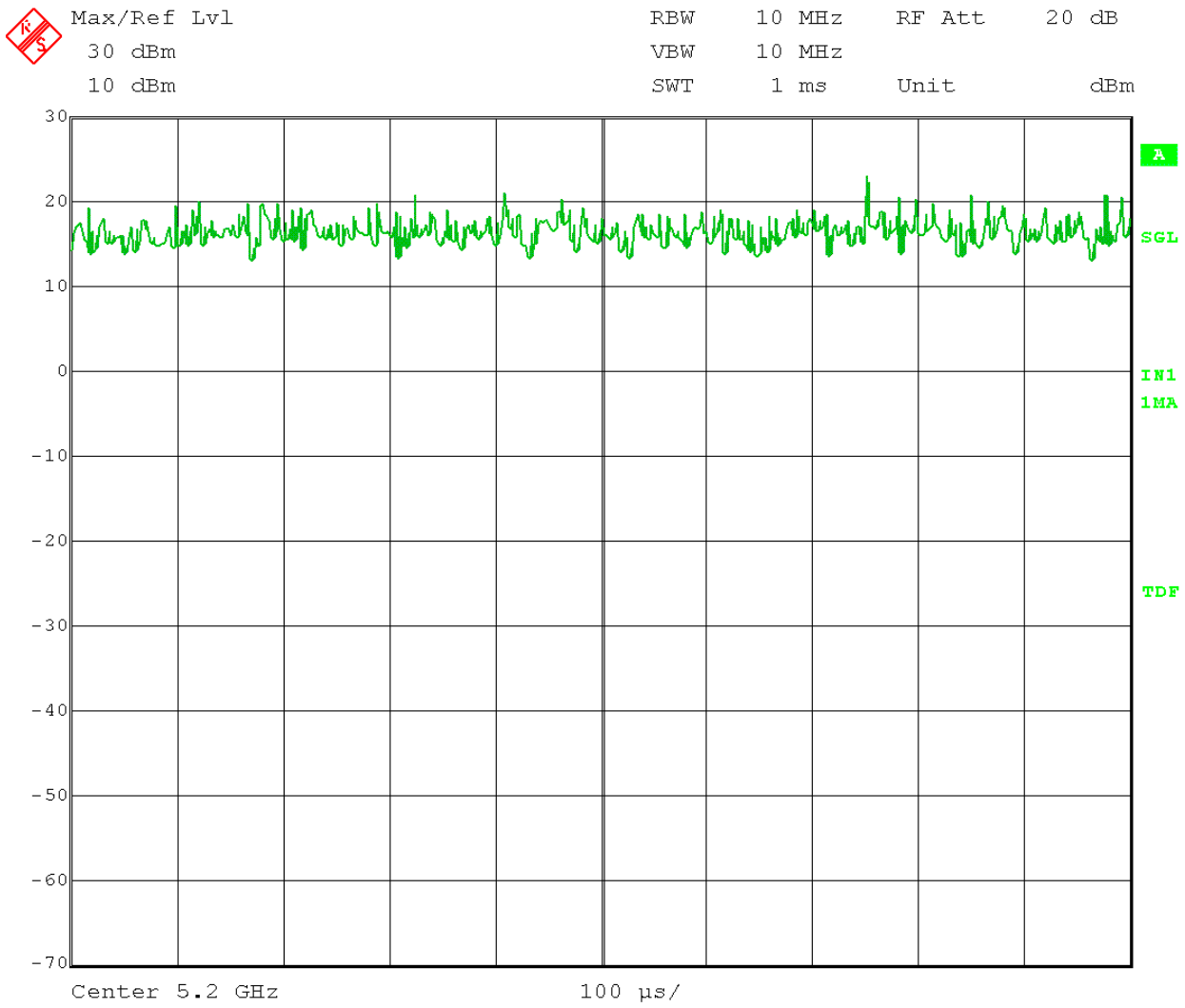
Duty cycle factor x = 1.00 = 100%



Date: 20.MAY.2014 09:40:26

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII
Test: Duty Cycle during testing
Operator: Craig B / Paul L
40 MHz channel bandwidth; OFDM
RBW = 10 MHz VBW = 10 MHz
Mid Channel: Transmit = 5.200 GHz 40 MHz BW

Duty cycle factor x = 1.00 = 100%



Date: 10.JUN.2014 10:59:33

Appendix B – Measurement Data

B2.0 Emission Bandwidth – 26 dB bandwidth – conducted

Rule Section: Informative

Test Procedure: FCC KDB 789033 D02 General UNII Test Procedures v01 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*

Section C.1 – Emission Bandwidth (EBW)

Description: RBW = approximately 1% of EBW
VBW > RBW
Detector = Peak
Trace mode = max hold

Measure the maximum width of the emission between the lower and upper frequencies that measure 26 dB below the maximum level of the in-band emission.

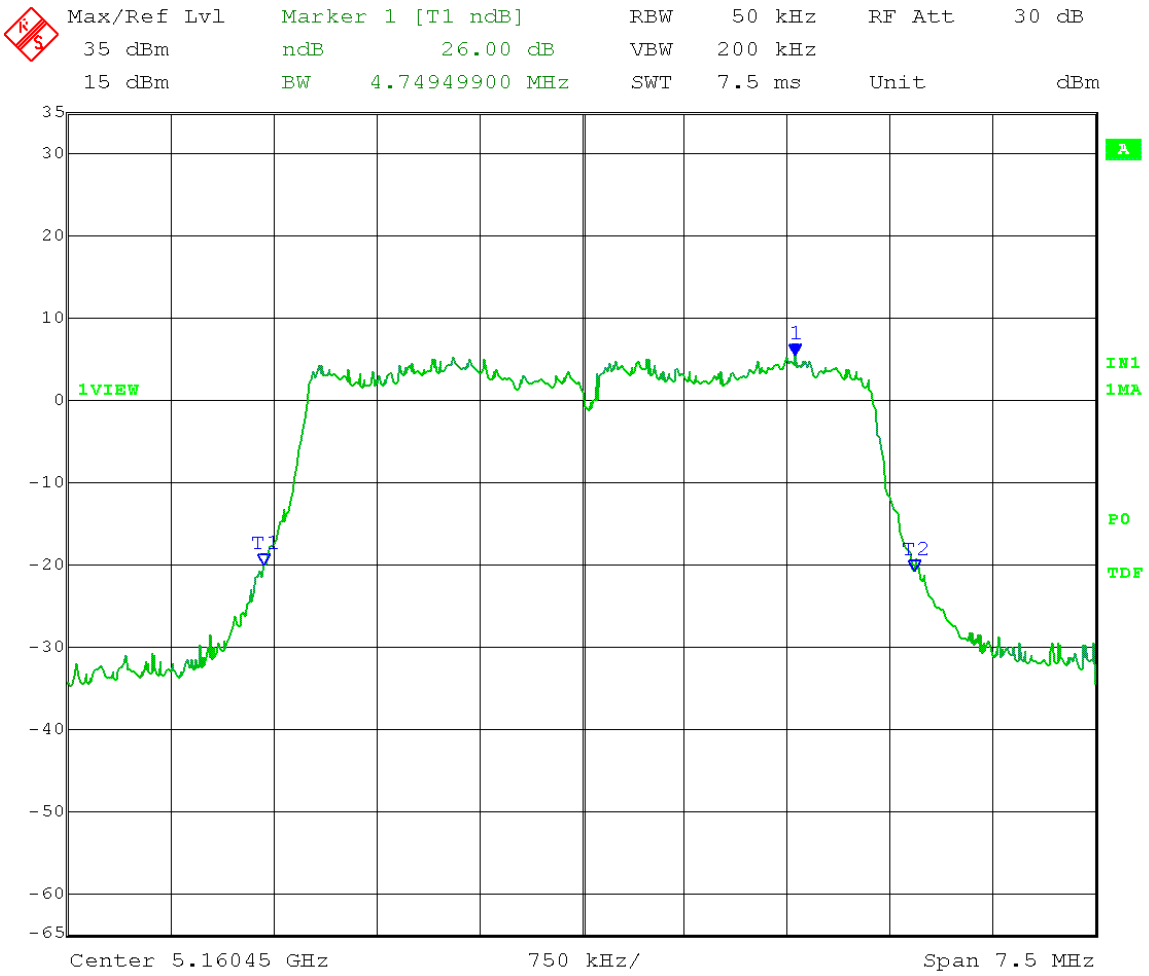
Limit: Informative

Notes: 5 MHz channel bandwidth measurements were taken with Legacy OFDM 54 Mbit/s modulation at the lowest, middle, and highest channels of operation. 40 MHz channel bandwidth measurements were taken with MCS15 OFDM modulation. The EUT was set to transmit continuously with 100% duty cycle.

Test Date: 05-20-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Emission Bandwidth (26 dB) - Conducted
Operator: Craig B
Comment: RBW = 50 kHz VBW = 200 kHz
Low Channel: Transmit = 5.160 GHz 5 MHz BW
Output power setting: 18

Channel 0:

26 dB Emission Bandwidth = 4.75 MHz

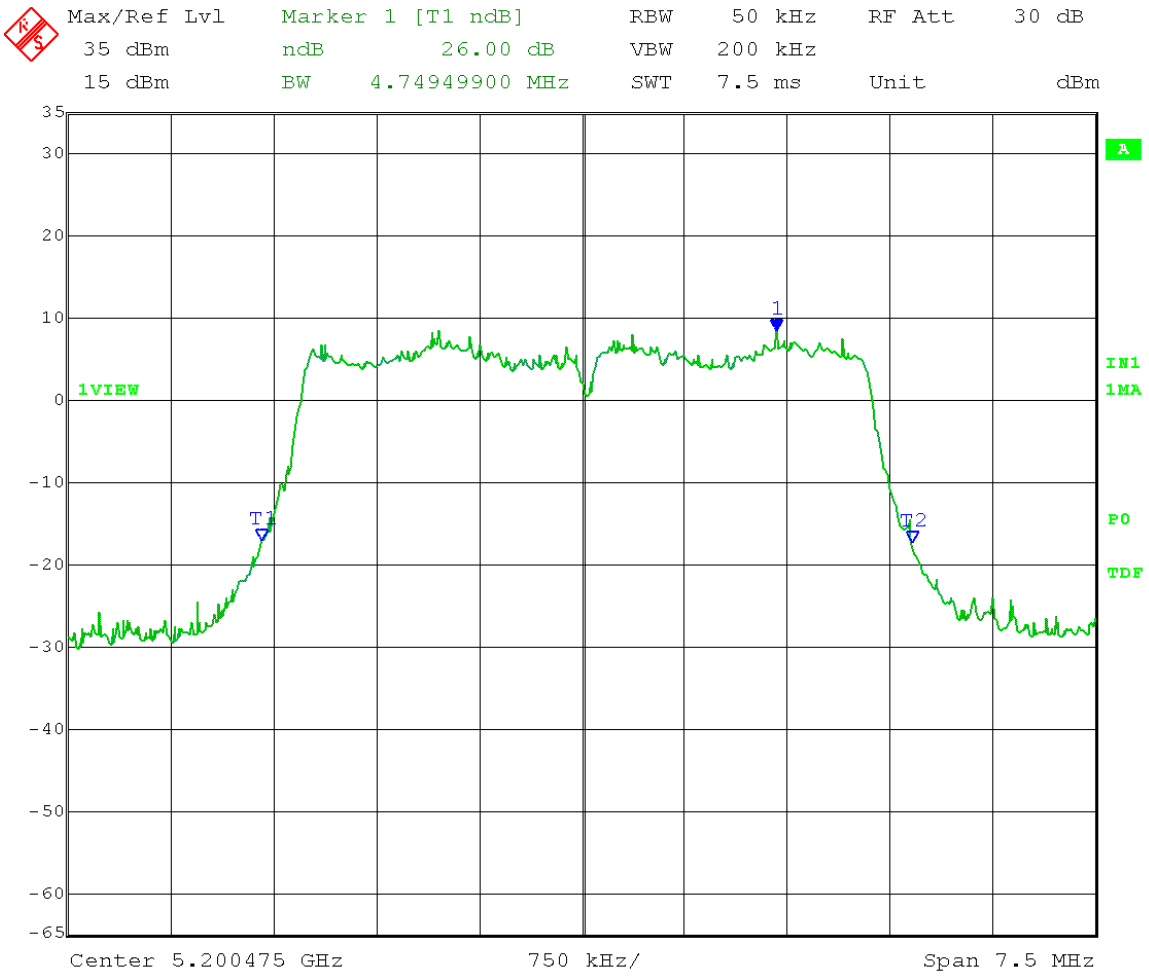


Date: 20.MAY.2014 09:27:56

Test Date: 05-20-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Emission Bandwidth (26 dB) - Conducted
Operator: Craig B
Comment: RBW = 50 kHz VBW = 200 kHz
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 18

Channel 0:

26 dB Emission Bandwidth = 4.75 MHz

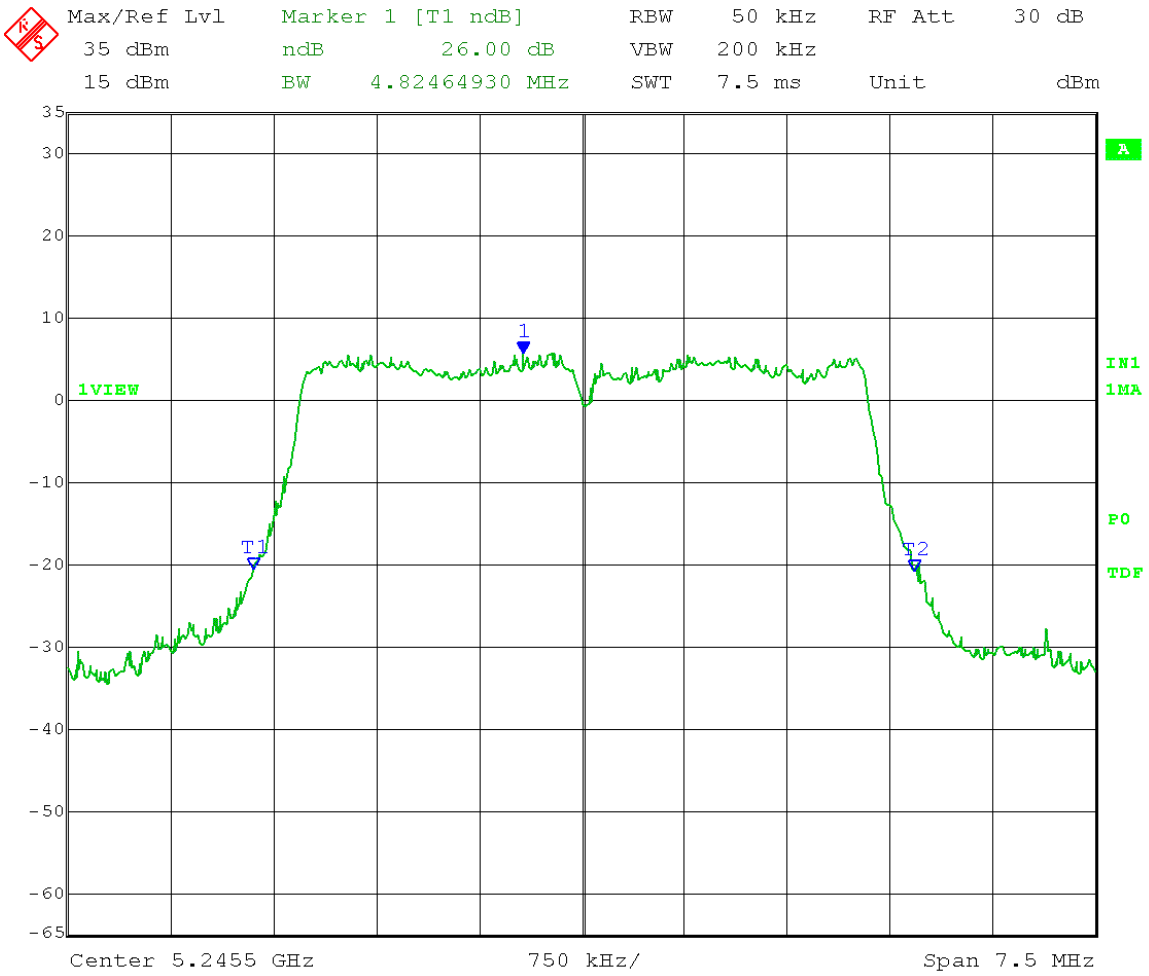


Date: 20.MAY.2014 09:18:00

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Emission Bandwidth (26 dB) - Conducted
Operator: Craig B
Comment: RBW = 50 kHz VBW = 200 kHz
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 18

Channel 0:

26 dB Emission Bandwidth = 4.82 MHz

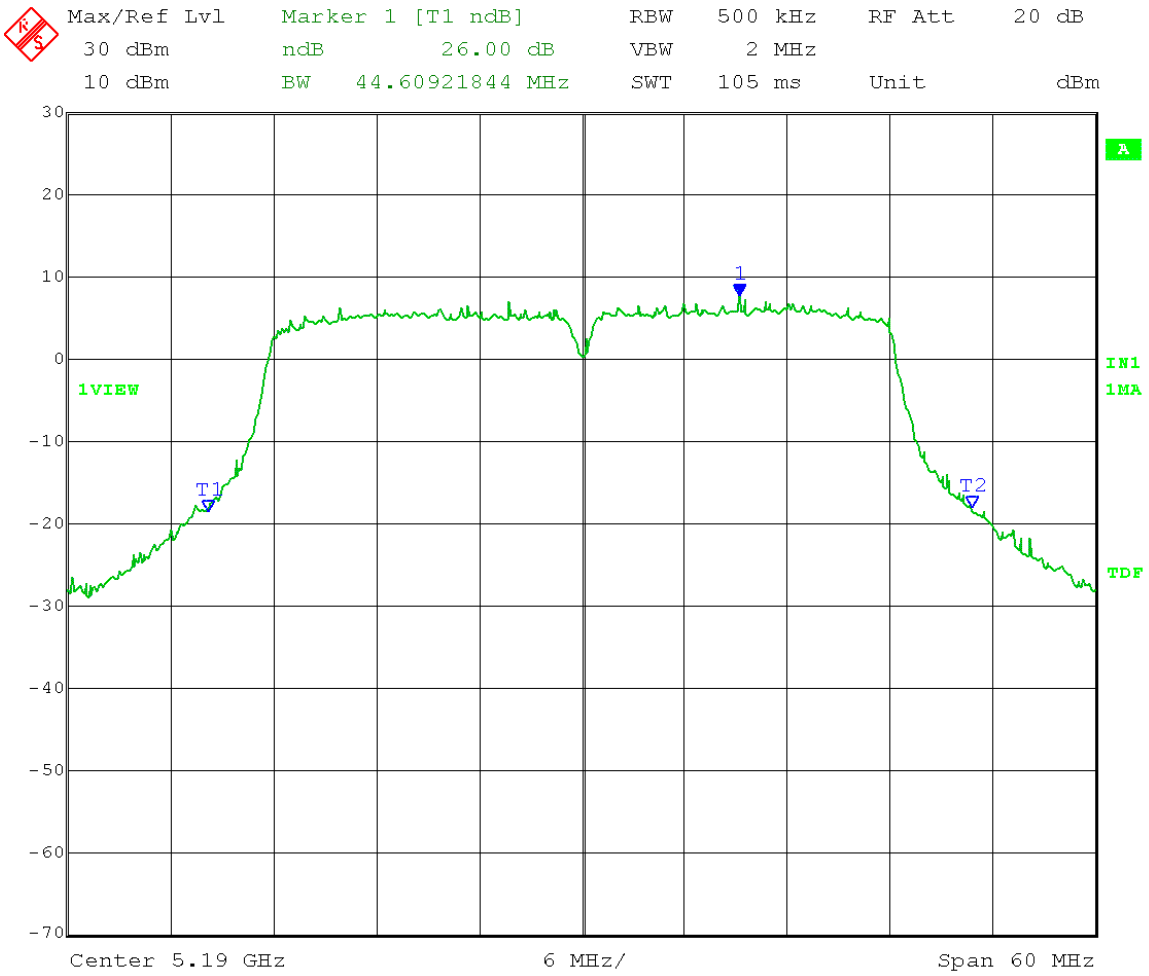


Date: 19.MAY.2014 14:21:43

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Emission Bandwidth (26 dB) - Conducted
Operator: Craig B
Comment: RBW = 500 kHz VBW = 2 MHz
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 14.5

Channel 0:

26 dB Emission Bandwidth = 44.61 MHz

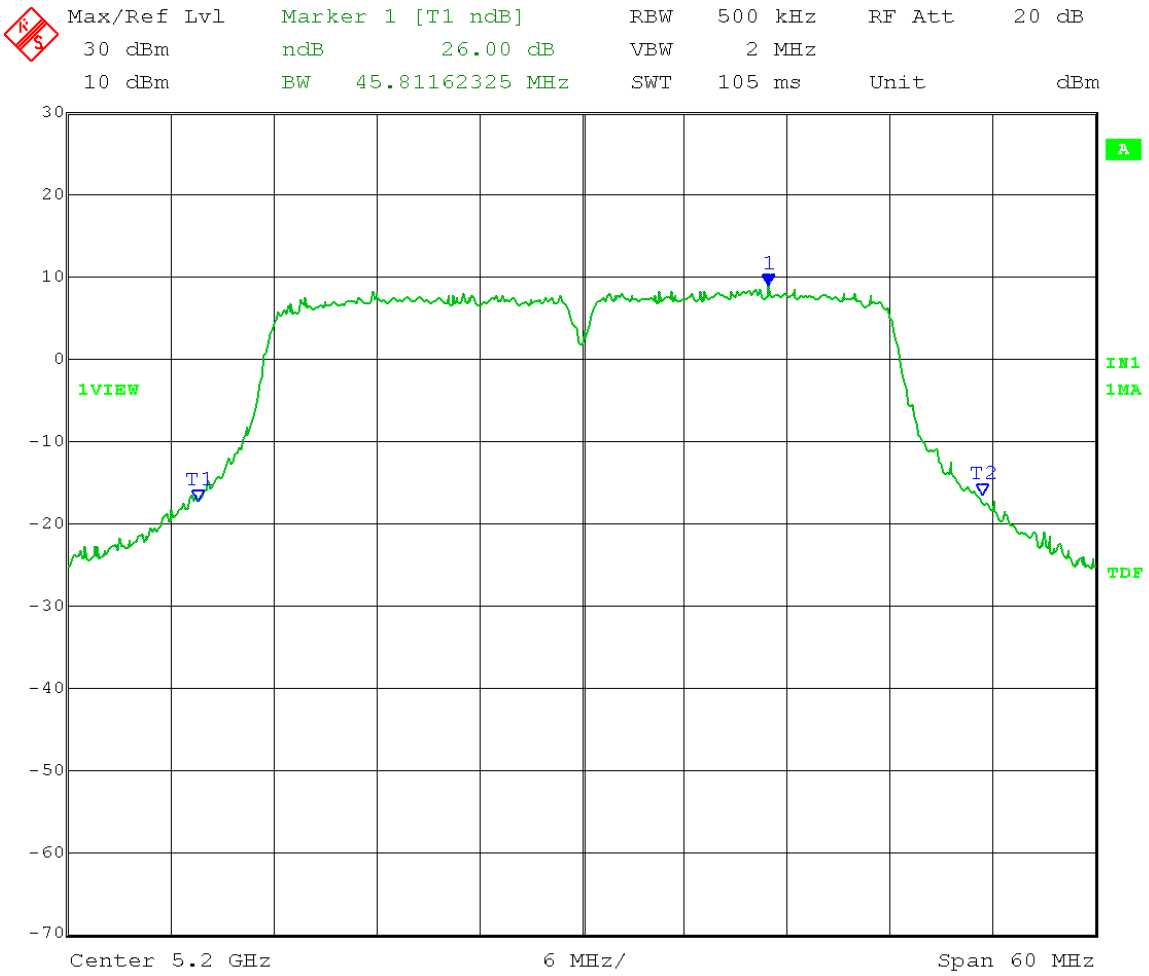


Date: 10.JUN.2014 11:03:36

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Emission Bandwidth (26 dB) - Conducted
Operator: Craig B
Comment: RBW = 500 kHz VBW = 2 MHz
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 17.5

Channel 0:

26 dB Emission Bandwidth = 45.81 MHz

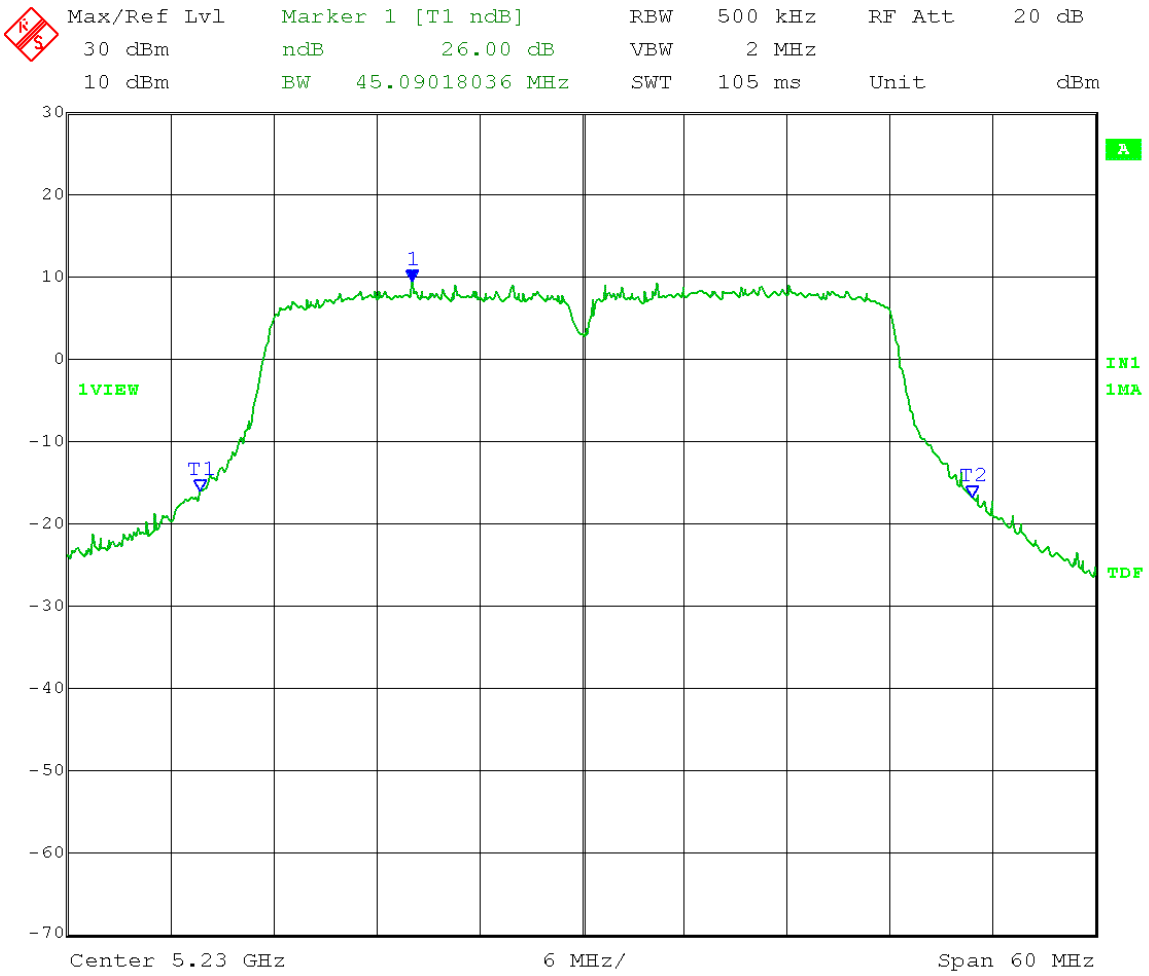


Date: 10.JUN.2014 11:10:29

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Emission Bandwidth (26 dB) - Conducted
Operator: Craig B
Comment: RBW = 500 kHz VBW = 2 MHz
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 18

Channel 0:

26 dB Emission Bandwidth = 45.09 MHz



Date: 10.JUN.2014 11:13:06

Appendix B – Measurement Data

B3.0 99 Percent Occupied Bandwidth

Rule Section: Informative

Test Procedure: FCC KDB 789033 D02 General UNII Test Procedures v01 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*

Section D – 99 Percent Occupied Bandwidth

Description: SPAN = 1.5 to 5 times the OBW
RBW = 1% to 5% of OBW
VBW ≥ 3 x RBW
Detector = Peak
Trace mode = max hold

Measure the width of the emission using the 99% power bandwidth function of the spectrum analyzer

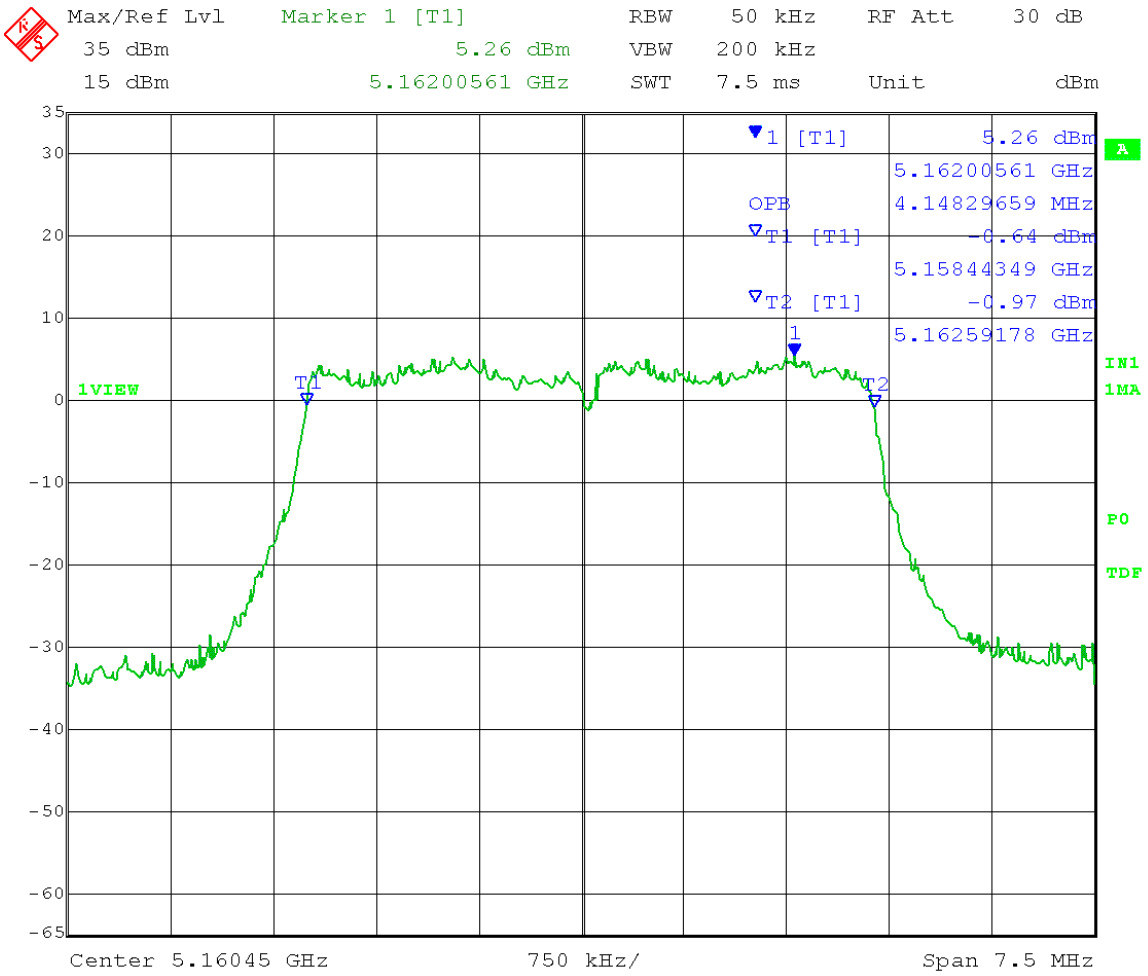
Limit: Informative

Notes: 5 MHz channel bandwidth measurements were taken with Legacy OFDM 54 Mbit/s modulation at the lowest, middle, and highest channels of operation. 40 MHz channel bandwidth measurements were taken with MCS15 OFDM modulation. The EUT was set to transmit continuously with 100% duty cycle.

Test Date: 05-20-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: 99% Occupied Bandwidth - Conducted
Operator: Craig B
Comment: RBW = 50 kHz VBW = 200 kHz
Low Channel: Transmit = 5.160 GHz 5 MHz BW
Output power setting: 18

Channel 0:

99% Power Bandwidth = 4.15 MHz

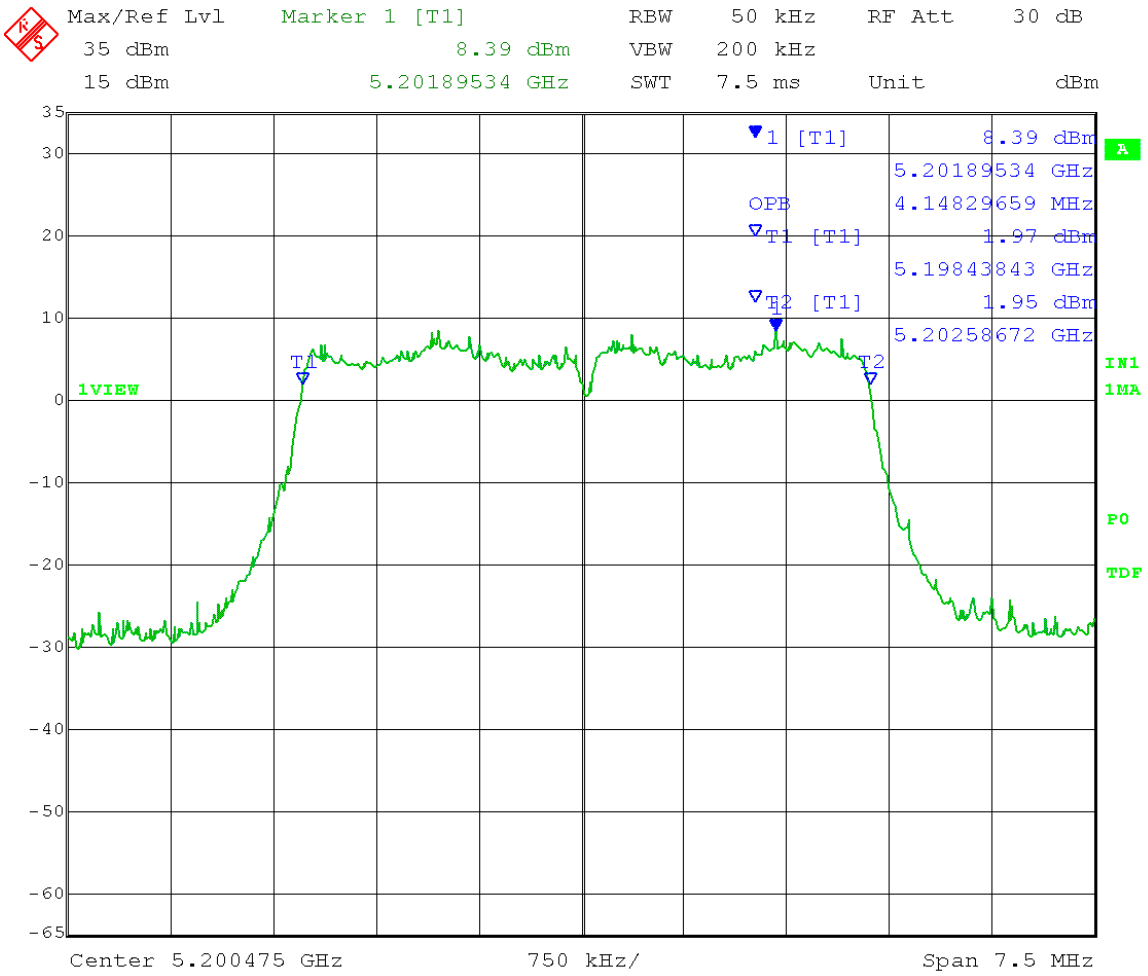


Date: 20.MAY.2014 09:26:25

Test Date: 05-20-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: 99% Occupied Bandwidth - Conducted
Operator: Craig B
Comment: RBW = 50 kHz VBW = 200 kHz
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 18

Channel 0:

99% Power Bandwidth = 4.15 MHz

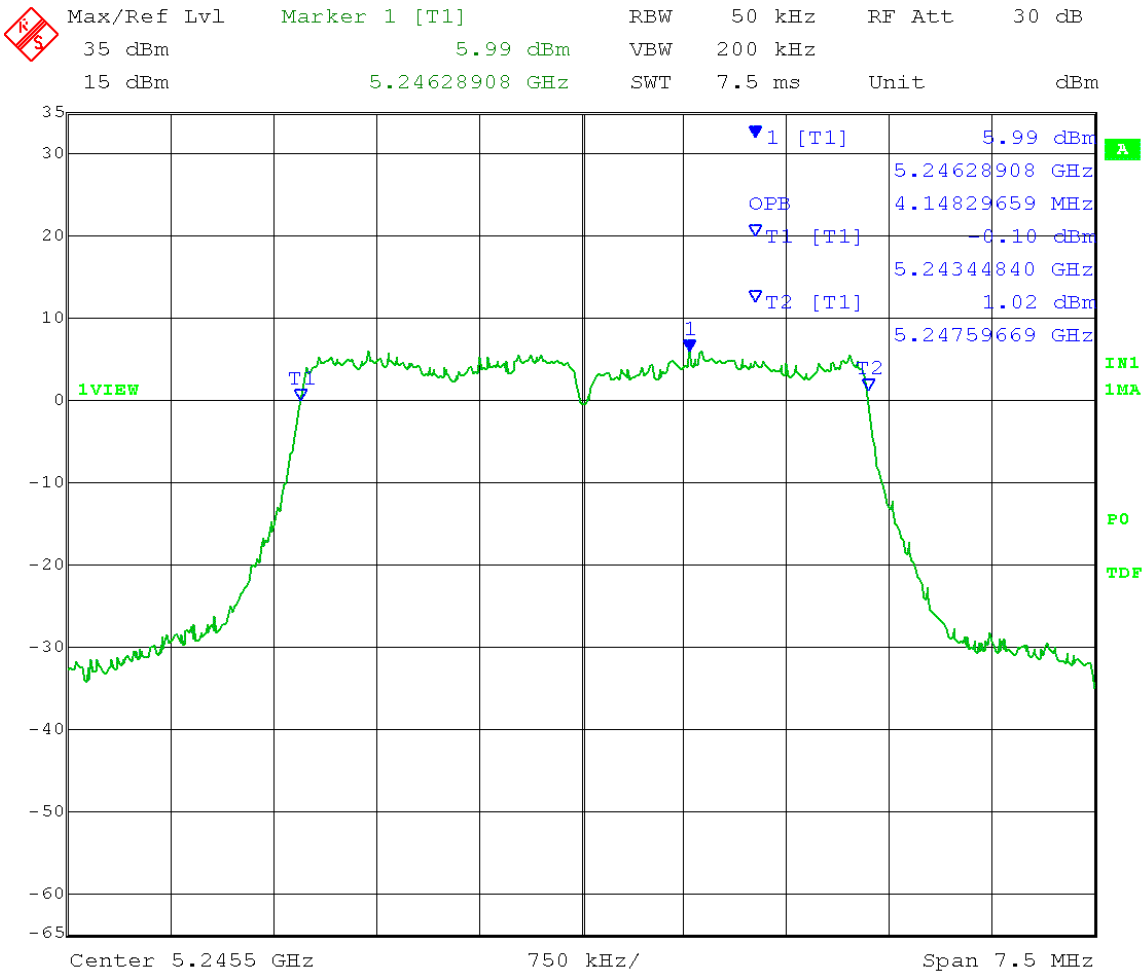


Date: 20.MAY.2014 09:19:48

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: 99% Occupied Bandwidth - Conducted
Operator: Craig B
Comment: RBW = 50 kHz VBW = 200 kHz
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 18

Channel 0:

99% Power Bandwidth = 4.15 MHz

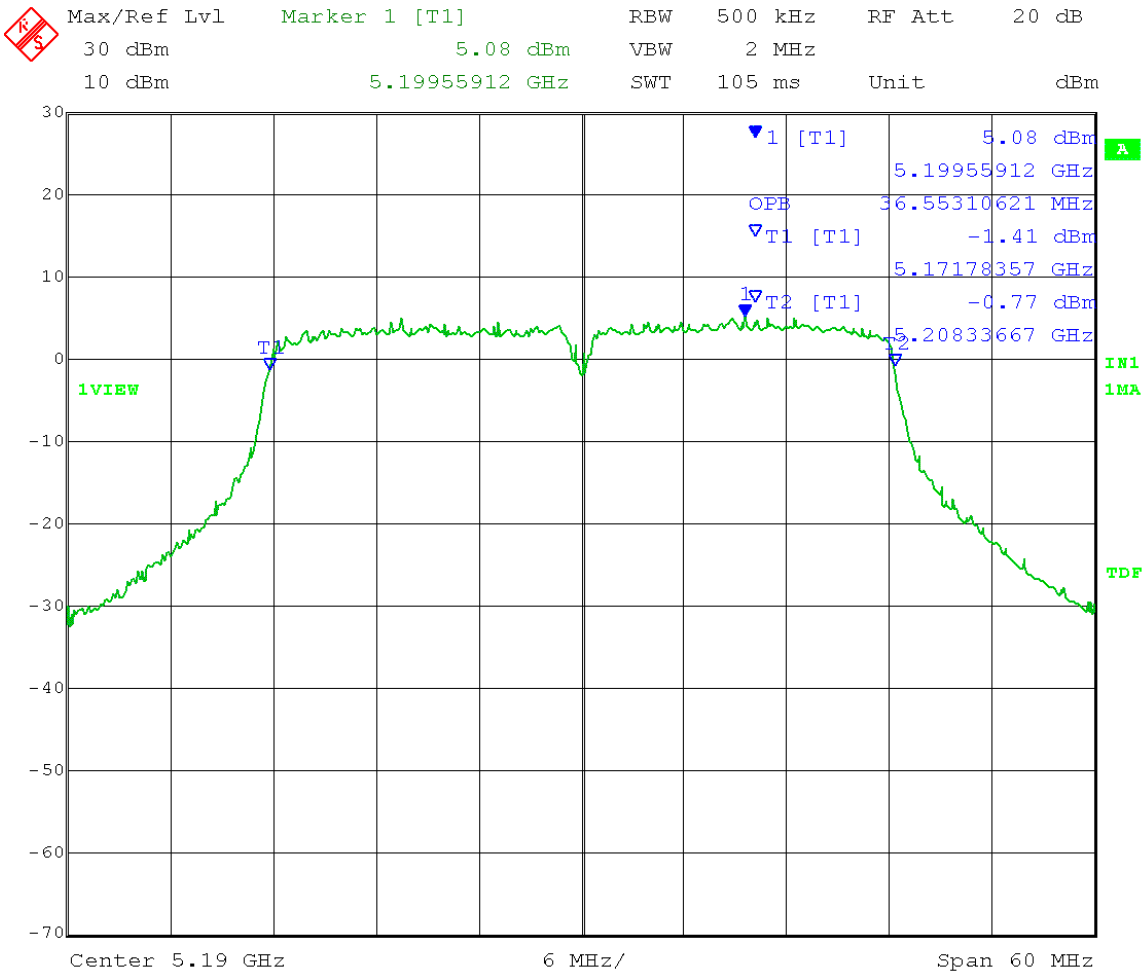


Date: 19.MAY.2014 14:52:11

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: 99% Occupied Bandwidth - Conducted
Operator: Craig B
Comment: RBW = 500 kHz VBW = 2 MHz
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 14.5

Channel 0:

99% Power Bandwidth = 36.55 MHz

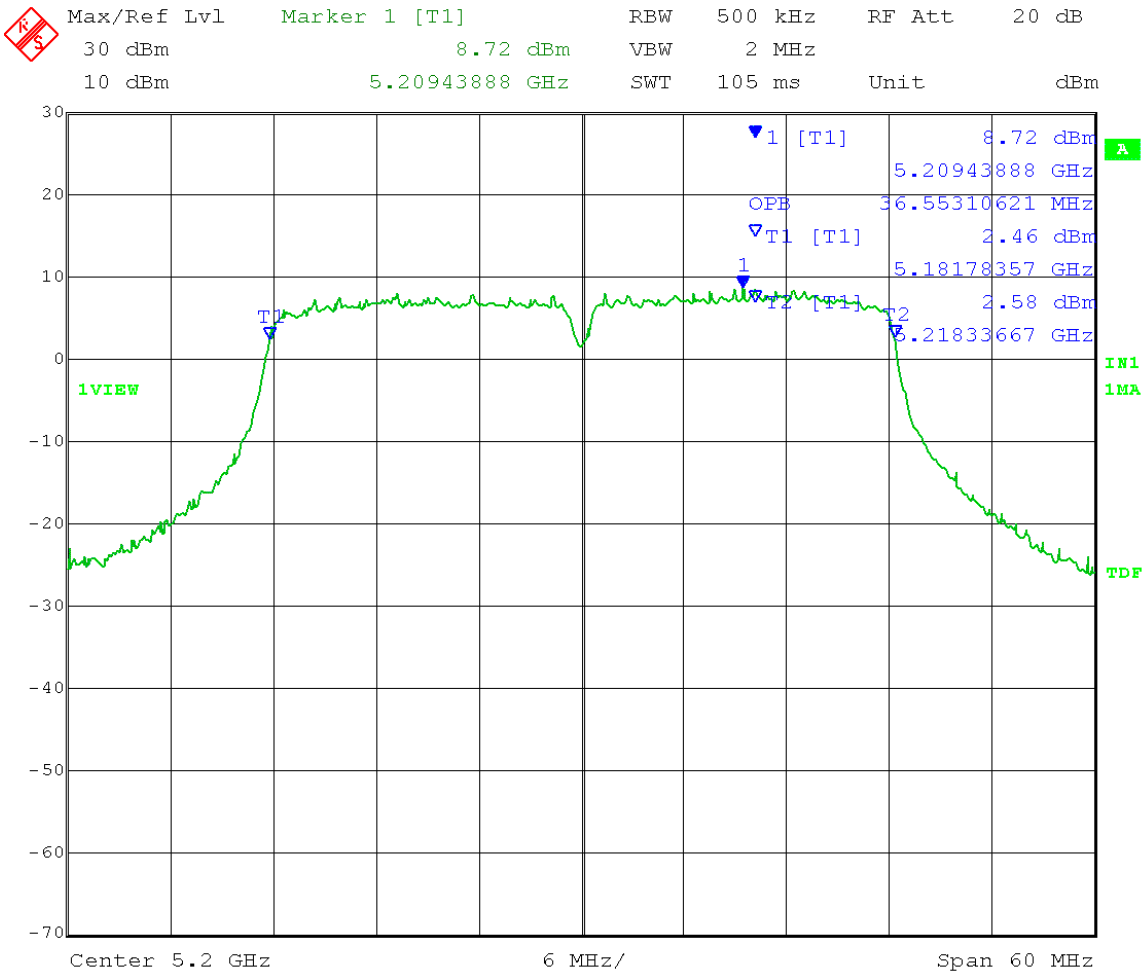


Date: 10.JUN.2014 11:16:39

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: 99% Occupied Bandwidth - Conducted
Operator: Craig B
Comment: RBW = 500 kHz VBW = 2 MHz
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 17.5

Channel 0:

99% Power Bandwidth = 36.55 MHz

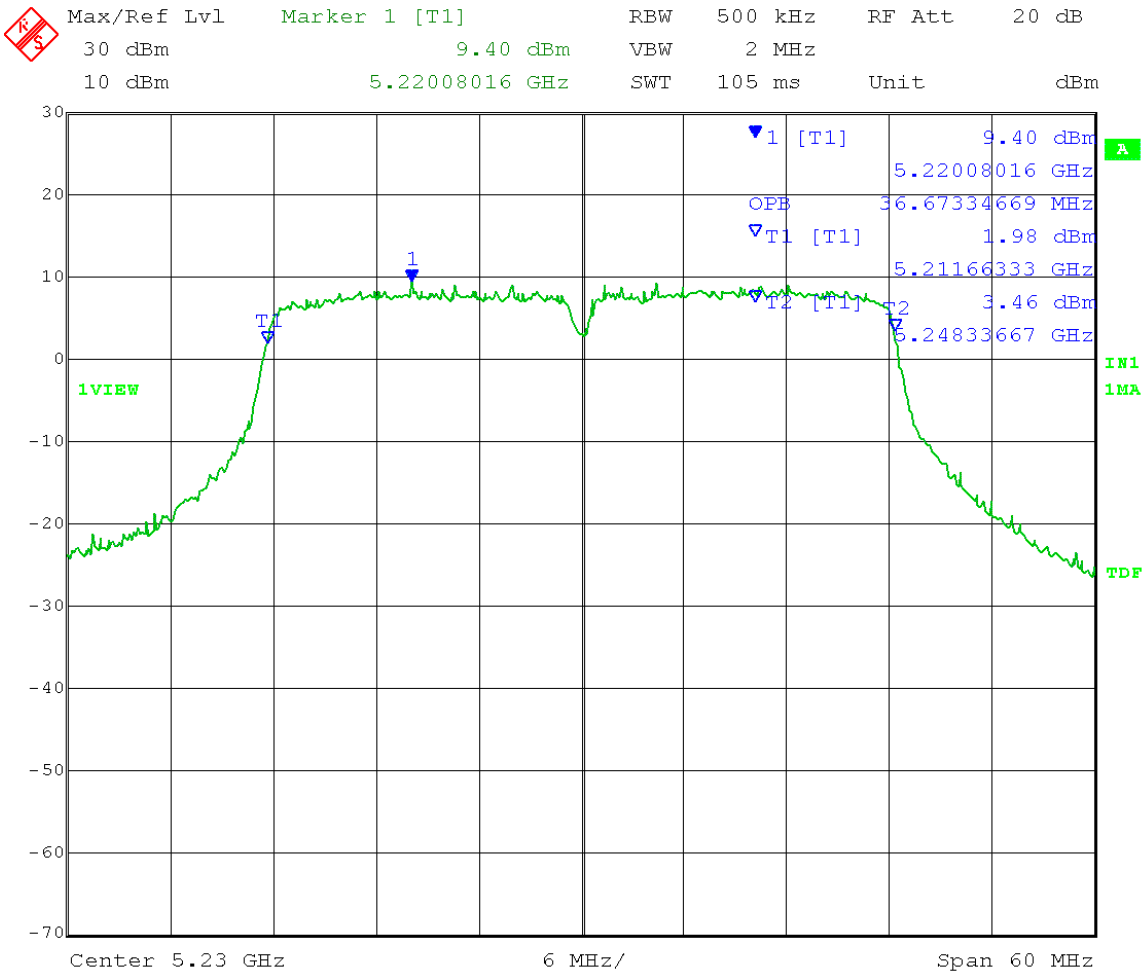


Date: 10.JUN.2014 11:19:18

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: 99% Occupied Bandwidth - Conducted
Operator: Craig B
Comment: RBW = 500 kHz VBW = 2 MHz
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 18

Channel 0:

99% Power Bandwidth = 36.67 MHz



Date: 10.JUN.2014 11:14:33

Appendix B – Measurement Data

B4.0 Maximum Conducted Output Power

Rule Section: Section 15.407(a)(1)

Test Procedure: FCC KDB 789033 D02 General UNII Test Procedures v01 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*

Section E(3)(a) Method PM (Measurement using an RF average power meter): Measurements performed using a wideband RF power meter with a thermocouple detector

Description: Measure the average power of the transmitter
Add 10 log (1/x), where x is the duty cycle, to the measured power
Add 10 log(N), where N is the number of outputs, for MIMO operation
(according to FCC KDB 662911)

Limit: 1W (30 dBm) conducted

Limit shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

For fixed point-to-point access points: Limit shall be reduced by the amount in dB that the directional gain of the antenna exceeds 23 dBi

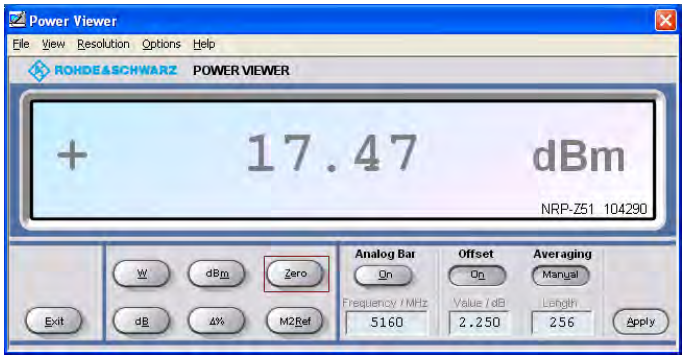
Results: Passed

Notes: 5 MHz channel bandwidth measurements were taken with Legacy OFDM 54 Mbit/s modulation at the lowest, middle, and highest channels of operation. 40 MHz channel bandwidth measurements were taken with MCS15 OFDM modulation. The EUT was set to transmit continuously with 100% duty cycle.

Peak detector output power measurements were also recorded and included in this test report as requested by Cambium Networks.

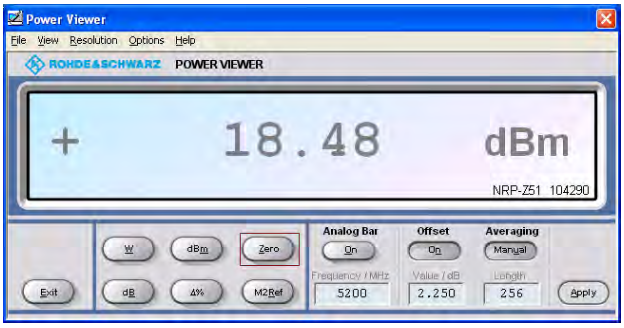
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.160 GHz 5 MHz BW
Output power setting: 18
Ch 0:

Maximum conducted output power = 17.47dBm + 3 dB (MIMO)
= 20.47 dBm



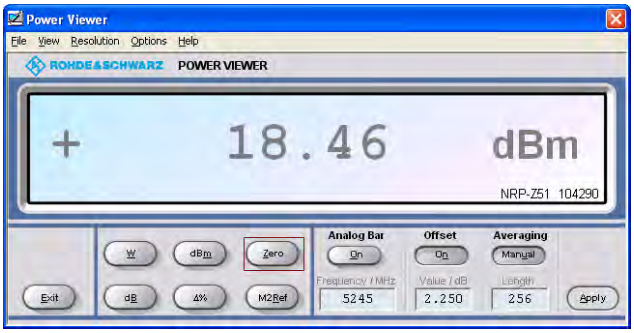
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 18
Ch 0:

Maximum conducted output power = 18.48 dBm + 3 dB (MIMO)
= 21.48 dBm



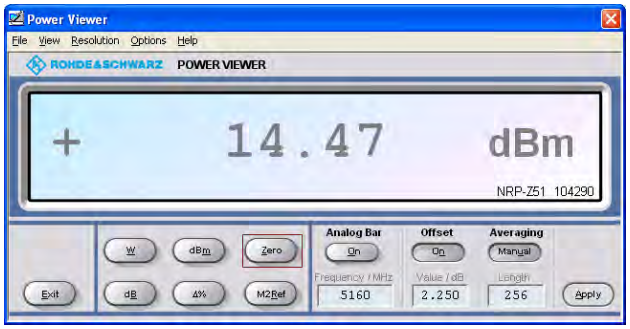
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 18
Ch 0:

Maximum conducted output power = 18.46 dBm + 3 dB (MIMO)
= 21.46 dBm



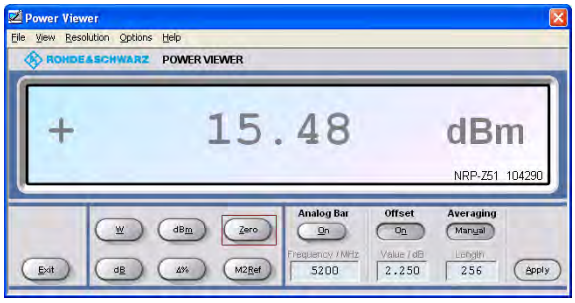
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.160 GHz 5 MHz BW
Output power setting: 15
Ch 0:

Maximum conducted output power = 14.47 dBm + 3 dB (MIMO)
= 17.47 dBm



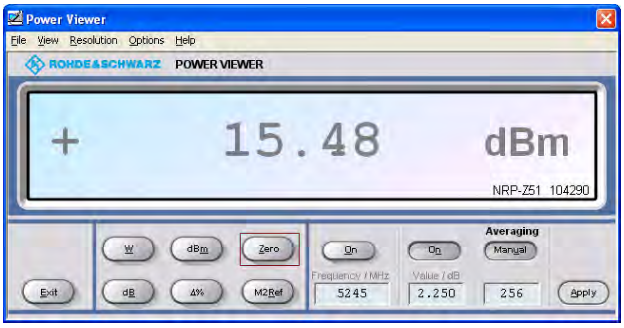
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 15
Ch 0:

Maximum conducted output power = 15.48 dBm + 3 dB (MIMO)
= 18.48 dBm



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 15
Ch 0:

Maximum conducted output power = 15.48 dBm + 3 dB (MIMO)
= 18.48 dBm

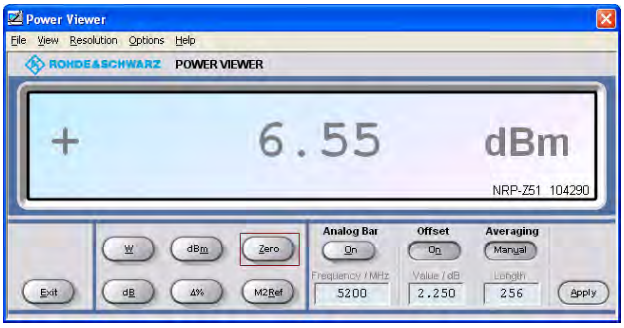


Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Low Channel: Transmit = 5.160 GHz 5 MHz BW
Output power setting: 7
Ch 0:

Maximum conducted output power = 5.99 dBm + 3 dB (MIMO)
= 8.99 dBm

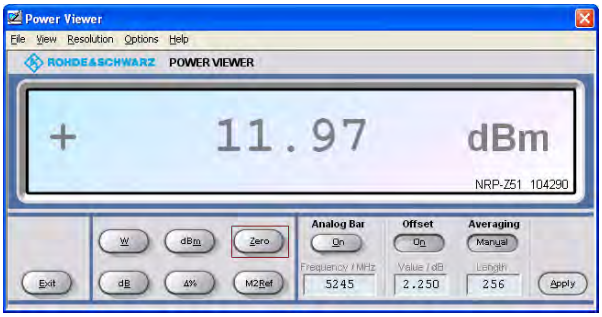
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 6
Ch 0:

Maximum conducted output power = 6.55 dBm + 3 dB (MIMO)
= 9.55 dBm



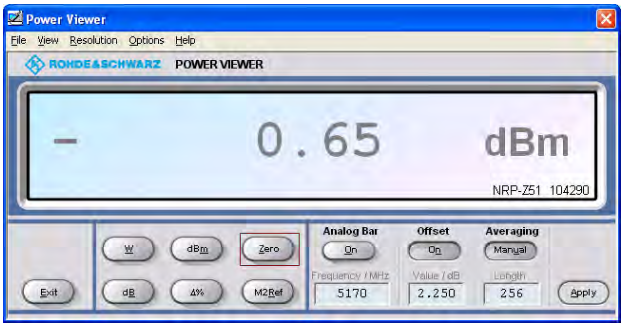
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 11
Ch 0:

Maximum conducted output power = 11.97 dBm + 3 dB (MIMO)
= 14.97 dBm



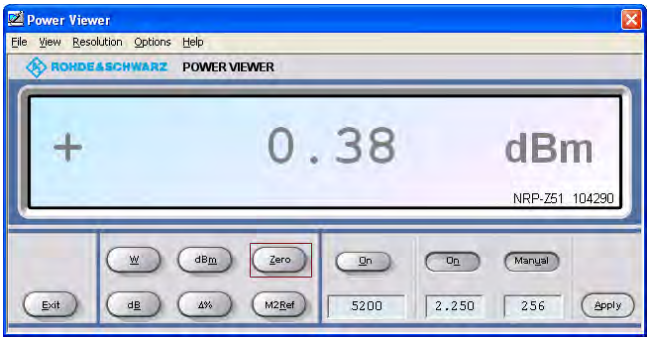
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.170 GHz 5 MHz BW
Output power setting: 0
Ch 0:

Maximum conducted output power = -0.65 dBm + 3 dB (MIMO)
= 2.35 dBm



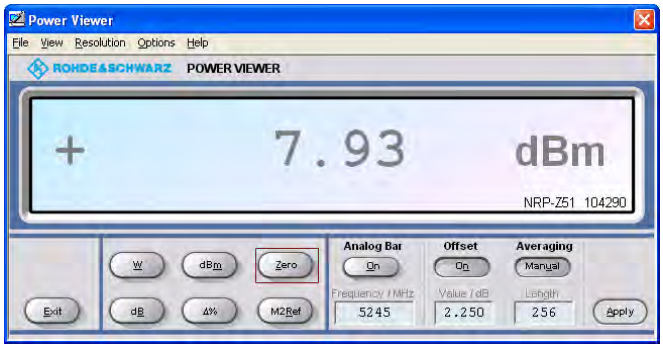
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 0
Ch 0:

Maximum conducted output power = 0.38 dBm + 3 dB (MIMO)
= 3.38 dBm



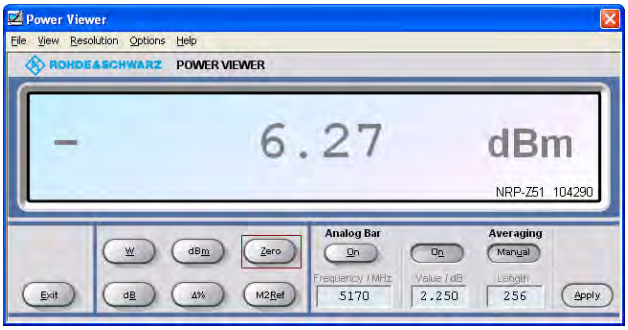
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 7
Ch 0:

Maximum conducted output power = 7.93 dBm + 3 dB (MIMO)
= 10.93 dBm



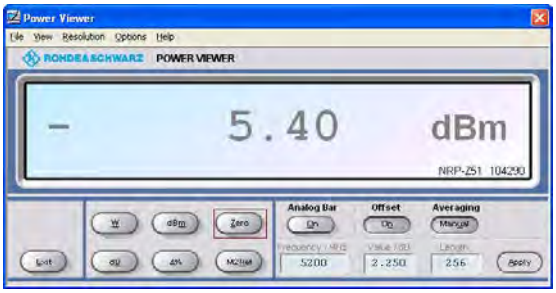
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-7) = 23 dBm
Low Channel: Transmit = 5.170 GHz 5 MHz BW
Output power setting: 4 – 10 dB external atten. = -6
Ch 0:

Maximum conducted output power = -6.27 dBm + 3 dB (MIMO)
= -3.27 dBm



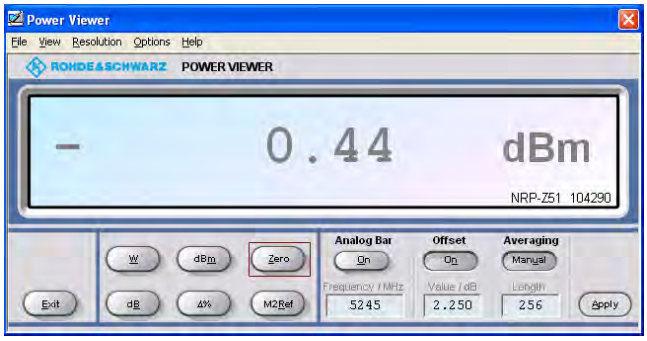
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-7) = 23 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 4 – 10 dB external atten. = -6
Ch 0:

Maximum conducted output power = -5.40 dBm + 3 dB (MIMO)
= -2.40 dBm



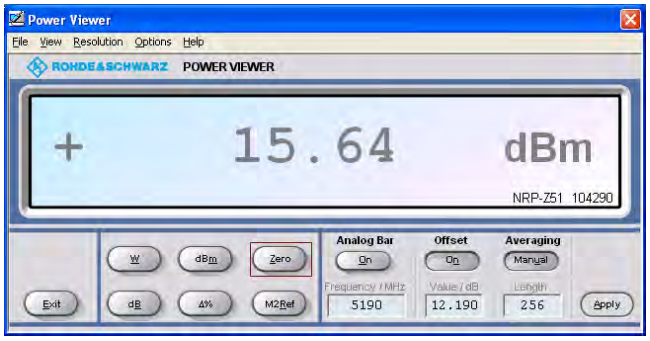
Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-7) = 23 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 9 – 10 dB external atten. = -1
Ch 0:

Maximum conducted output power = -0.44 dBm + 3 dB (MIMO)
= 2.56 dBm



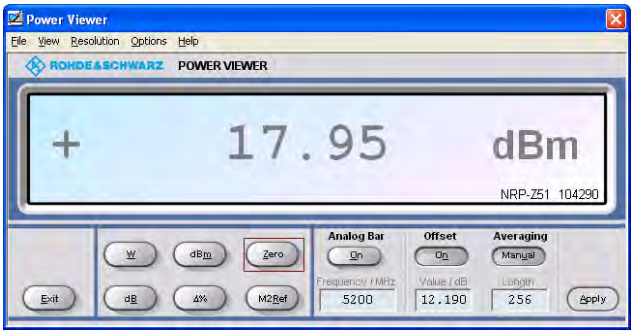
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 14.5
Ch 0:

Maximum conducted output power = 15.64 dBm + 3 dB (MIMO)
= 18.64 dBm



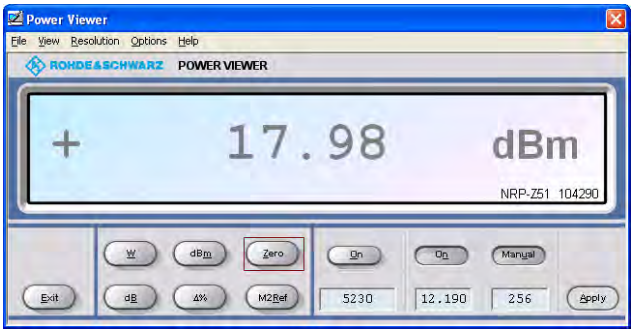
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 16
Ch 0:

Maximum conducted output power = 17.95 dBm + 3 dB (MIMO)
= 20.95 dBm



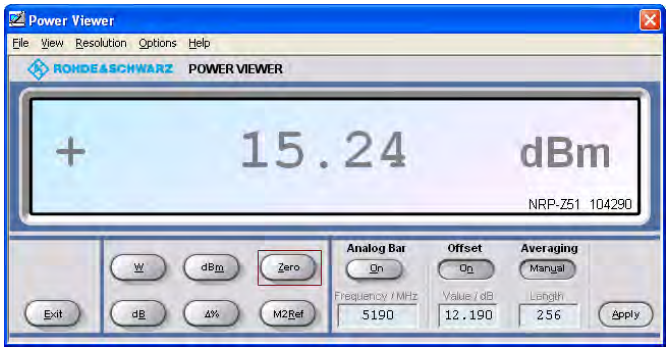
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 16
Ch 0:

Maximum conducted output power = 17.98 dBm + 3 dB (MIMO)
= 20.98 dBm



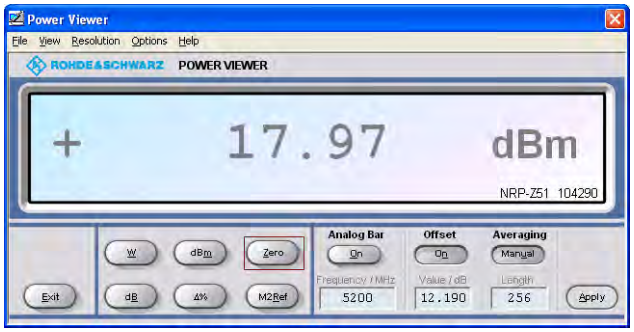
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 14.0
Ch 0:

Maximum conducted output power = 15.24 dBm + 3 dB (MIMO)
= 18.24 dBm



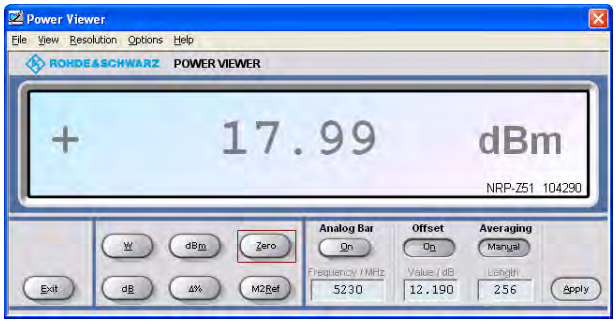
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 16
Ch 0:

Maximum conducted output power = 17.97 dBm + 3 dB (MIMO)
= 20.97 dBm



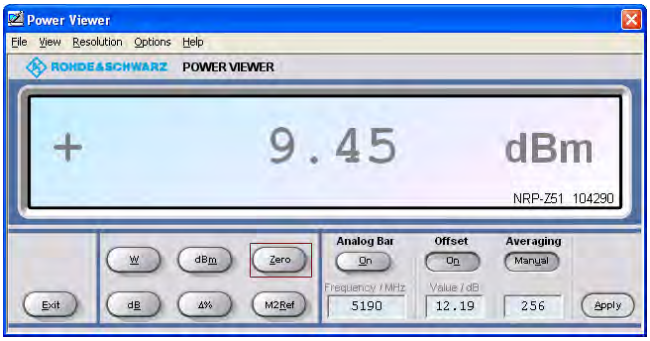
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 16
Ch 0:

Maximum conducted output power = 17.99 dBm + 3 dB (MIMO)
= 20.99 dBm



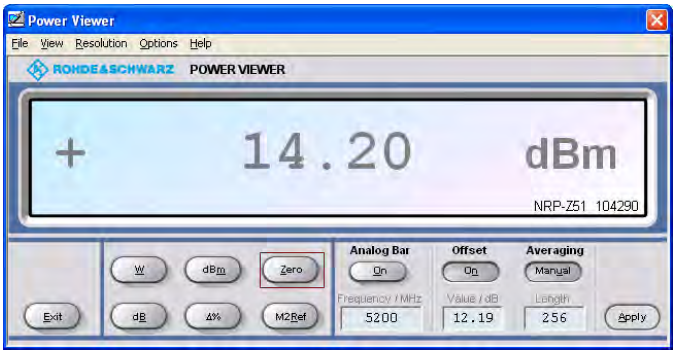
Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 8.0
Ch 0:

Maximum conducted output power = 9.45 dBm + 3 dB (MIMO)
= 12.45 dBm



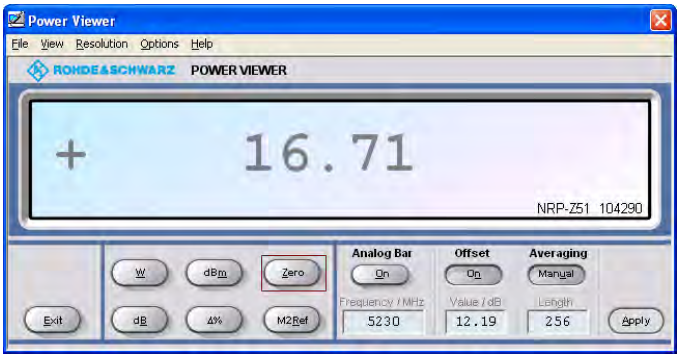
Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 12.0
Ch 0:

Maximum conducted output power = 14.20 dBm + 3 dB (MIMO)
= 17.20 dBm



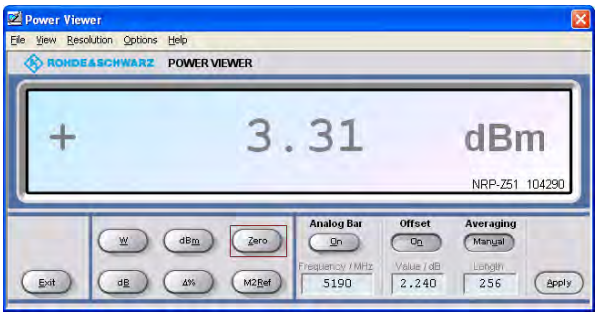
Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 14.5
Ch 0:

Maximum conducted output power = 16.71 dBm + 3 dB (MIMO)
= 19.71 dBm



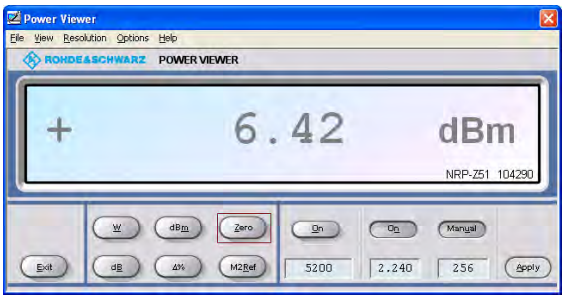
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 2.0 Ch 0:

Maximum conducted output power = 3.31 dBm + 3 dB (MIMO)
= 6.31 dBm



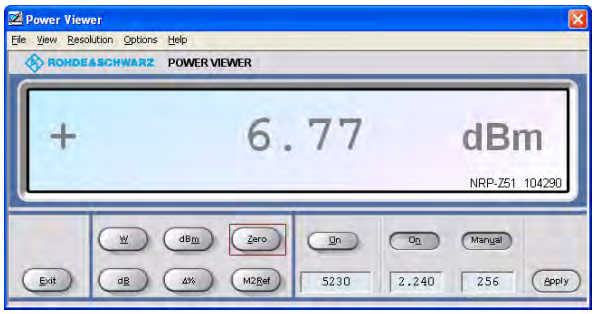
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 4.5 Ch 0:

Maximum conducted output power = 6.42 dBm + 3 dB (MIMO)
= 9.42 dBm



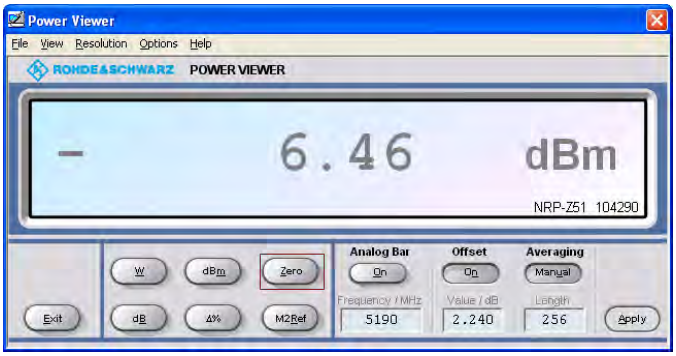
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 4.5 Ch 0:

Maximum conducted output power = 6.77 dBm + 3 dB (MIMO)
= 9.77 dBm



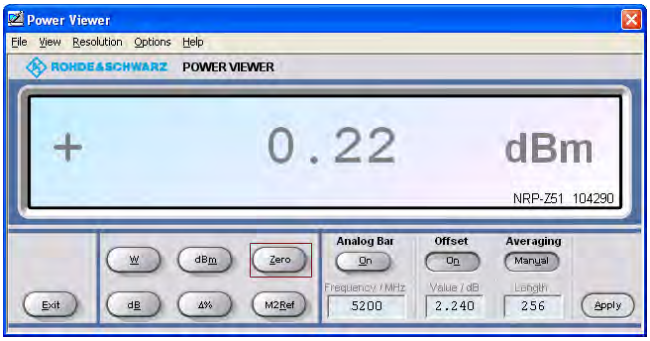
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-23) = 23 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 2.5 – 10 dB external atten. = -7.5
Ch 0:

Maximum conducted output power = -6.46 dBm + 3 dB (MIMO)
= -3.46 dBm



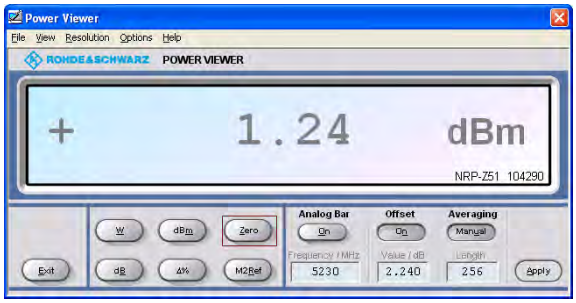
Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-23) = 23 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 8.5 – 10 dB external atten. = -1.5
Ch 0:

Maximum conducted output power = 0.22 dBm + 3 dB (MIMO)
= 3.22 dBm



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-23) = 23 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 9 – 10 dB external atten. = -1
Ch 0:

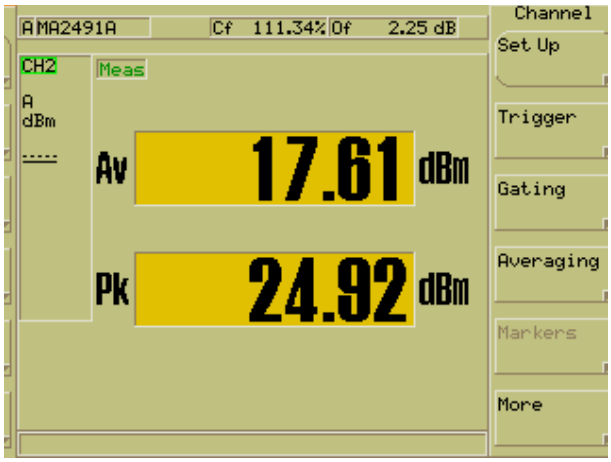
Maximum conducted output power = 1.24 dBm + 3 dB (MIMO)
= 4.24 dBm



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.160 GHz 5 MHz BW
Output power setting: 18
Ch 0:

Maximum conducted output power = 24.92 dBm + 3 dB (MIMO)
= 27.92 dBm

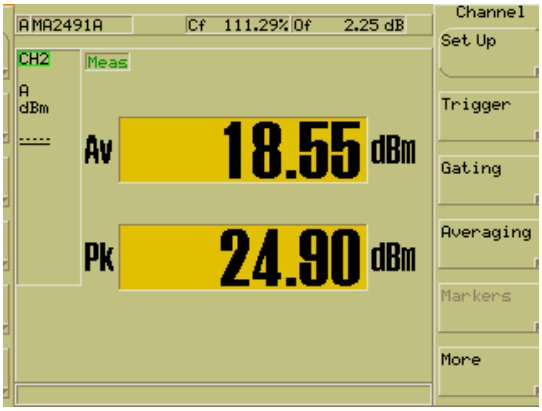
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 18
Ch 0:

Maximum conducted output power = 24.90 dBm + 3 dB (MIMO)
= 27.90 dBm

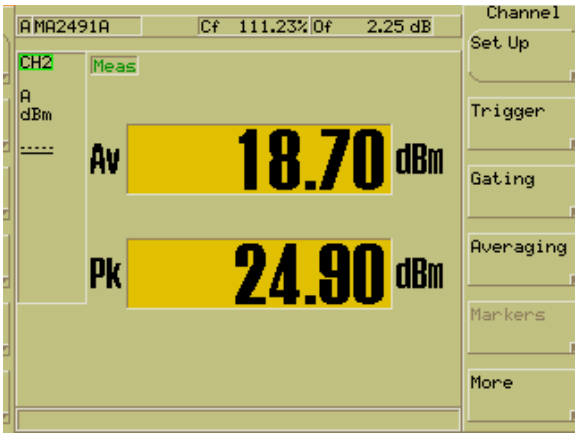
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 18
Ch 0:

Maximum conducted output power = 24.90 dBm + 3 dB (MIMO)
= 27.90 dBm

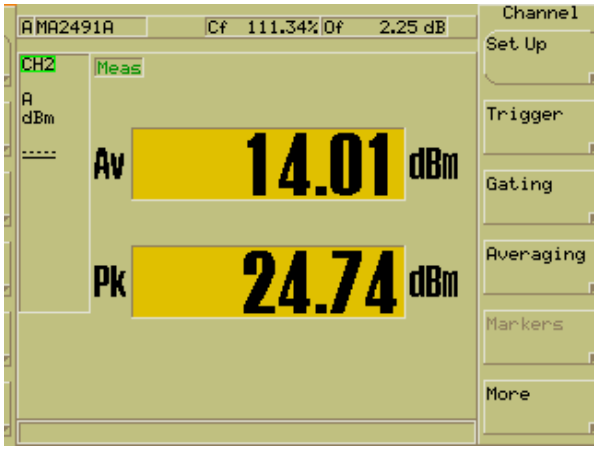
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.160 GHz 5 MHz BW
Output power setting: 15
Ch 0:

Maximum conducted output power = 24.74 dBm + 3 dB (MIMO)
= 27.74 dBm

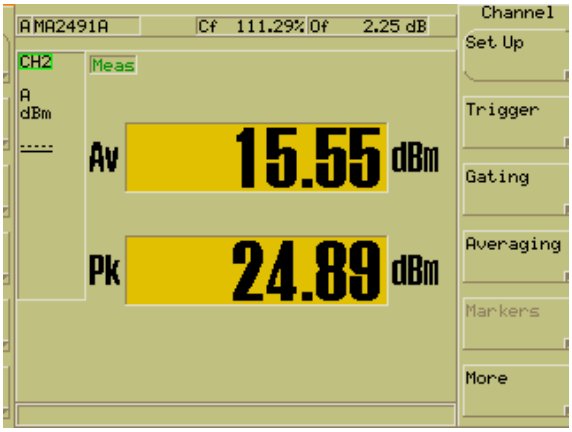
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 15
Ch 0:

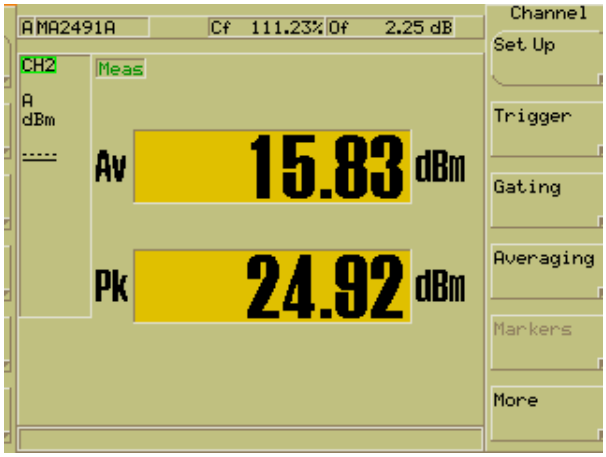
Maximum conducted output power = 24.89 dBm + 3 dB (MIMO)
= 27.89 dBm

PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 15
Ch 0:

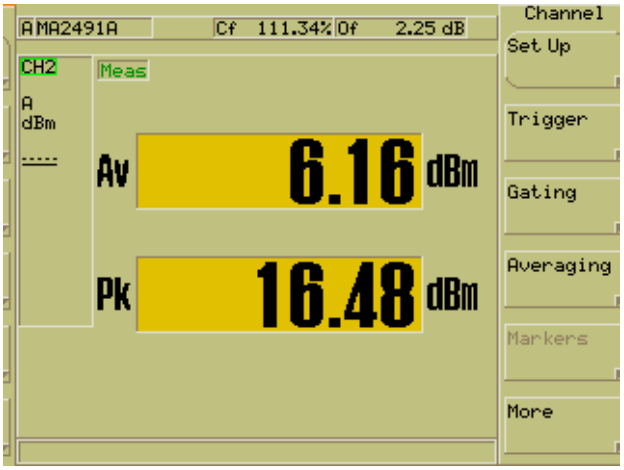
Maximum conducted output power = 24.92 dBm + 3 dB (MIMO)
= 27.92 dBm



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Low Channel: Transmit = 5.160 GHz 5 MHz BW
Output power setting: 7
Ch 0:

Maximum conducted output power = 16.48 dBm + 3 dB (MIMO)
= 19.48 dBm

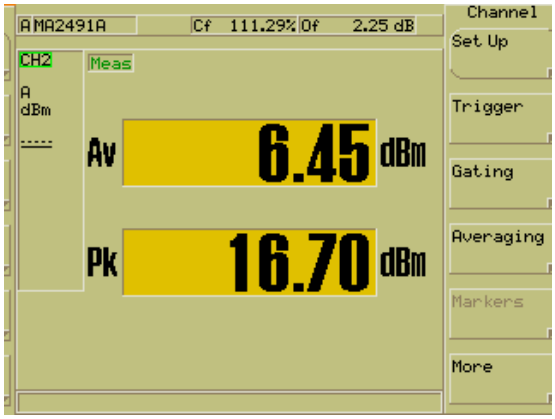
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 6
Ch 0:

Maximum conducted output power = 16.70 dBm + 3 dB (MIMO)
= 19.70 dBm

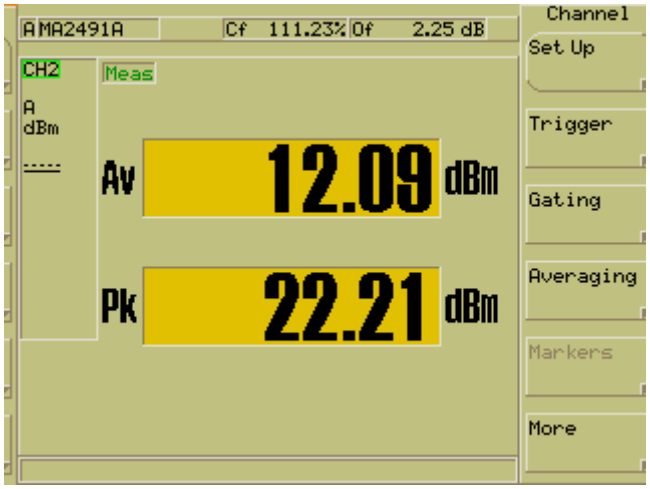
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 11
Ch 0:

Maximum conducted output power = 22.21 dBm + 3 dB (MIMO)
= 25.21 dBm

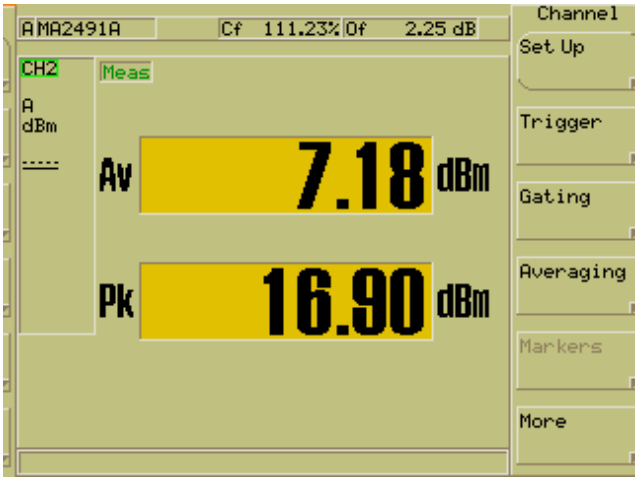
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 8.5
Ch 0:

Maximum conducted output power = 16.90 dBm + 3 dB (MIMO)
= 19.90 dBm

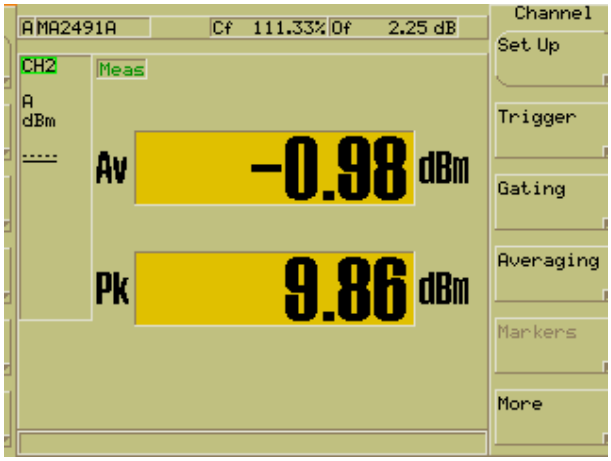
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.170 GHz 5 MHz BW
Output power setting: 0
Ch 0:

Maximum conducted output power = 9.86 dBm + 3 dB (MIMO)
= 12.86 dBm

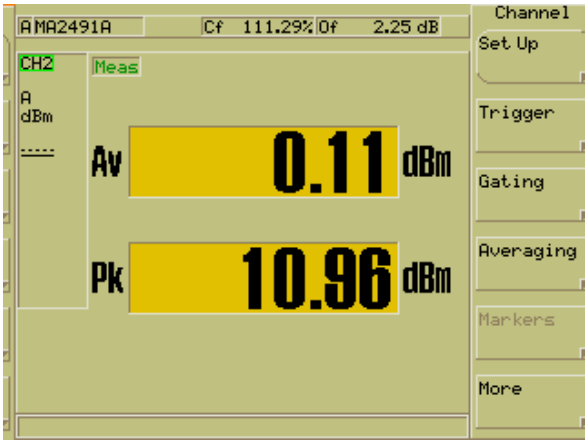
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 0
Ch 0:

Maximum conducted output power = 10.96 dBm + 3 dB (MIMO)
= 13.96 dBm

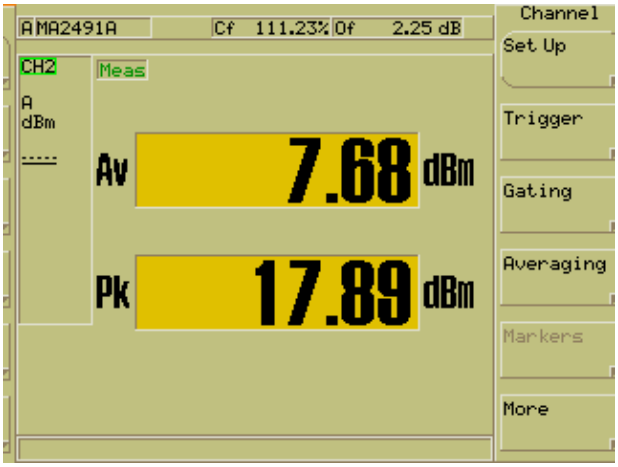
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 7
Ch 0:

Maximum conducted output power = 17.89 dBm + 3 dB (MIMO)
= 20.89 dBm

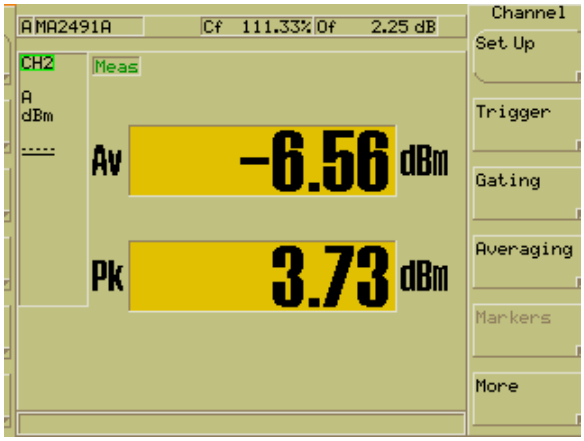
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-7) = 23 dBm
Low Channel: Transmit = 5.170 GHz 5 MHz BW
Output power setting: 4 – 10 dB external atten. = -6
Ch 0:

Maximum conducted output power = 3.73 dBm + 3 dB (MIMO)
= 6.73 dBm

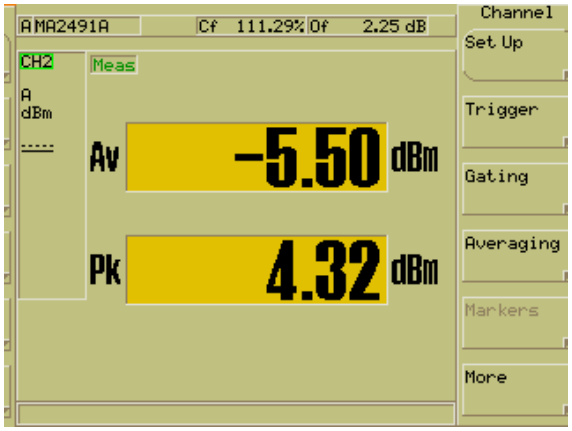
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-7) = 23 dBm
Mid Channel: Transmit = 5.200 GHz 5 MHz BW
Output power setting: 4 – 10 dB external atten. = -6
Ch 0:

Maximum conducted output power = 4.32 dBm + 3 dB (MIMO)
= 7.32 dBm

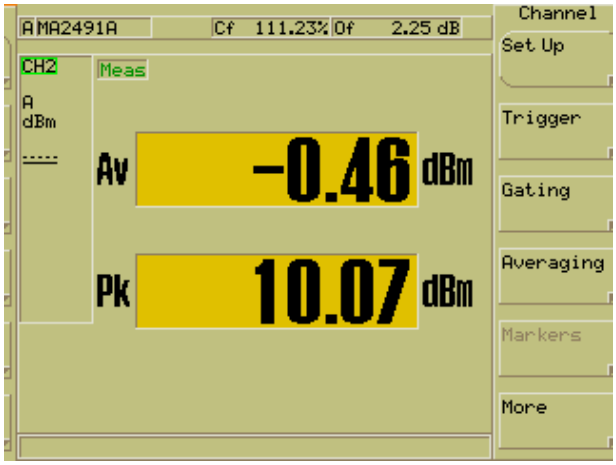
PEAK DETECTOR



Test Date: 05-27-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-7) = 23 dBm
High Channel: Transmit = 5.245 GHz 5 MHz BW
Output power setting: 9 – 10 dB external atten. = -1
Ch 0:

Maximum conducted output power = 10.07 dBm + 3 dB (MIMO)
= 13.07 dBm

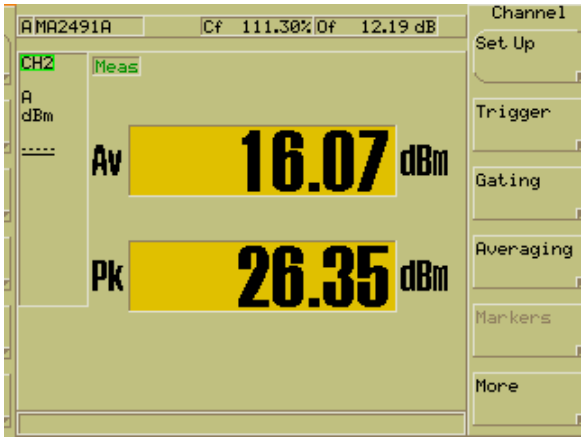
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 14.5
Ch 0:

Maximum conducted output power = 26.35 dBm + 3 dB (MIMO)
= 29.35 dBm

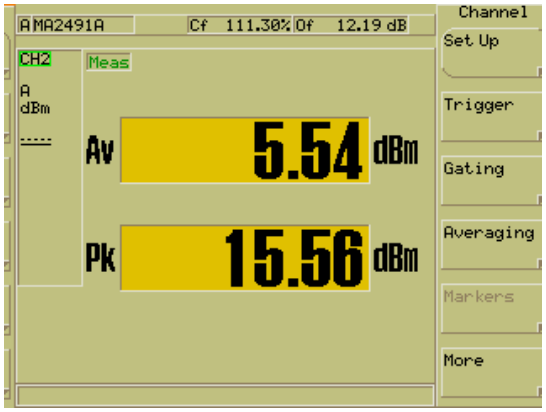
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 4.5
Ch 0:

Maximum conducted output power = 15.56 dBm + 3 dB (MIMO)
= 18.56 dBm

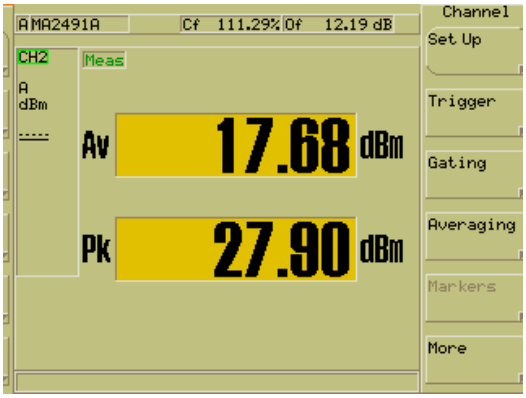
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 16
Ch 0:

Maximum conducted output power = 27.90 dBm + 3 dB (MIMO)
= 30.90 dBm

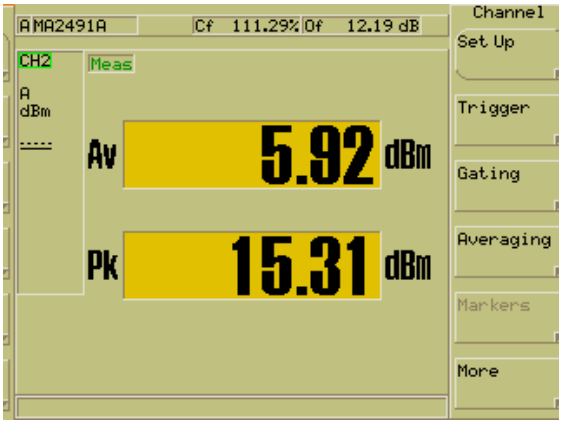
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 4.5
Ch 0:

Maximum conducted output power = 15.31 dBm + 3 dB (MIMO)
= 18.31 dBm

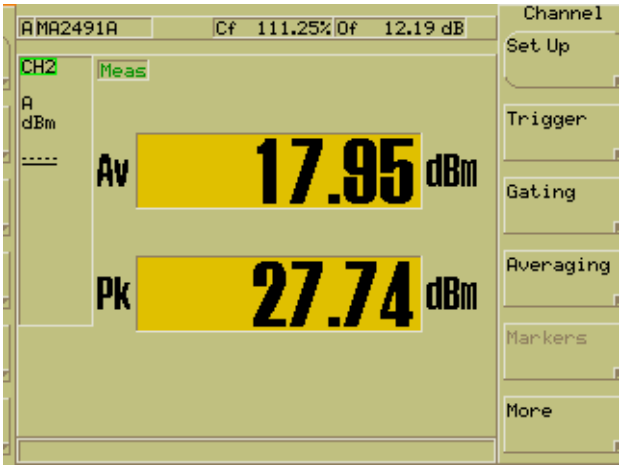
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 16
Ch 0:

Maximum conducted output power = 27.74 dBm + 3 dB (MIMO)
= 30.74 dBm

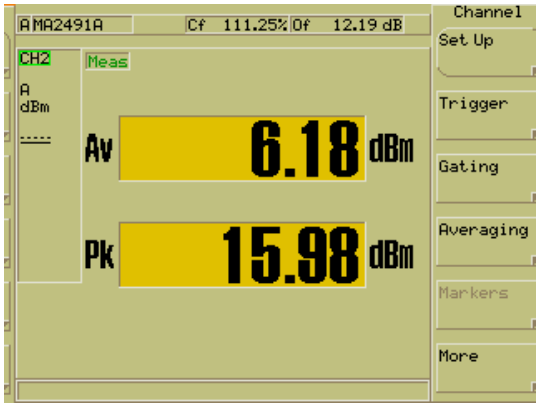
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 2 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 4.5
Ch 0:

Maximum conducted output power = 15.98 dBm + 3 dB (MIMO)
= 18.98 dBm

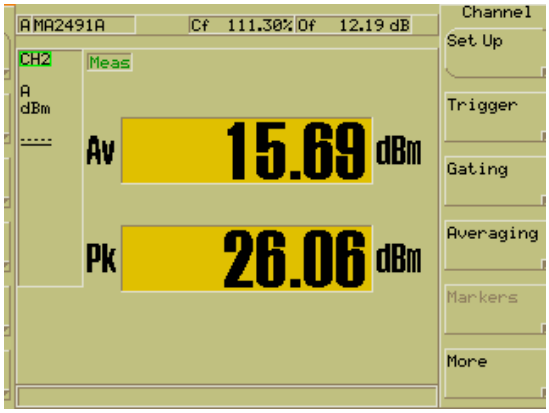
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 14
Ch 0:

Maximum conducted output power = 26.06 dBm + 3 dB (MIMO)
= 29.06 dBm

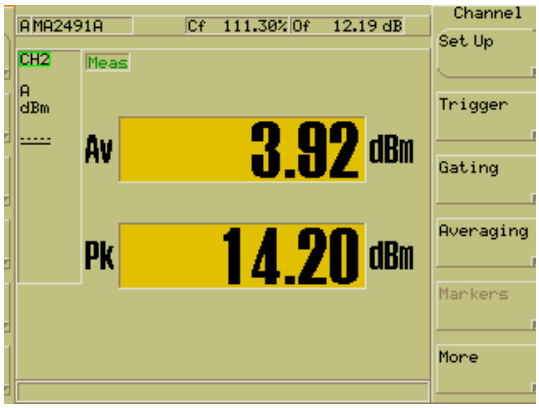
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 3
Ch 0:

Maximum conducted output power = 14.20 dBm + 3 dB (MIMO)
= 17.20 dBm

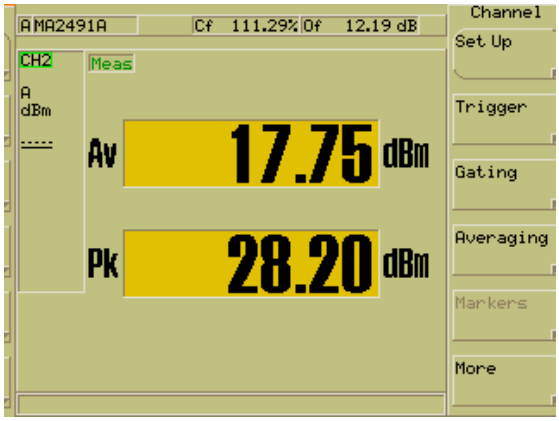
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 16
Ch 0:

Maximum conducted output power = 28.20 dBm + 3 dB (MIMO)
= 31.20 dBm

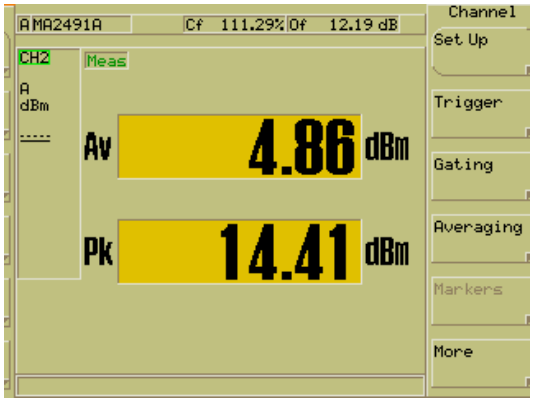
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 3.5
Ch 0:

Maximum conducted output power = 14.41 dBm + 3 dB (MIMO)
= 17.41 dBm

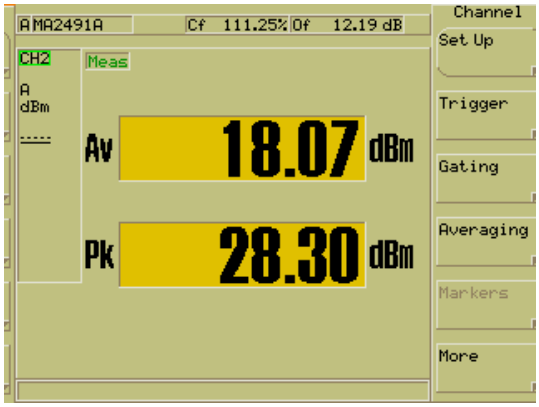
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 16
Ch 0:

Maximum conducted output power = 28.30 dBm + 3 dB (MIMO)
= 31.30 dBm

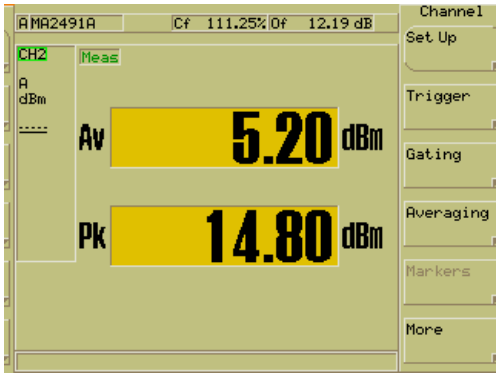
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 3 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 3.5
Ch 0:

Maximum conducted output power = 14.80 dBm + 3 dB (MIMO)
= 17.80 dBm

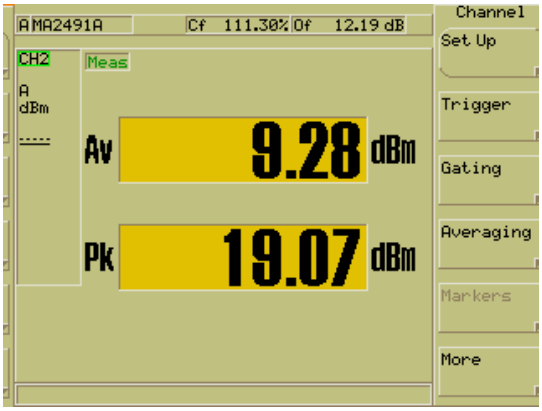
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 8.0
Ch 0:

Maximum conducted output power = 19.07 dBm + 3 dB (MIMO)
= 22.07 dBm

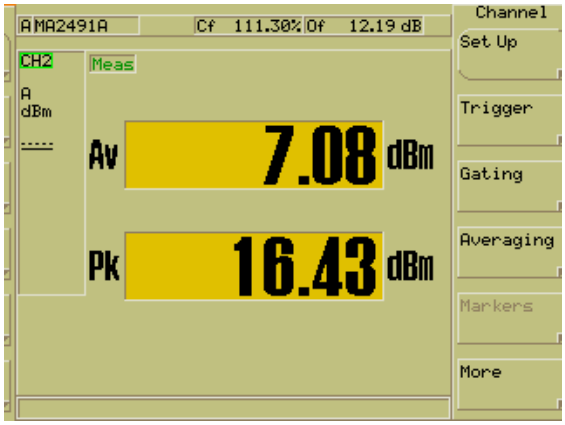
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 6.0
Ch 0:

Maximum conducted output power = 16.43 dBm + 3 dB (MIMO)
= 19.43 dBm

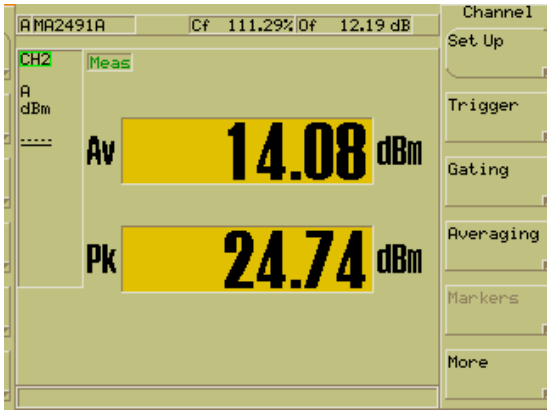
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 12
Ch 0:

Maximum conducted output power = 24.74 dBm + 3 dB (MIMO)
= 27.74 dBm

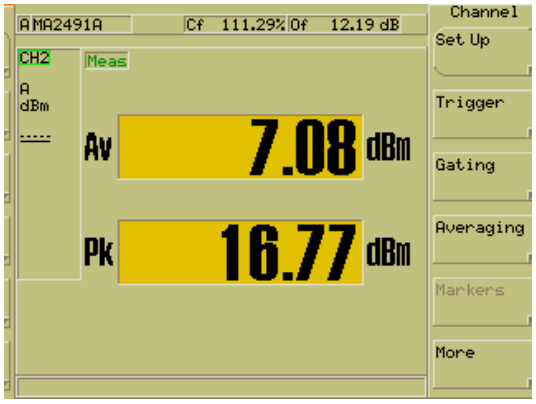
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 5.5
Ch 0:

Maximum conducted output power = 16.77 dBm + 3 dB (MIMO)
= 19.77 dBm

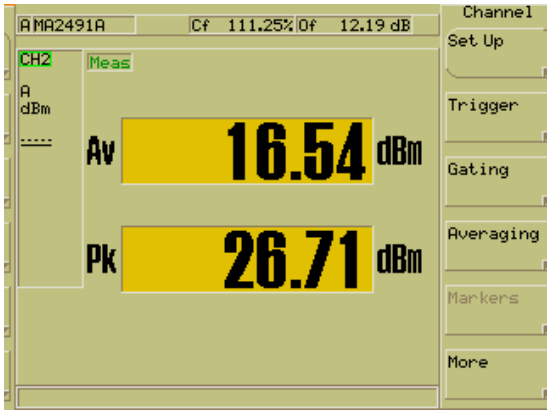
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 14.5
Ch 0:

Maximum conducted output power = 26.71 dBm + 3 dB (MIMO)
= 29.71 dBm

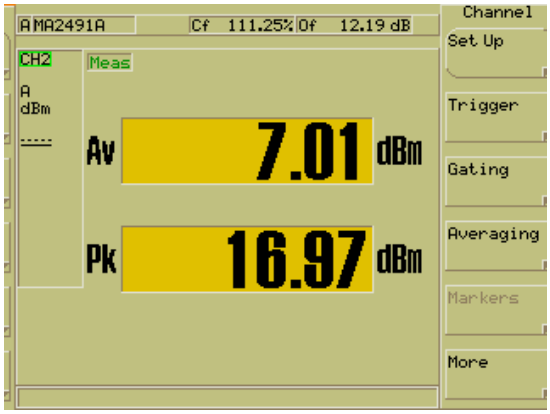
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 6 dBi
Operating Mode: Point-to-Multipoint; Antenna Gain = 16 dBi
EUT Limit: (30 dBm – (16 dBi – 6 dB) = 20 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 5.0
Ch 0:

Maximum conducted output power = 16.97 dBm + 3 dB (MIMO)
= 19.97 dBm

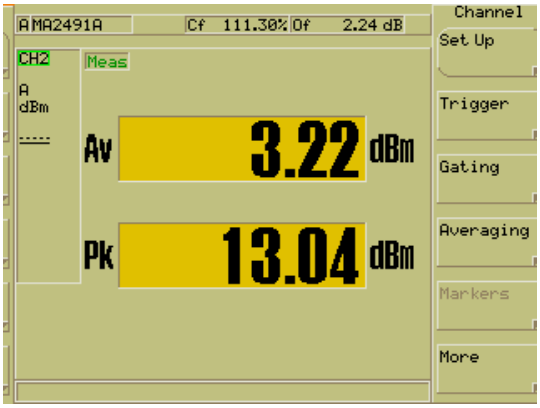
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 2.0
Ch 0:

Maximum conducted output power = 13.04 dBm + 3 dB (MIMO)
= 16.04 dBm

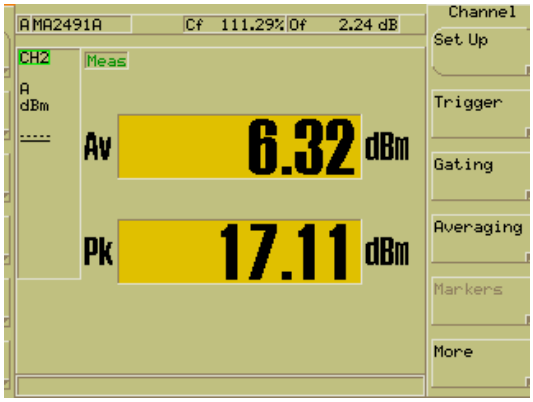
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 4.5
Ch 0:

Maximum conducted output power = 17.11 dBm + 3 dB (MIMO)
= 20.11 dBm

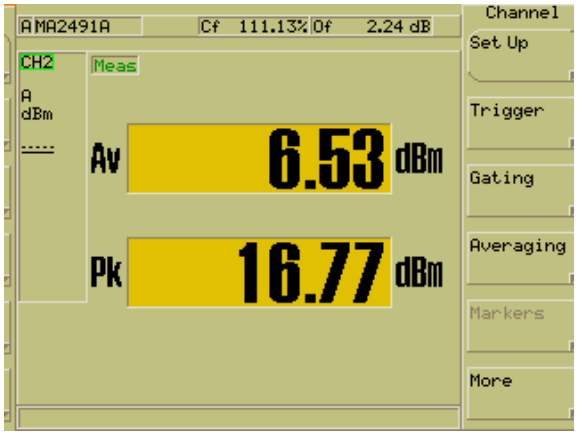
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 23 dBi
EUT Limit: 30 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 4.5
Ch 0:

Maximum conducted output power = 16.77 dBm + 3 dB (MIMO)
= 19.77 dBm

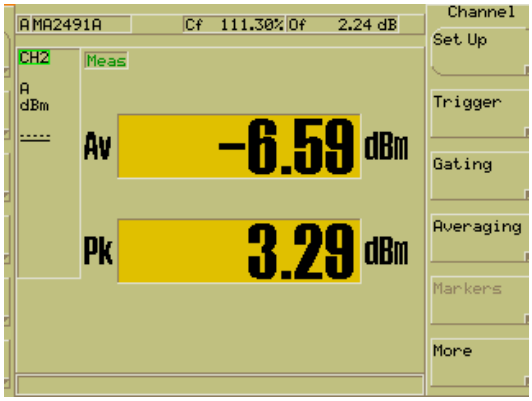
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-23) = 23 dBm
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 2.5 – 10 dB external atten. = -7.5
Ch 0:

Maximum conducted output power = 3.29 dBm + 3 dB (MIMO)
= 6.29 dBm

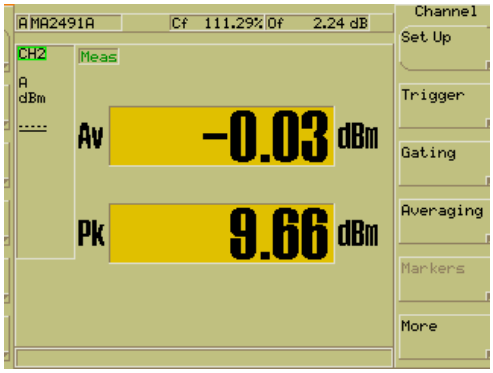
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-23) = 23 dBm
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 8.5 – 10 dB external atten. = -1.5
Ch 0:

Maximum conducted output power = 9.66 dBm + 3 dB (MIMO)
= 12.66 dBm

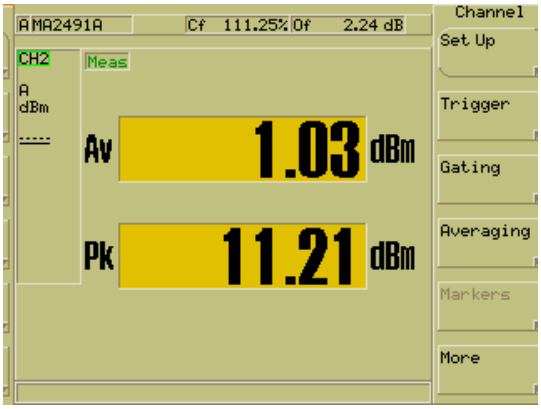
PEAK DETECTOR



Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to Point)
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using a power meter (PM)
Limit: [15.407(a)(1)]: 30.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit: 30 dBm – (30-23) = 23 dBm
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 9.0 – 10 dB external atten. = -1.0
Ch 0:

Maximum conducted output power = 11.21 dBm + 3 dB (MIMO)
= 14.21 dBm

PEAK DETECTOR



Appendix B – Measurement Data

B5.0 Maximum Power Spectral Density (PSD)– Conducted

Rule Section: Section 15.407(a)(1)

Test Procedure: FCC KDB 789033 D02 General UNII Test Procedures v01 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*

Section F – Maximum power spectral density (PSD)
Using method E(2)(b) SA-1 for power spectrum

Description: SPAN: set to encompass entire emission bandwidth
RBW = 1 MHz
VBW ≥ 3 MHz
Number of points ≥ 2 x Span/RBW
Sweep time: auto
Detector = RMS
Sweep: trace average 200 sweeps in RMS mode
Use peak search to find the peak of the spectrum

Limit: 17 dBm in any 1 MHz band

Limit shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

For fixed point-to-point access points: Limit shall be reduced by the amount in dB that the directional gain of the antenna exceeds 23 dBi

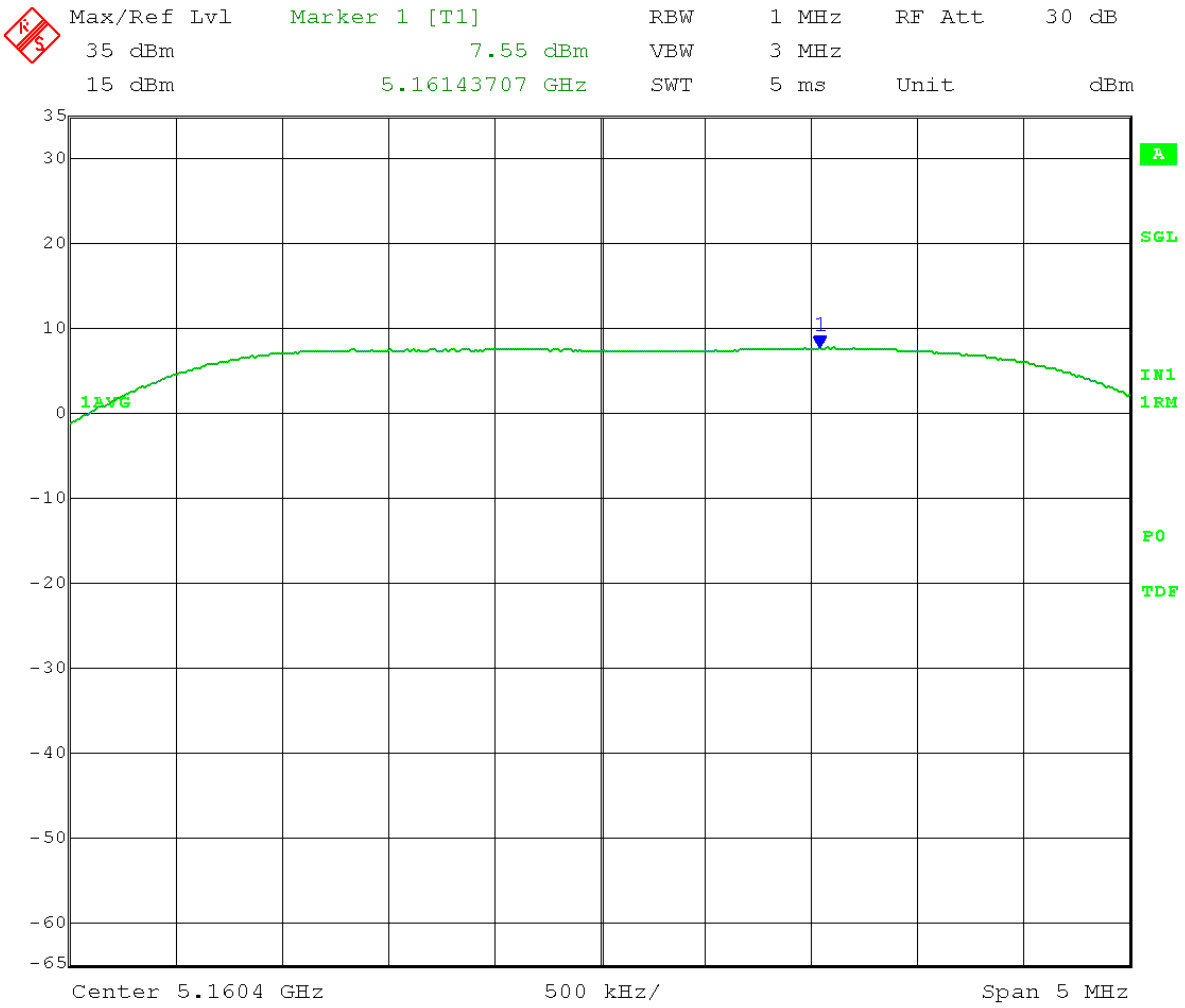
Results: Passed

Notes: 5 MHz channel bandwidth measurements were taken with Legacy OFDM 54 Mbit/s modulation at the lowest, middle, and highest channels of operation. 40 MHz channel bandwidth measurements were taken with MCS15 OFDM modulation. The EUT was set to transmit continuously with 100% duty cycle.

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3(MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Low Channel: Transmit = 5.160 GHz	5 MHz BW
Output power setting: 18	Channel 0

PSD = 7.55 dBm/MHz

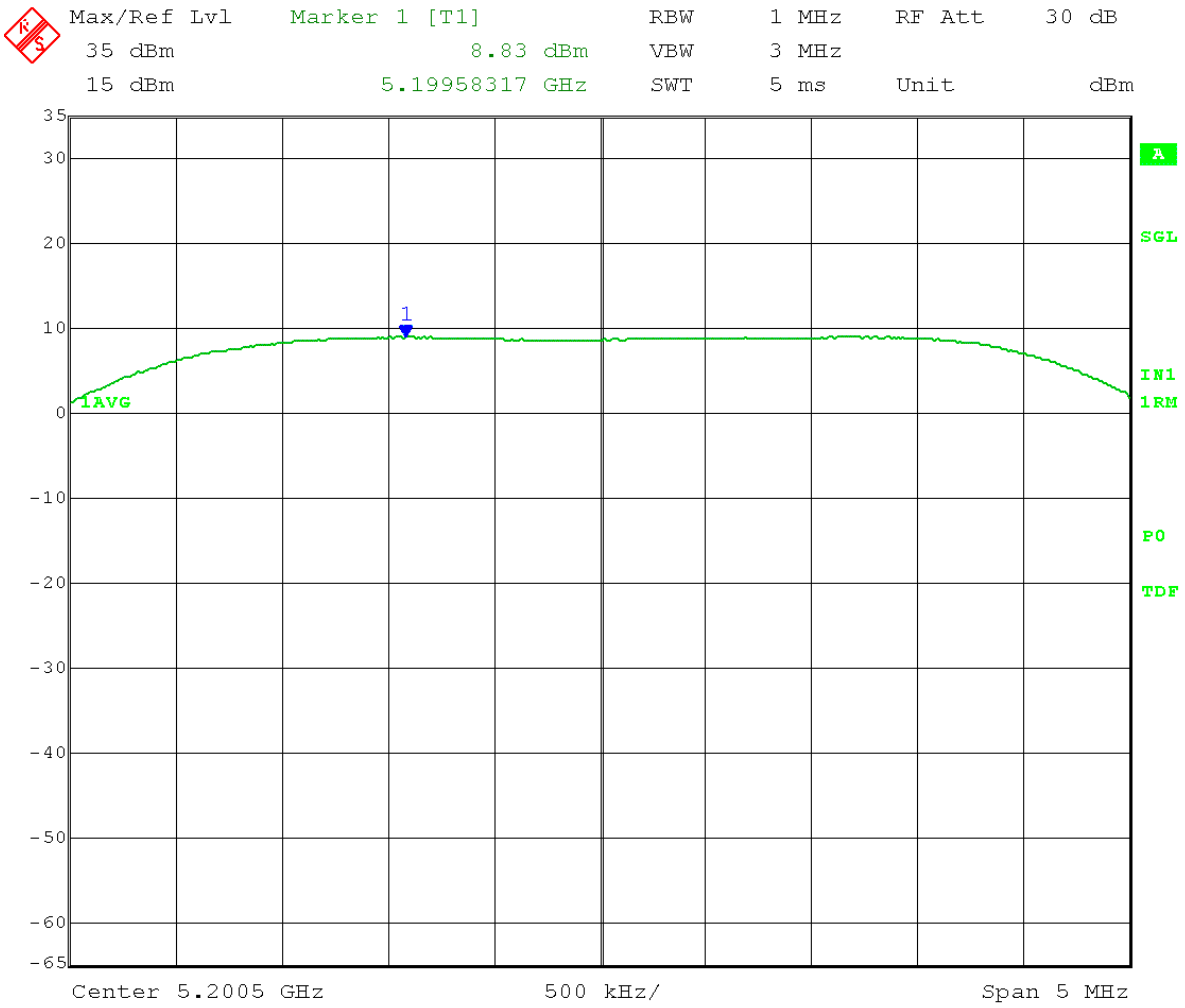


Date: 19.MAY.2014 15:24:42

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3(MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Mid Channel: Transmit = 5.200 GHz	5 MHz BW
Output power setting: 18	Channel 0

PSD = 8.83 dBm/MHz

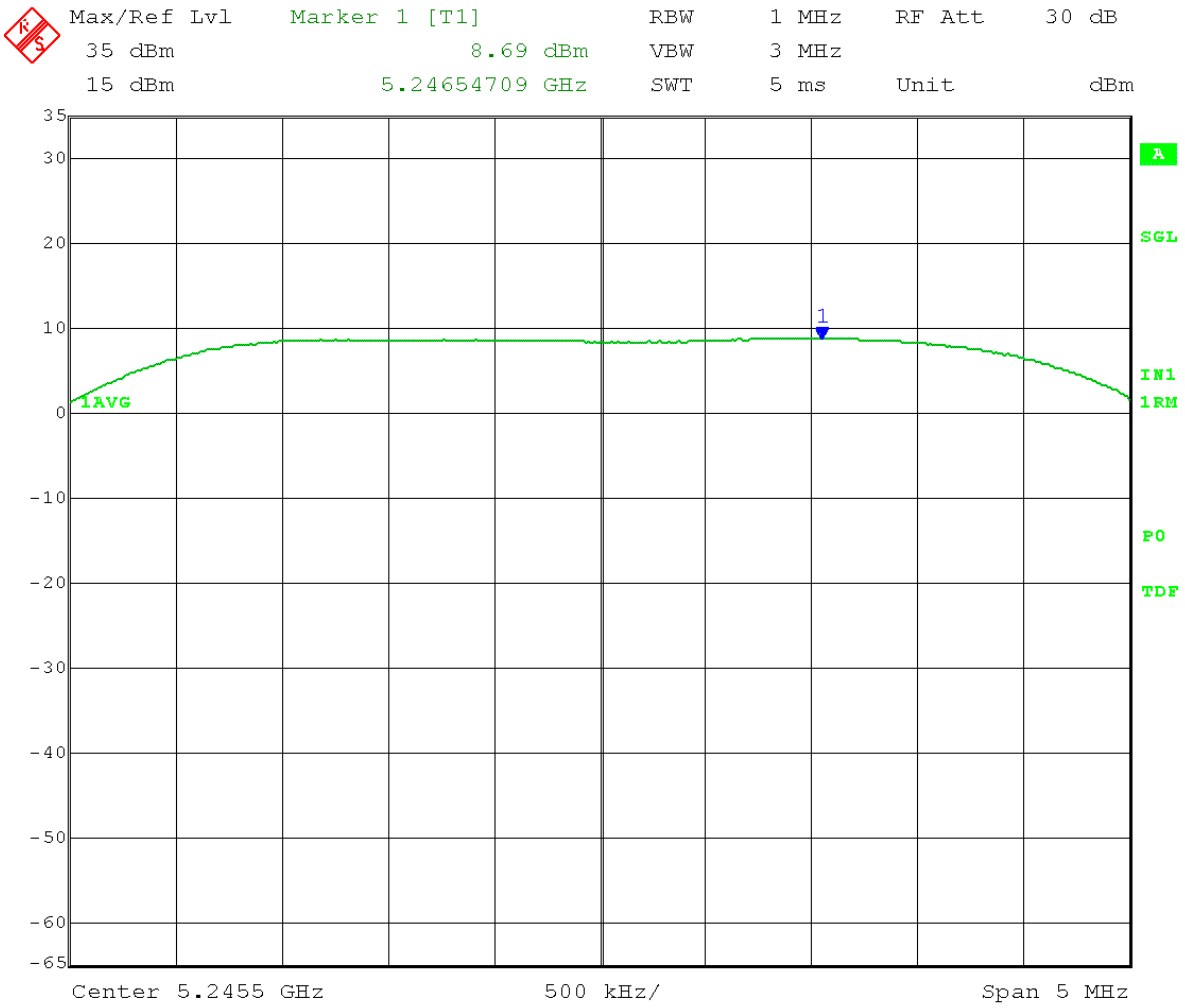


Date: 19.MAY.2014 15:21:46

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3(MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
High Channel: Transmit = 5.245 GHz	5 MHz BW
Output power setting: 18	Channel 0

PSD = 8.69 dBm/MHz

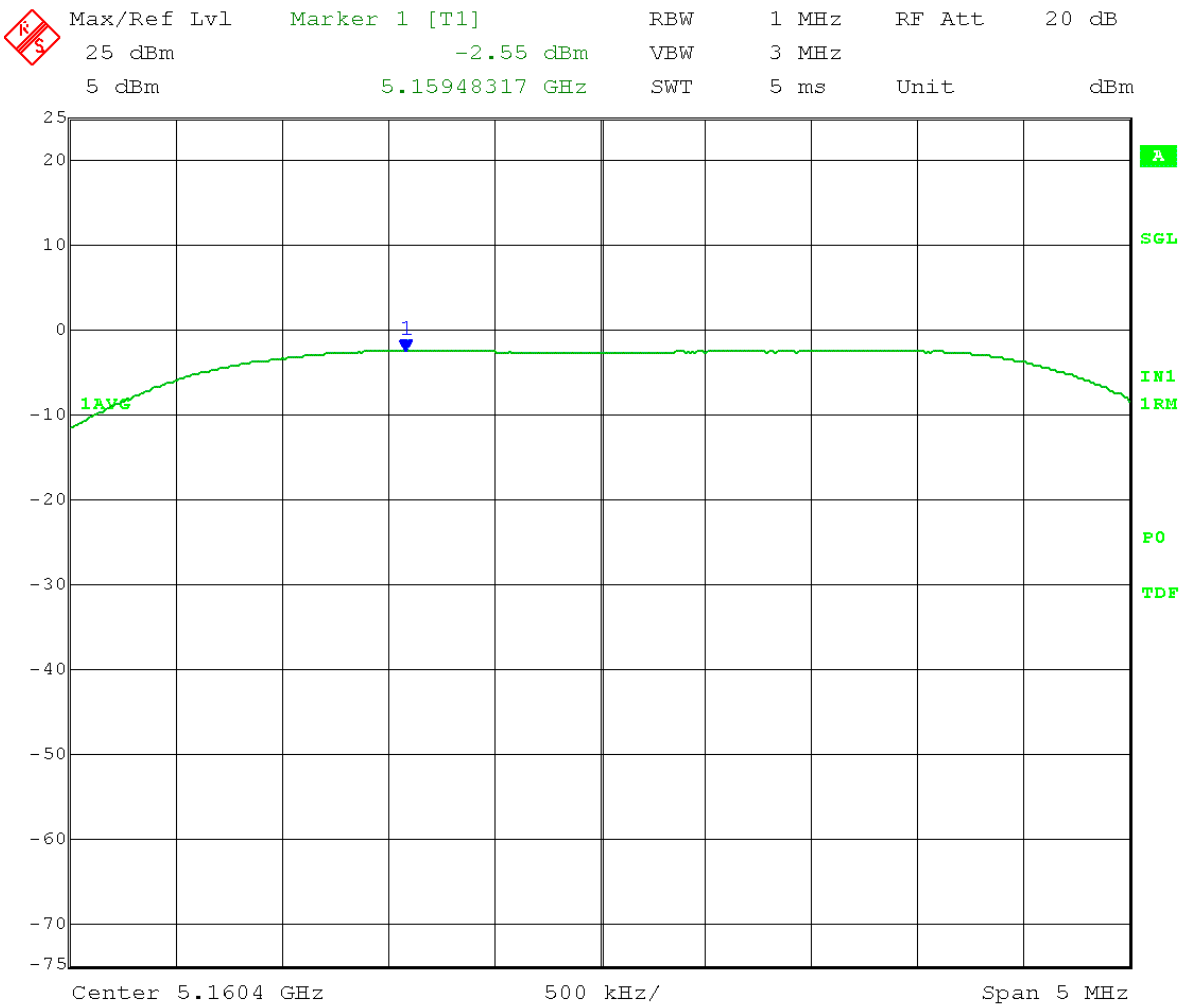


Date: 19.MAY.2014 14:59:09

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) – 10 (amount greater than 6)
= 4 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Low Channel: Transmit = 5.160 GHz	5 MHz BW
Output power setting: 7	Channel 0

PSD = -2.55 dBm/MHz

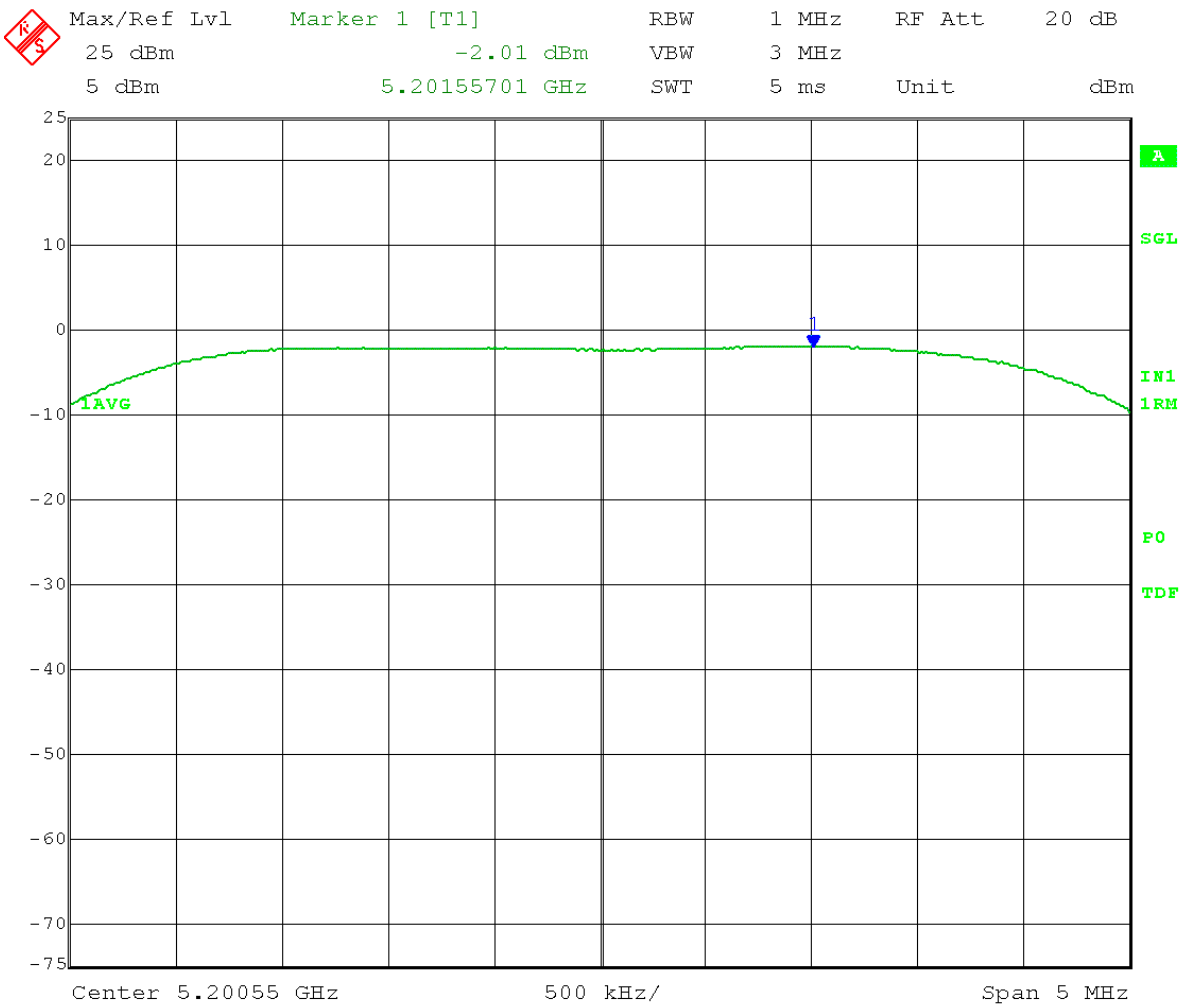


Date: 19.MAY.2014 15:33:03

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) – 10 (amount greater than 6)
= 4 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Mid Channel: Transmit = 5.200 GHz	5 MHz BW
Output power setting: 6	Channel 0

PSD = -2.01 dBm/MHz

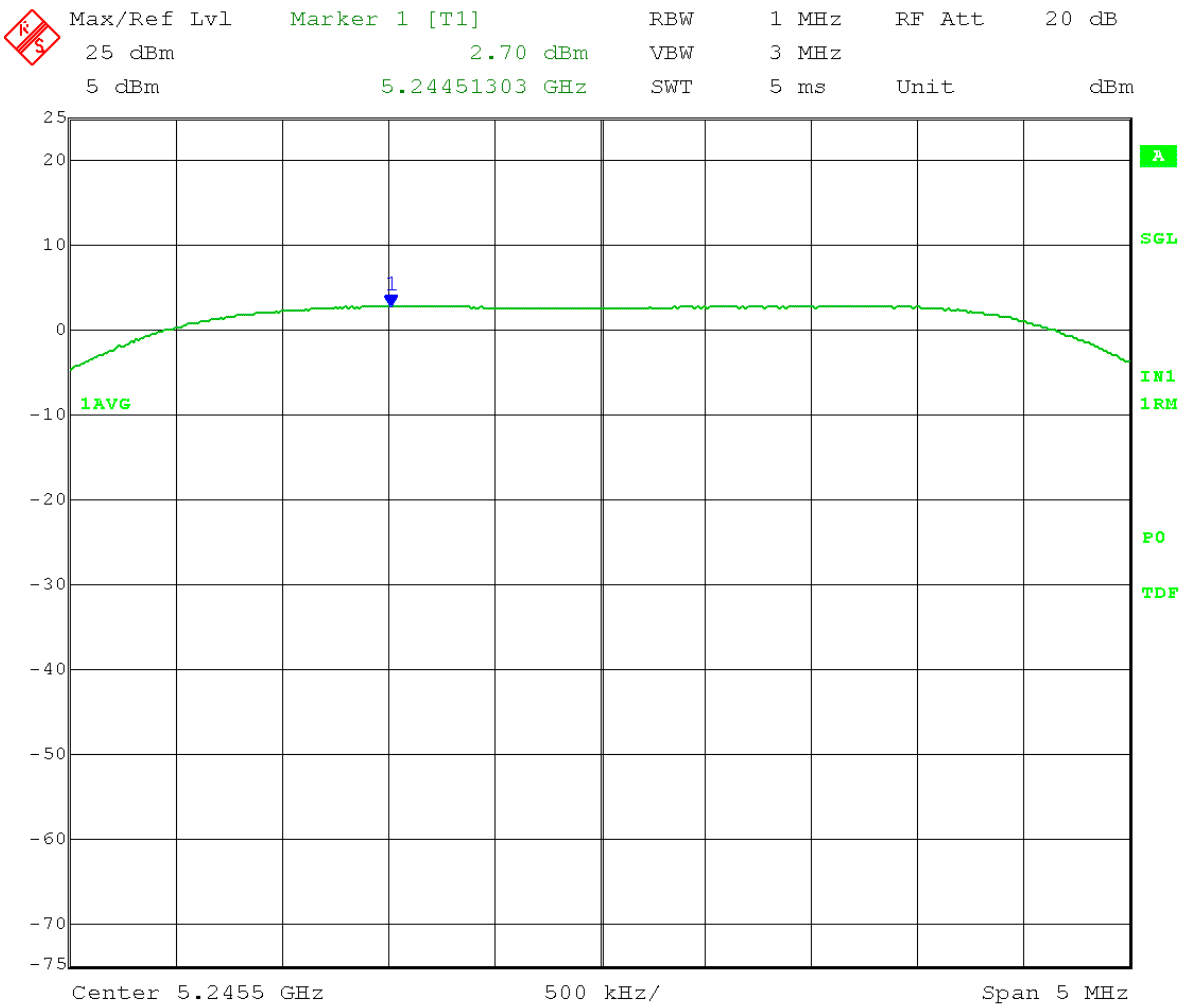


Date: 19.MAY.2014 15:35:57

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) – 10 (amount greater than 6)
= 4 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
High Channel: Transmit = 5.245 GHz	5 MHz BW
Output power setting: 11	Channel 0

PSD = 2.70 dBm/MHz

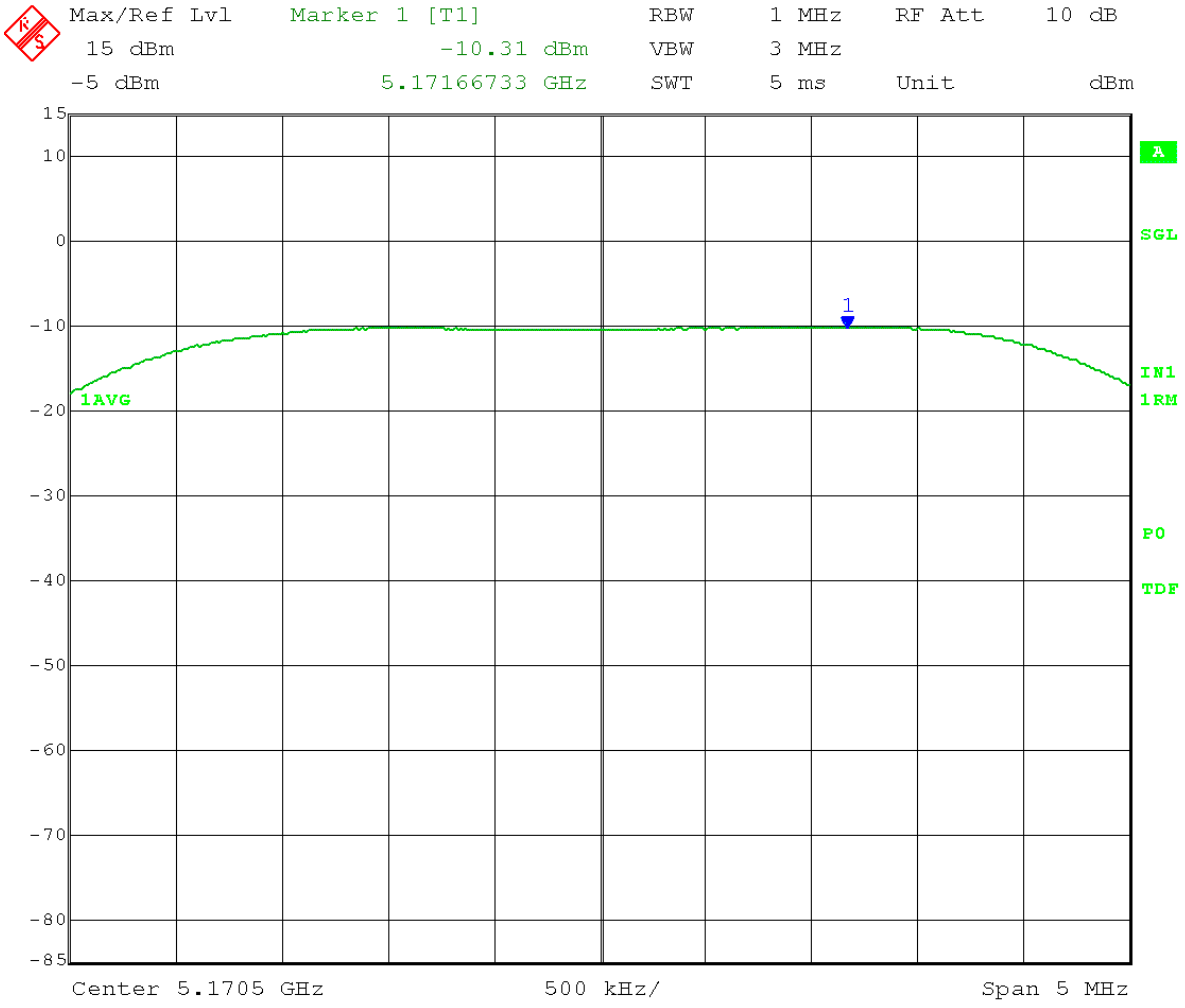


Date: 19.MAY.2014 15:39:11

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Low Channel: Transmit = 5.170 GHz	5 MHz BW
Output power setting: 0	Channel 0

PSD = -10.31 dBm/MHz

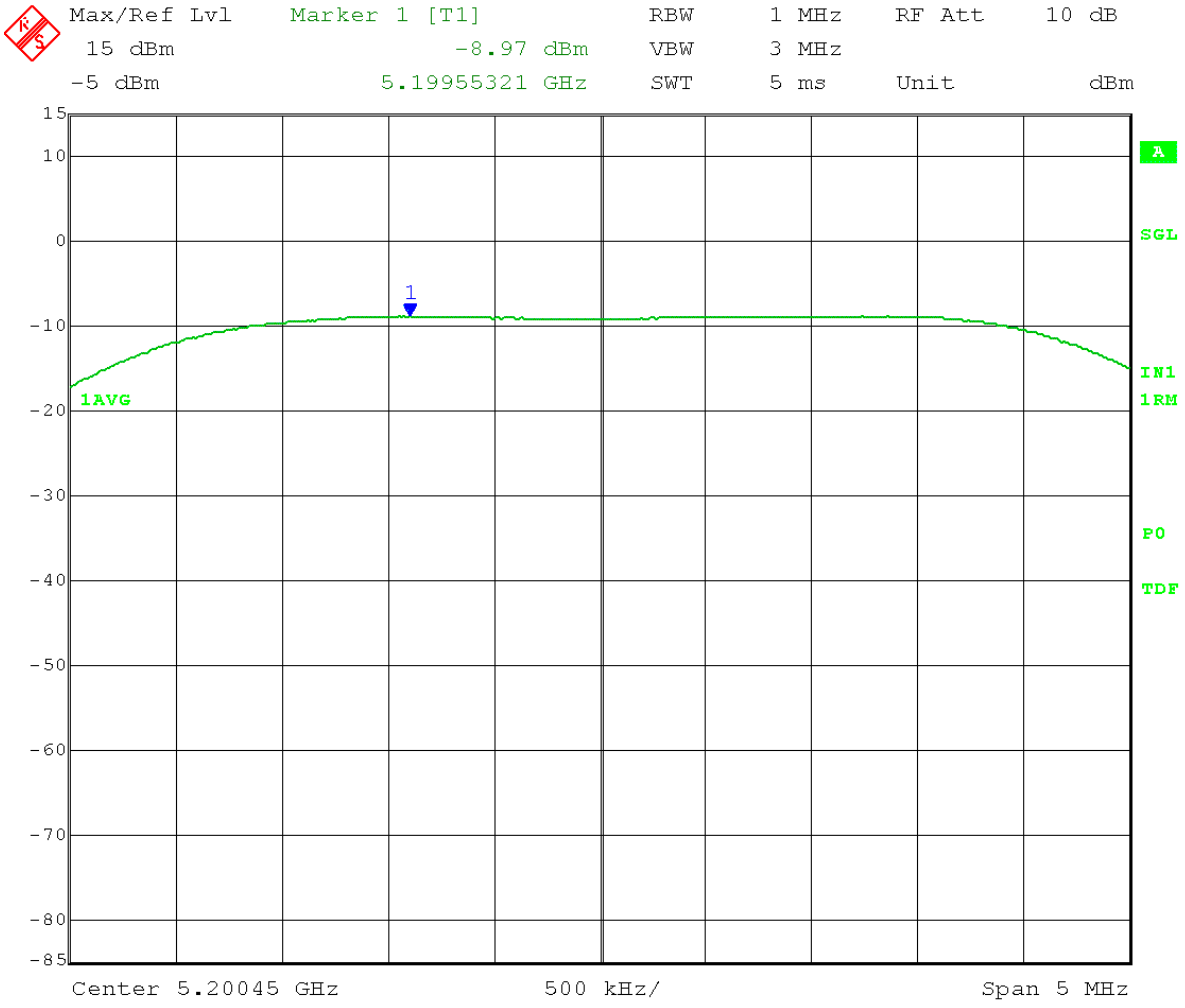


Date: 19.MAY.2014 15:52:05

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Mid Channel: Transmit = 5.200 GHz	5 MHz BW
Output power setting: 0	Channel 0

PSD = -8.97 dBm/MHz

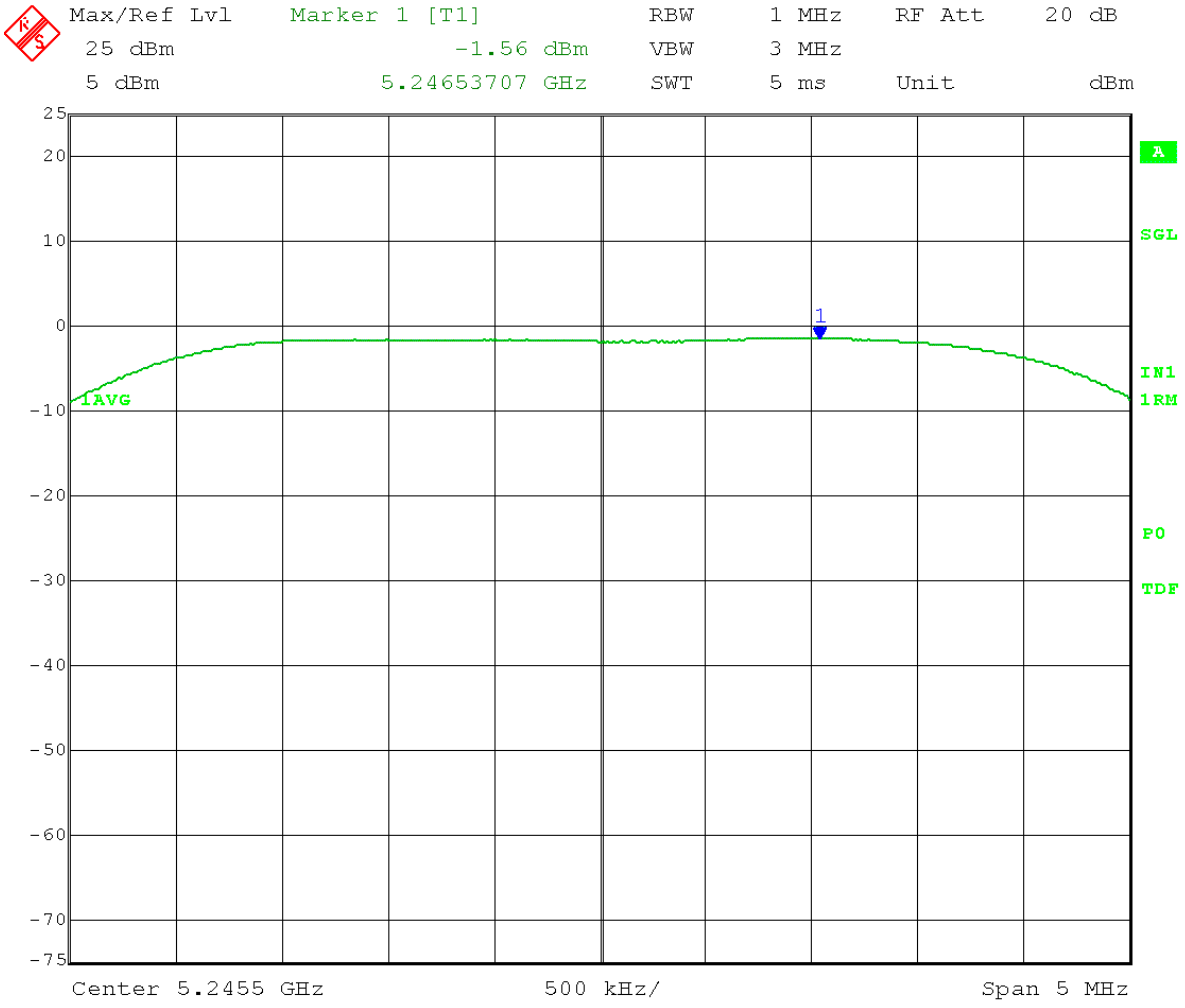


Date: 19.MAY.2014 15:47:57

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
High Channel: Transmit = 5.245 GHz	5 MHz BW
Output power setting: 7	Channel 0

PSD = -1.56 dBm/MHz

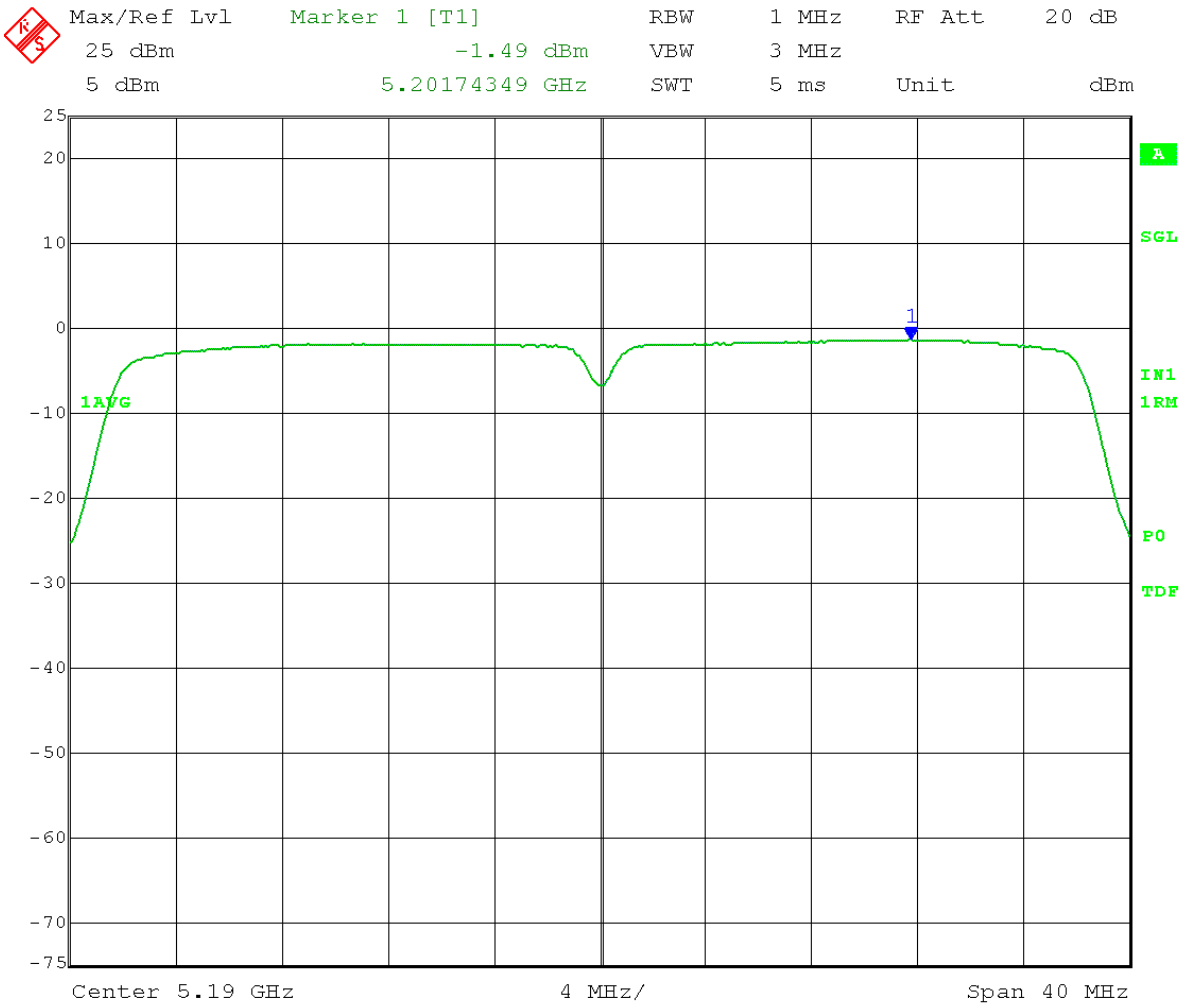


Date: 19.MAY.2014 15:45:41

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3(MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Low Channel: Transmit = 5.190 GHz	40 MHz BW
Output power setting: 14.5	Channel 0

PSD = -1.49 dBm/MHz

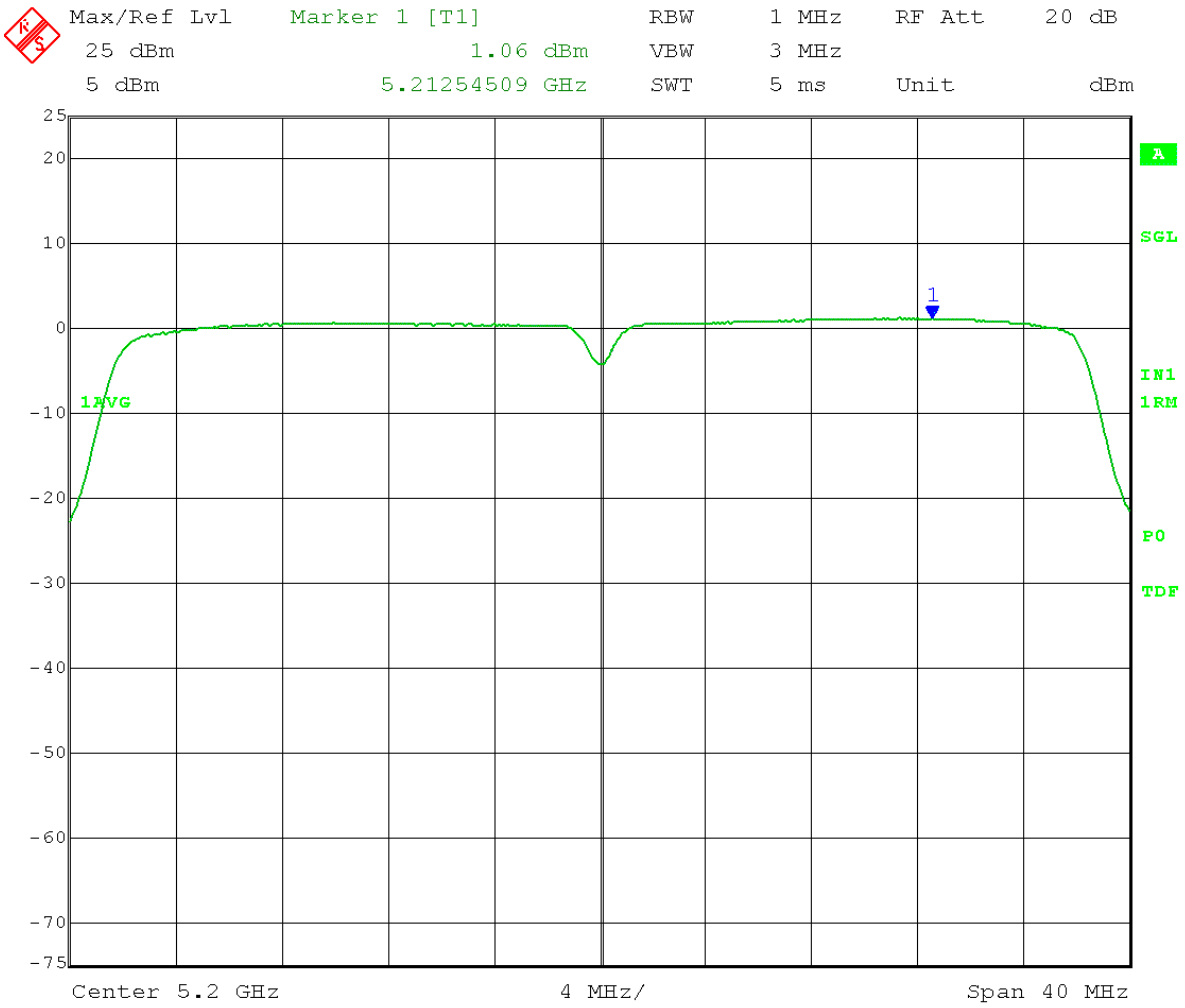


Date: 10.JUN.2014 10:14:53

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3(MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Mid Channel: Transmit = 5.200 GHz	40 MHz BW
Output power setting: 17.5	Channel 0

PSD = 1.06 dBm/MHz

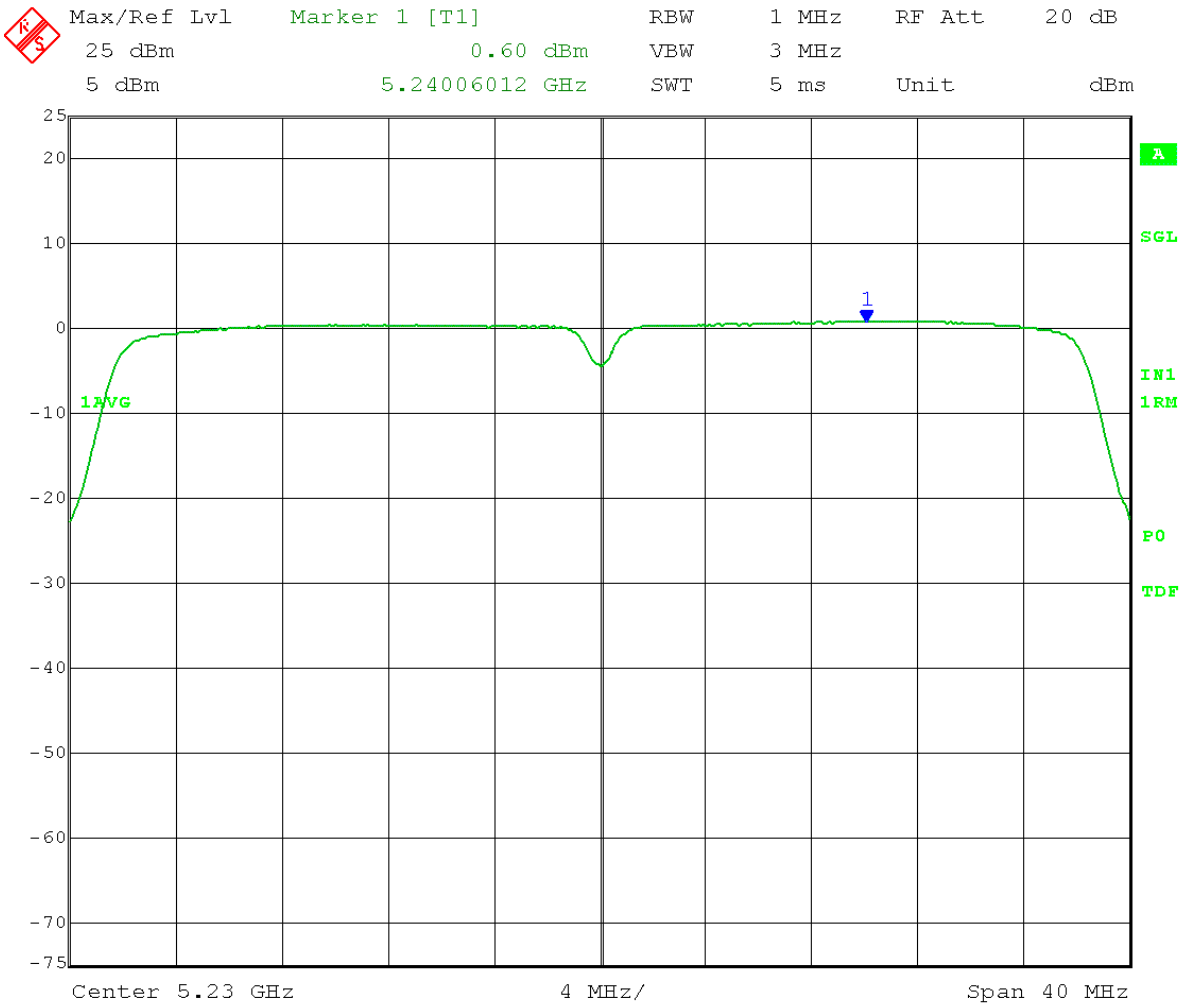


Date: 10.JUN.2014 10:17:44

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3(MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
High Channel: Transmit = 5.230 GHz	40 MHz BW
Output power setting: 18	Channel 0

PSD = 0.60 dBm/MHz

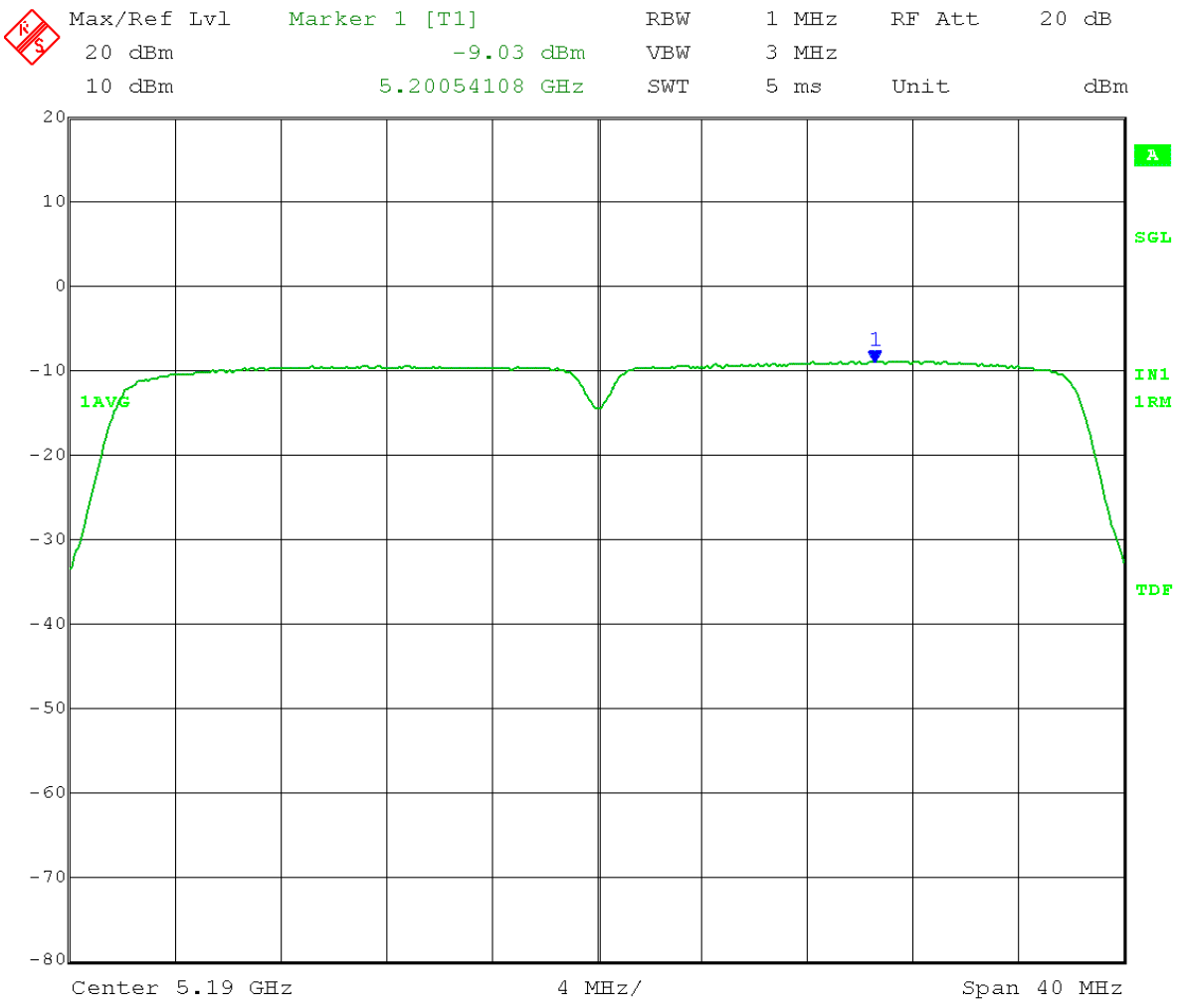


Date: 9.JUN.2014 09:25:15

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) – 10 (amount greater than 6)
= 4 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Low Channel: Transmit = 5.190 GHz	40 MHz BW
Output power setting: 8.0	Channel 0

PSD = -9.03 dBm/MHz

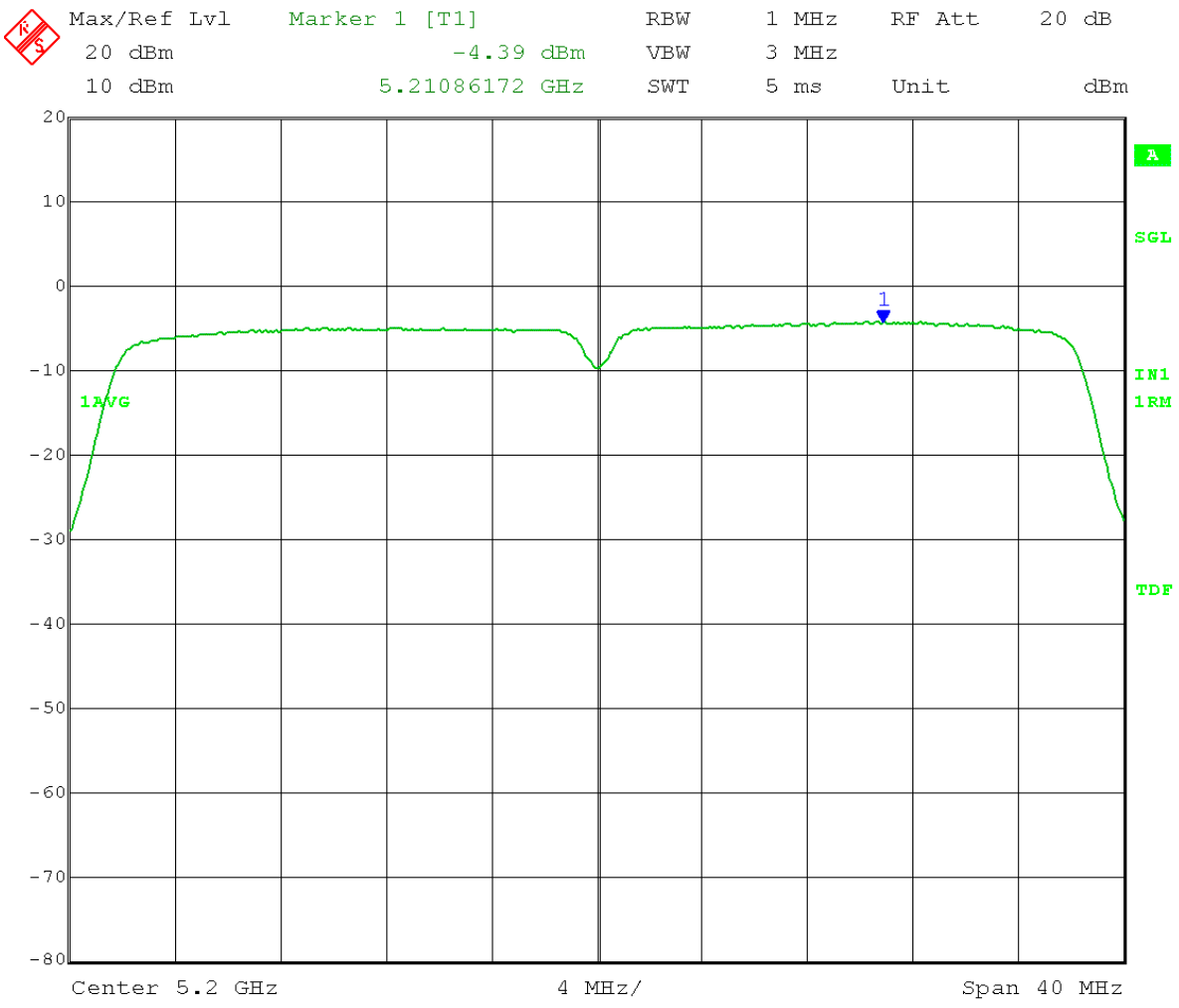


Date: 9.JUN.2014 13:47:24

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) – 10 (amount greater than 6)
= 4 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Mid Channel: Transmit = 5.200 GHz	40 MHz BW
Output power setting: 12.0	Channel 0

PSD = -4.39 dBm/MHz

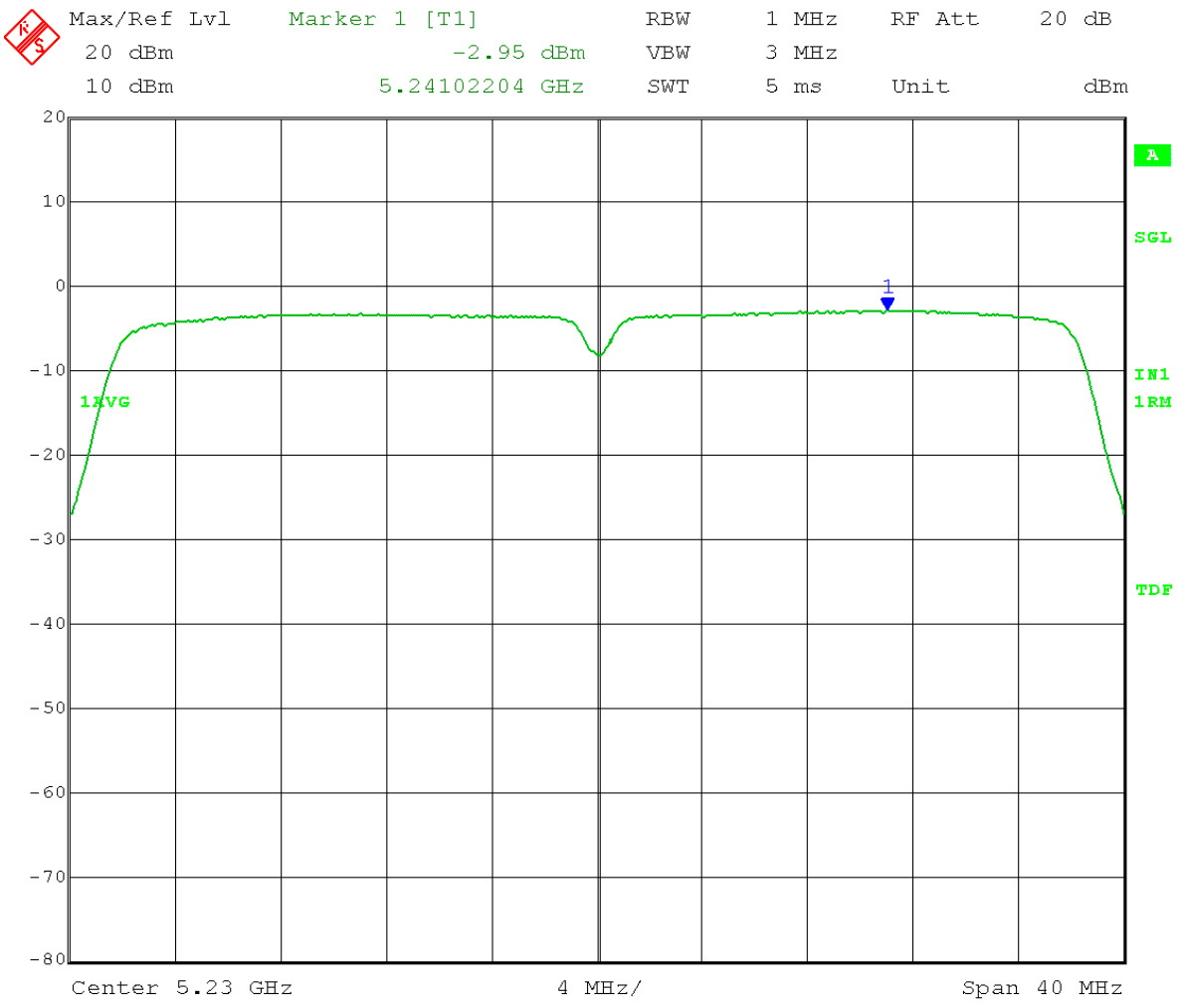


Date: 9.JUN.2014 13:49:29

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) – 10 (amount greater than 6)
= 4 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
High Channel: Transmit = 5.230 GHz	40 MHz BW
Output power setting: 14.5	Channel 0

PSD = -2.95 dBm/MHz

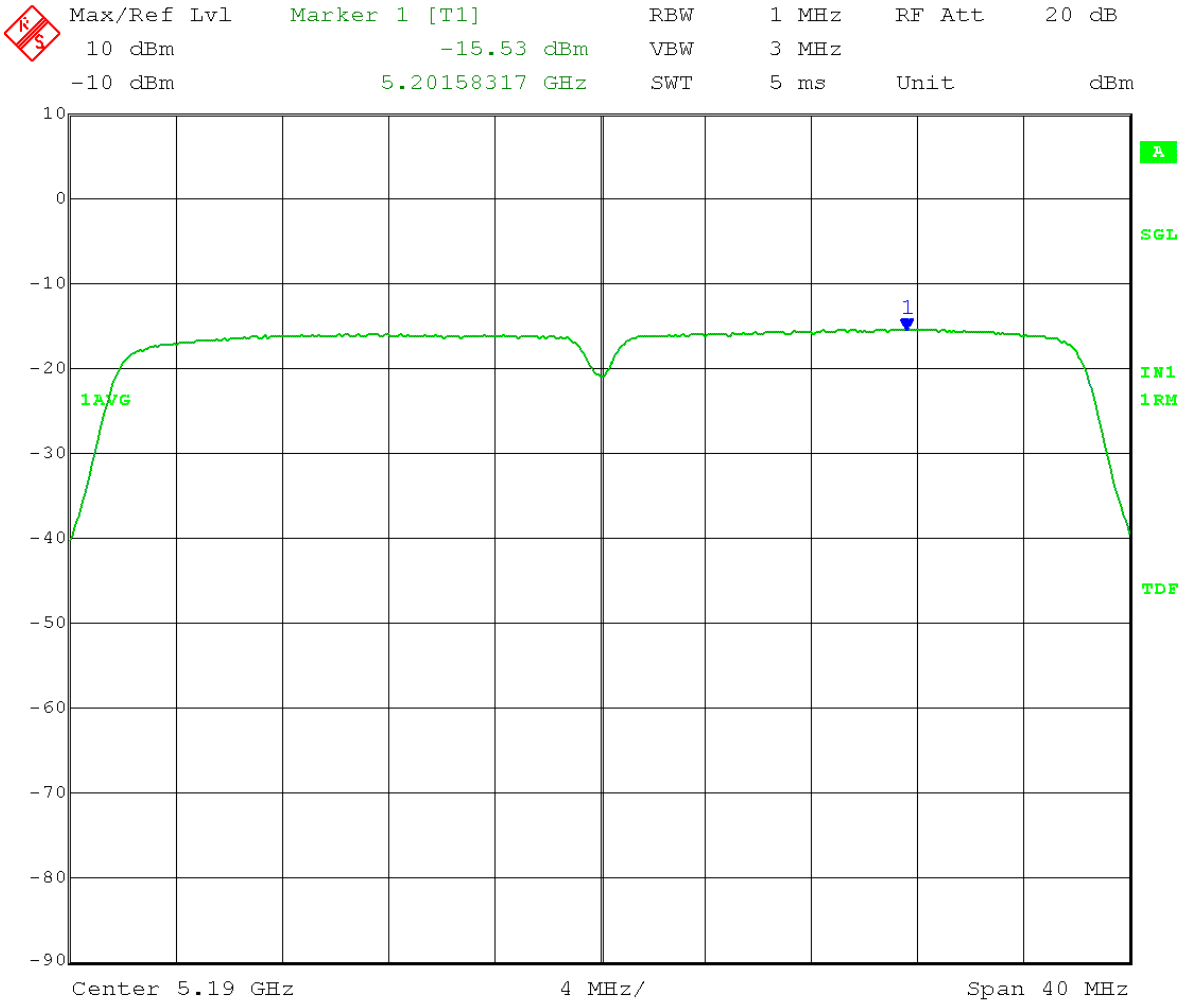


Date: 9.JUN.2014 13:31:49

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) = 14 dBm/MHz

RBW = 1 MHz	VBW = 3 MHz
Detector = RMS	Trace = AVG
Sweep Time = Auto	Sweep counts = 200
Low Channel: Transmit = 5.190 GHz	40 MHz BW
Output power setting: 2.0	Channel 0

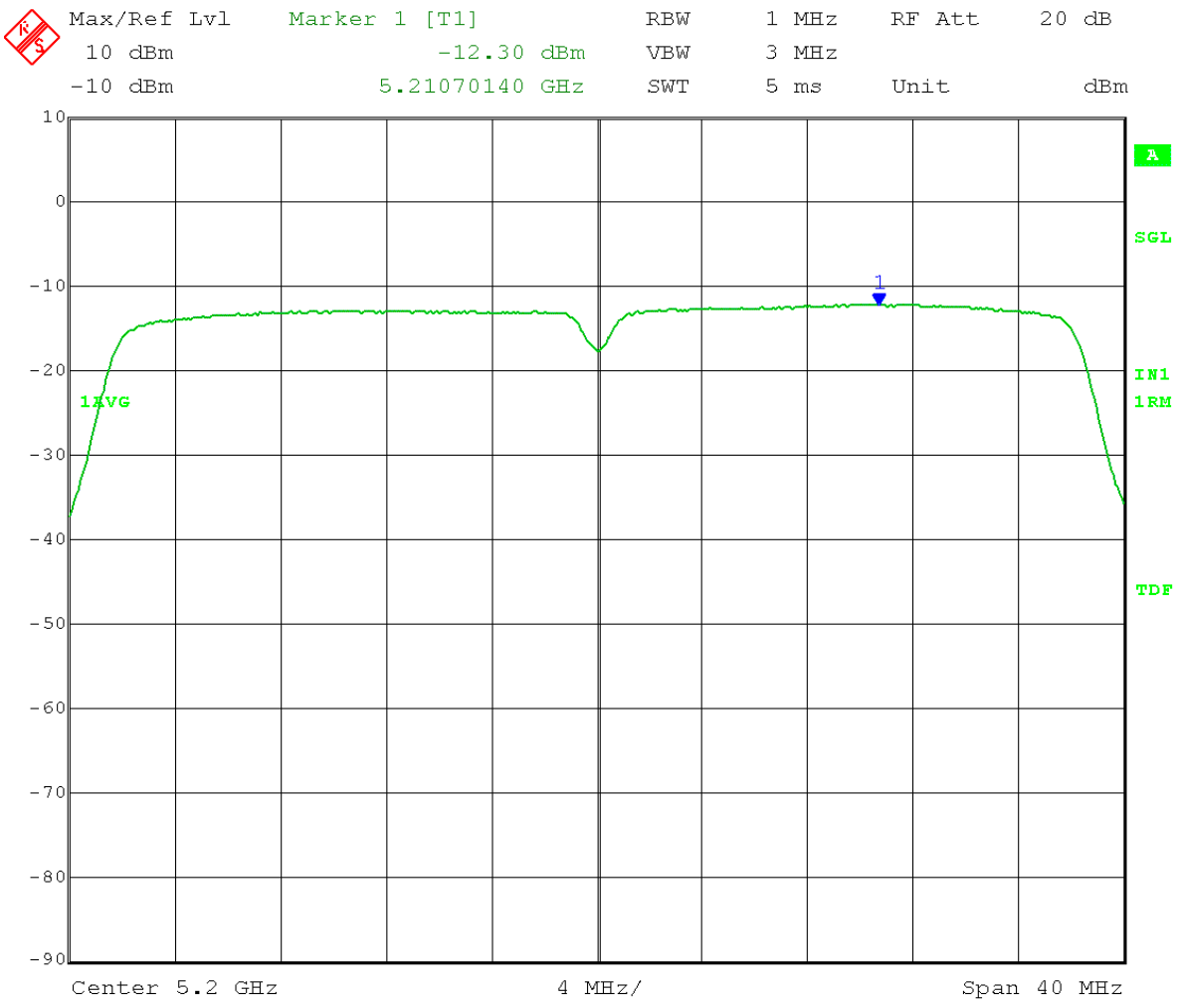
PSD = -15.53 dBm/MHz



Date: 10.JUN.2014 10:33:24

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) = 14 dBm/MHz
RBW = 1 MHz VBW = 3 MHz
Detector = RMS Trace = AVG
Sweep Time = Auto Sweep counts = 200
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 4.5
Channel 0

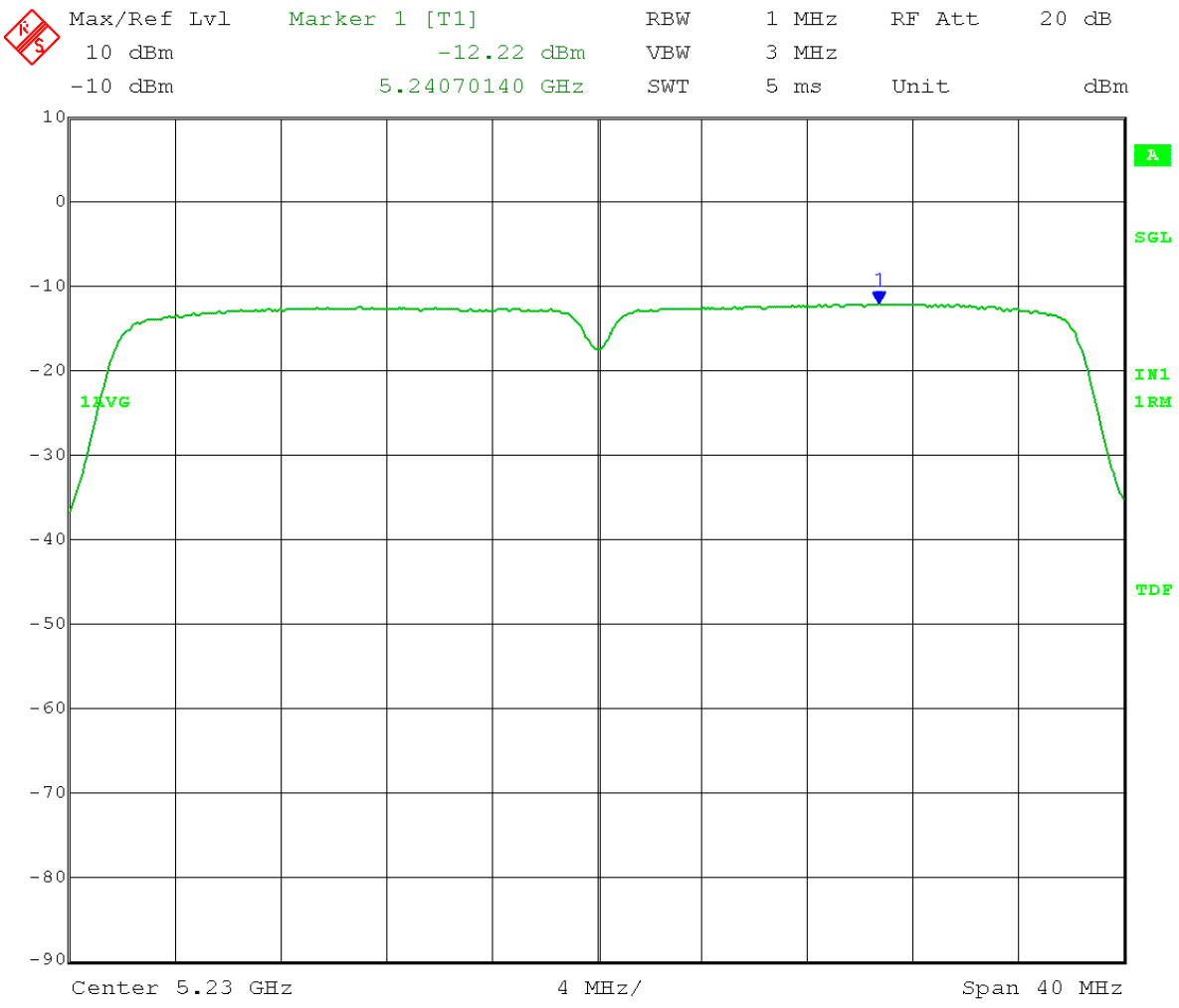
PSD = -12.30 dBm/MHz



Date: 10.JUN.2014 10:36:47

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit:[15.407(a)(1)(i)]: 17 – 3 (MIMO) = 14 dBm/MHz
RBW = 1 MHz VBW = 3 MHz
Detector = RMS Trace = AVG
Sweep Time = Auto Sweep counts = 200
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 4.5
Channel 0

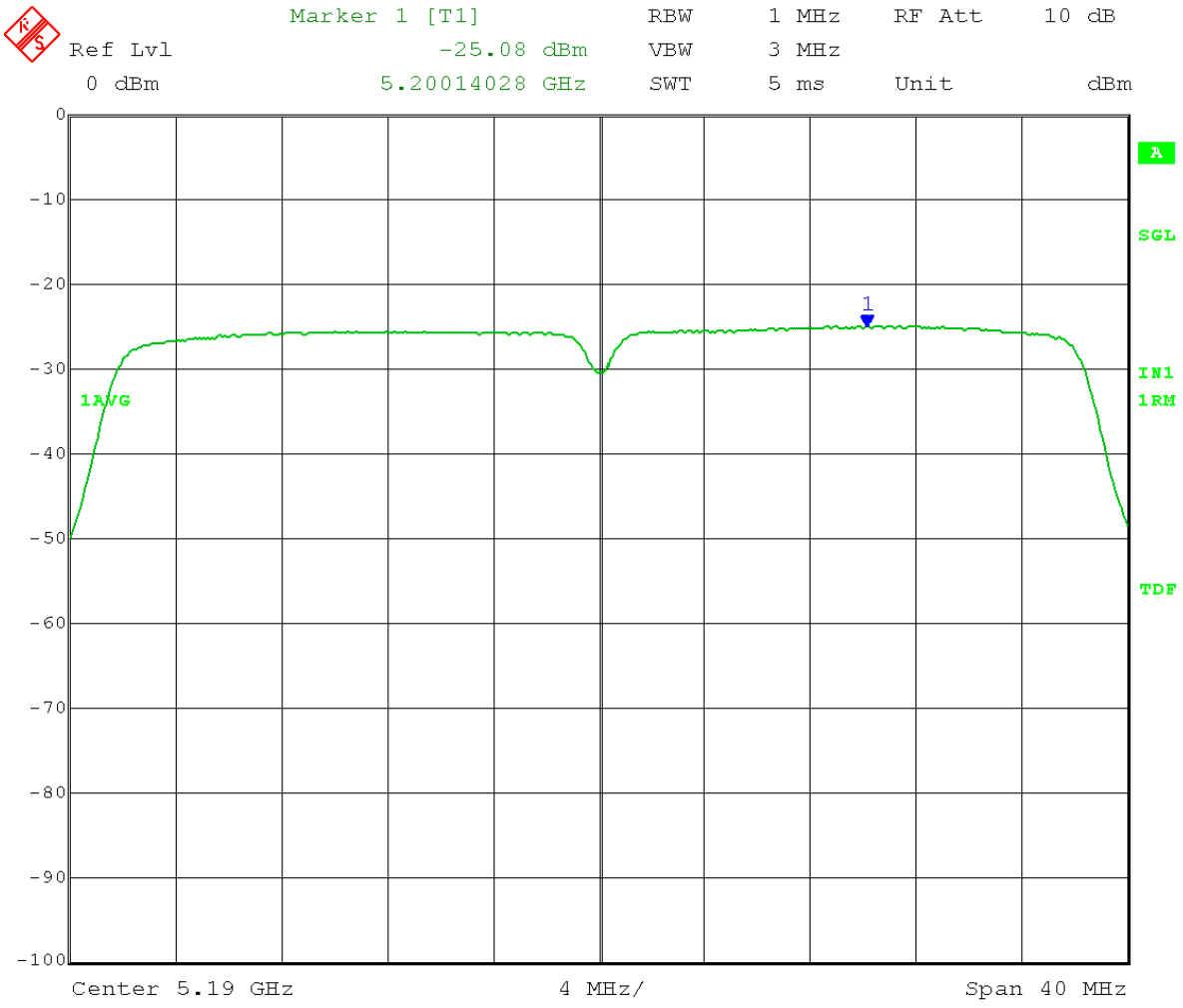
PSD = -12.22 dBm/MHz



Date: 10.JUN.2014 10:41:49

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit: [15.407(a)(1)]: 17.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit:[15.407(a)(1)(i)]: 17 – (30-23) – 3 (MIMO) = 7 dBm/MHz
RBW = 1 MHz VBW = 3 MHz
Detector = RMS Trace = AVG
Sweep Time = Auto Sweep counts = 200
Low Channel: Transmit = 5.190 GHz 40 MHz BW
Output power setting: 2.5 – 10 dB external atten. = -7.5
Channel 0

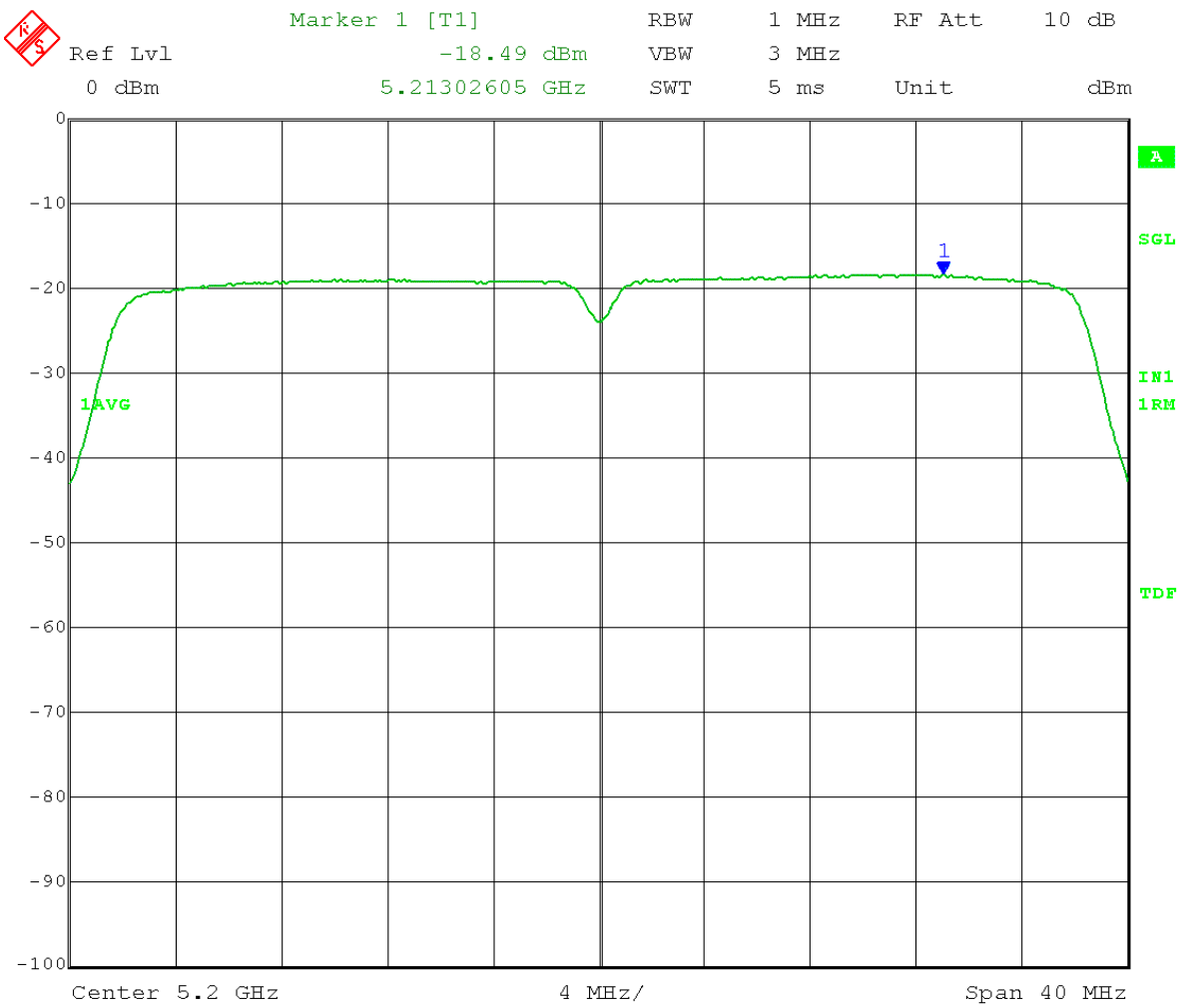
PSD = -25.08 dBm/MHz



Date: 10.JUN.2014 10:46:29

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit: [15.407(a)(1)]: 17.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit:[15.407(a)(1)(i)]: 17 – (30-23) – 3 (MIMO) = 7 dBm/MHz
RBW = 1 MHz VBW = 3 MHz
Detector = RMS Trace = AVG
Sweep Time = Auto Sweep counts = 200
Mid Channel: Transmit = 5.200 GHz 40 MHz BW
Output power setting: 8.5 – 10 dB external atten. = -1.5
Channel 0

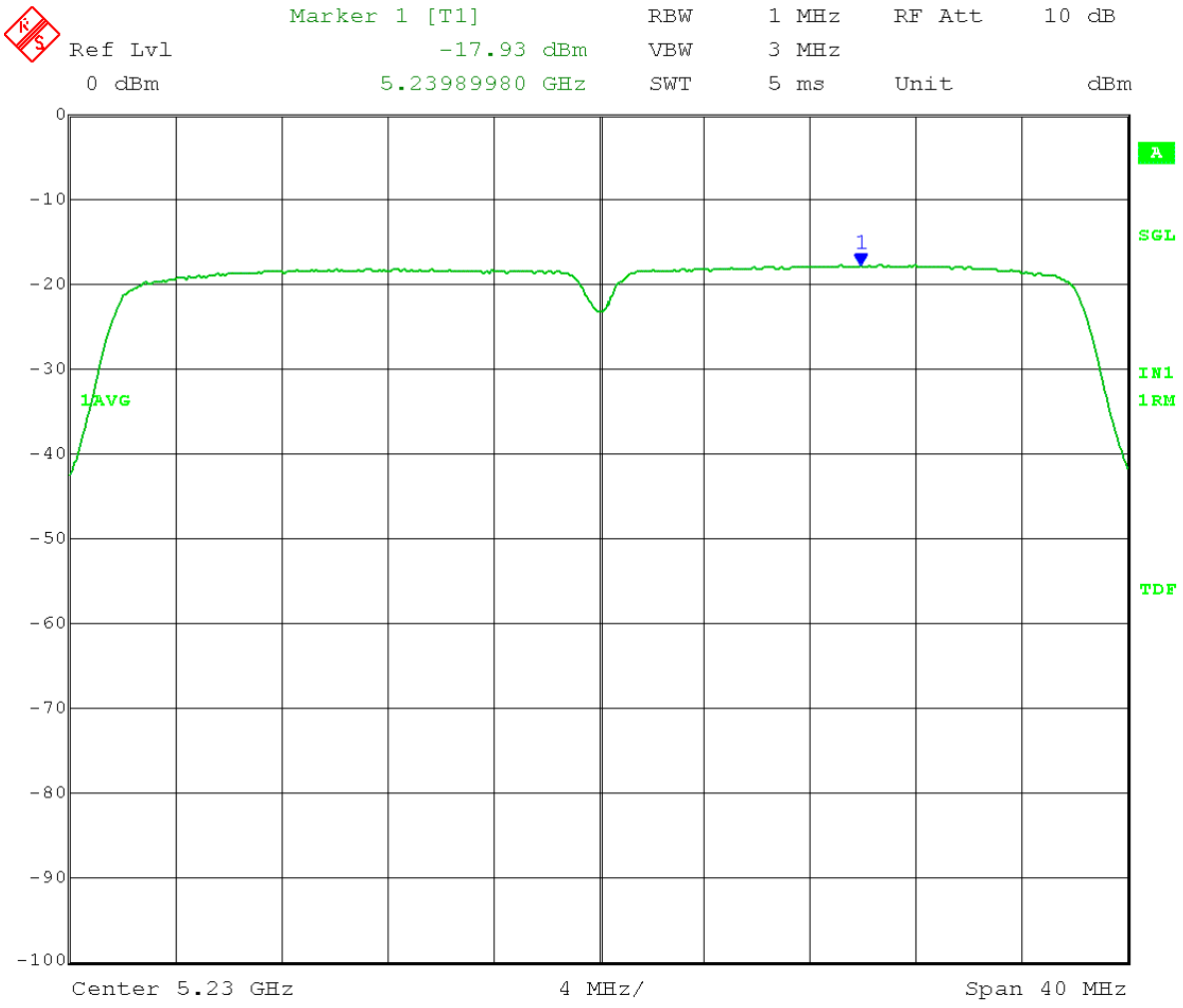
PSD = -18.49 dBm/MHz



Date: 10.JUN.2014 10:49:16

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain (Point-to-Point)
Test: Peak Power Spectral Density - Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407(a)(1)
F) PSD
Limit: [15.407(a)(1)]: 17.0 dBm conducted, reduced 1 dB for every dB the antenna gain exceeds 23 dBi (Point-to-Point)
Operating Mode: Point-to-Point; Antenna Gain = 30 dBi
EUT Limit:[15.407(a)(1)(i)]: 17 – (30-23) – 3 (MIMO) = 7 dBm/MHz
RBW = 1 MHz VBW = 3 MHz
Detector = RMS Trace = AVG
Sweep Time = Auto Sweep counts = 200
High Channel: Transmit = 5.230 GHz 40 MHz BW
Output power setting: 9.0 – 10 dB external atten. = -1.0
Channel 0

PSD = -17.93 dBm/MHz



Date: 10.JUN.2014 10:51:43

Appendix B – Measurement Data

B6.0 Unwanted Emission Levels – Radiated Band-Edge - (Cabinet Radiated)
(antenna ports 50-Ohm terminated)

Rule Section: Sections 15.407(b)(1)

Test Procedure: FCC KDB 789033 D02 General UNII Test Procedures v01 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*

Section G – Unwanted emission measurement
Section G(1) – Unwanted emissions in the restricted bands
Section G(3) – General Requirements for Unwanted Emissions Measurements
Section G(5) – Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
Section G(6) – Procedure for Average Unwanted Emissions Measurements Above 1000 MHz
Section G(6)(c) – Method AD - Average Detection method

Description: Per 789033 D02 General UNII Test Procedures v01, section G(2)(c): "an out-of-band emission that complies with both the peak and average limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit."

Measure the band-edge emission level using the following settings:
PEAK measurements:
- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = peak
- Sweep time = auto
- Trace mode = max hold

AVERAGE measurements:
- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = RMS
- Sweep time = auto
- Trace mode = trace average 200 traces

Limit: Peak and Average limits of 15.209, were used instead of the -27 dBm/MHz limit of FCC Part 15.407(b)(1).

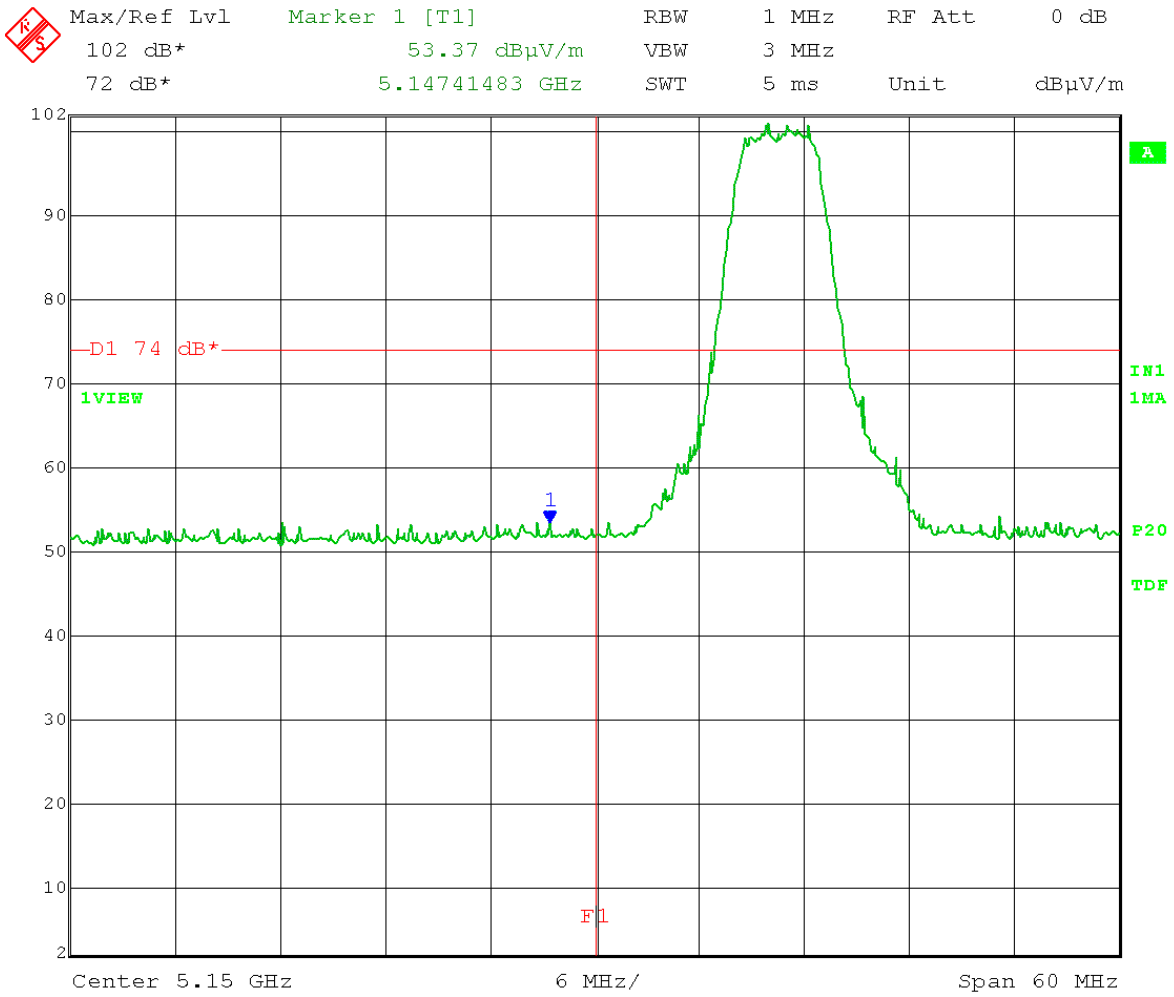
Results: Passed

Notes: 5 MHz channel bandwidth measurements were taken with Legacy OFDM 54 Mbit/s modulation at the lowest, middle, and highest channels of operation. 40 MHz channel bandwidth measurements were taken with MCS15 OFDM modulation. The EUT was set to transmit continuously with 100% duty cycle.

Tested with both output antenna ports terminated with 50 Ohm terminations. 5 MHz channel bandwidth output power setting in test software was set to 18.0. 40 MHz channel bandwidth output power setting in test software was set to 16.0.

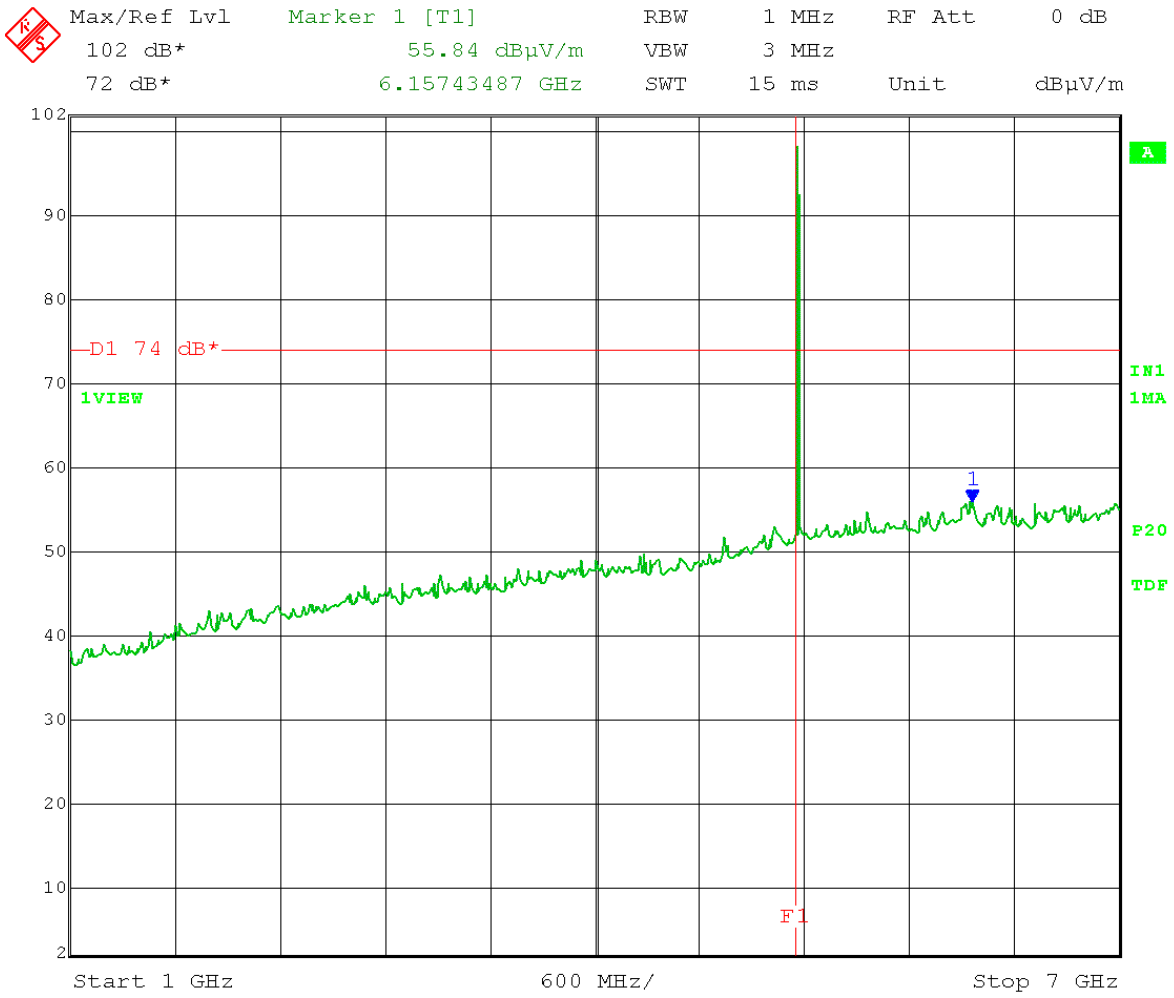
Test Date: 05-23-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channels 0 and 1 both active ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 18
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m at 3 meters

Horizontal:



Date: 23.MAY.2014 12:42:31

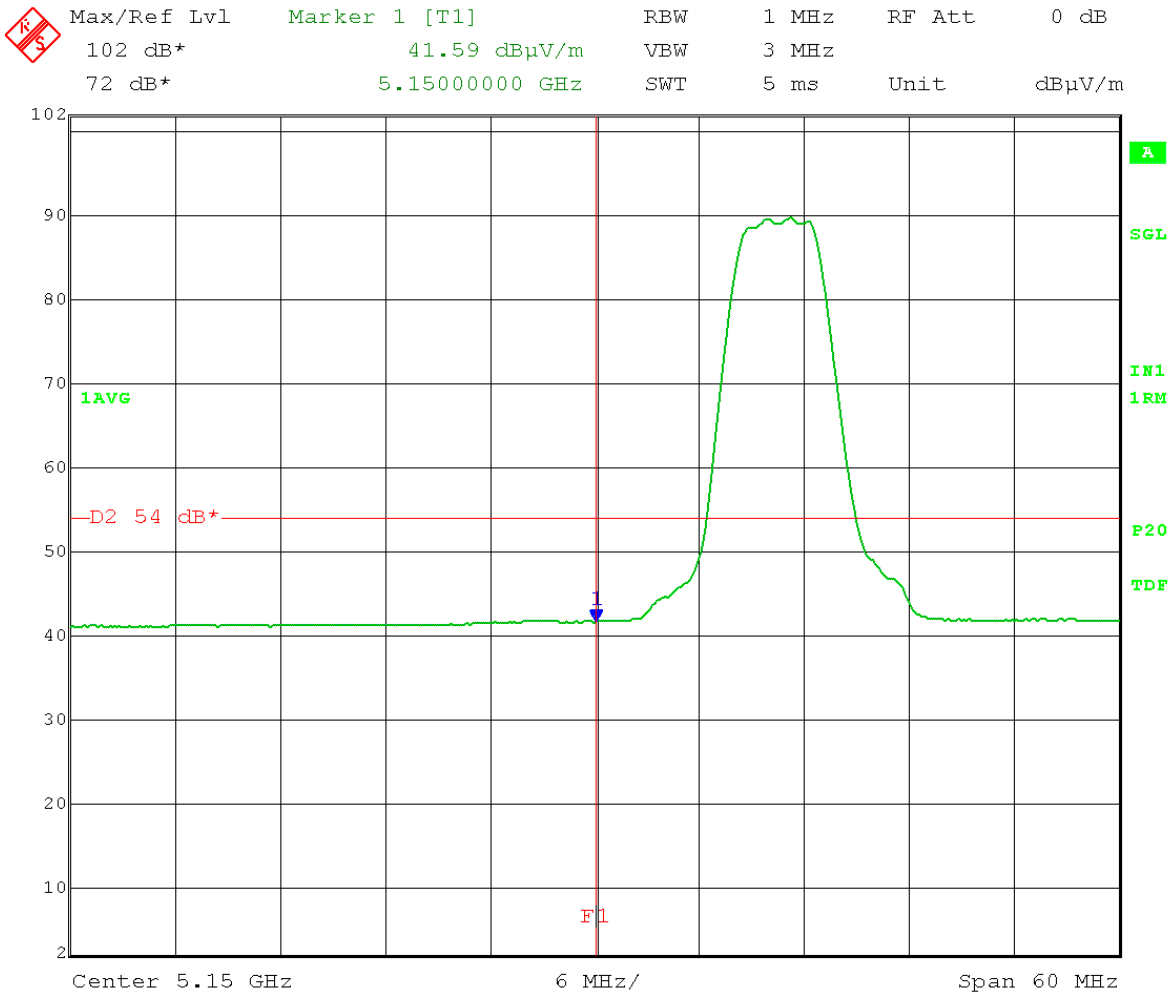
Horizontal:



Date: 23.MAY.2014 12:43:17

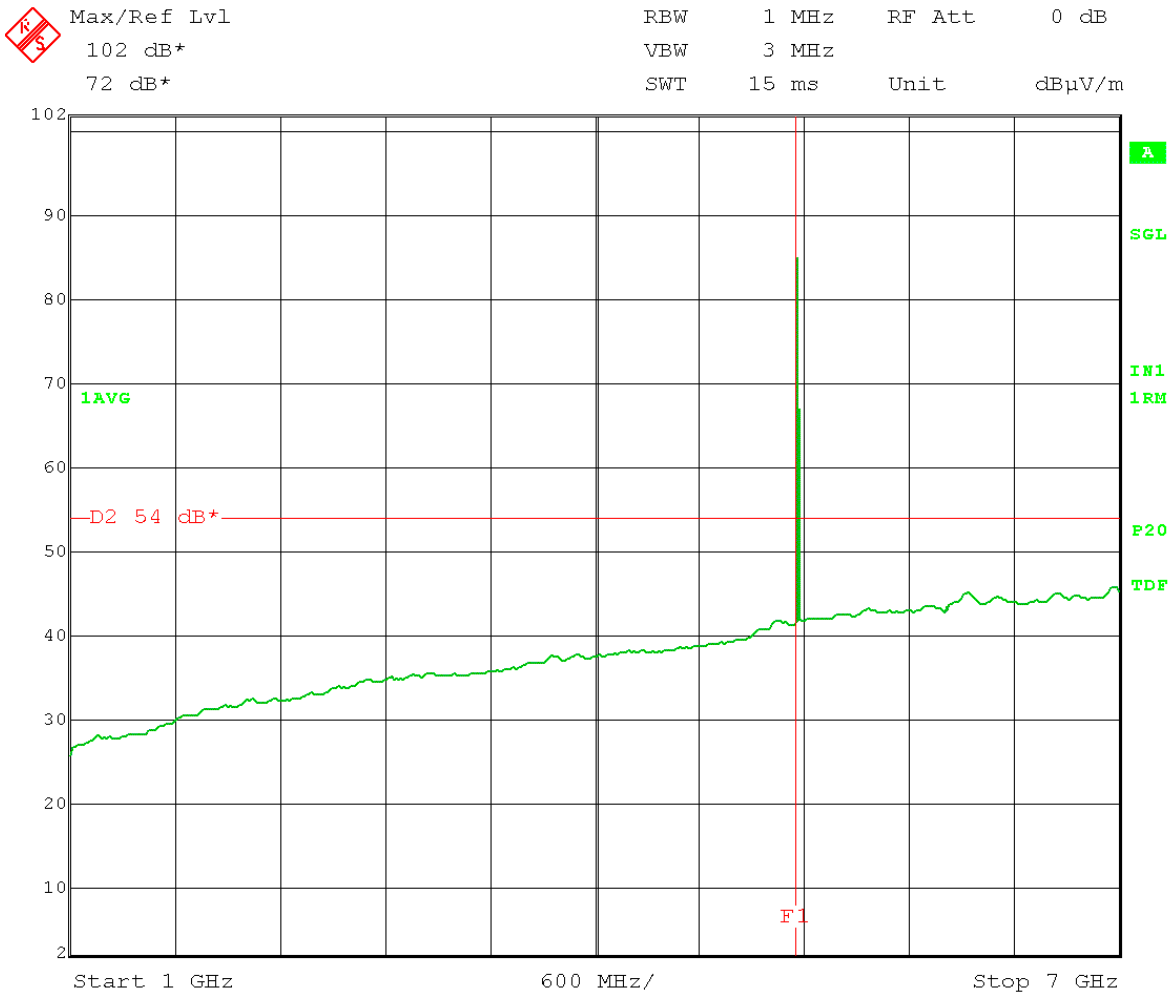
Test Date: 05-23-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 sweeps
Channels 0 and 1 both active ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 18
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m at 3 meters

Horizontal:



Date: 23.MAY.2014 12:46:25

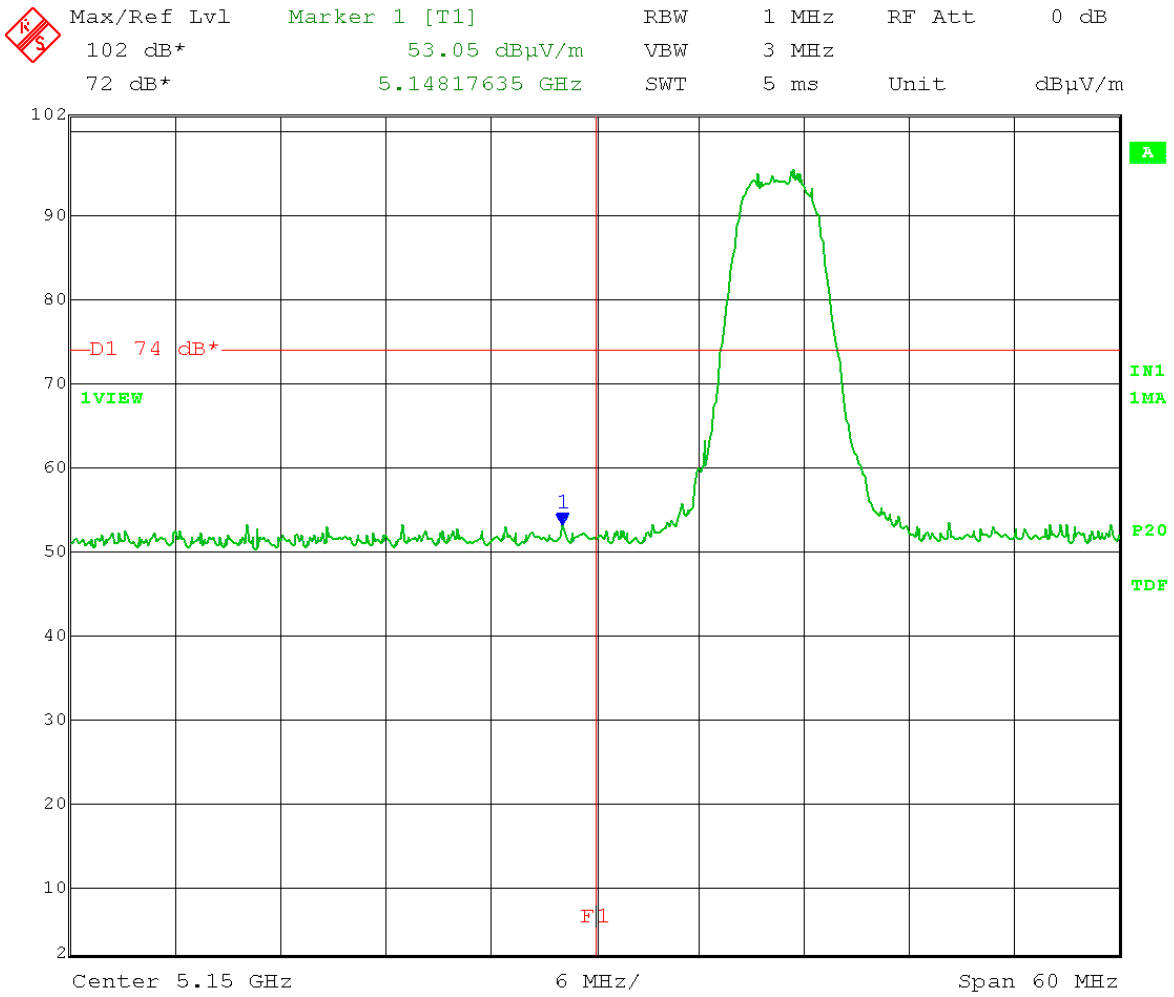
Horizontal:



Date: 23.MAY.2014 12:45:18

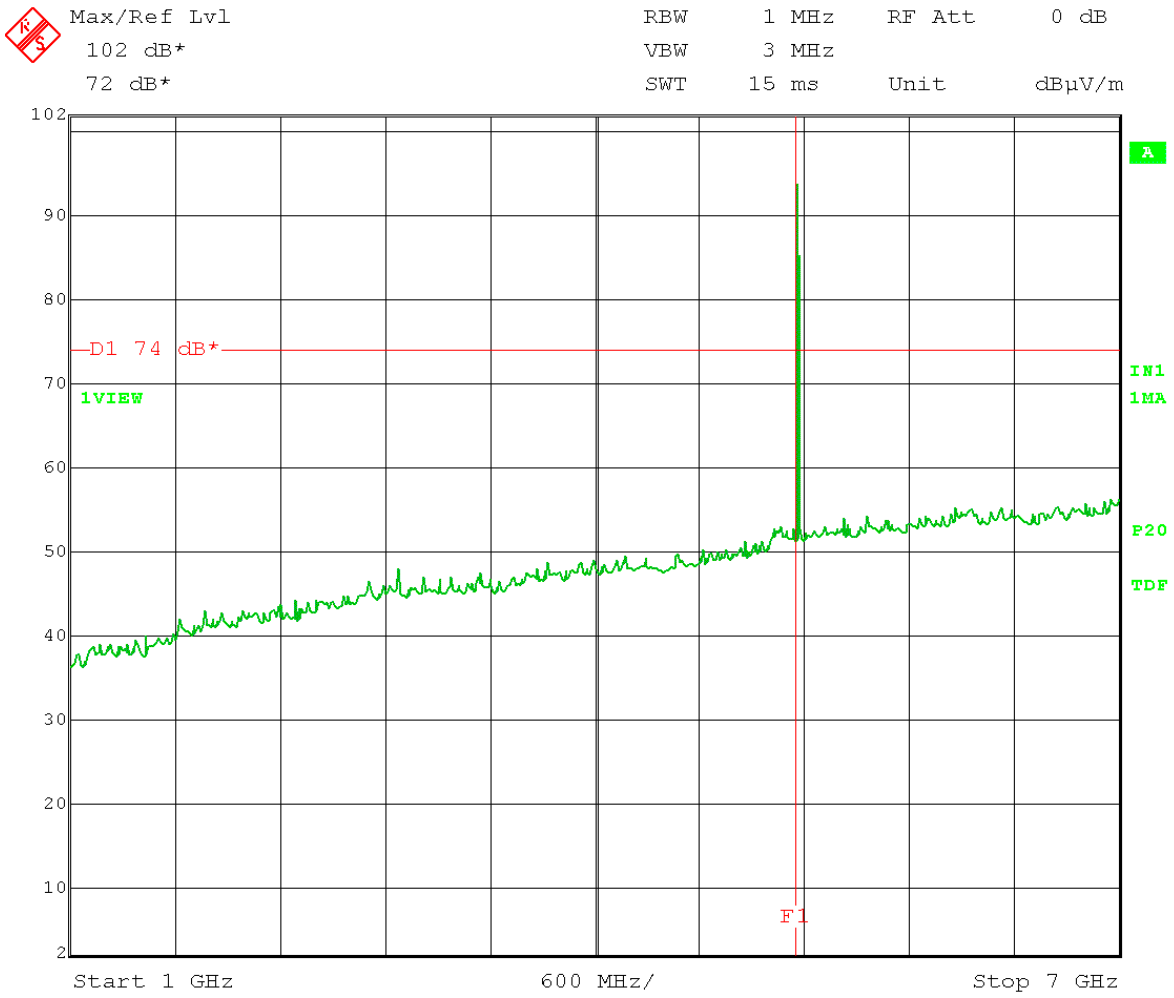
Test Date: 05-23-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channels 0 and 1 both active ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 18
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m at 3 meters

Vertical:



Date: 23.MAY.2014 11:18:47

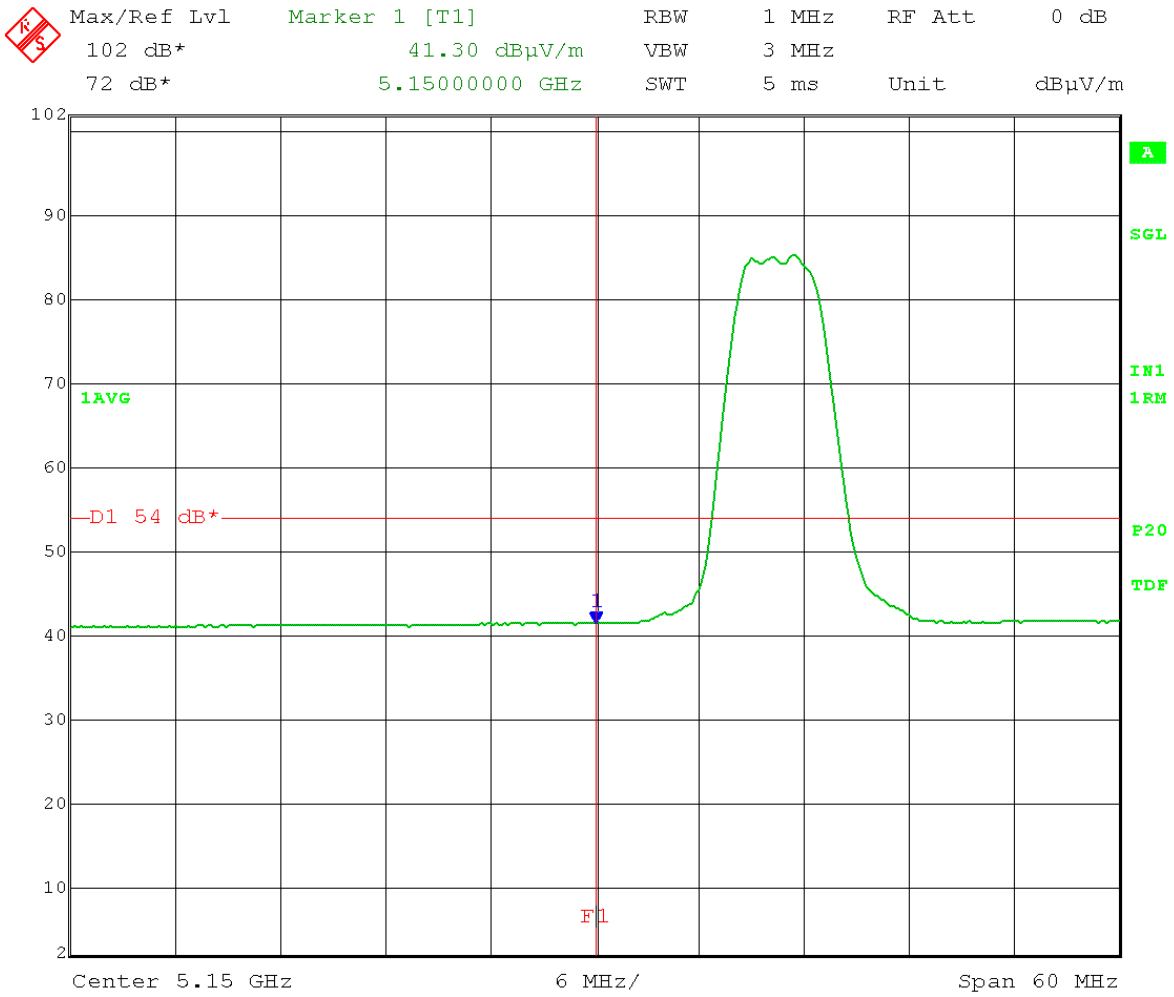
Vertical:



Date: 23.MAY.2014 11:19:27

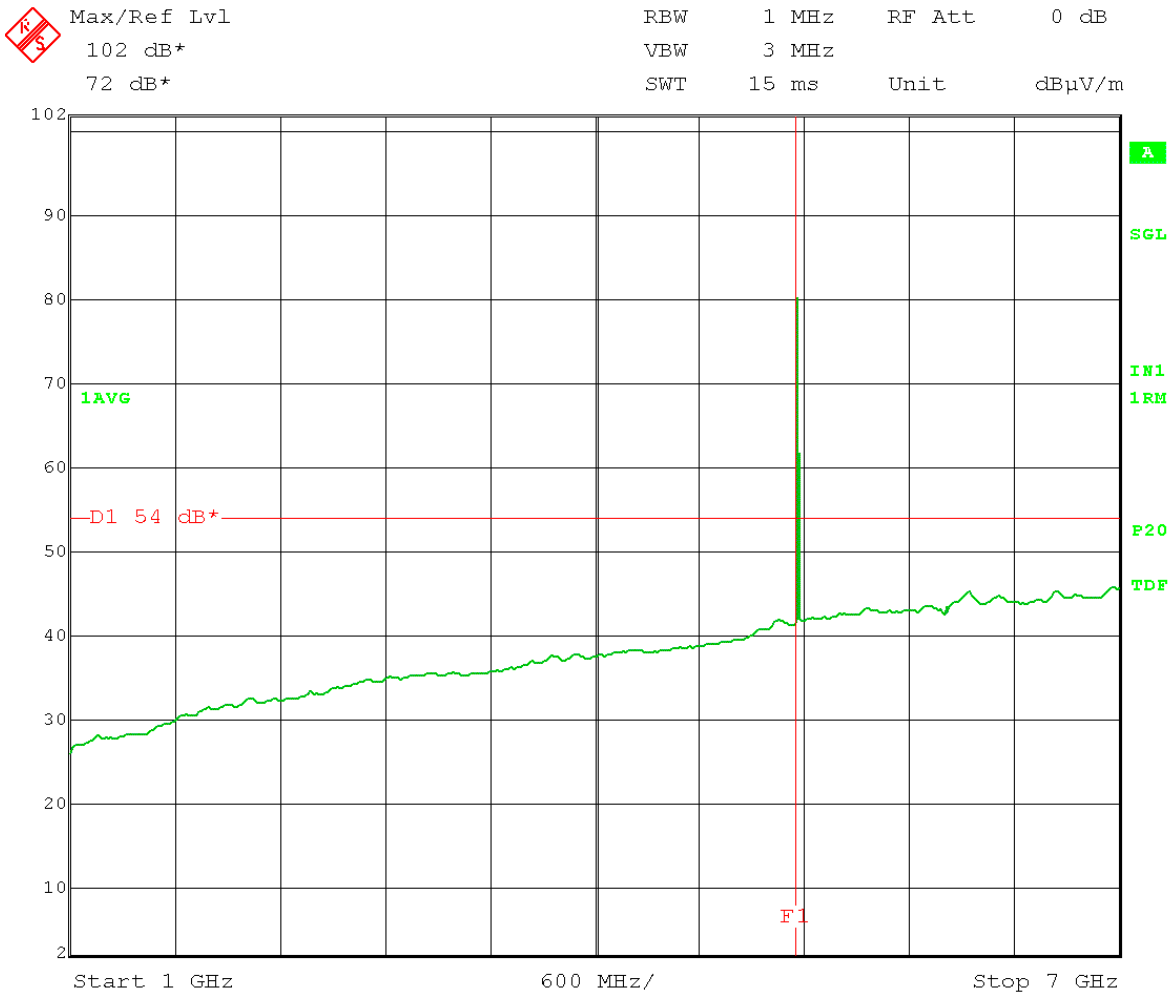
Test Date: 05-23-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 sweeps
Channels 0 and 1 both active ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 18
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m at 3 meters

Vertical:



Date: 23.MAY.2014 11:14:50

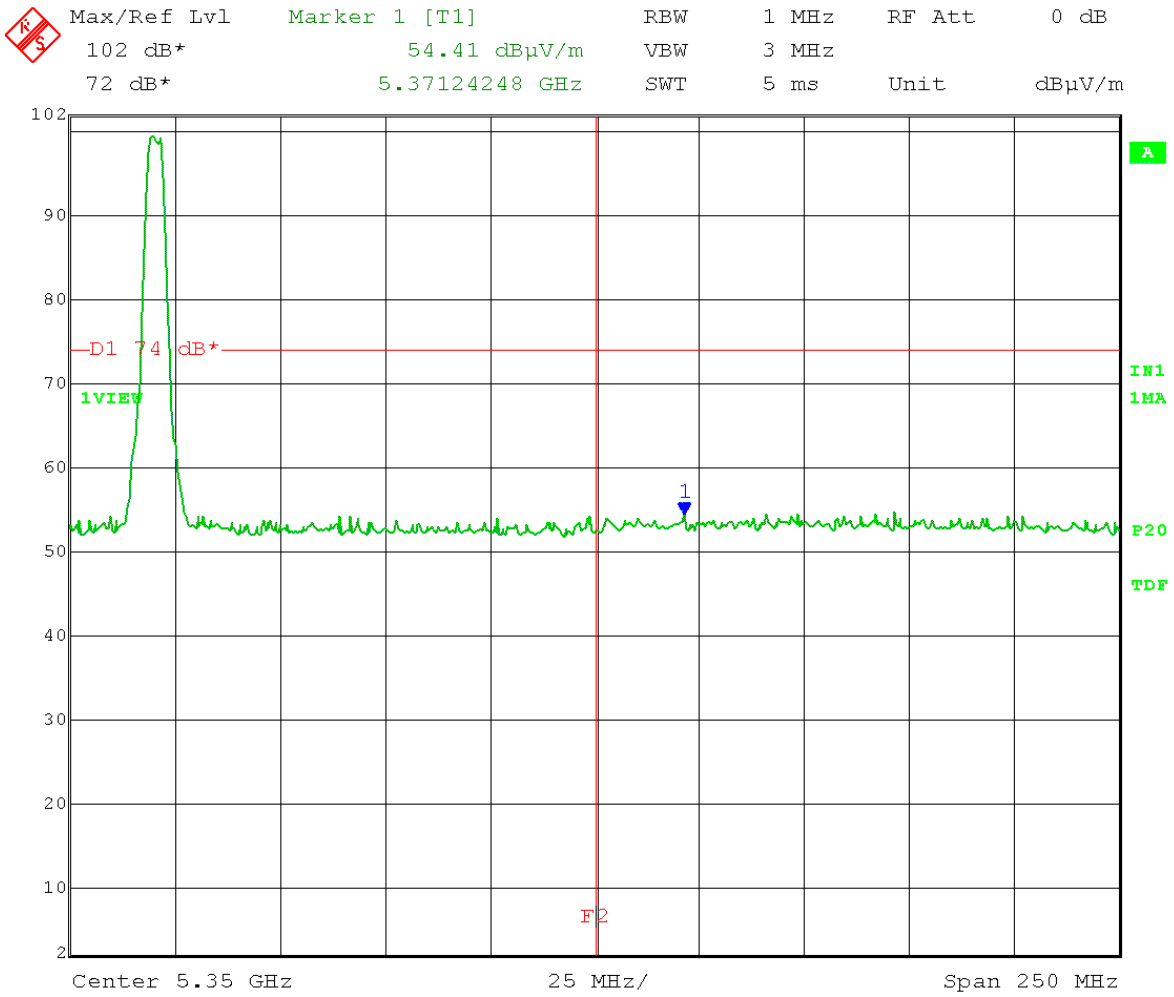
Vertical:



Date: 23.MAY.2014 11:16:44

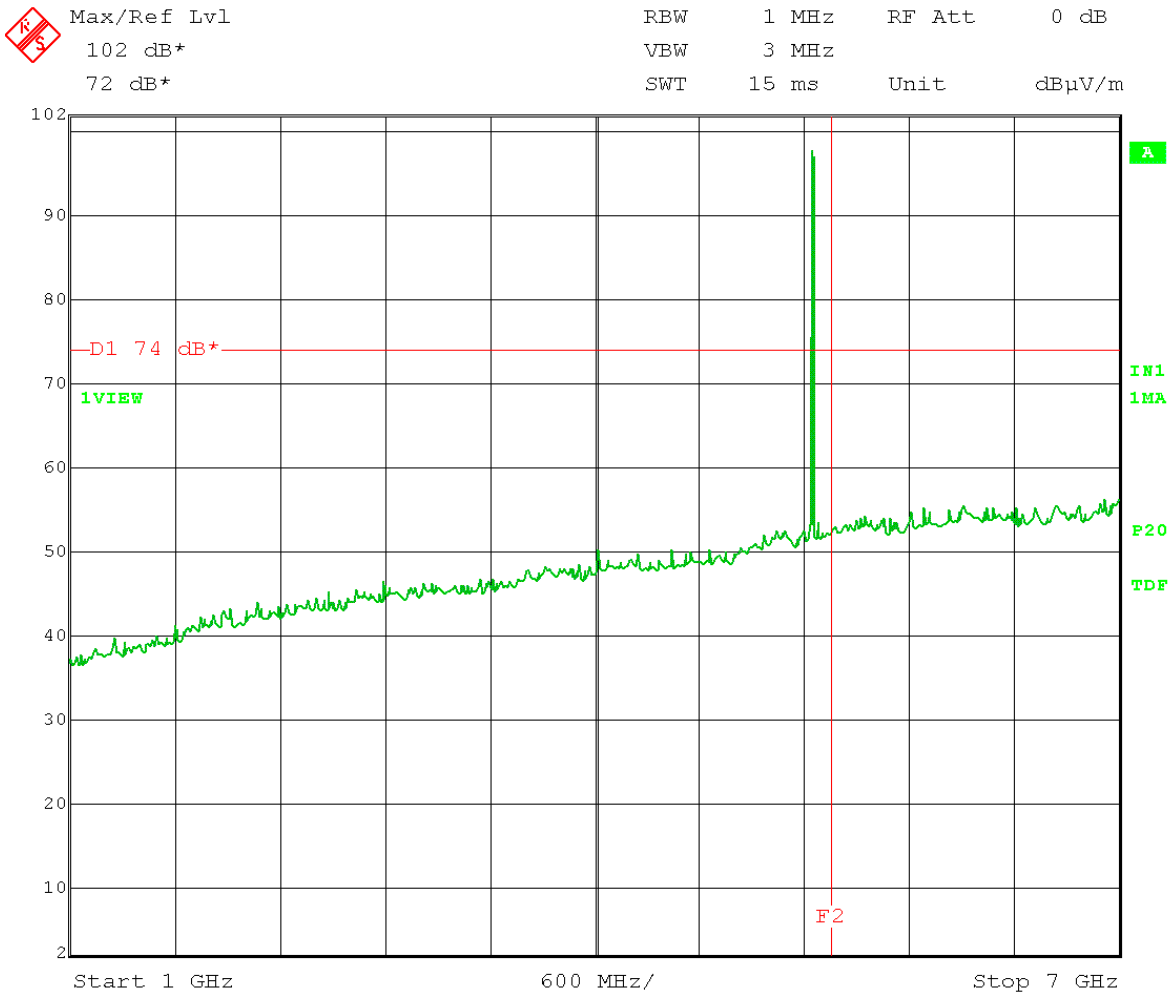
Test Date: 05-23-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channels 0 and 1 both active ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 18
5 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m at 3 meters

Horizontal:



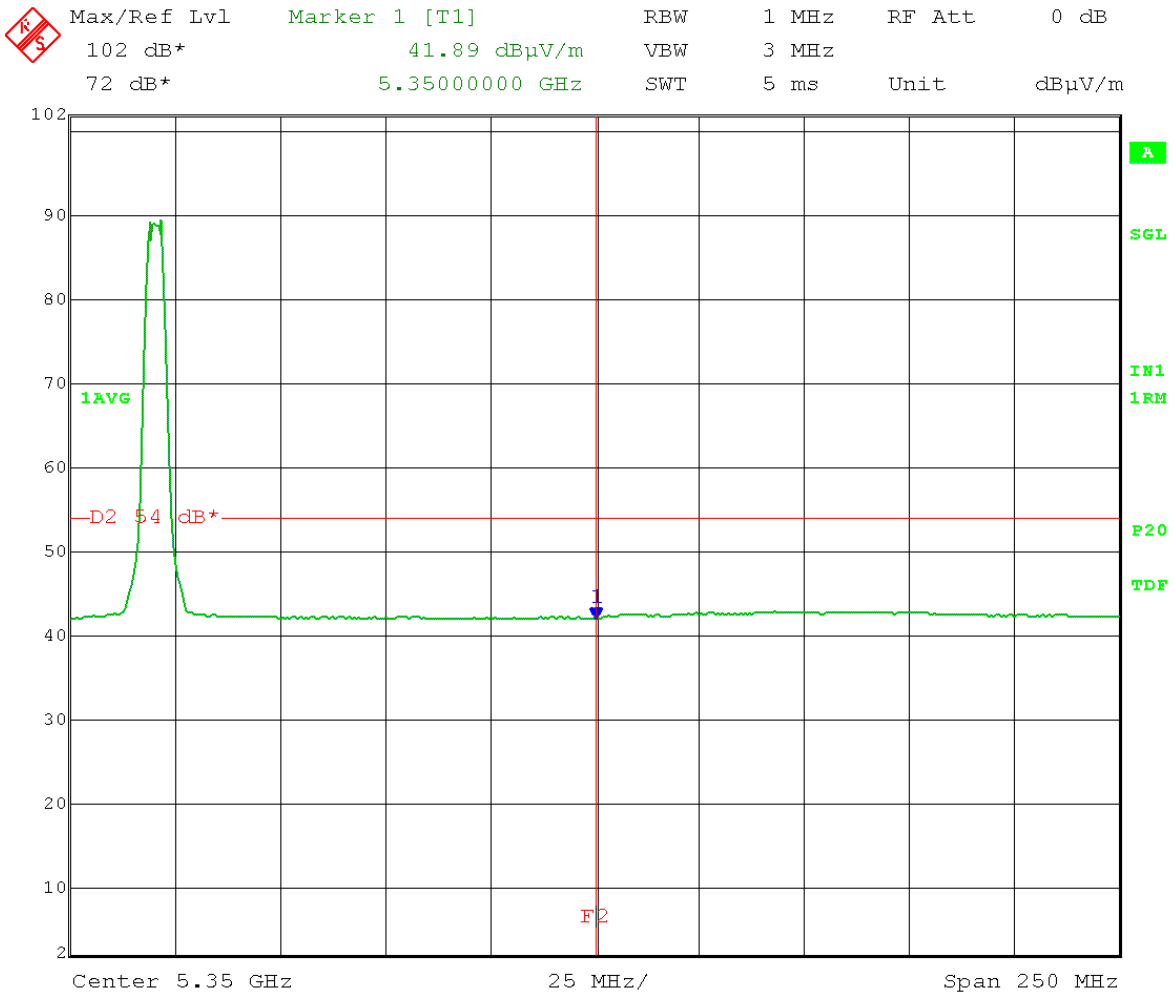
Date: 23.MAY.2014 12:00:06

Horizontal:


Max/Ref Lvl
102 dB*
72 dB*
RBW 1 MHz
VBW 3 MHz
SWT 15 ms
RF Att 0 dB
Unit dBµV/m
102
90
80
70
60
50
40
30
20
10
2
D1 74 dB*
1VIEW
A
IN1
1MA
P20
TDF
F2
Start 1 GHz
600 MHz/
Stop 7 GHz
Date: 23.MAY.2014 11:58:56

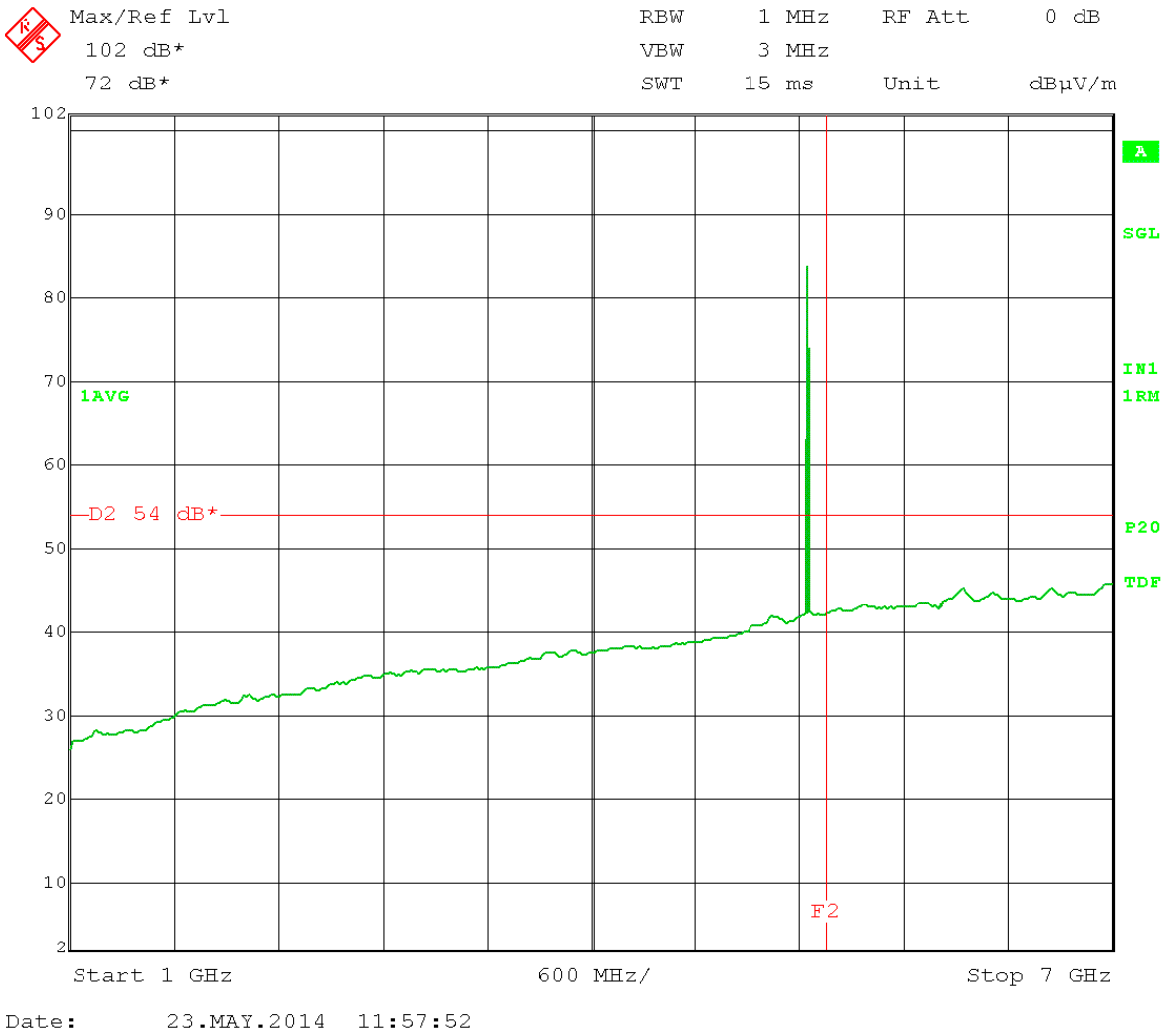
Test Date: 05-23-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 sweeps
Channels 0 and 1 both active ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 18
5 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m at 3 meters

Horizontal:



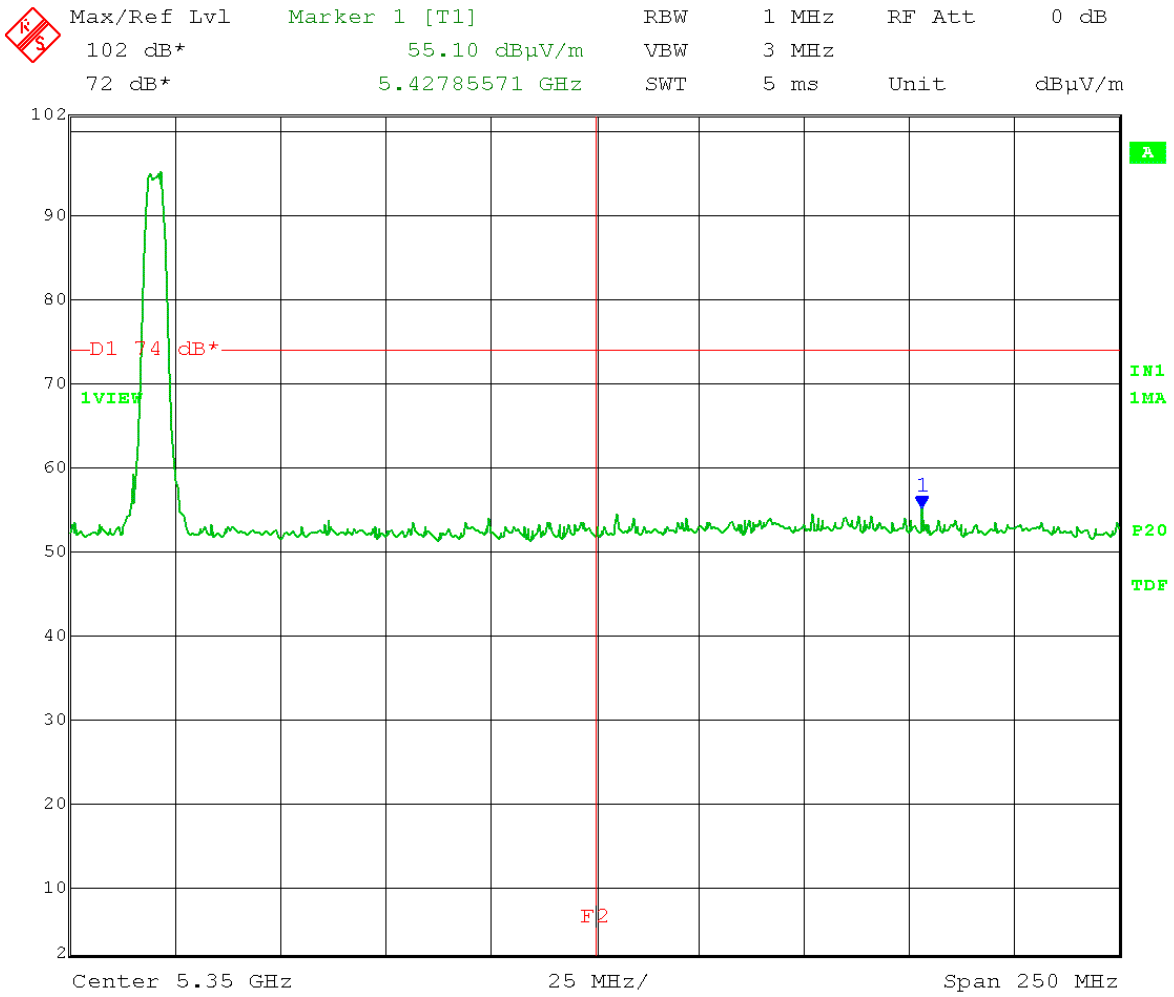
Date: 23.MAY.2014 11:56:46

Horizontal:


Max/Ref Lvl
102 dB*
72 dB*
RBW 1 MHz
VBW 3 MHz
SWT 15 ms
RF Att 0 dB
Unit dBµV/m
102
90
80
70
60
50
40
30
20
10
2
1AVG
D2 54 dB*
F2
A
SGL
IN1
1RM
P20
TDF
Start 1 GHz
600 MHz/
Stop 7 GHz
Date: 23.MAY.2014 11:57:52

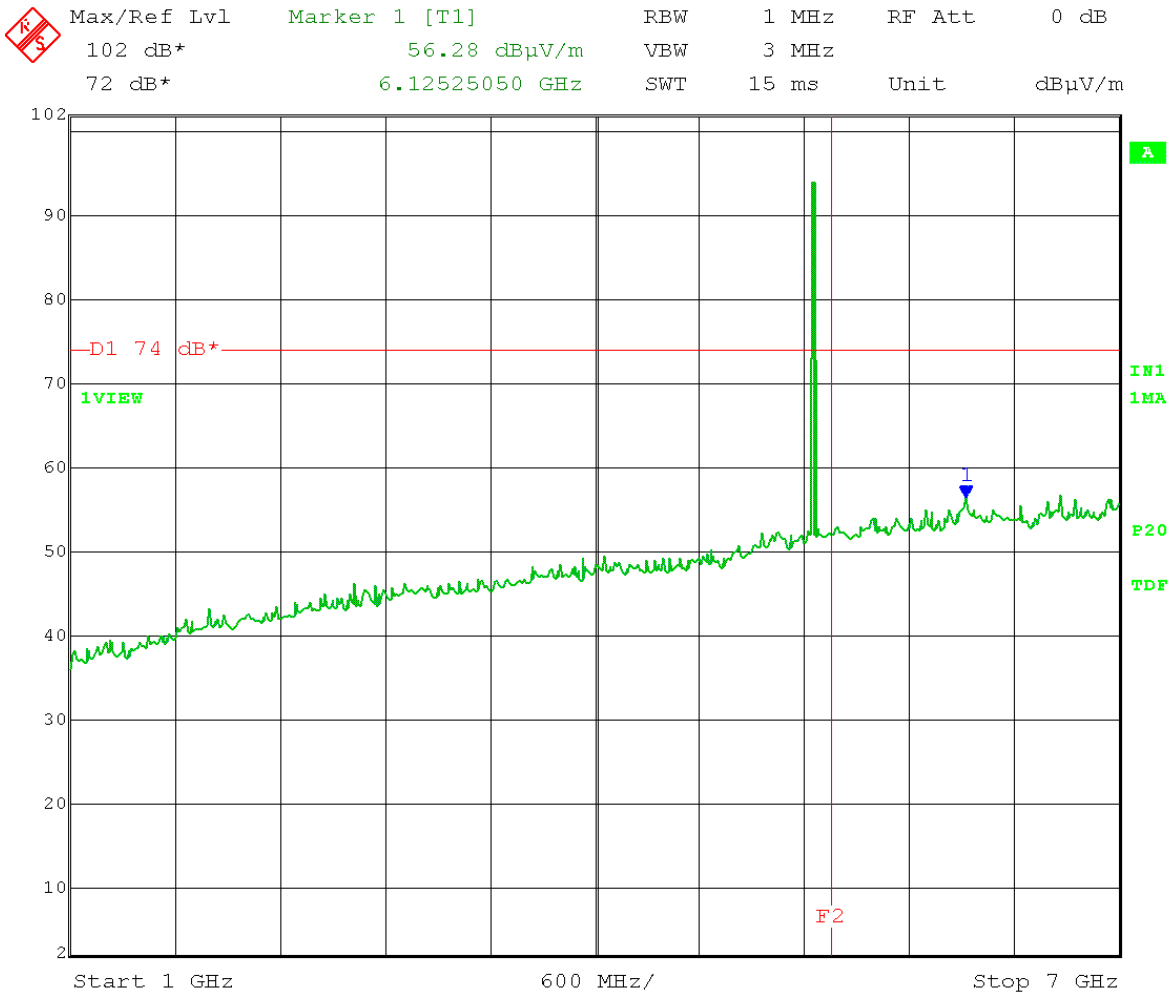
Test Date: 05-23-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channels 0 and 1 both active ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 18
5 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m at 3 meters

Vertical:



Date: 23.MAY.2014 11:41:37

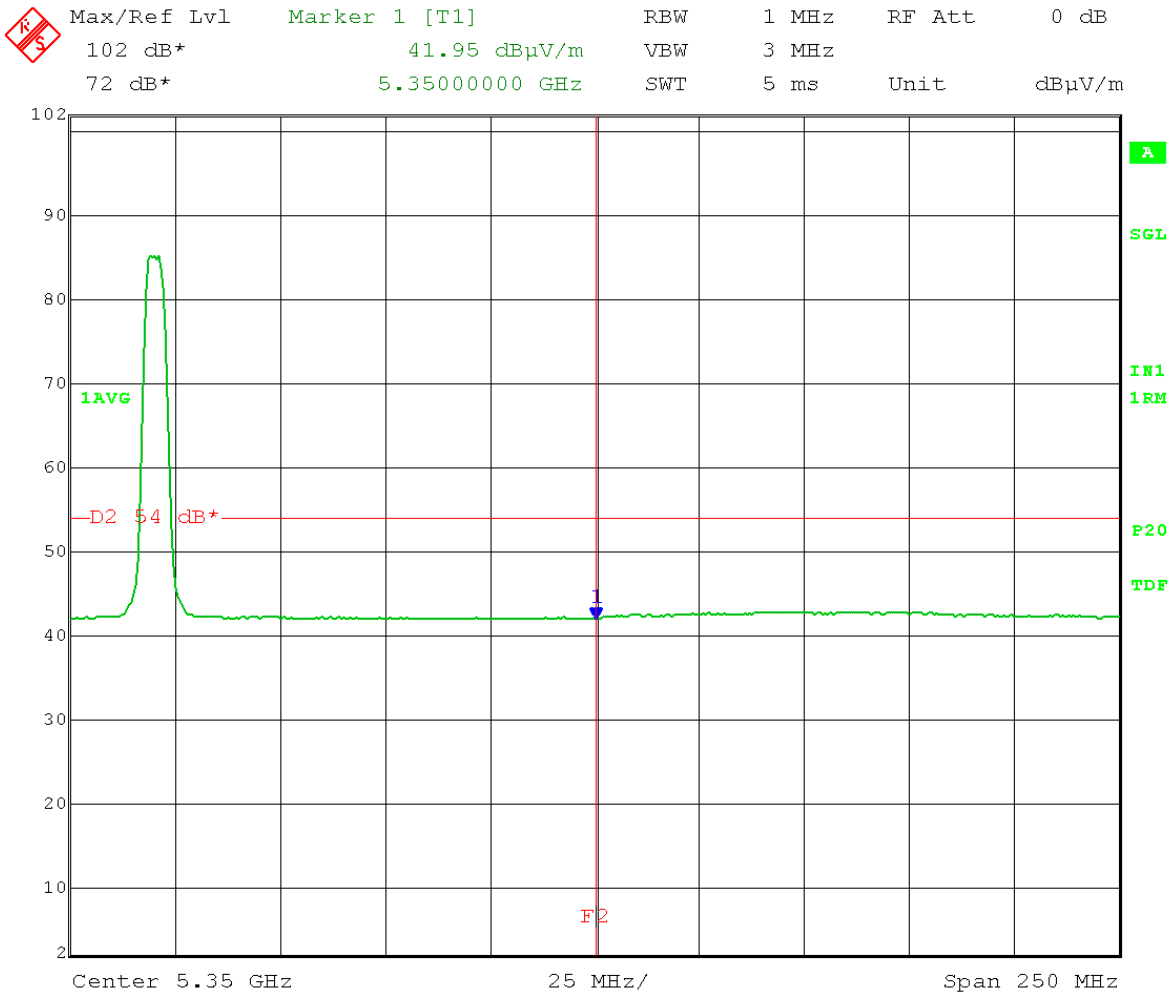
Vertical:



Date: 23.MAY.2014 11:42:38

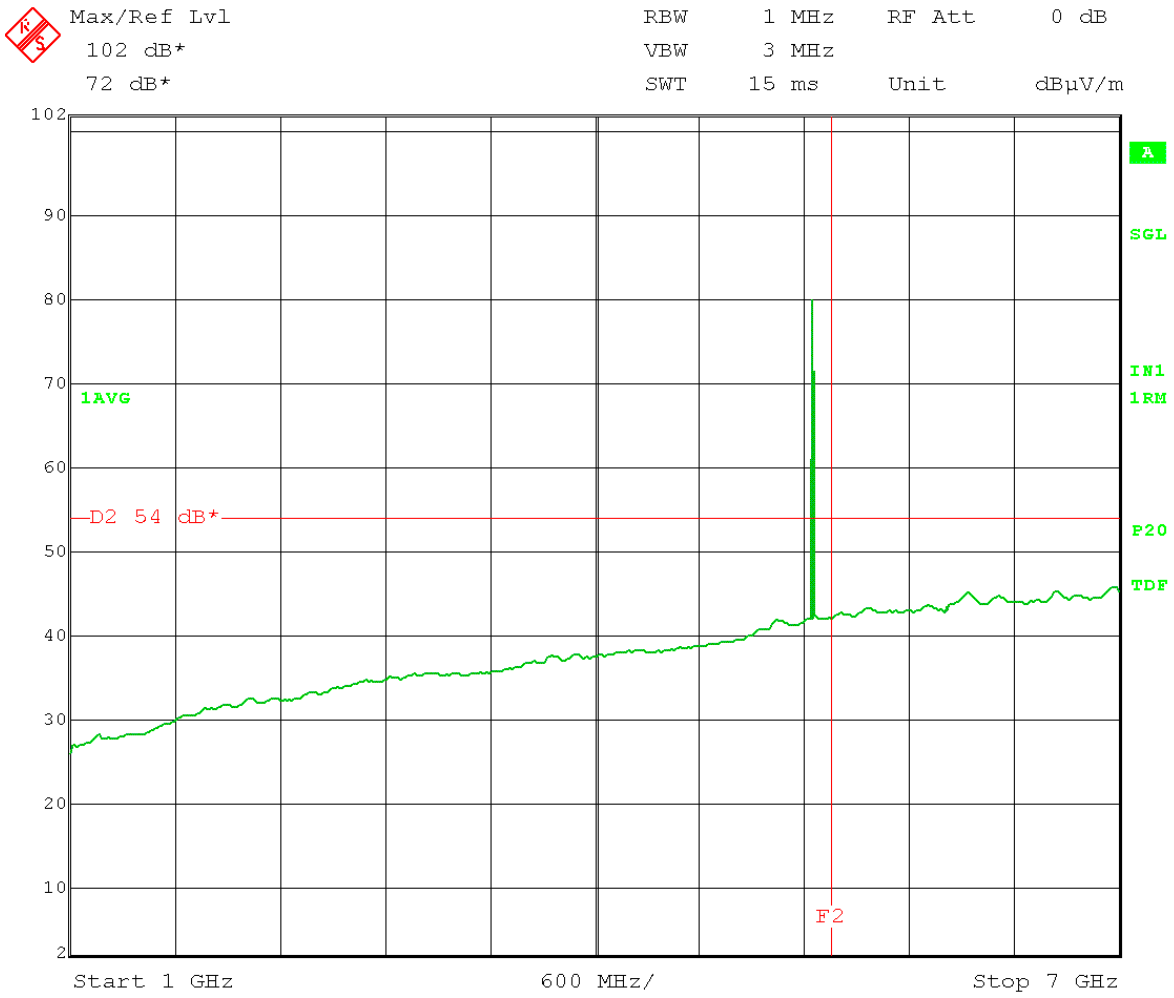
Test Date: 05-23-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 sweeps
Channels 0 and 1 both active ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 18
5 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m at 3 meters

Vertical:



Date: 23.MAY.2014 11:43:44

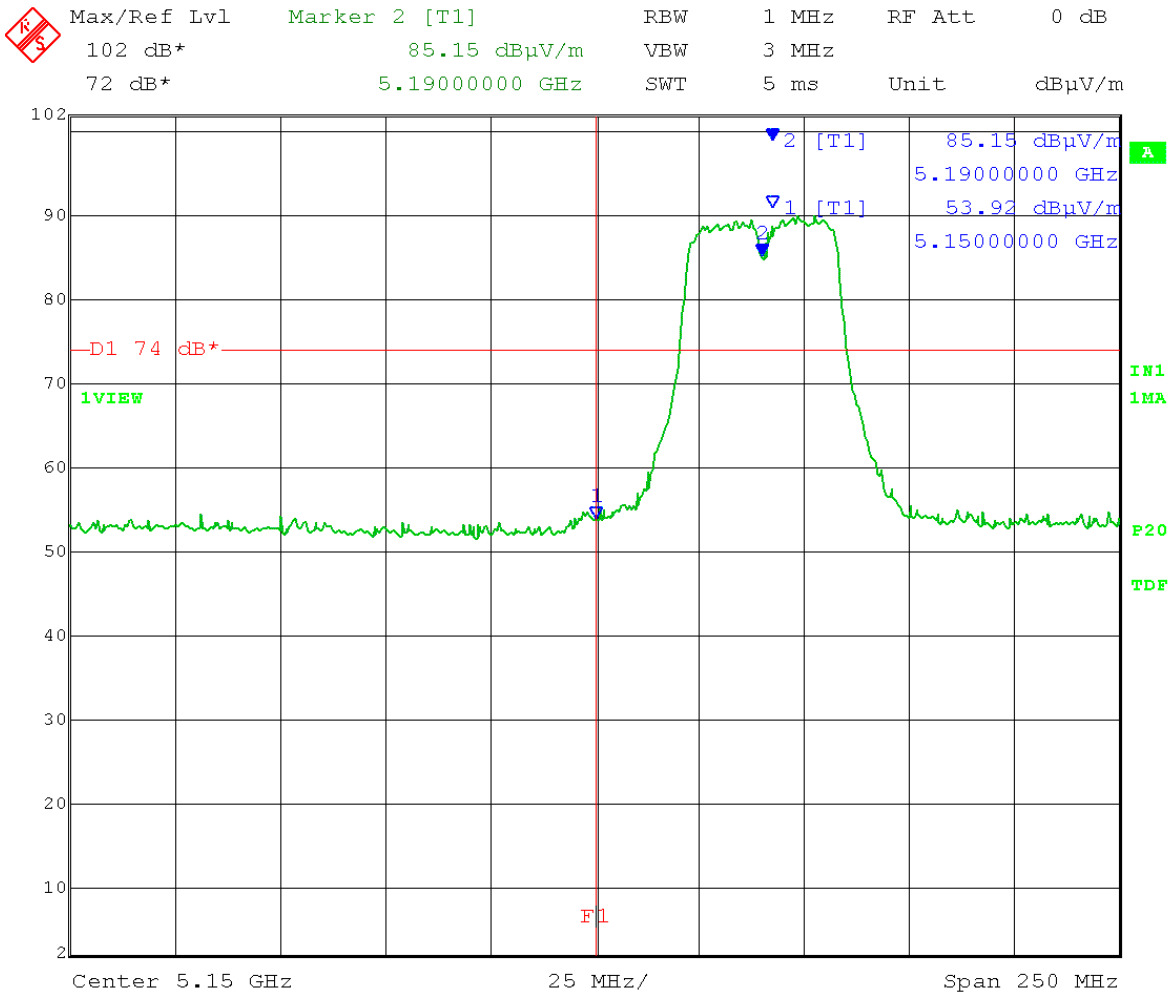
Vertical:



Date: 23.MAY.2014 11:44:38

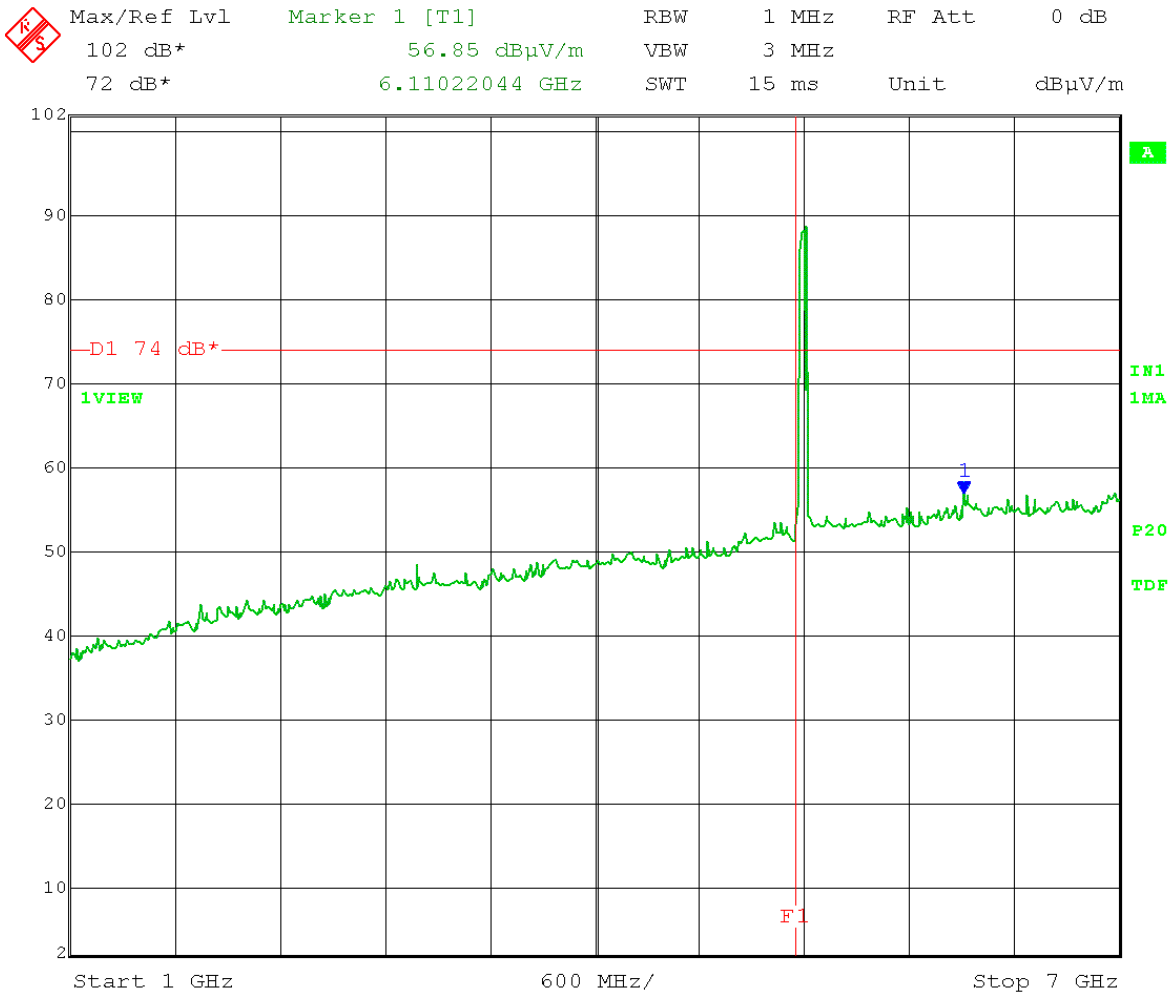
Test Date: 06-13-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channels 0 and 1 both active ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 16
40 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m at 3 meters

Horizontal:



Date: 13.JUN.2014 10:18:21

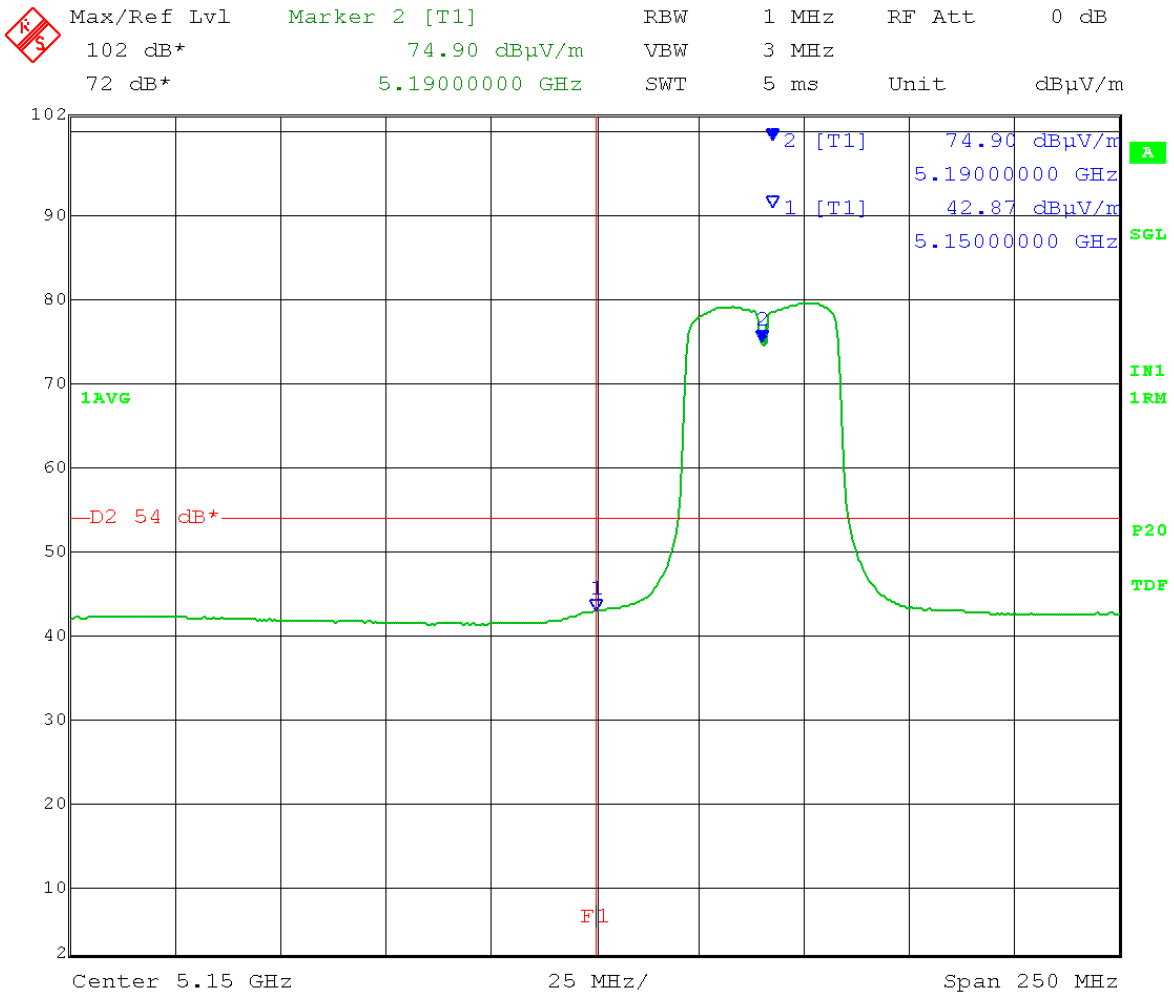
Horizontal:



Date: 13.JUN.2014 10:19:36

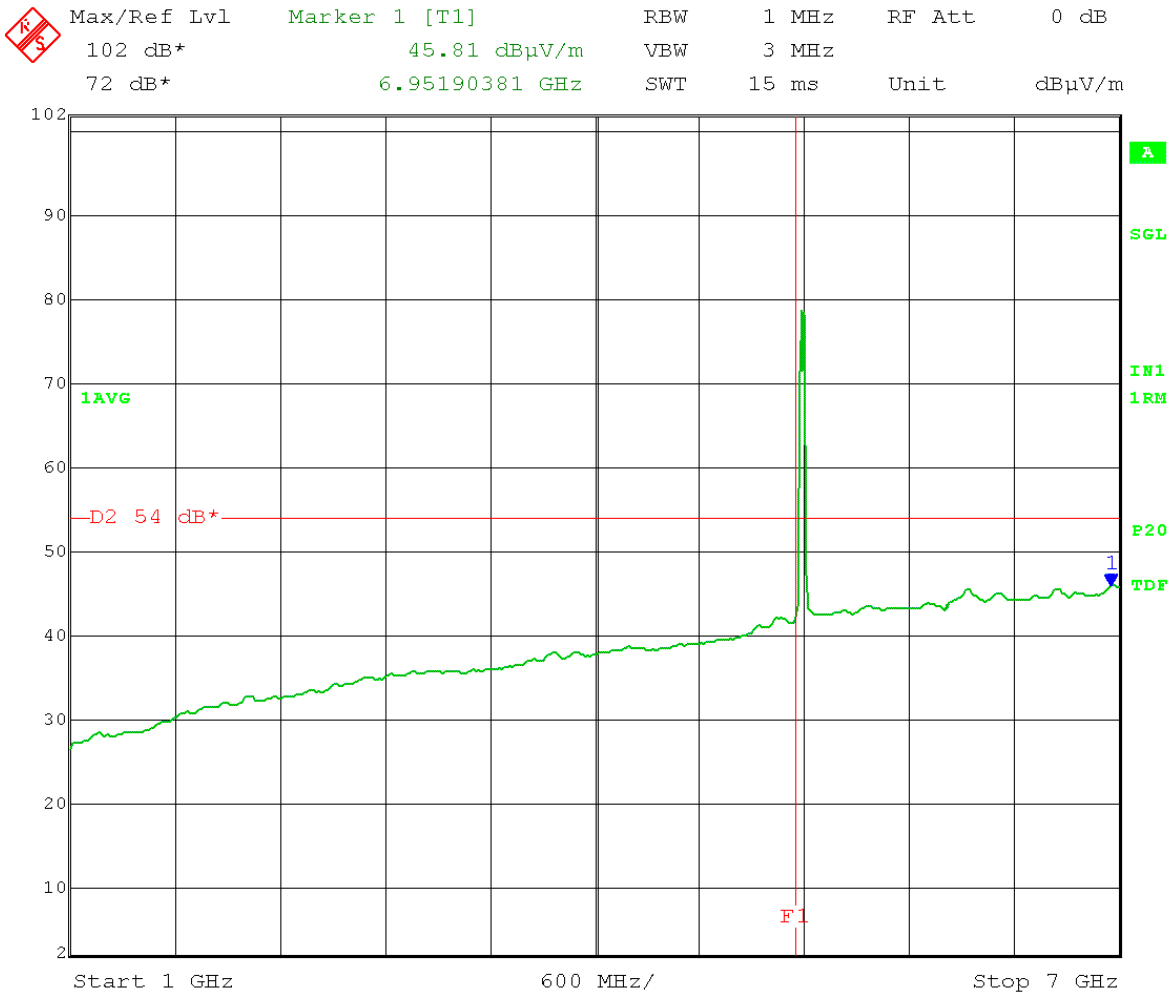
Test Date: 06-13-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 sweeps
Channels 0 and 1 both active ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 16
40 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m at 3 meters

Horizontal:



Date: 13.JUN.2014 10:17:06

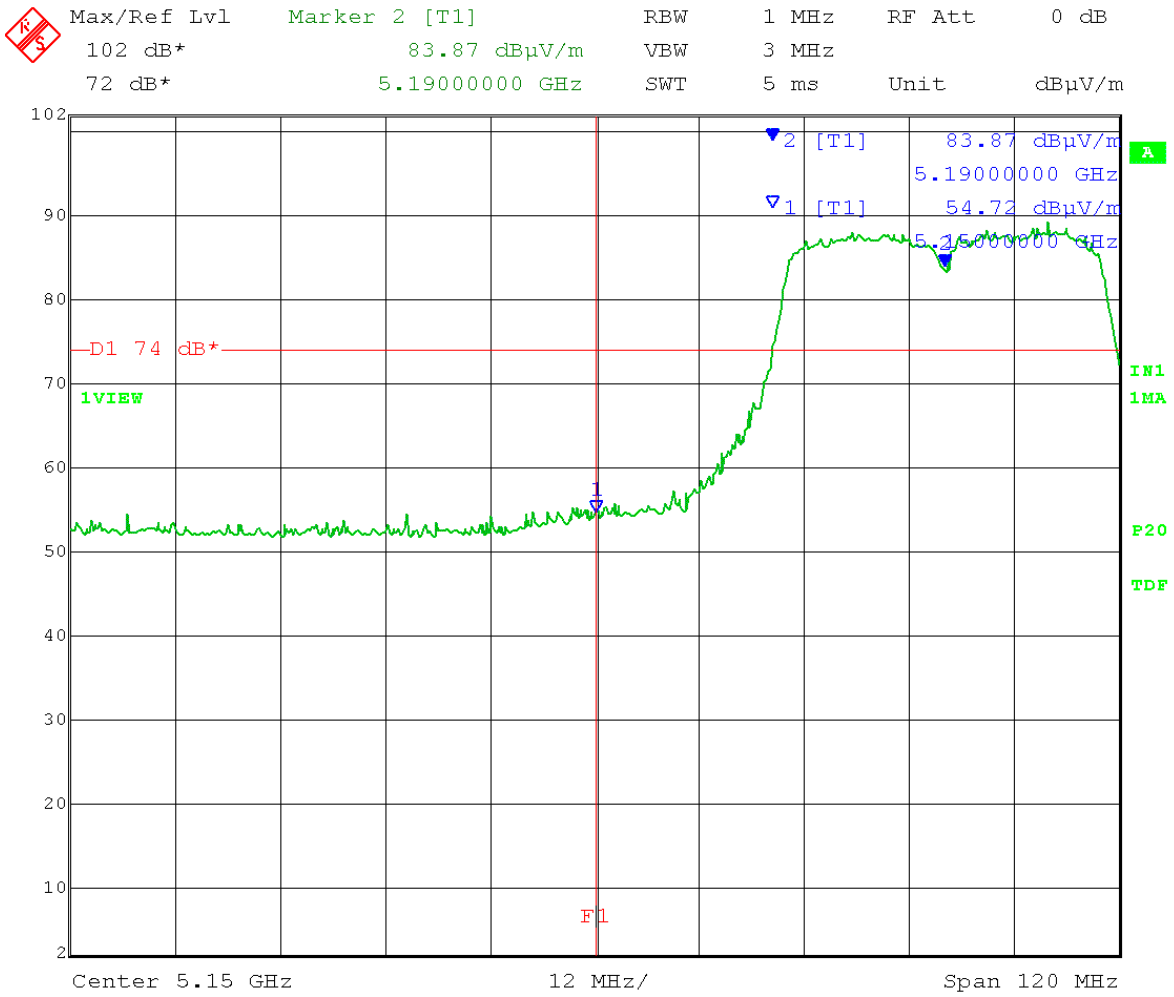
Horizontal:



Date: 13.JUN.2014 10:21:33

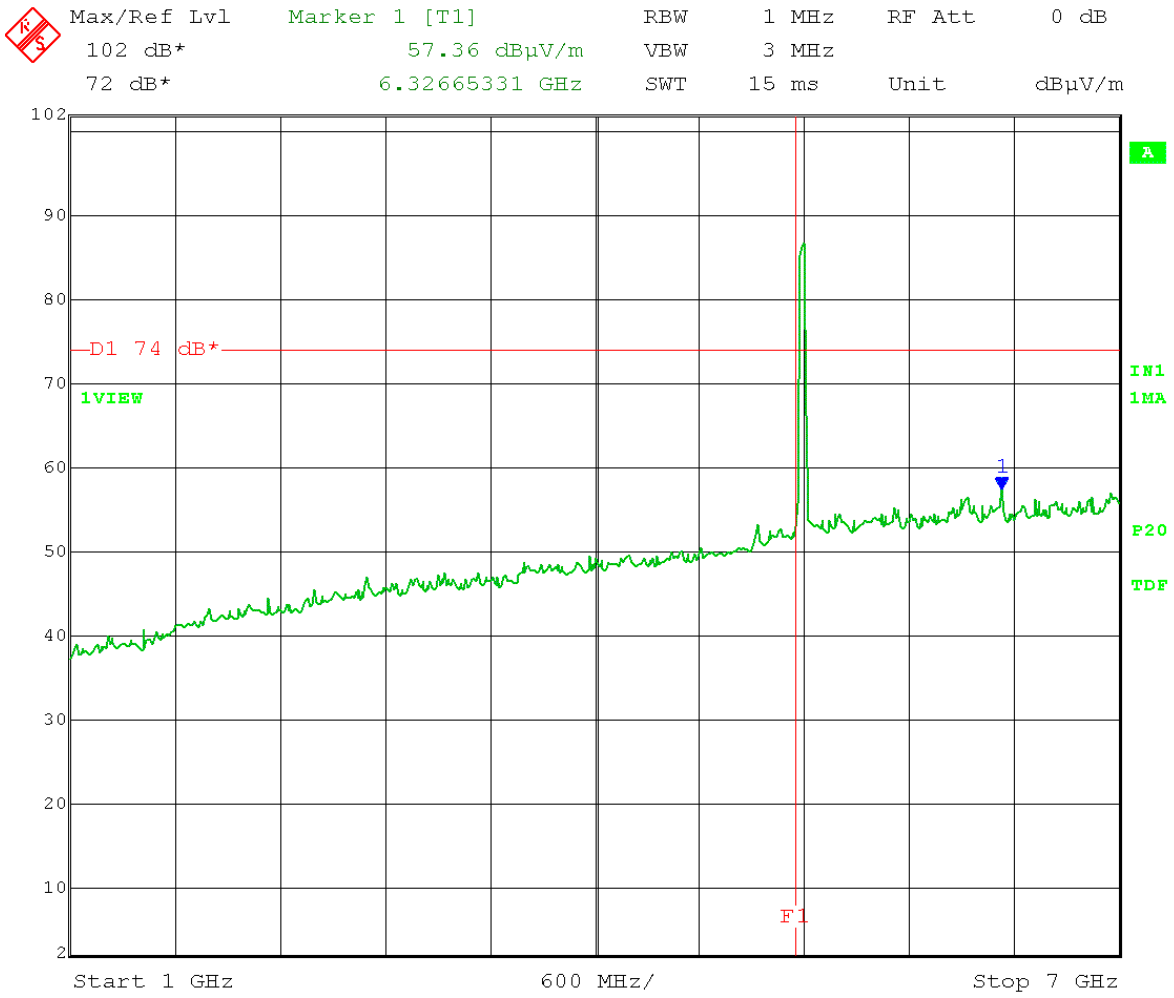
Test Date: 06-13-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channels 0 and 1 both active ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 16
40 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m at 3 meters

Vertical:



Date: 13.JUN.2014 09:20:29

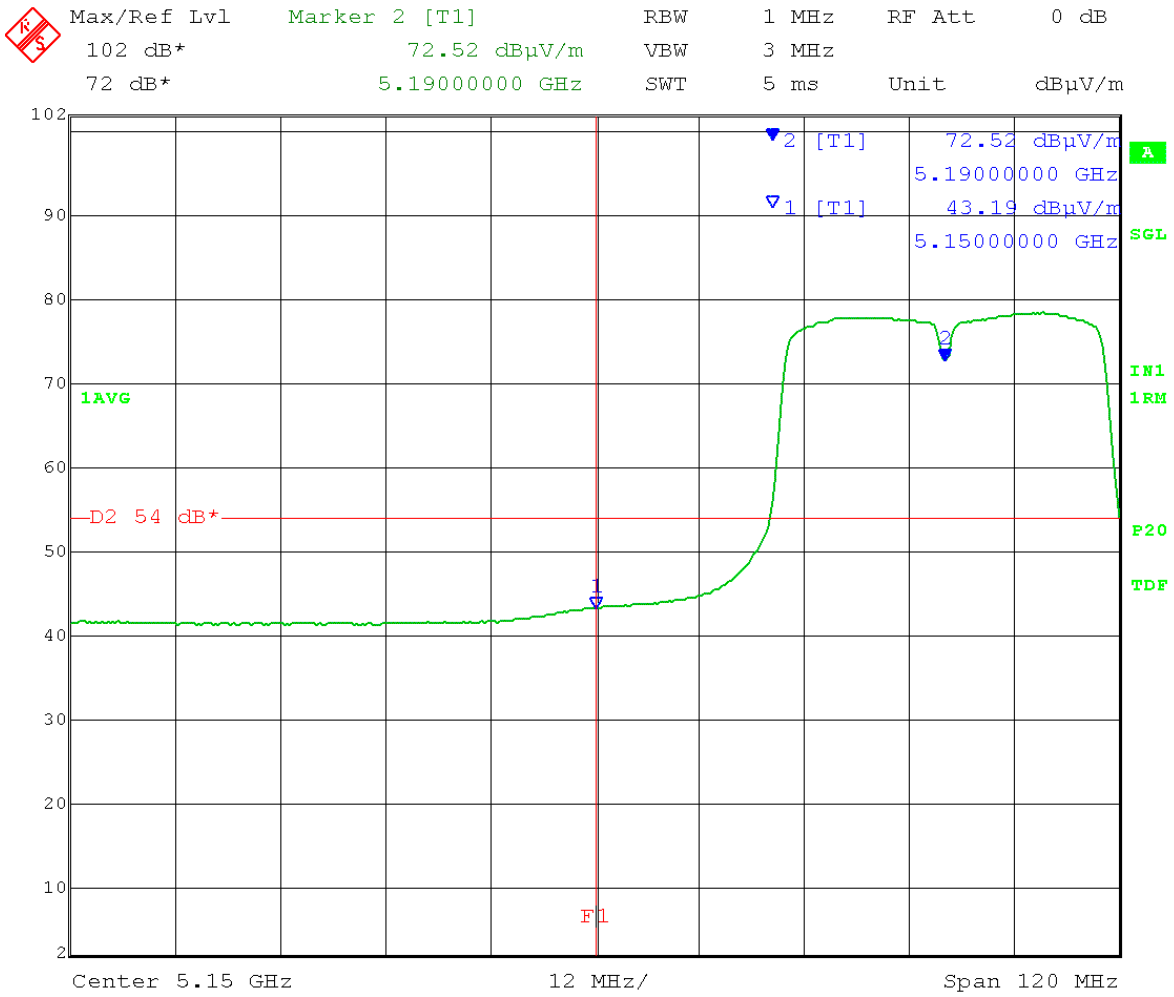
Vertical:



Date: 13.JUN.2014 09:21:37

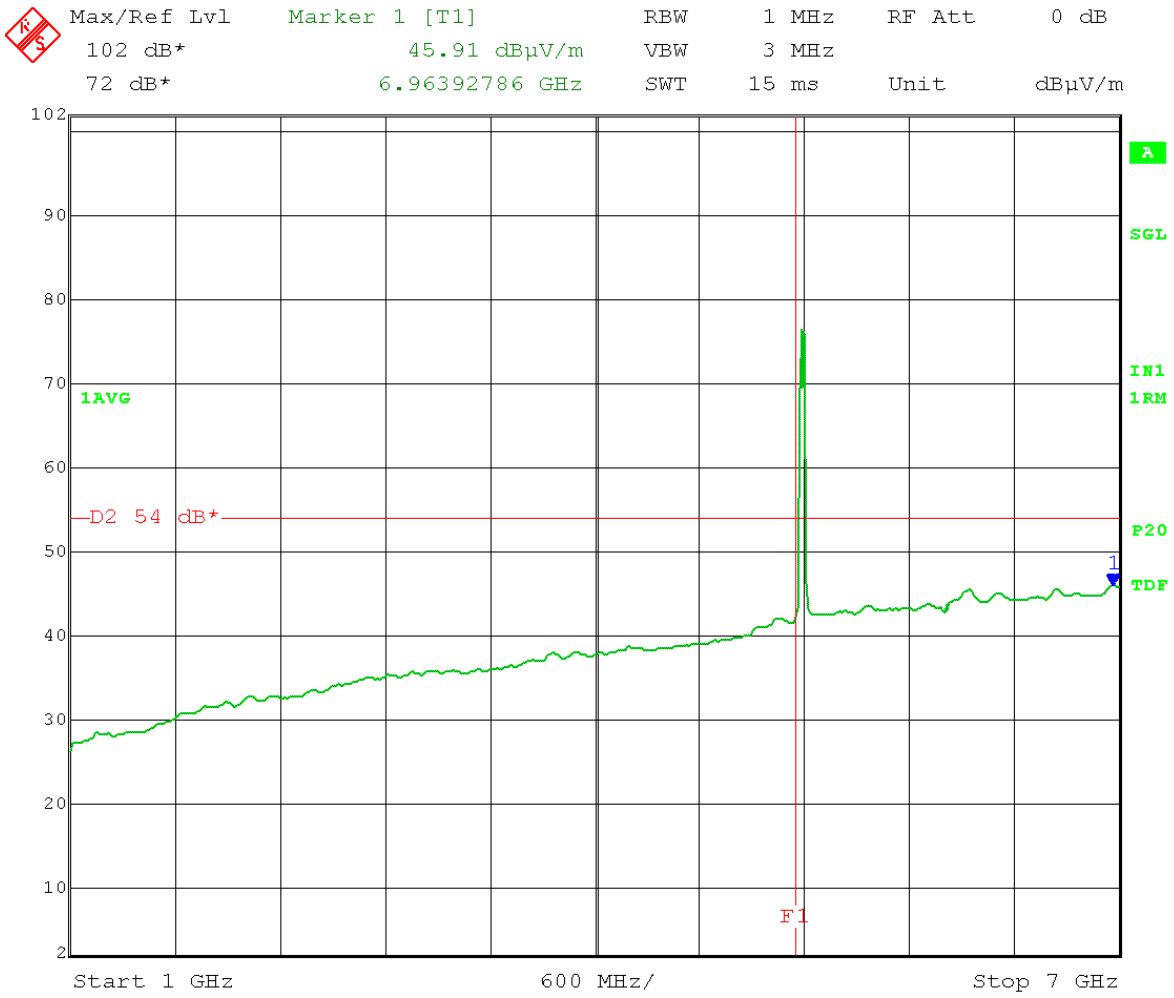
Test Date: 06-13-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 sweeps
Channels 0 and 1 both active ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 16
40 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m at 3 meters

Vertical:



Date: 13.JUN.2014 09:18:37

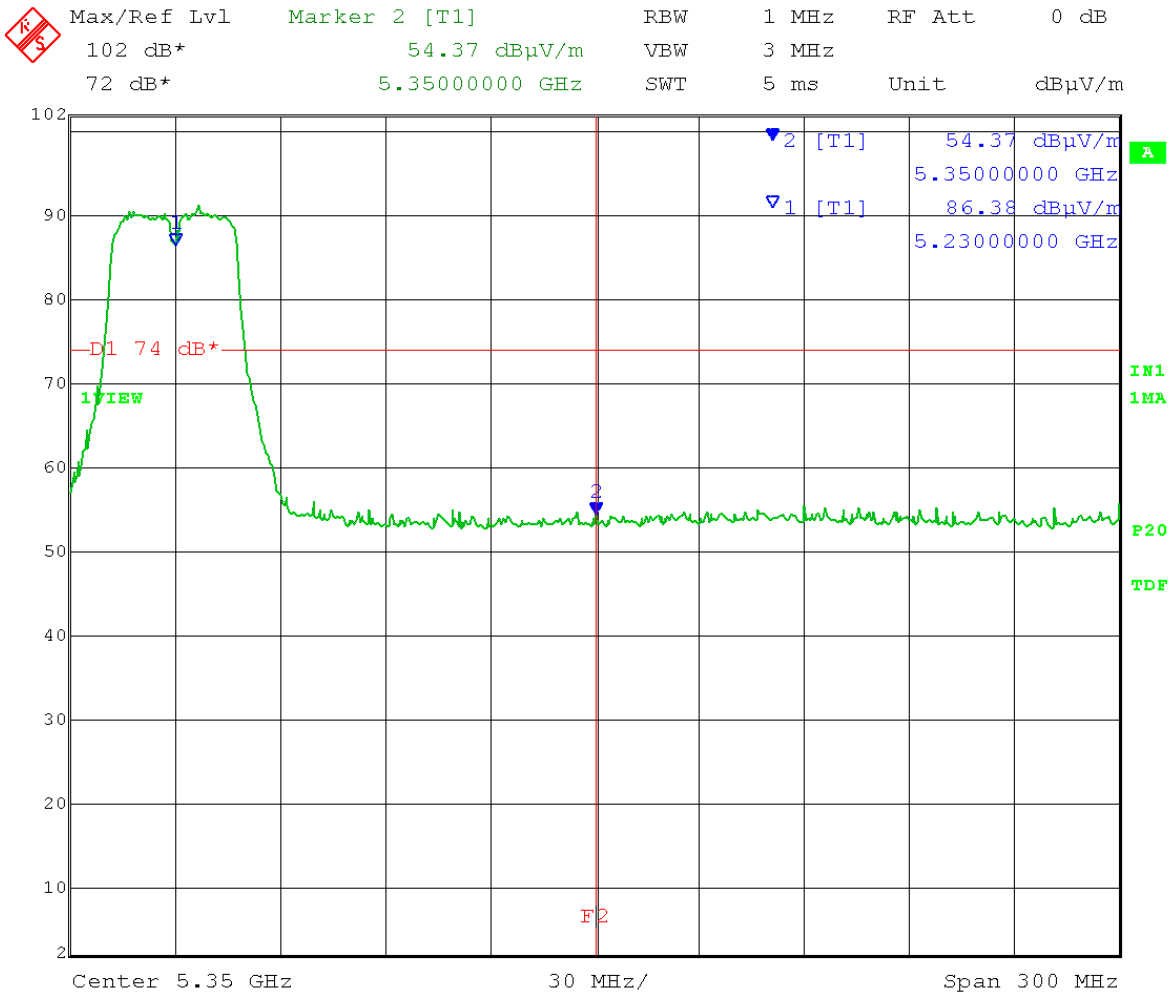
Vertical:



Date: 13.JUN.2014 09:23:09

Test Date: 06-13-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channels 0 and 1 both active ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 16
40 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m at 3 meters

Horizontal:



Date: 13.JUN.2014 09:51:23

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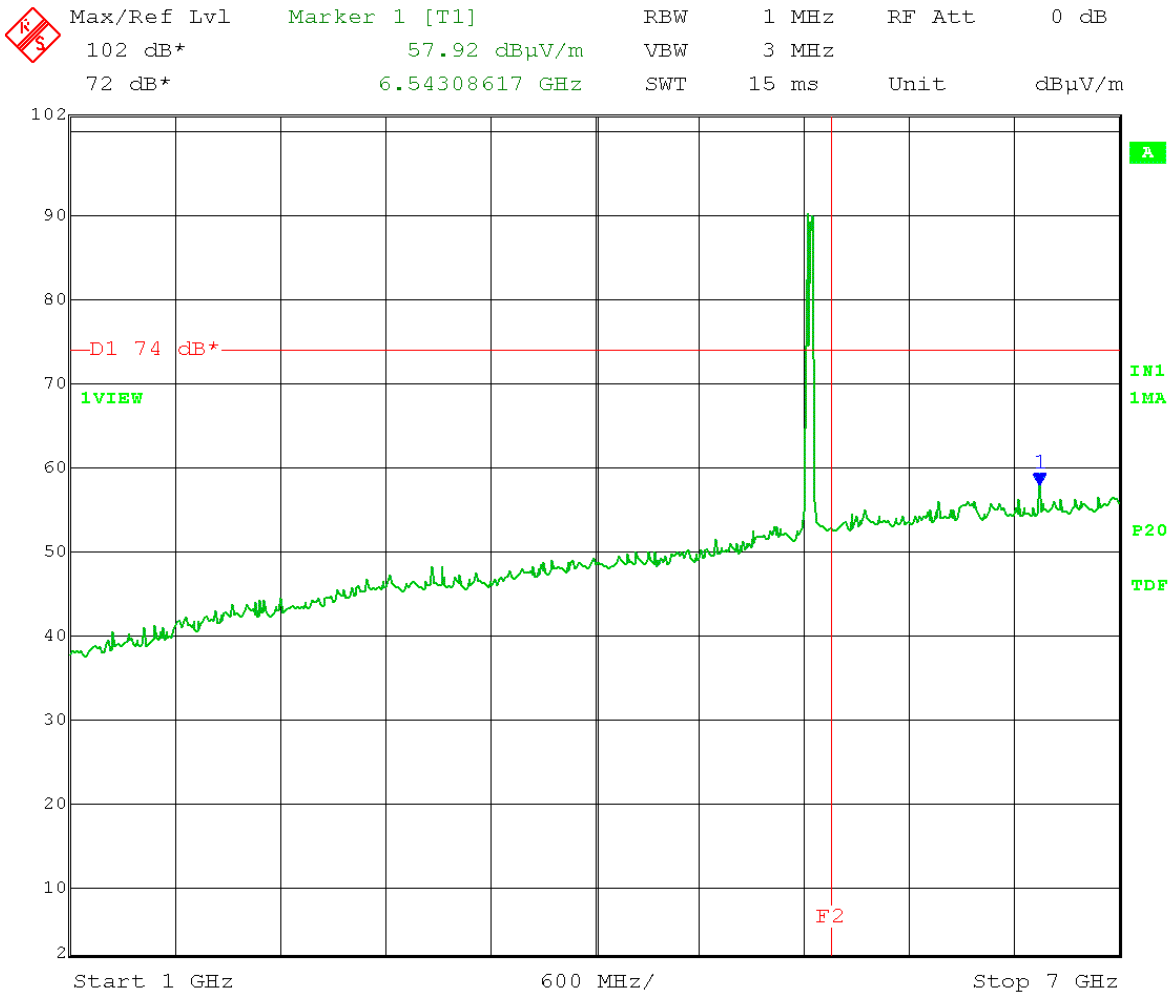
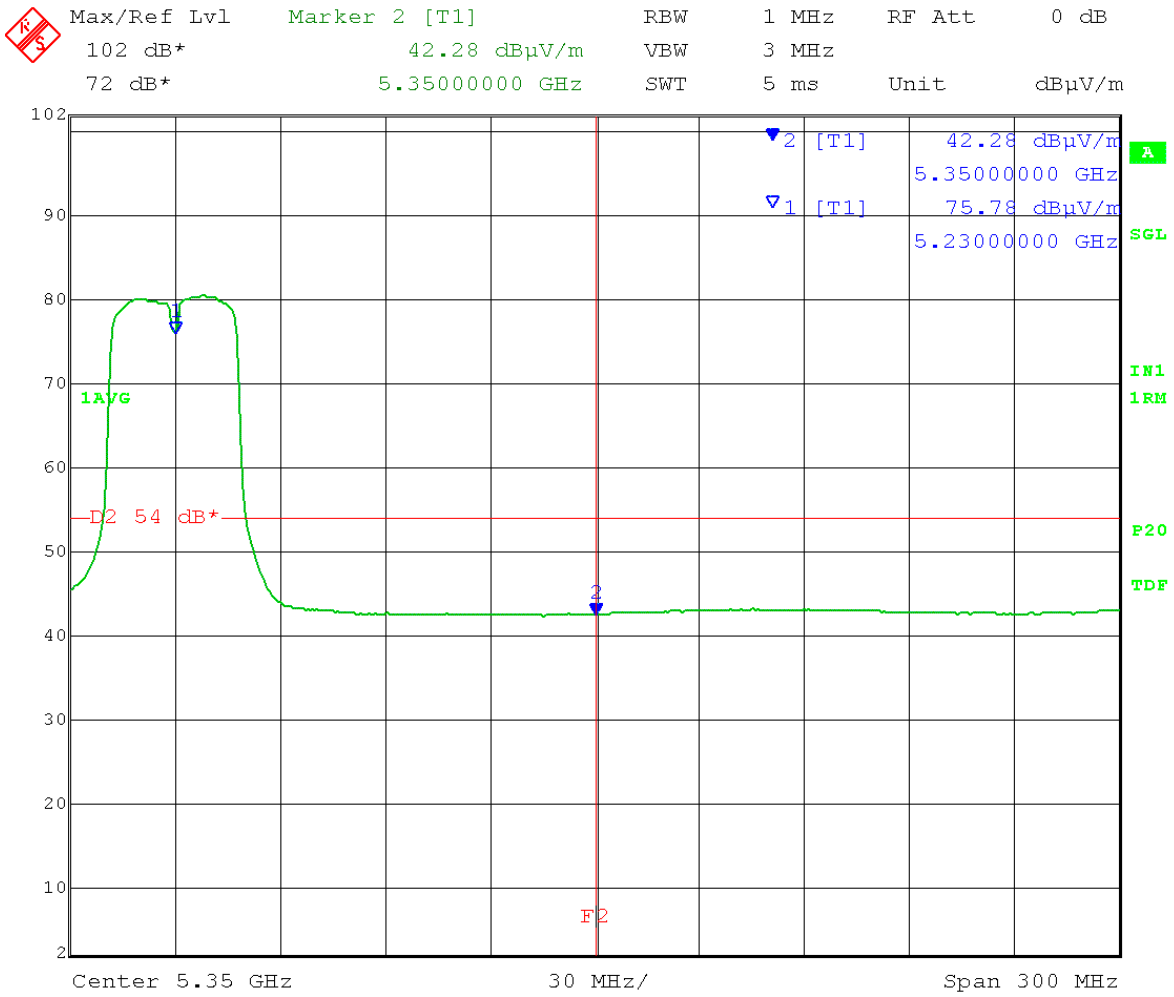


Date: 13.JUN.2014 10:01:39

Test Date: 06-13-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 sweeps
Channels 0 and 1 both active ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 16
40 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m at 3 meters

Horizontal:



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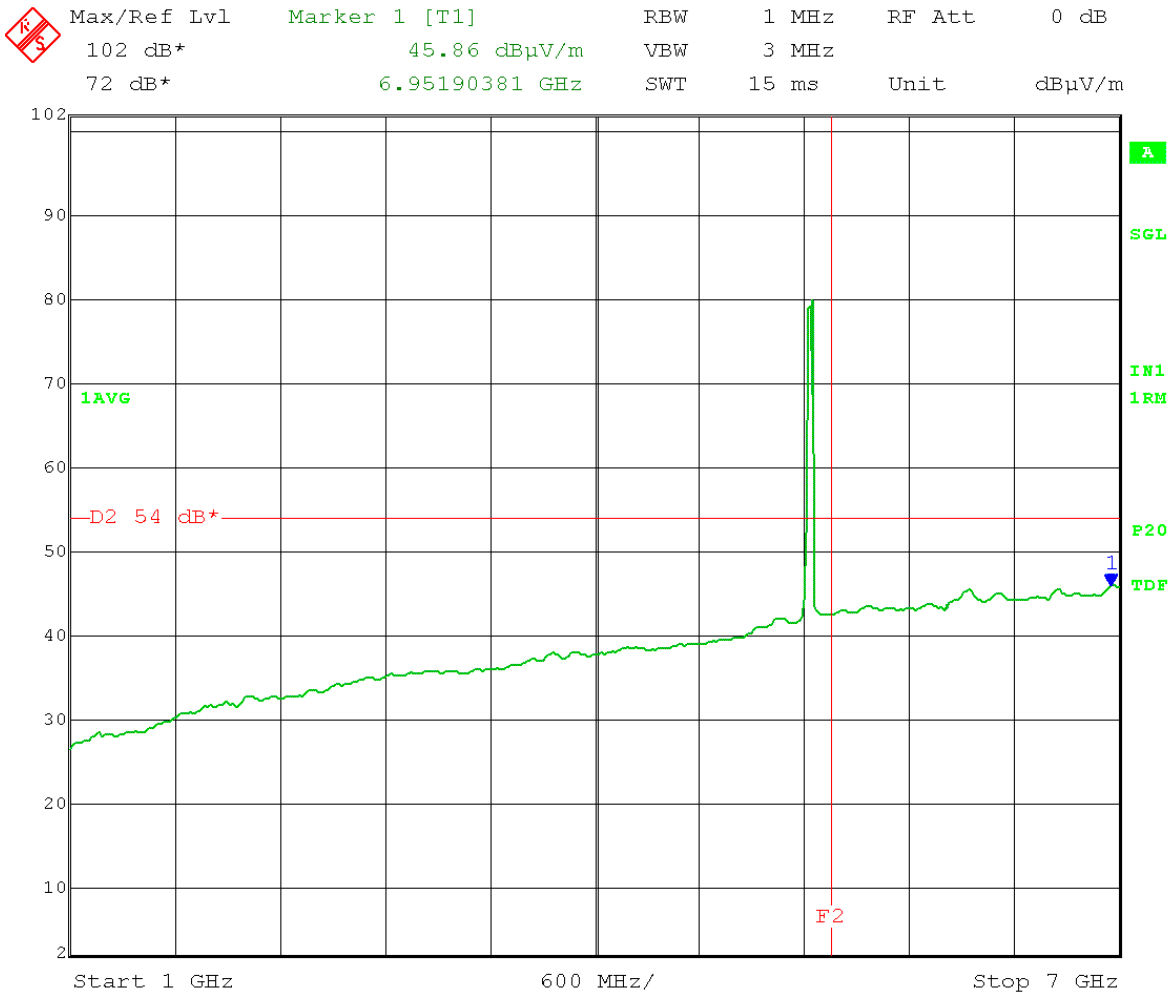
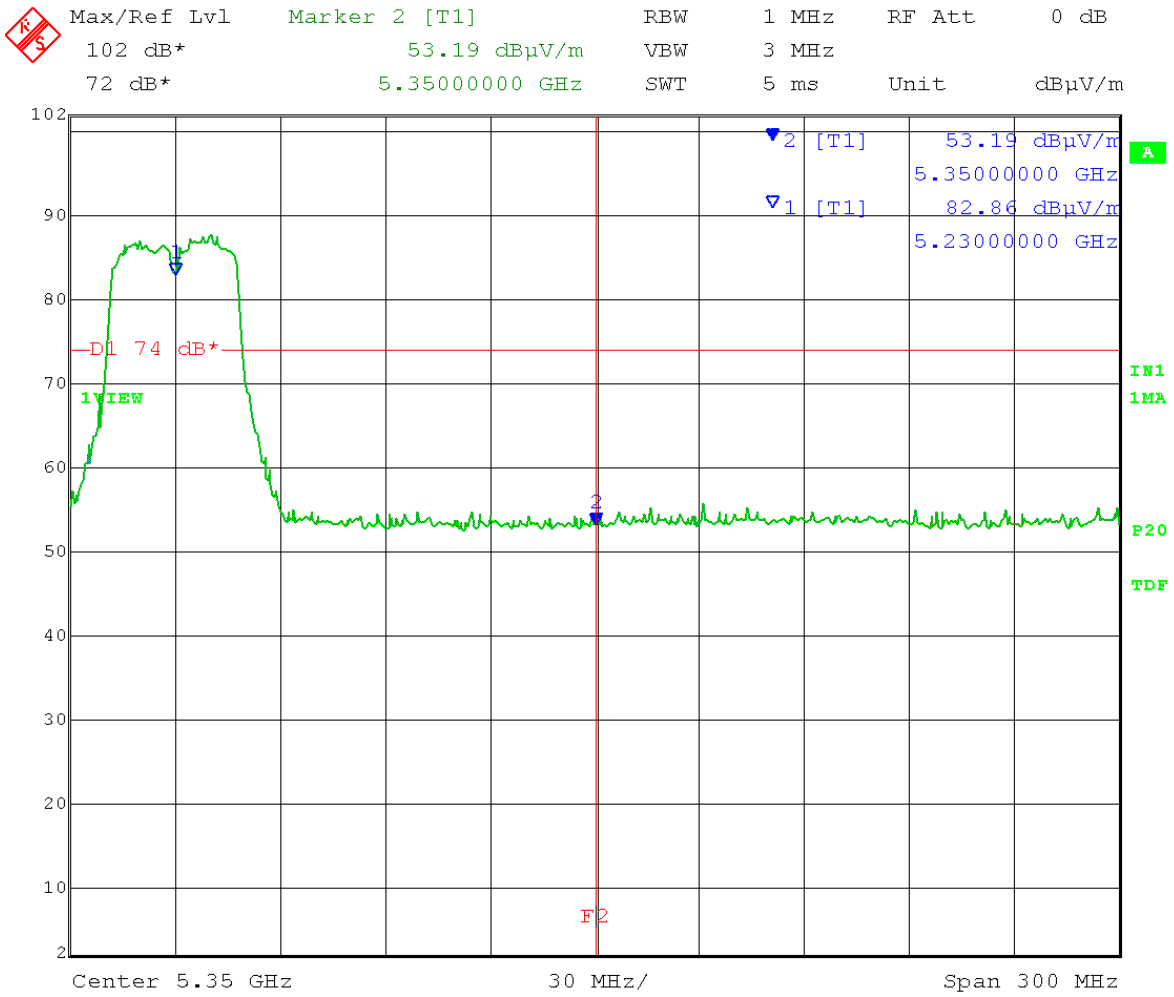


Date: 13.JUN.2014 10:03:02

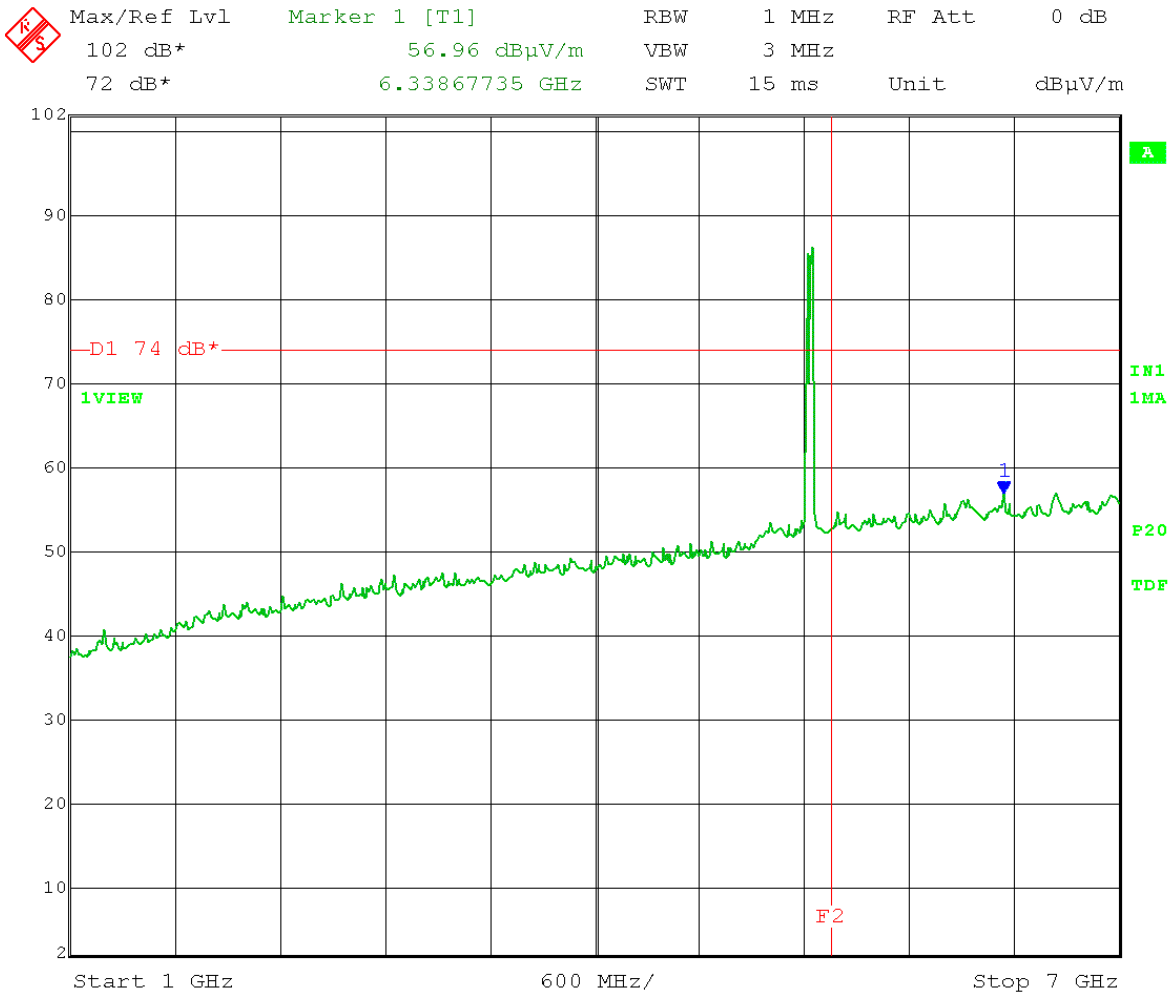
Test Date: 06-13-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channels 0 and 1 both active ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 16
40 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m at 3 meters

Vertical:



Date: 13.JUN.2014 09:32:59

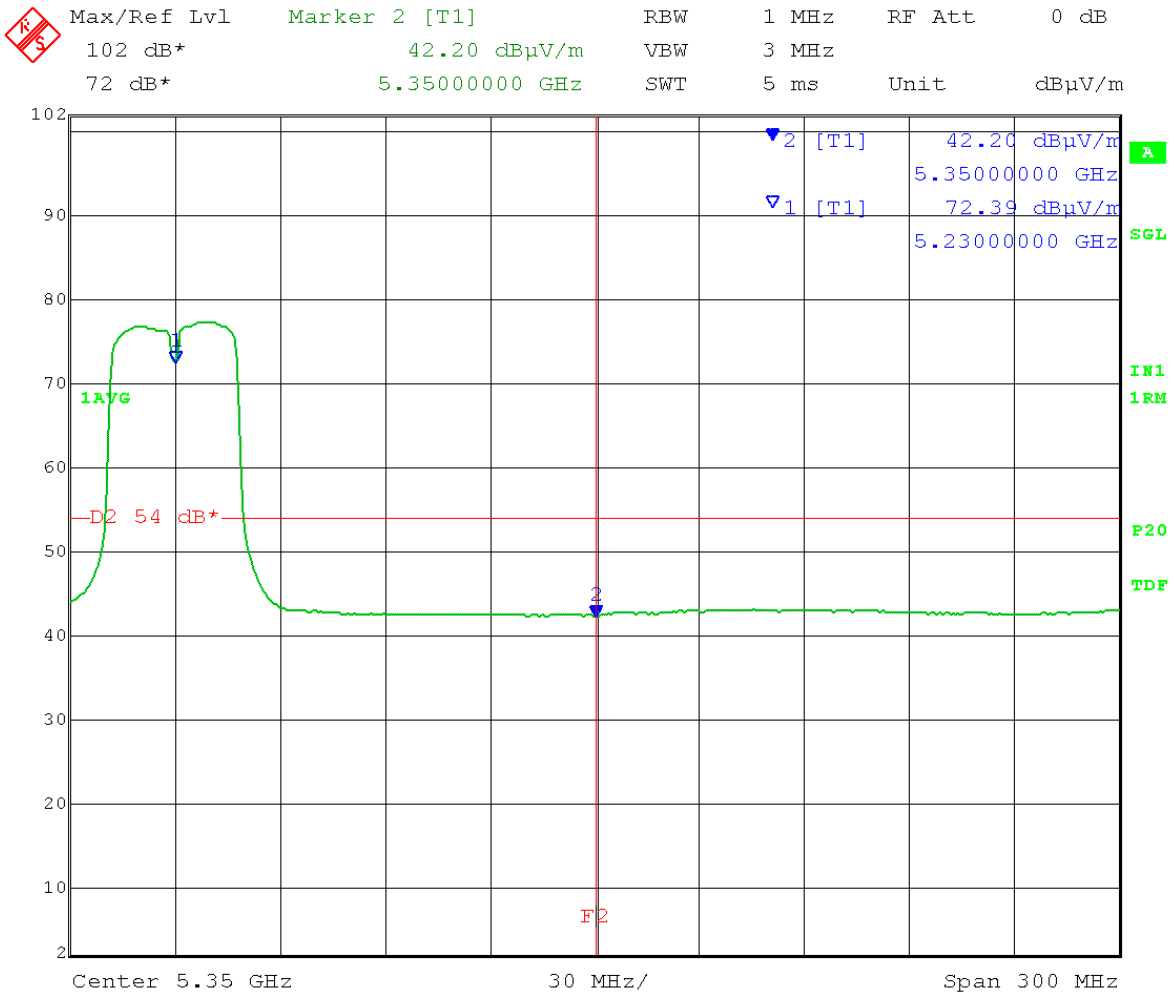
Vertical:



Date: 13.JUN.2014 09:34:09

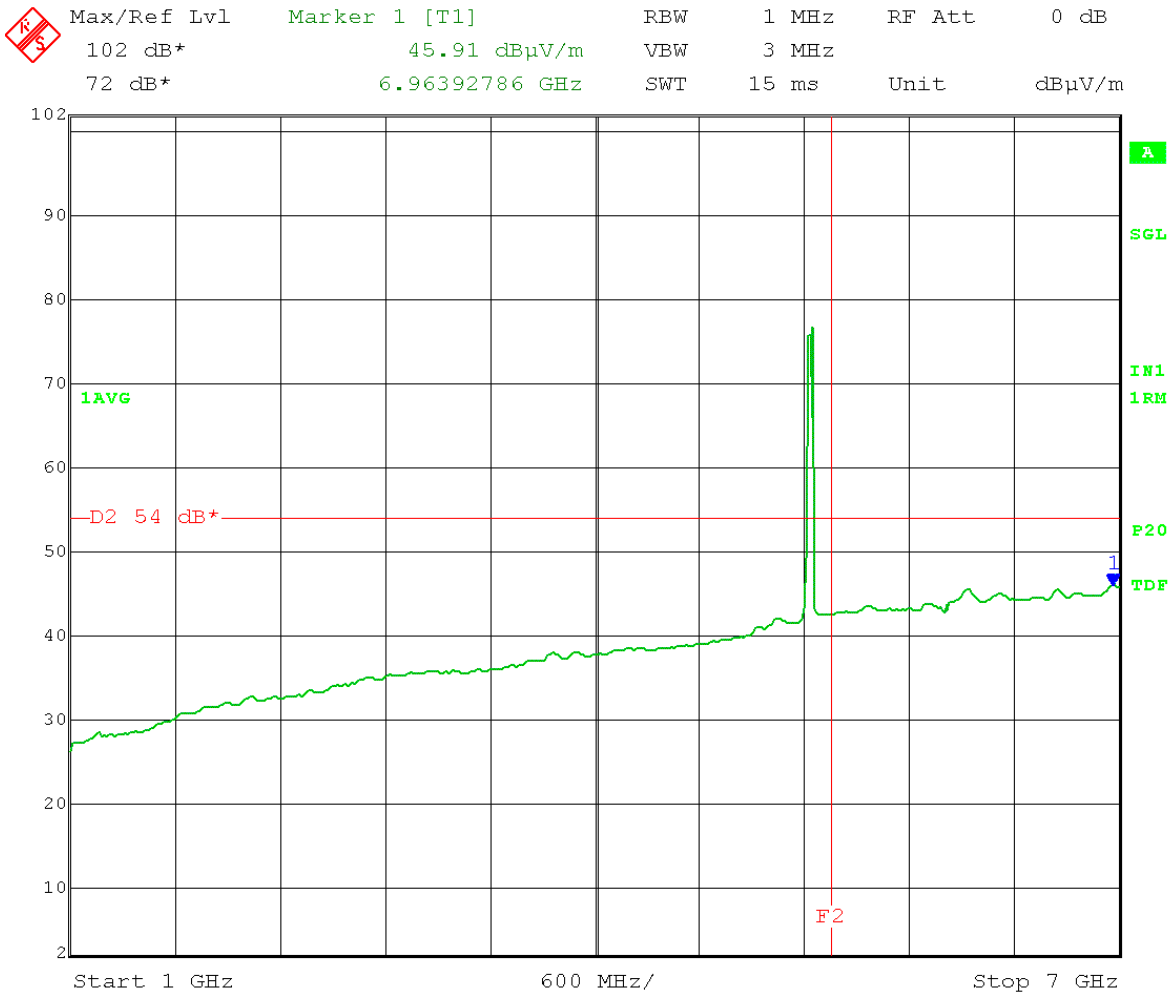
Test Date: 06-13-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII 50 Ohm terminations on antenna ports
Test: Operating Band-edge Measurement – Radiated from cabinet
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 sweeps
Channels 0 and 1 both active ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 16
40 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m at 3 meters

Vertical:



Date: 13.JUN.2014 09:31:19

Vertical:



Date: 13.JUN.2014 09:35:16

Appendix B – Measurement Data

B7.0 Unwanted Emission Levels – Band Edge - RF Conducted

Rule Section: Sections 15.407(b)(1)

Test Procedure: FCC KDB 789033 D02 General UNII Test Procedures v01 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*
Section G(1) – Unwanted emissions in the restricted bands
Section G(3) – General Requirements for Unwanted Emissions Measurements
Section G(5) – Procedure for Unwanted Maximum Emissions Measurements Above 1000 MHz
Section G(6) – Procedure for Unwanted Average Emissions Measurements Above 1000 MHz
Section G(6)(c) – Method AD - Average Detection Method
Section G(3)(d)(ii) – Integration Method

Peak measurements above 1000 MHz
RBW = 1 MHz
VBW ≥ 3 MHz
Detector = peak
Sweep time = auto
Trace mode = max hold

Average measurements above 1000 MHz (required for peak emissions that are above the average limits) – Method AD (Average Detection)
RBW = 1 MHz
VBW ≥ 3 MHz
Detector = RMS (span/(# of points in sweep) ≤ RBW/2)
Averaging type = power
Sweep time = auto
Trace mode = trace average 100 sweeps; increased by a factor of (1 / duty cycle)
For a duty cycle less than 98%, add 10 log (1/duty cycle)

Integration Method
Set RBW = 100 kHz
Set VBW ≥ 3 x RBW
Perform band-power integration across the 1 MHz bandwidth in which the emission level is to be measured.

EIRP calculation:
Add upper bound on out-of-band antenna gain to measured antenna port conducted emission power. (This is the maximum in-band gain or 2 dBi, whichever is greater)
Add 10 log(N), where N is the number of output, for MIMO operation

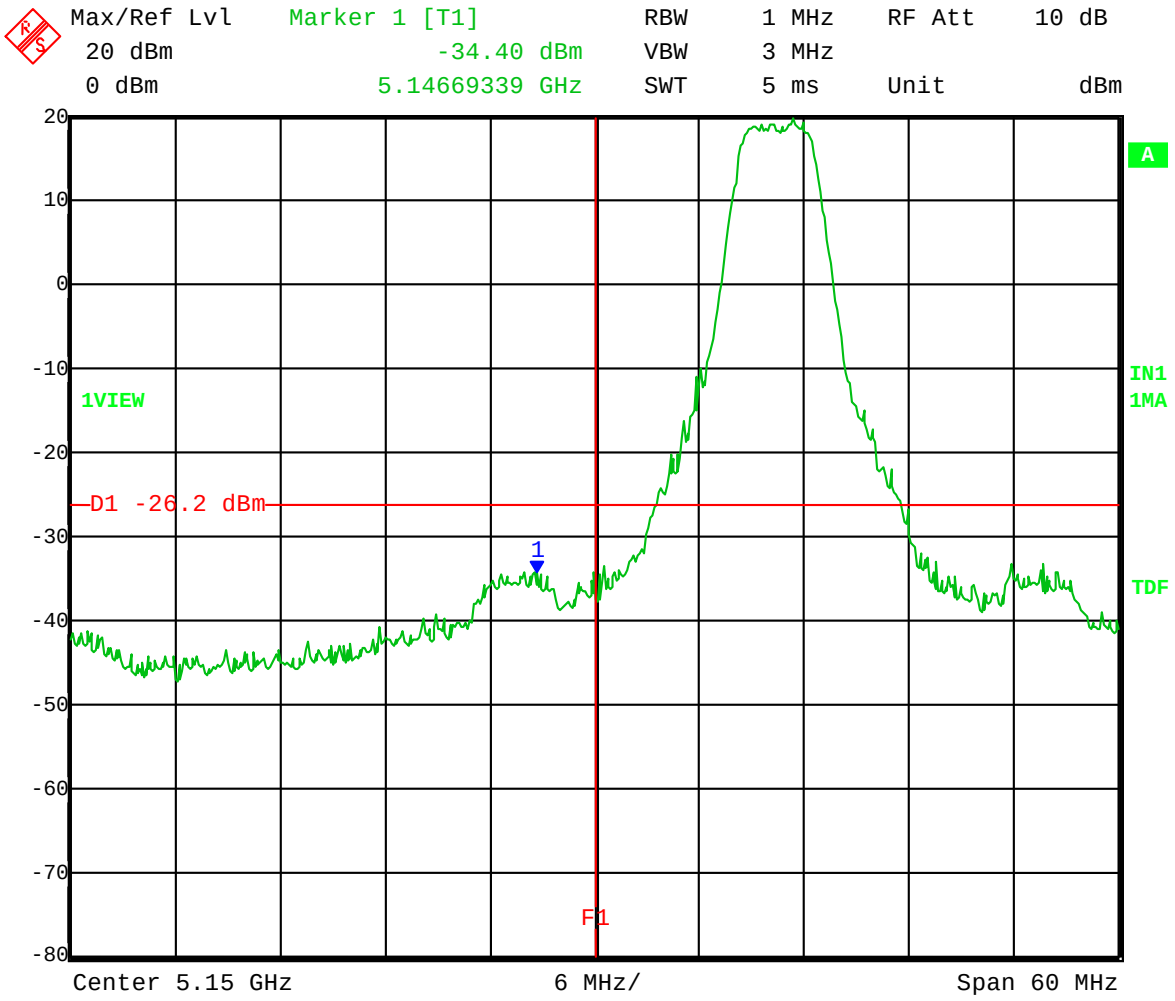
Field strength calculation:
Above 1 GHz: E (dBμV/m) = EIRP (dBm) – 20 log (d{meters}) + 104.77

Limits: Inside restricted bands: Peak and Average limits of FCC Part 15.209

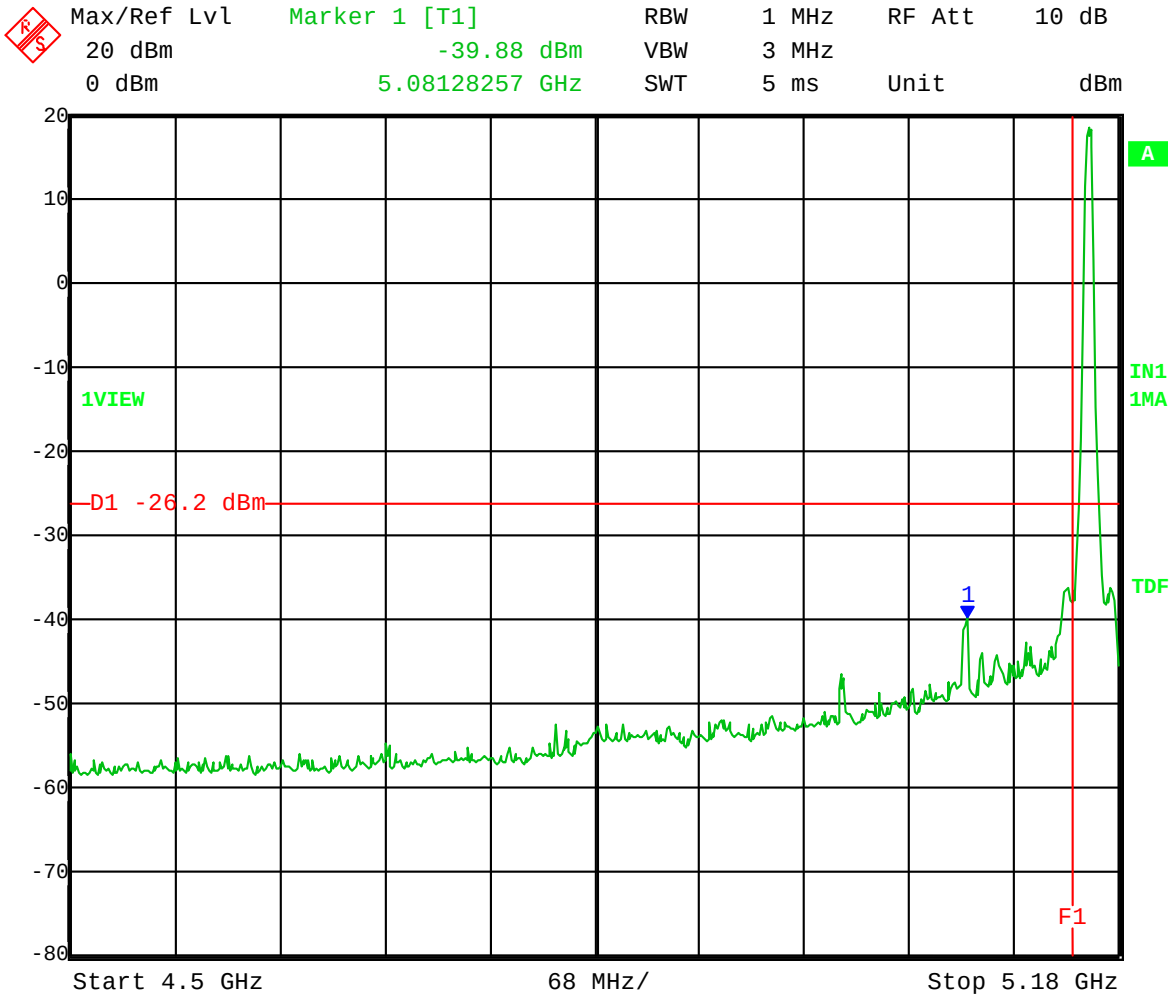
Notes: 5 MHz channel bandwidth measurements were taken with Legacy OFDM 54 Mbit/s modulation at the lowest, middle, and highest channels of operation. 40 MHz channel bandwidth measurements were taken with MCS15 OFDM modulation. The EUT was set to transmit continuously with 100% duty cycle.

Included in this "band edge" section of the report are charts showing compliance to the entire restricted band nearest the EUT's operating band edge frequency.

Test Date: 05-15-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 18
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -26.2 dBm

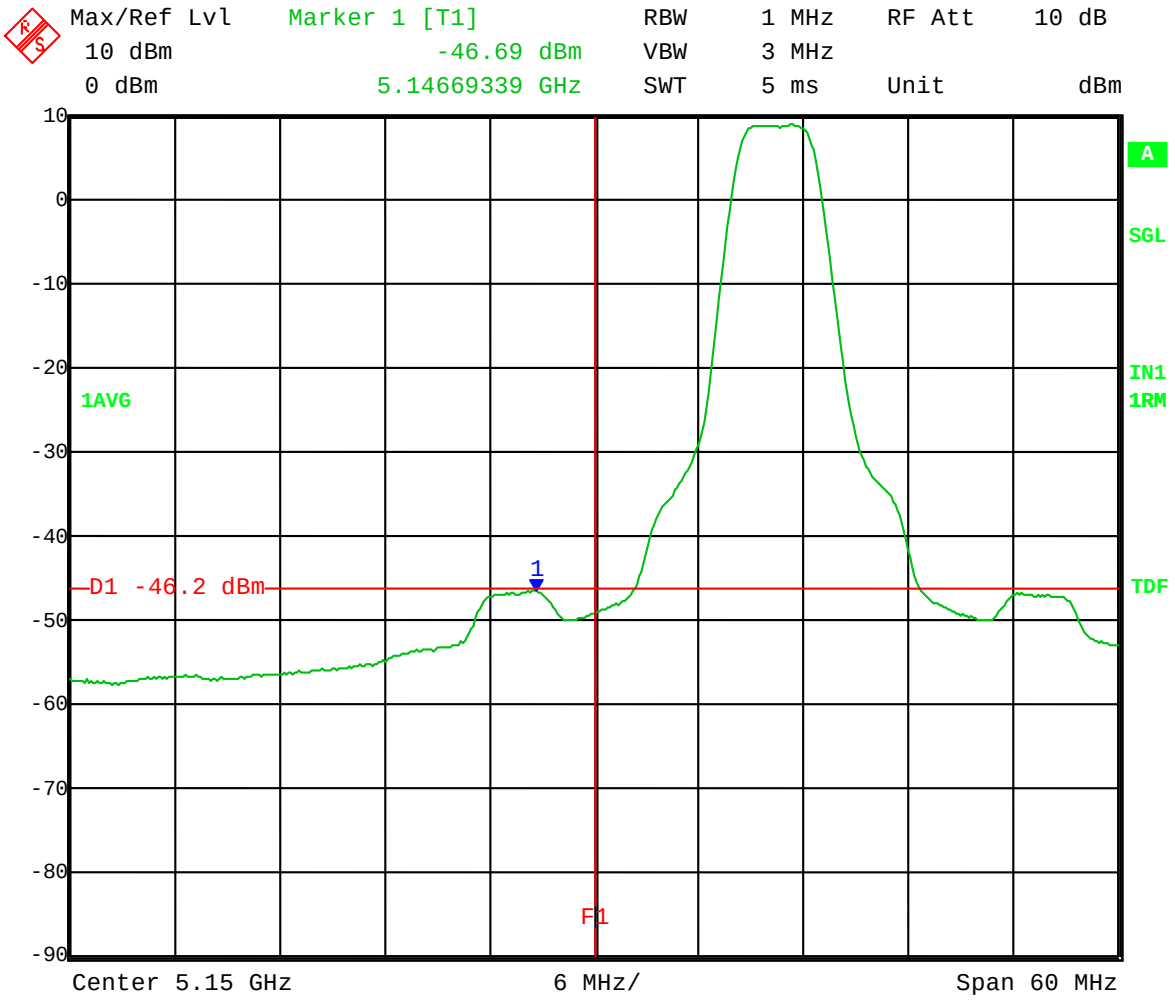


Date: 15.MAY.2014 15:46:41



Date: 15.MAY.2014 15:47:54

Test Date: 05-15-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 18
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -46.2 dBm



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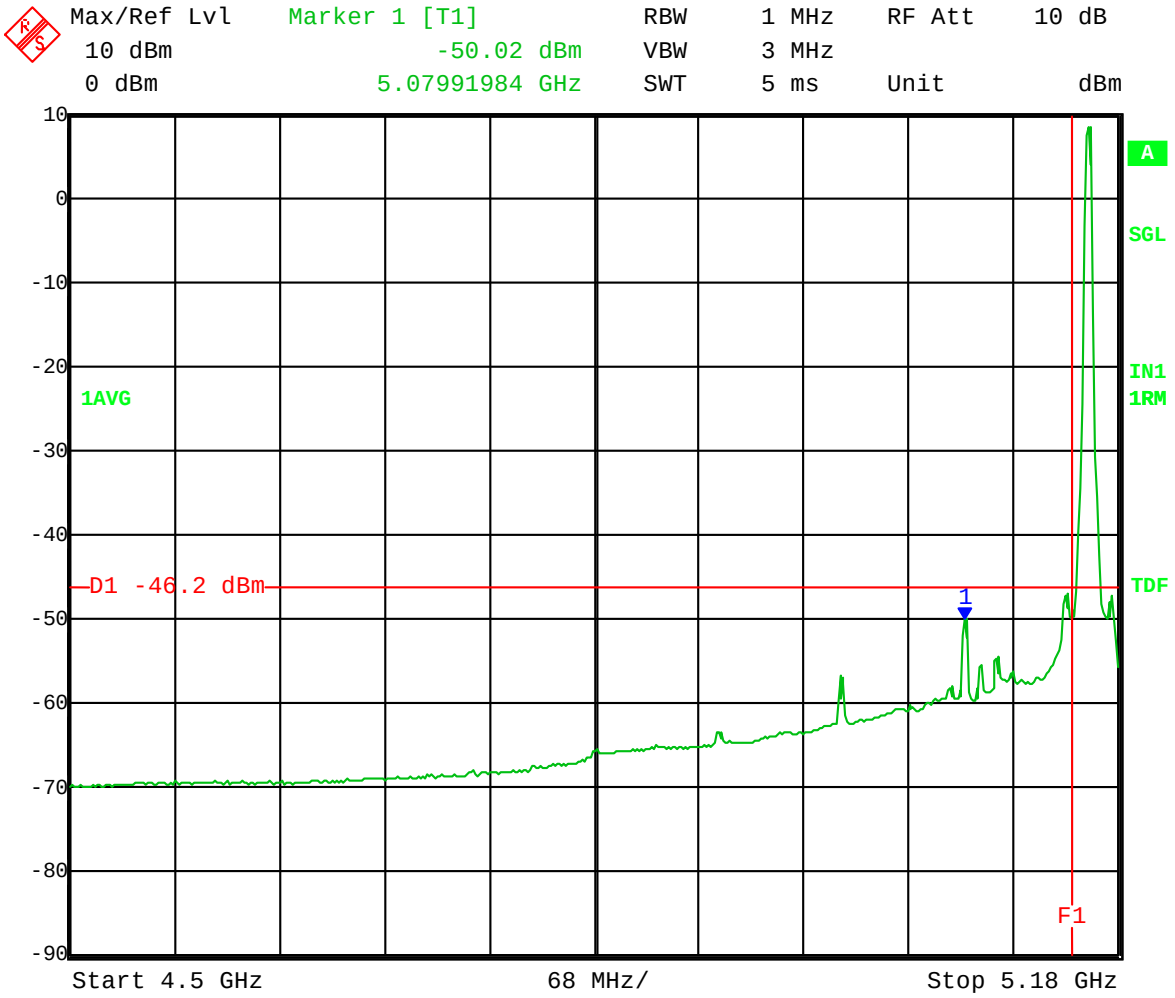
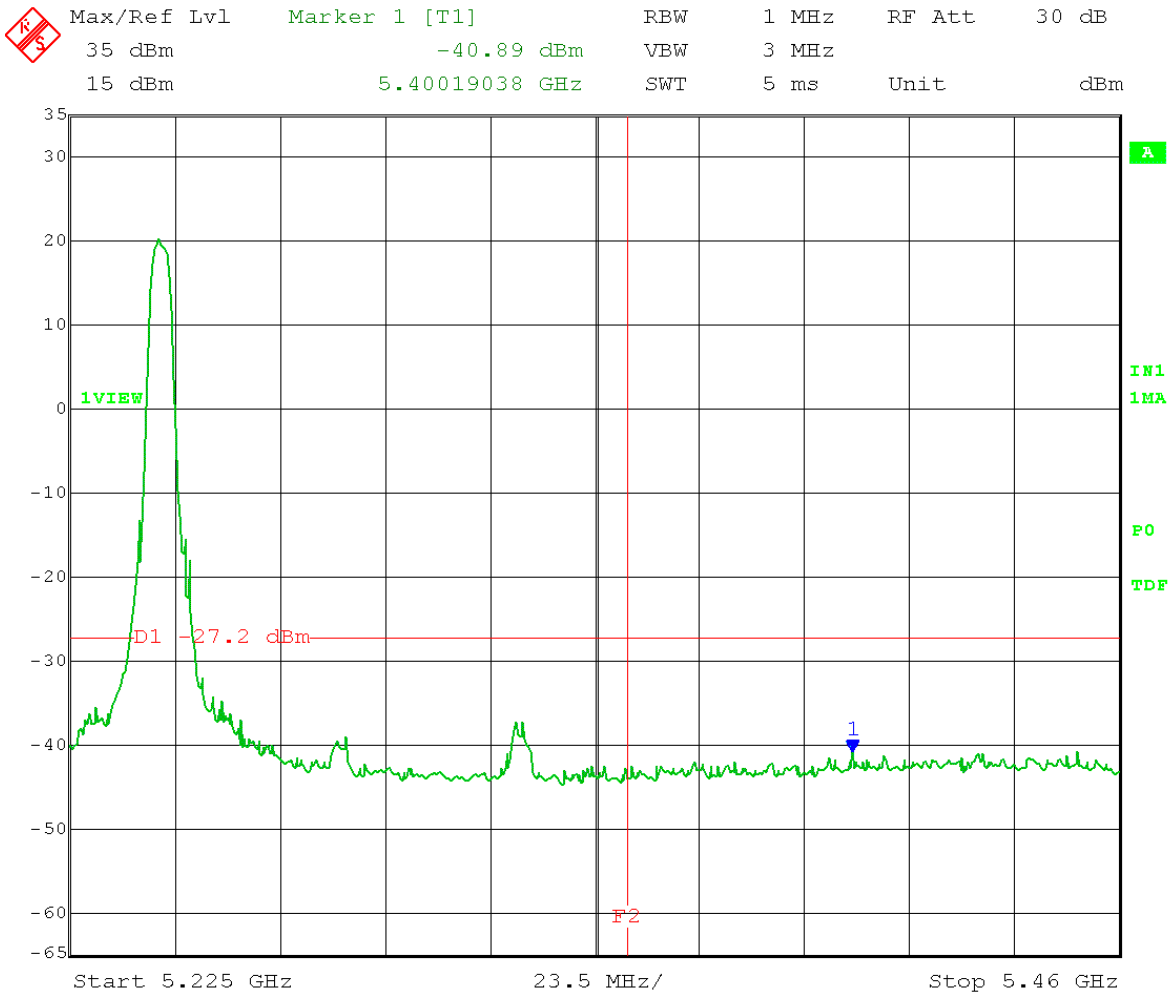


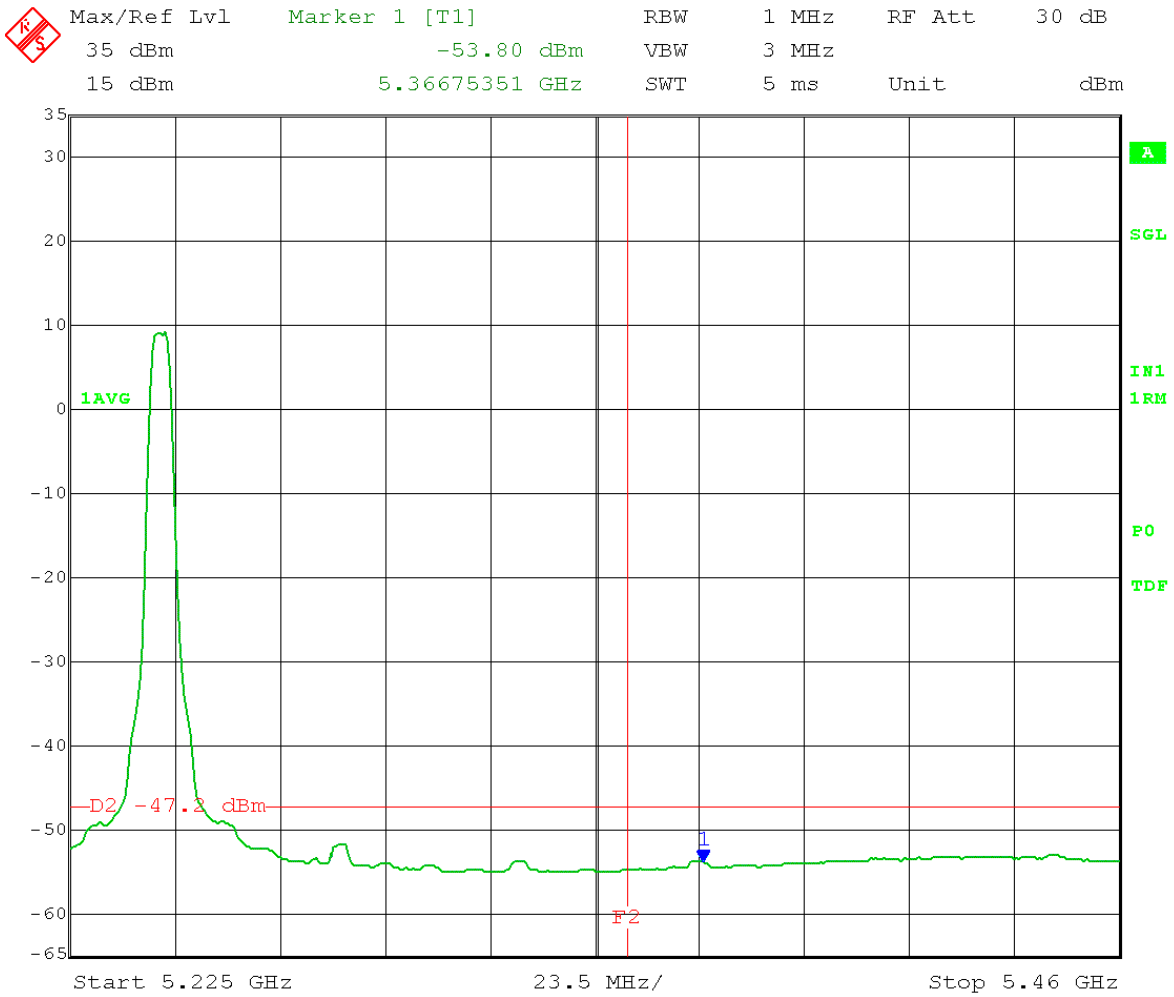
Date: 15.MAY.2014 15:44:33

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 18
5 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -26.2 dBm



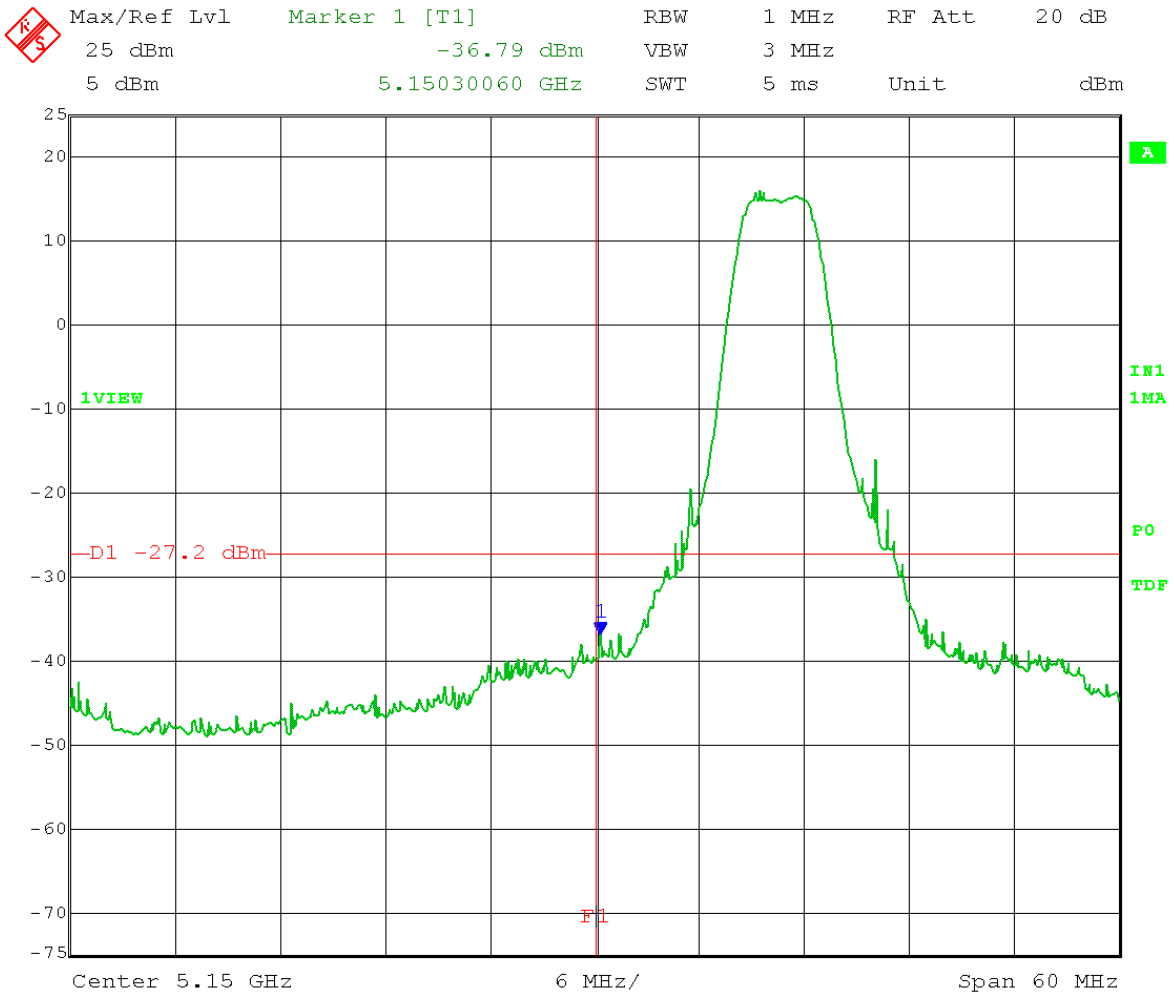
Date: 19.MAY.2014 13:41:28

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 18
5 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -46.2 dBm

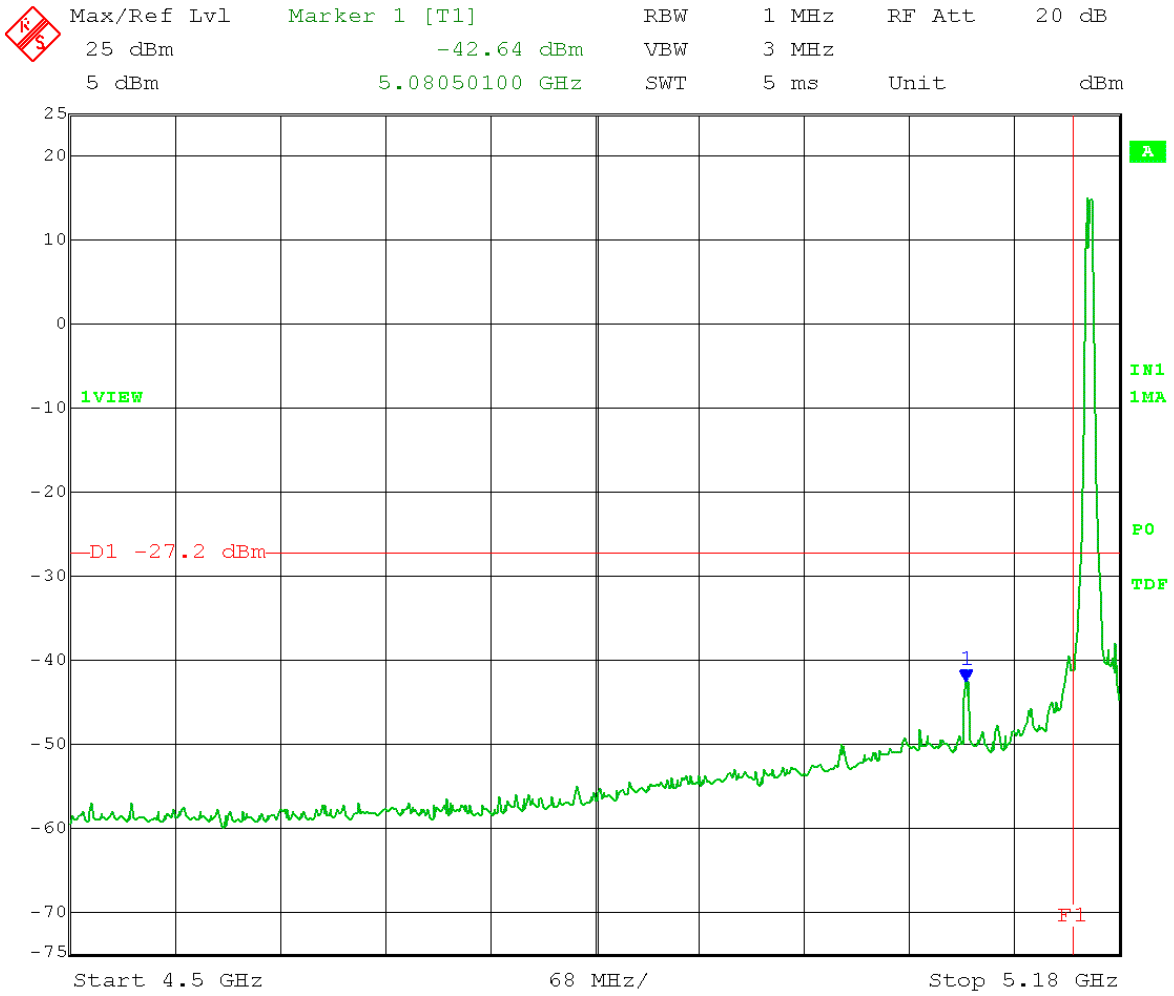


Date: 19.MAY.2014 13:40:30

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 15
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -27.2 dBm

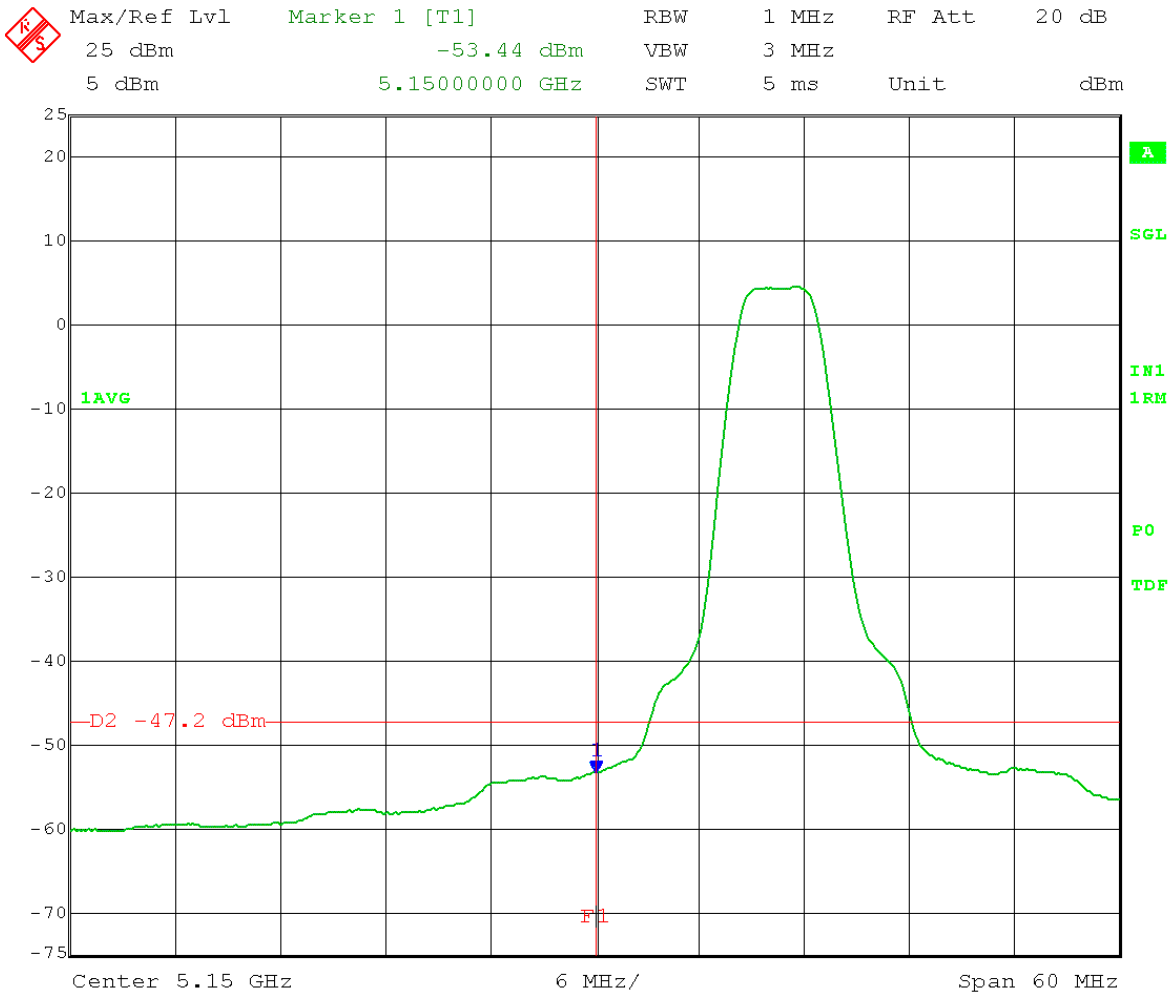


Date: 19.MAY.2014 13:34:03



Date: 19.MAY.2014 13:33:09

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 15
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm



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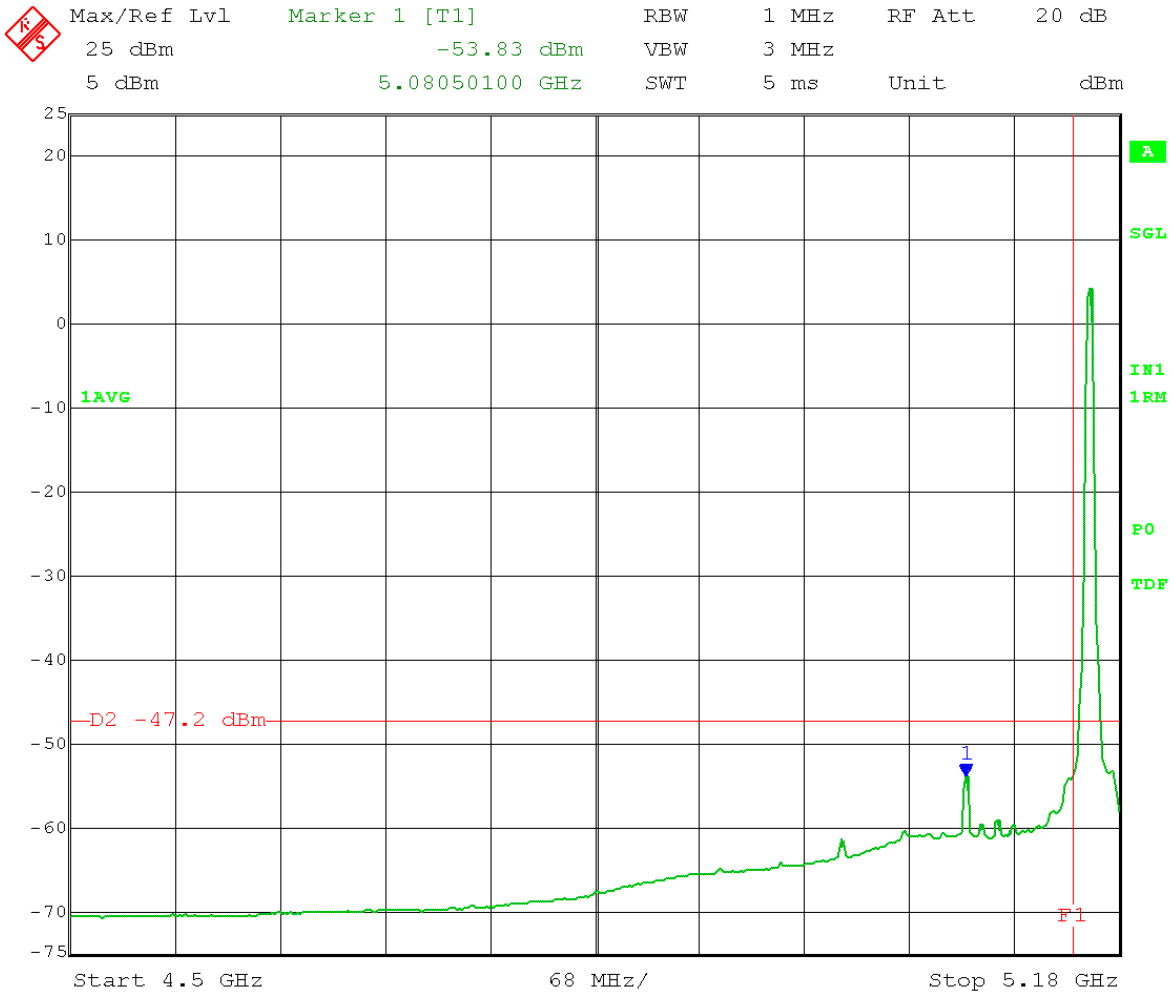
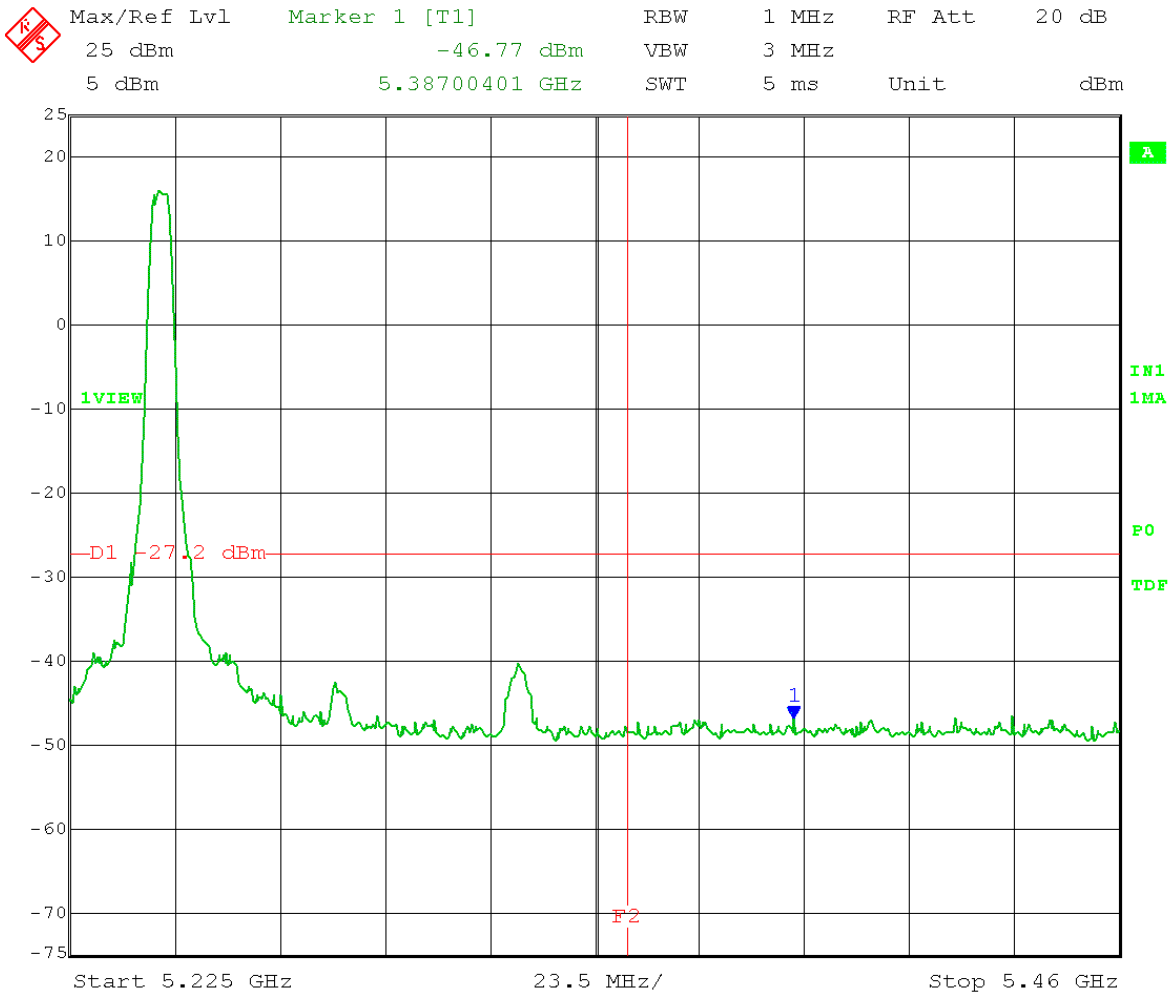


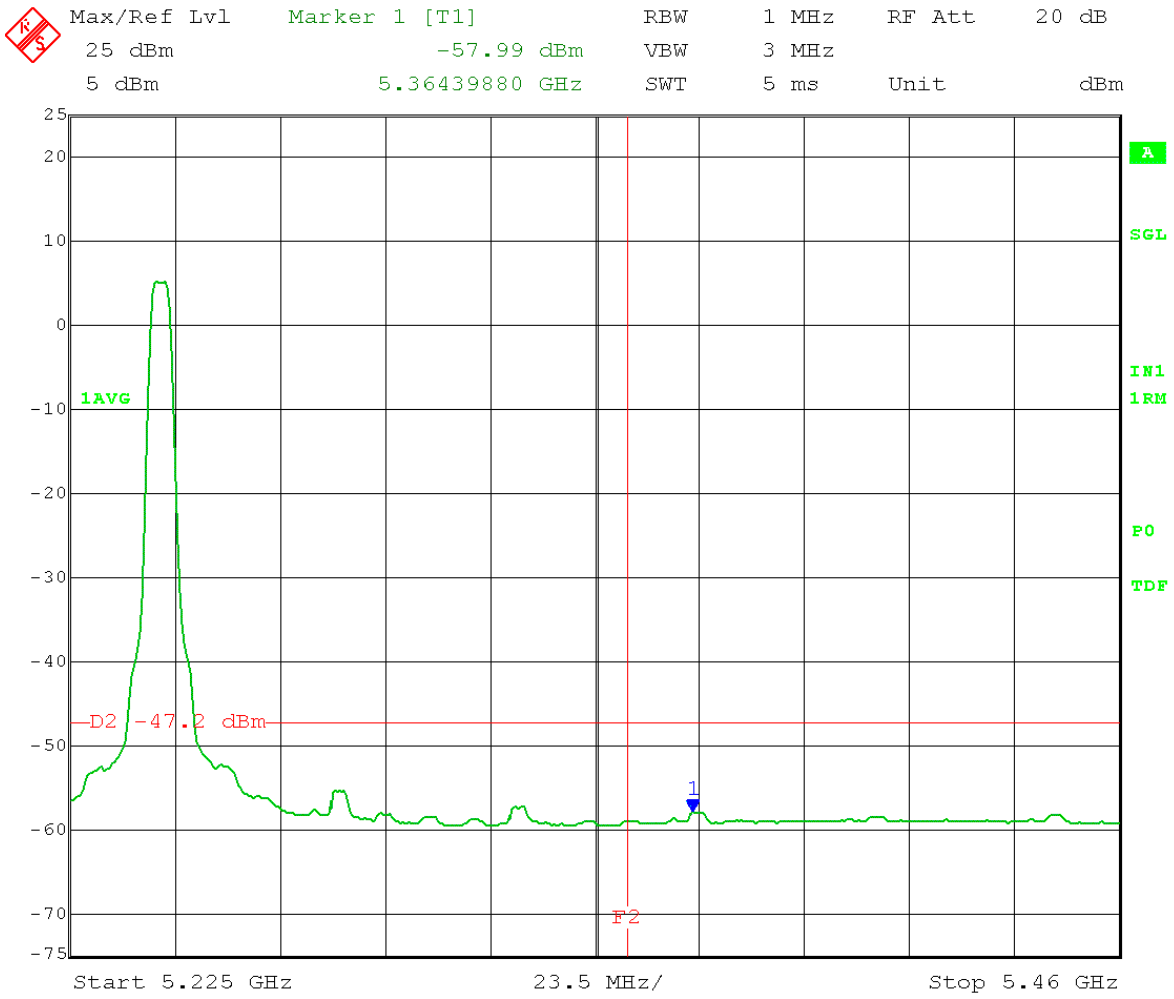
Date: 19.MAY.2014 13:32:00

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 15
5 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -27.2 dBm



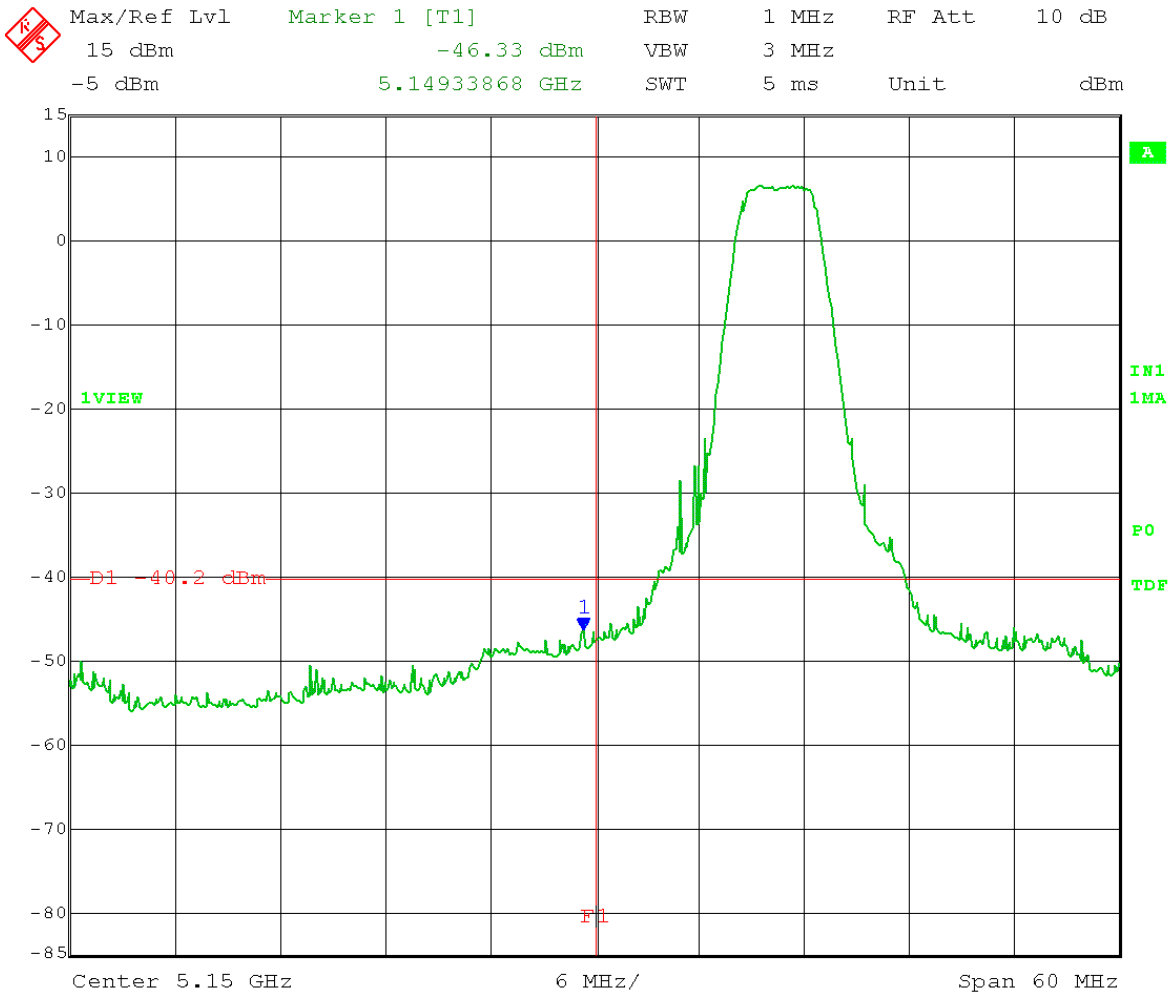
Date: 19.MAY.2014 13:36:03

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 15
5 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm



Date: 19.MAY.2014 13:37:16

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna assembly gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 7
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna assembly gain – 3 dB (MIMO) = -40.2 dBm



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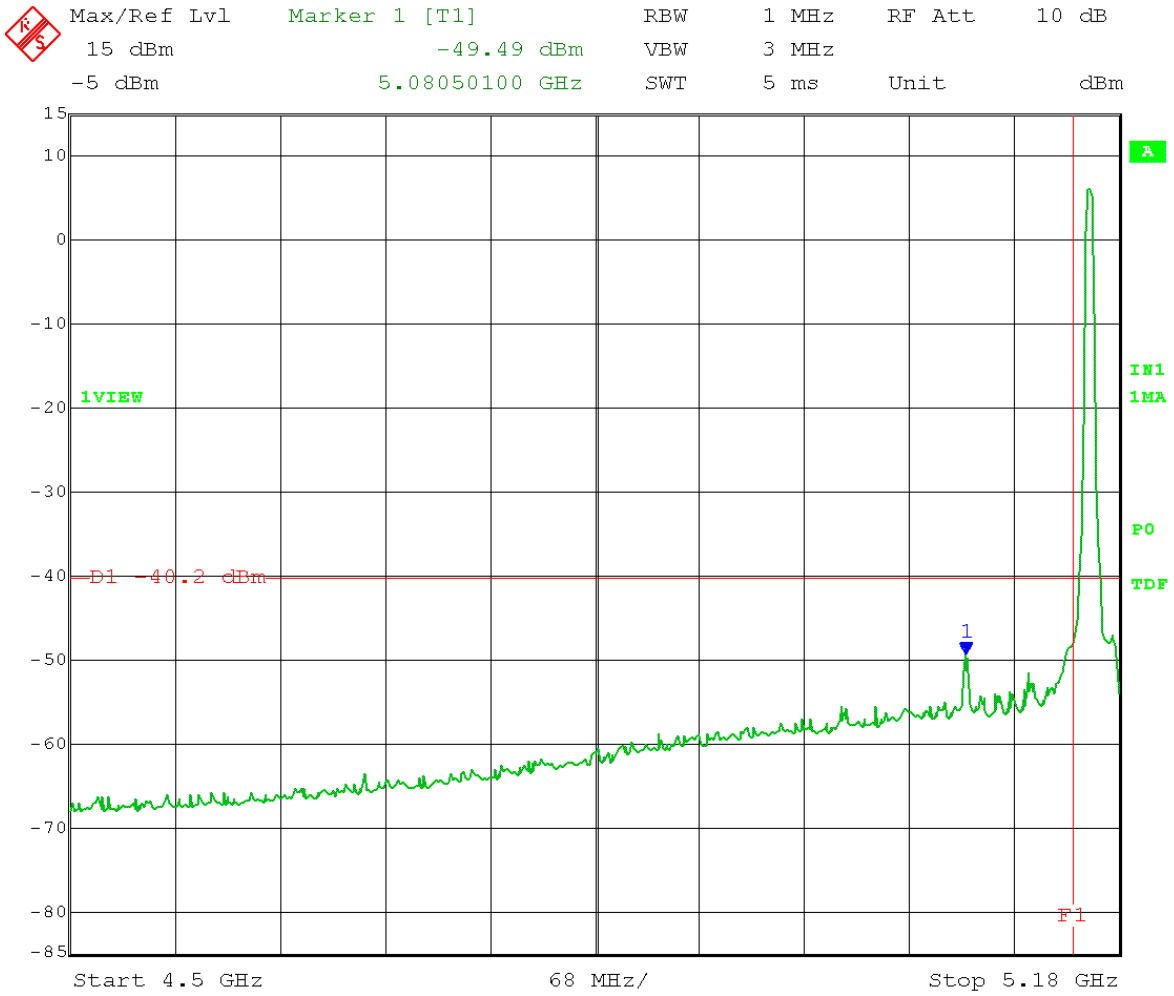
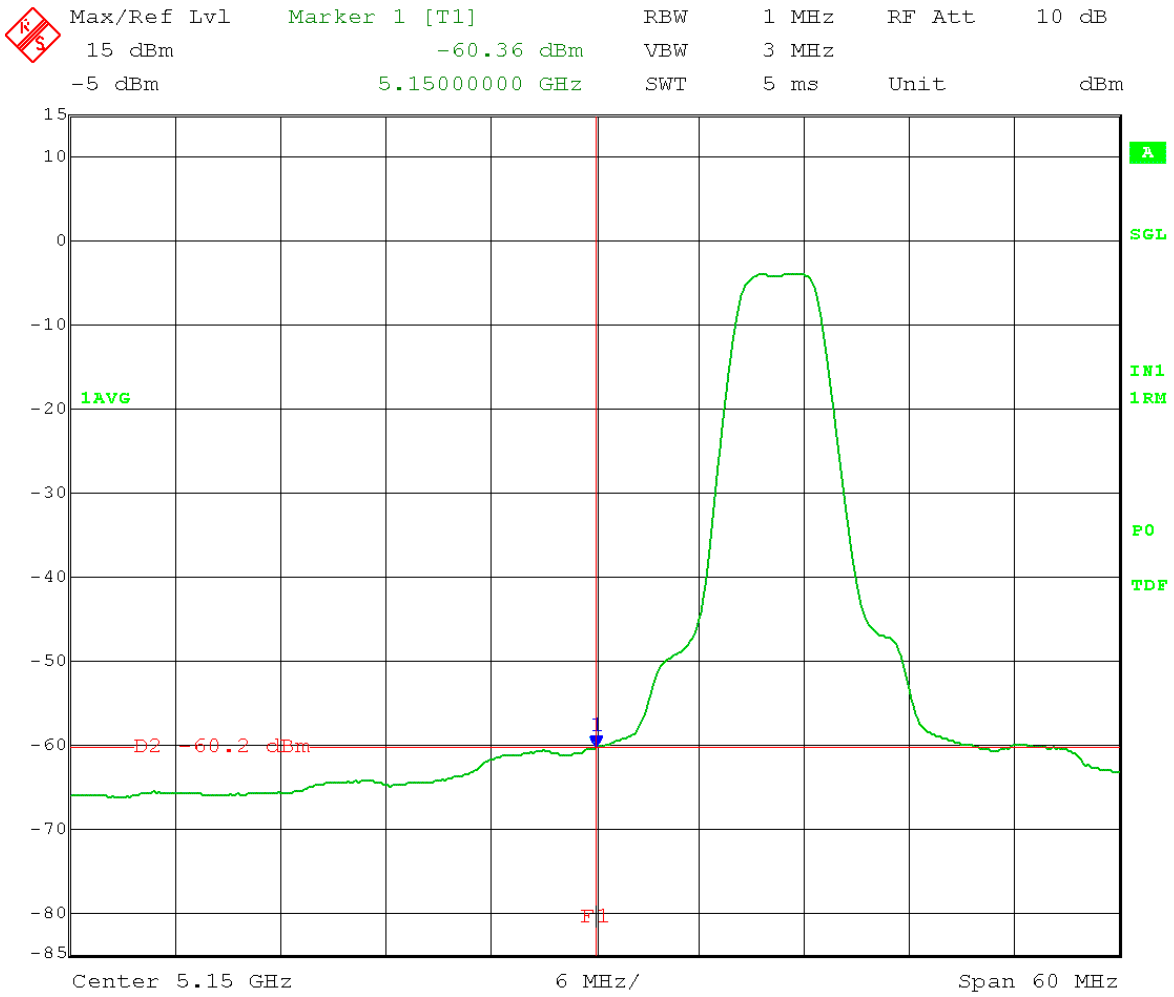


Date: 19.MAY.2014 11:51:50

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna assembly gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.160 GHz Output power setting: 7
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna assembly gain – 3 dB (MIMO) = -60.2 dBm



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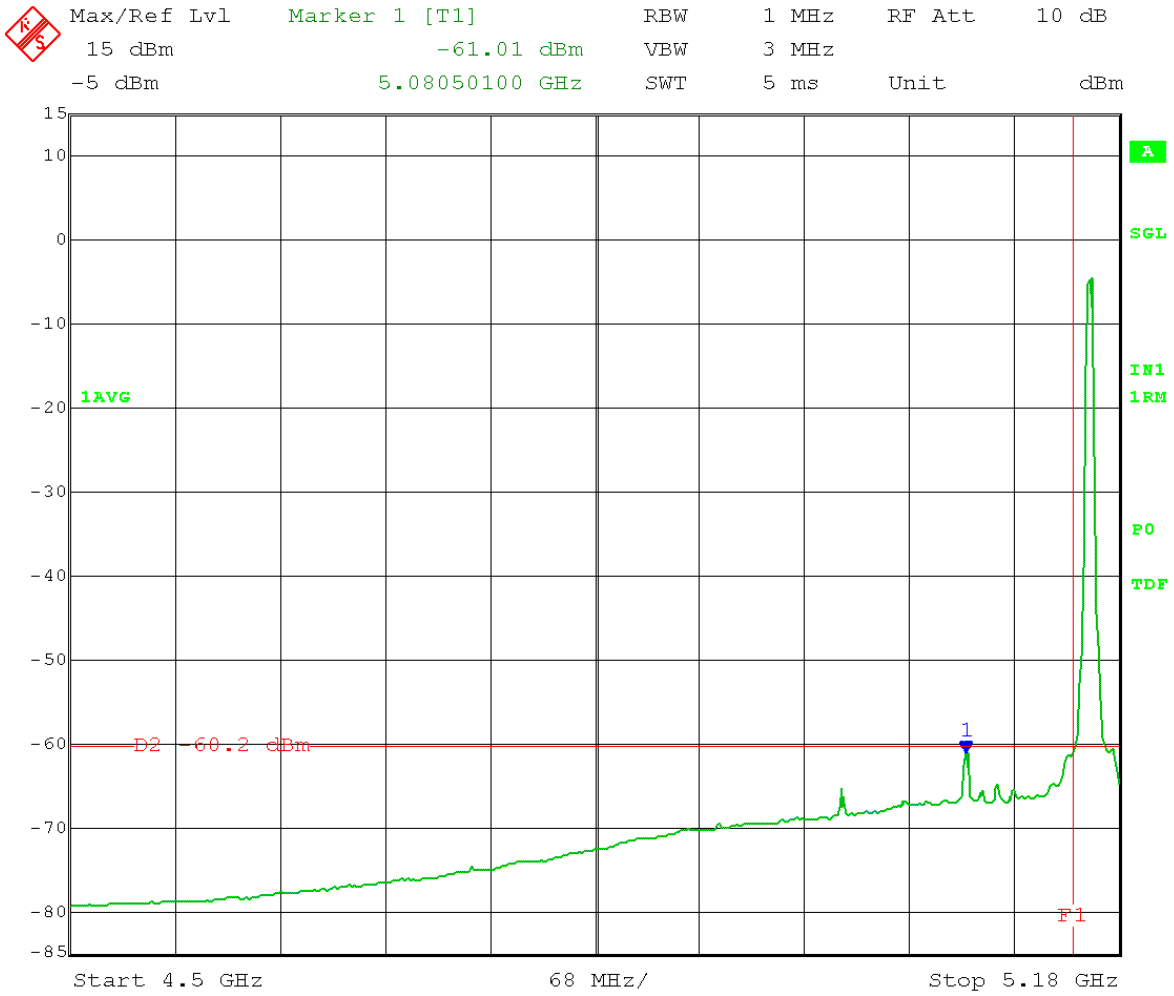
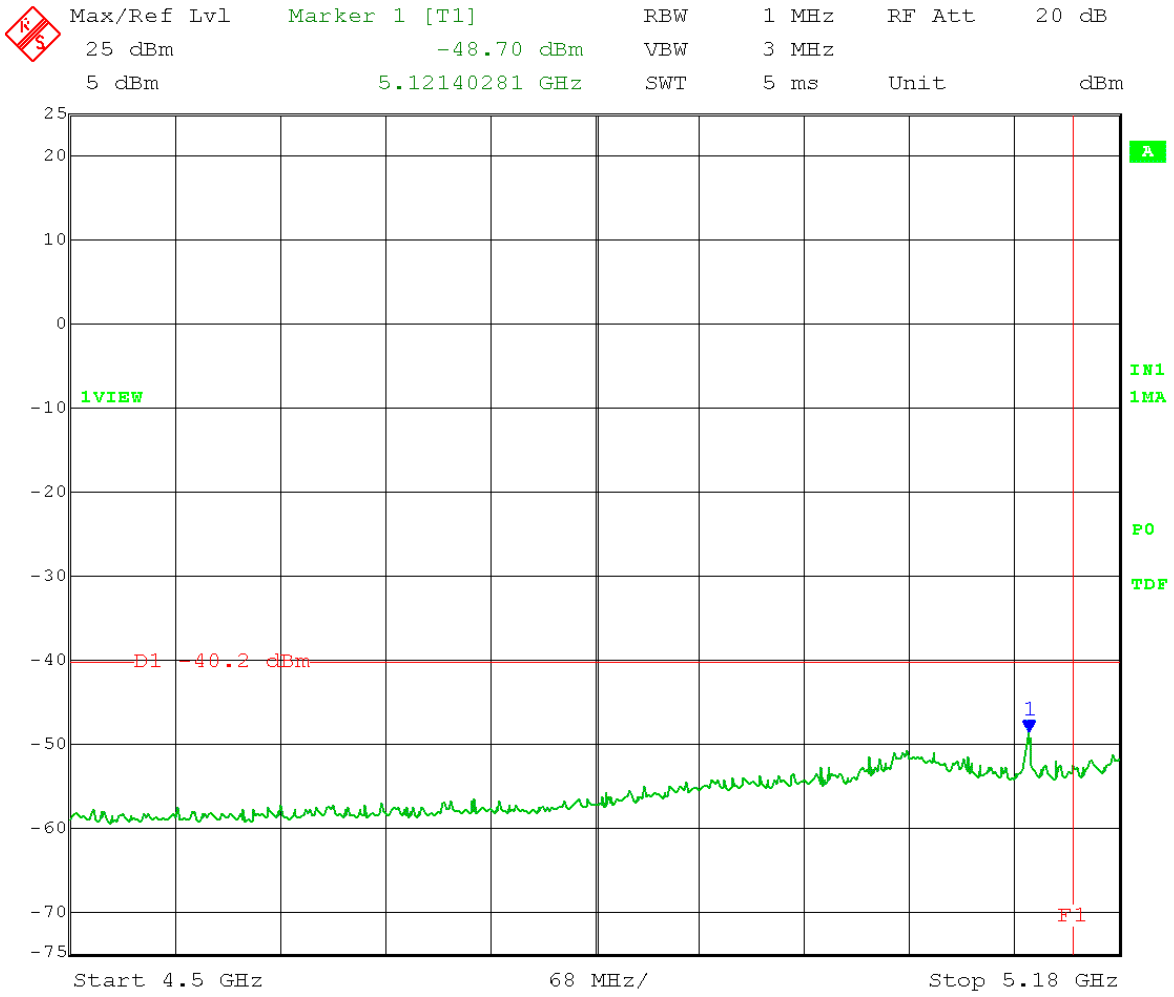


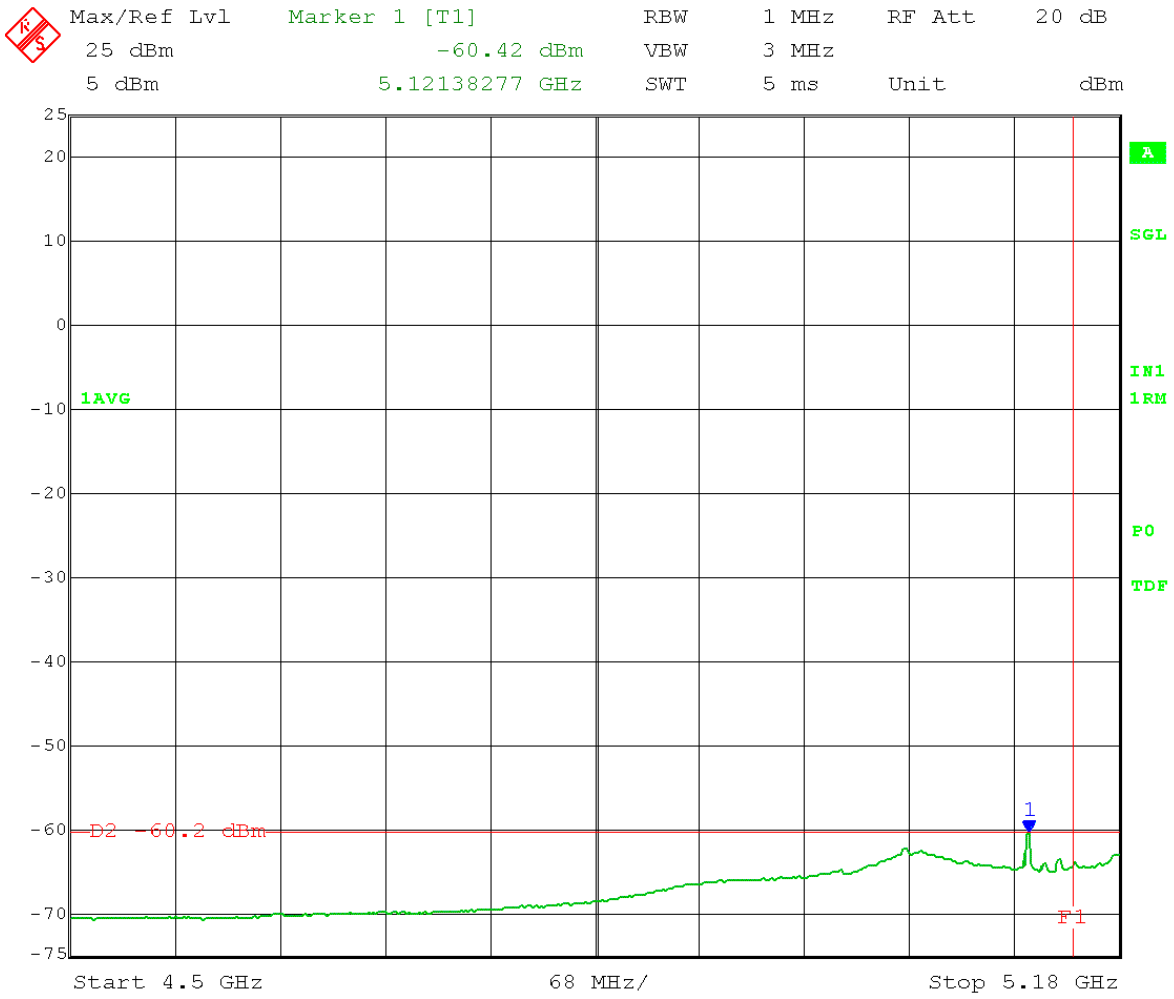
Date: 19.MAY.2014 11:50:06

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna assembly gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 6
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna assembly gain – 3 dB (MIMO) = -40.2 dBm



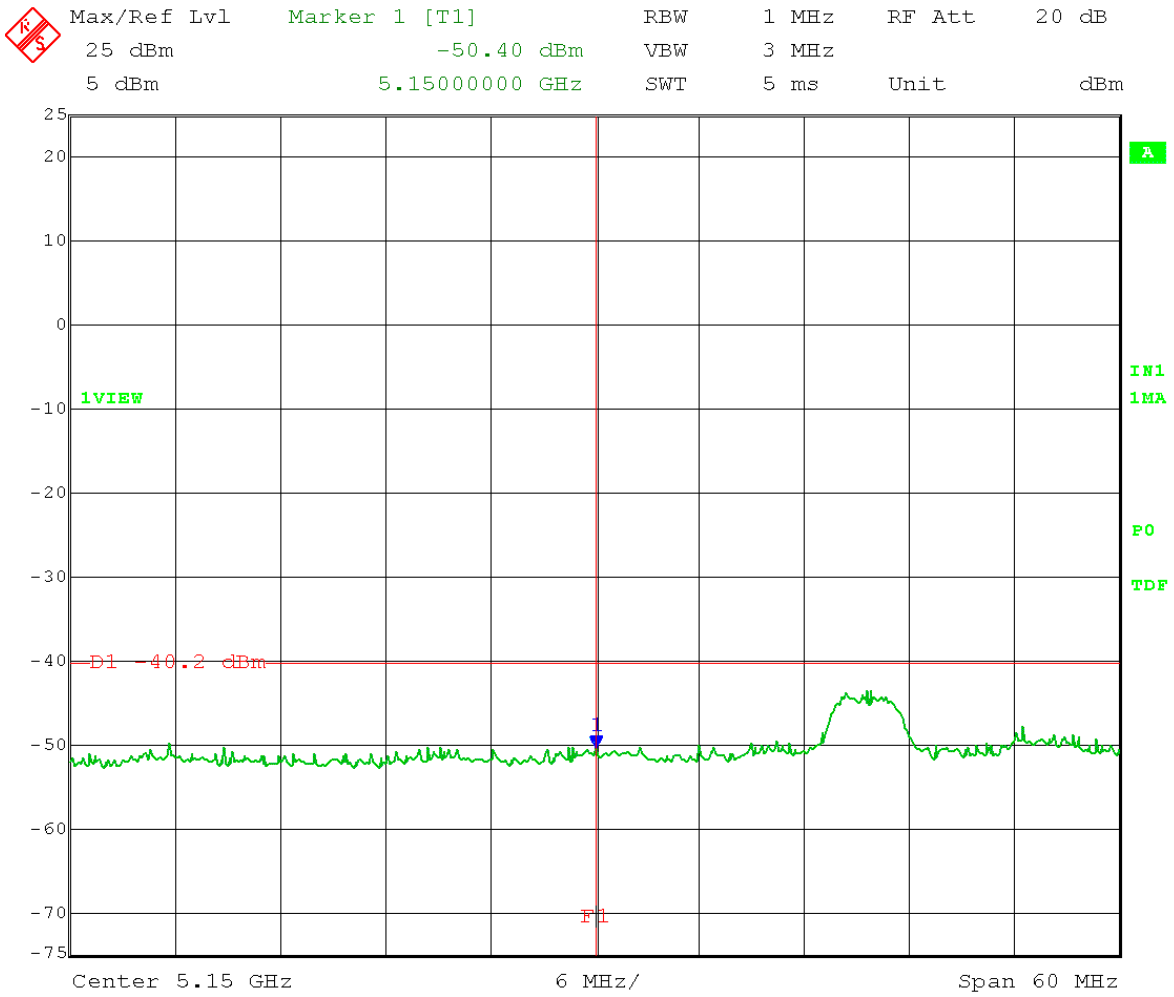
Date: 19.MAY.2014 13:23:36

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna assembly gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 6
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna assembly gain – 3 dB (MIMO) = -60.2 dBm

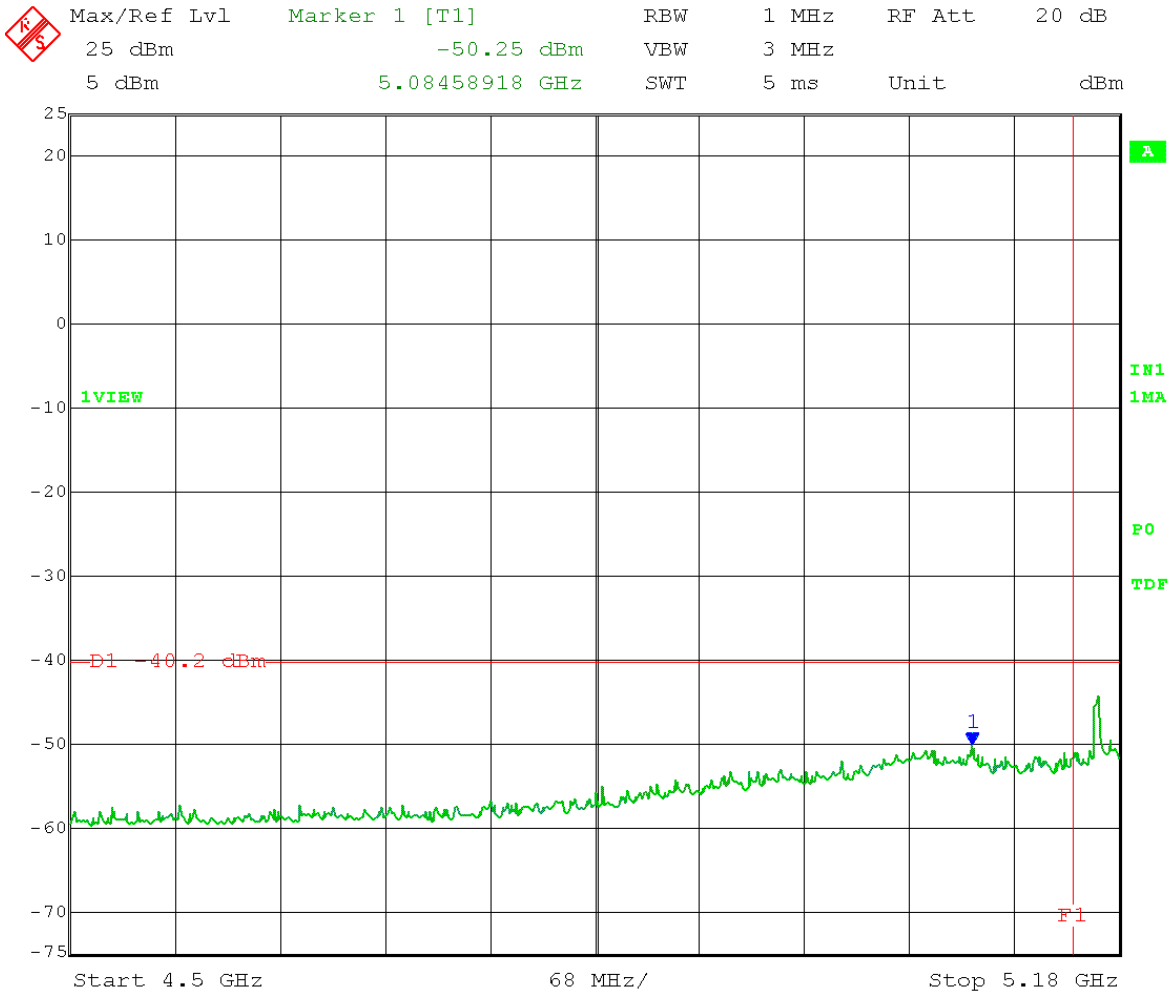


Date: 19.MAY.2014 13:22:34

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna assembly gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 11
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna assembly gain – 3 dB (MIMO) = -40.2 dBm

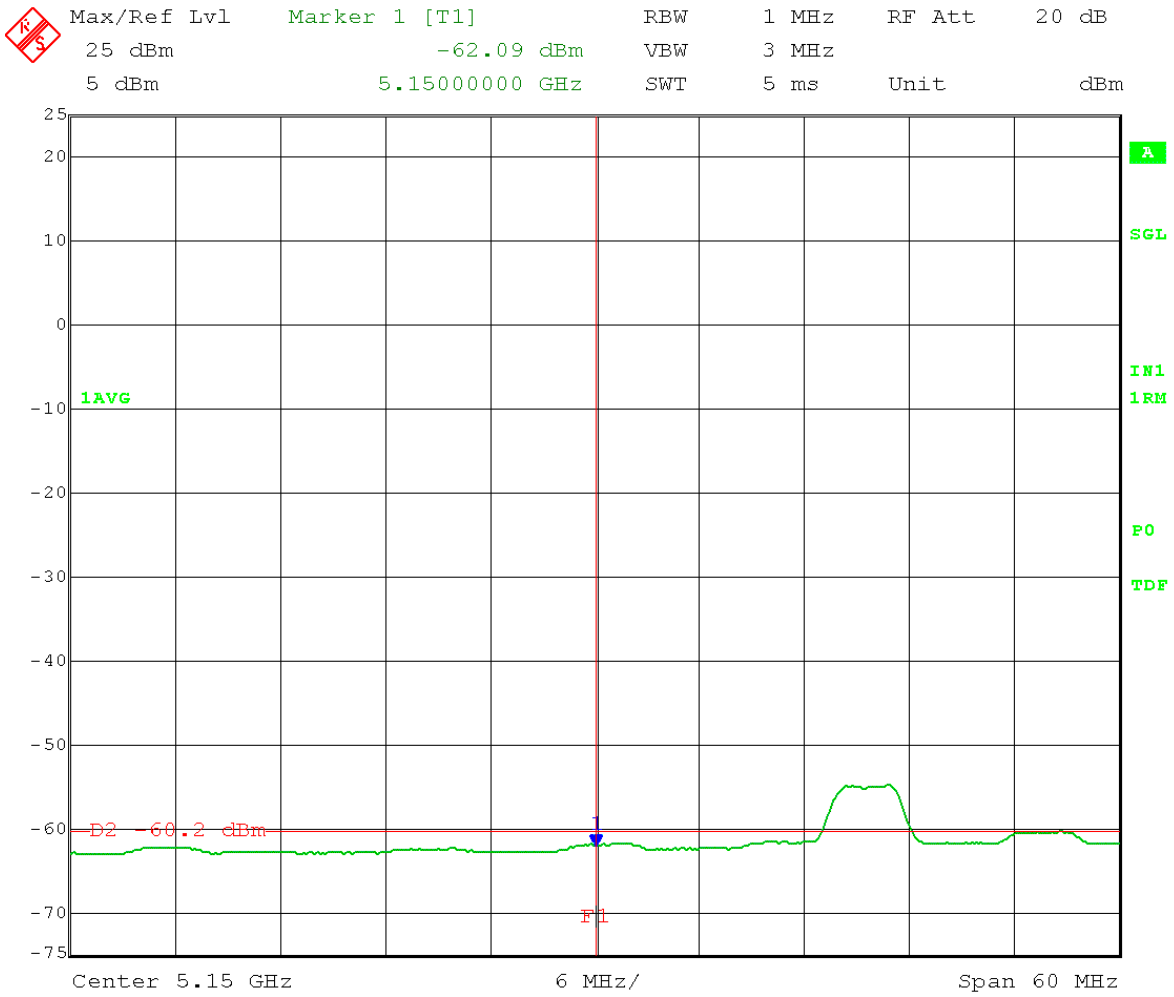


Date: 19.MAY.2014 13:15:03

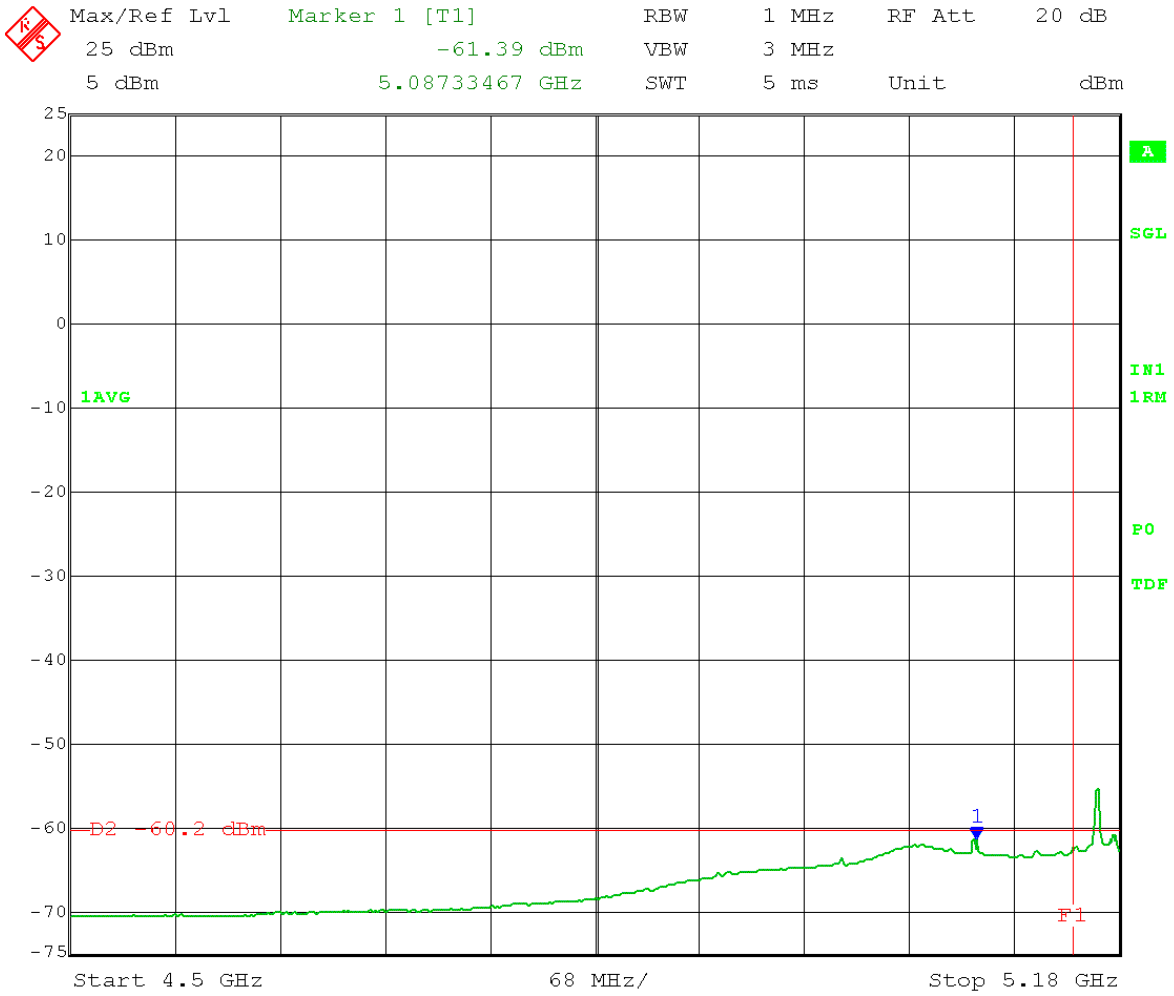


Date: 19.MAY.2014 13:15:41

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna assembly gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 11
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna assembly gain – 3 dB (MIMO) = -60.2 dBm

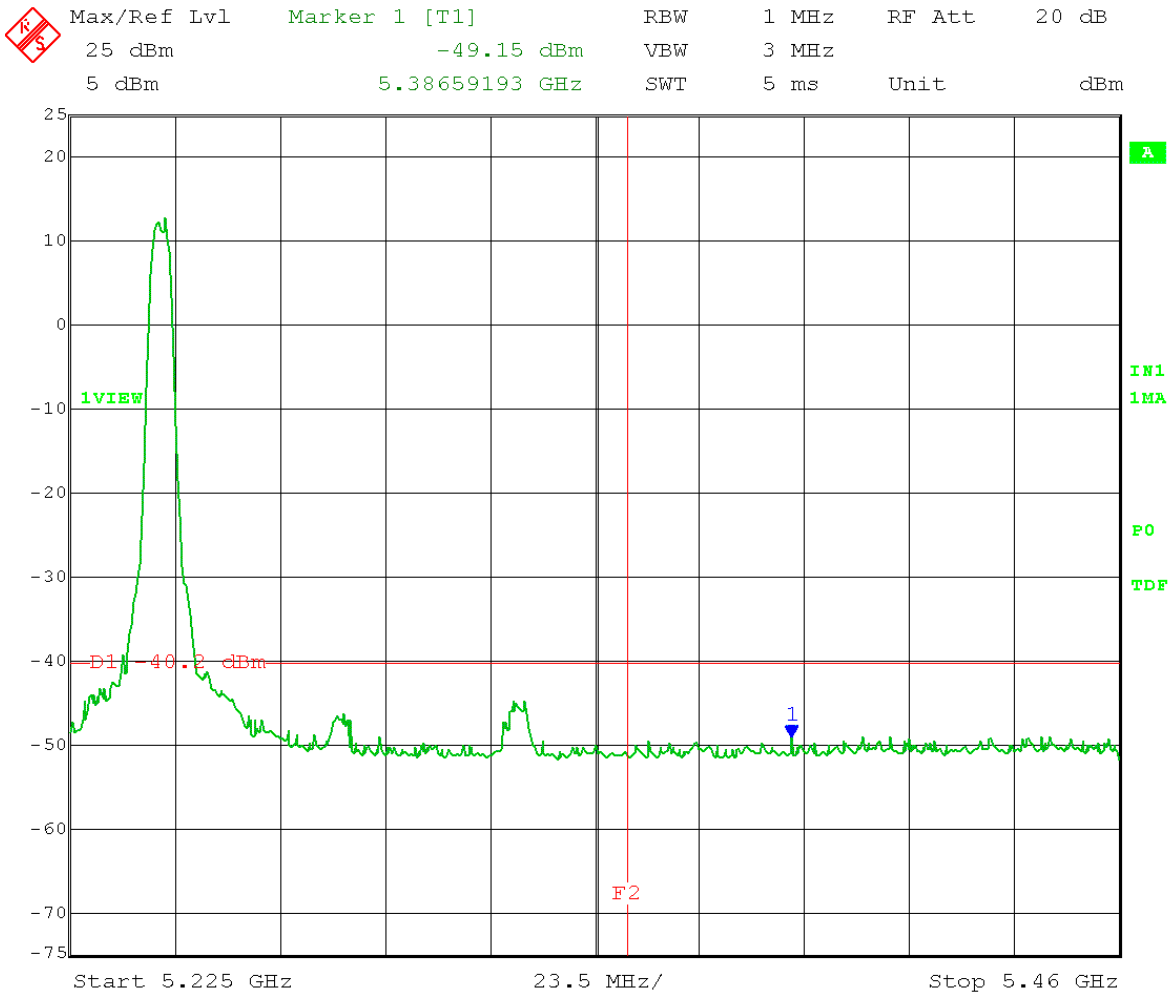


Date: 19.MAY.2014 13:13:57



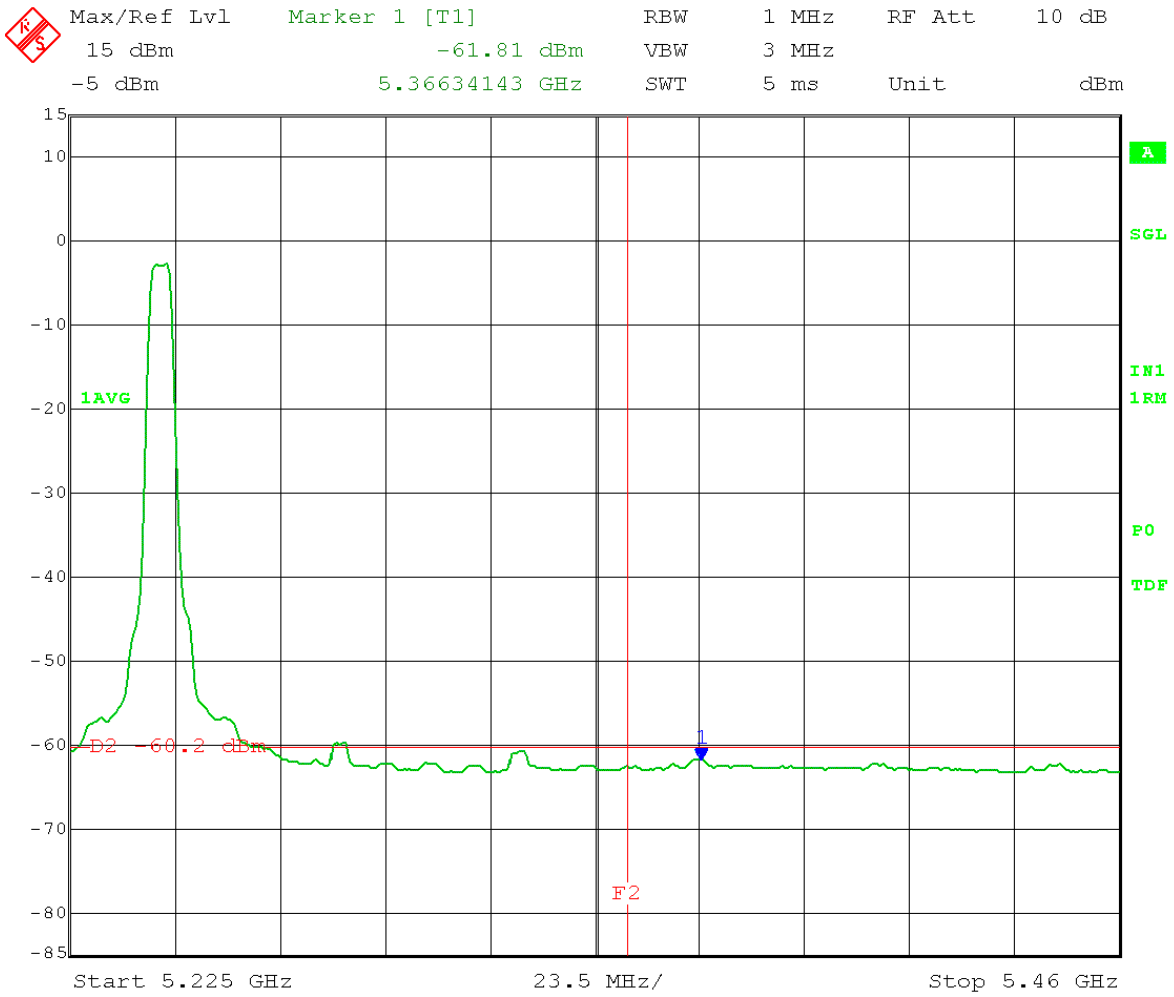
Date: 19.MAY.2014 13:13:17

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna assembly gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 11
5 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna assembly gain – 3 dB (MIMO) = -40.2 dBm



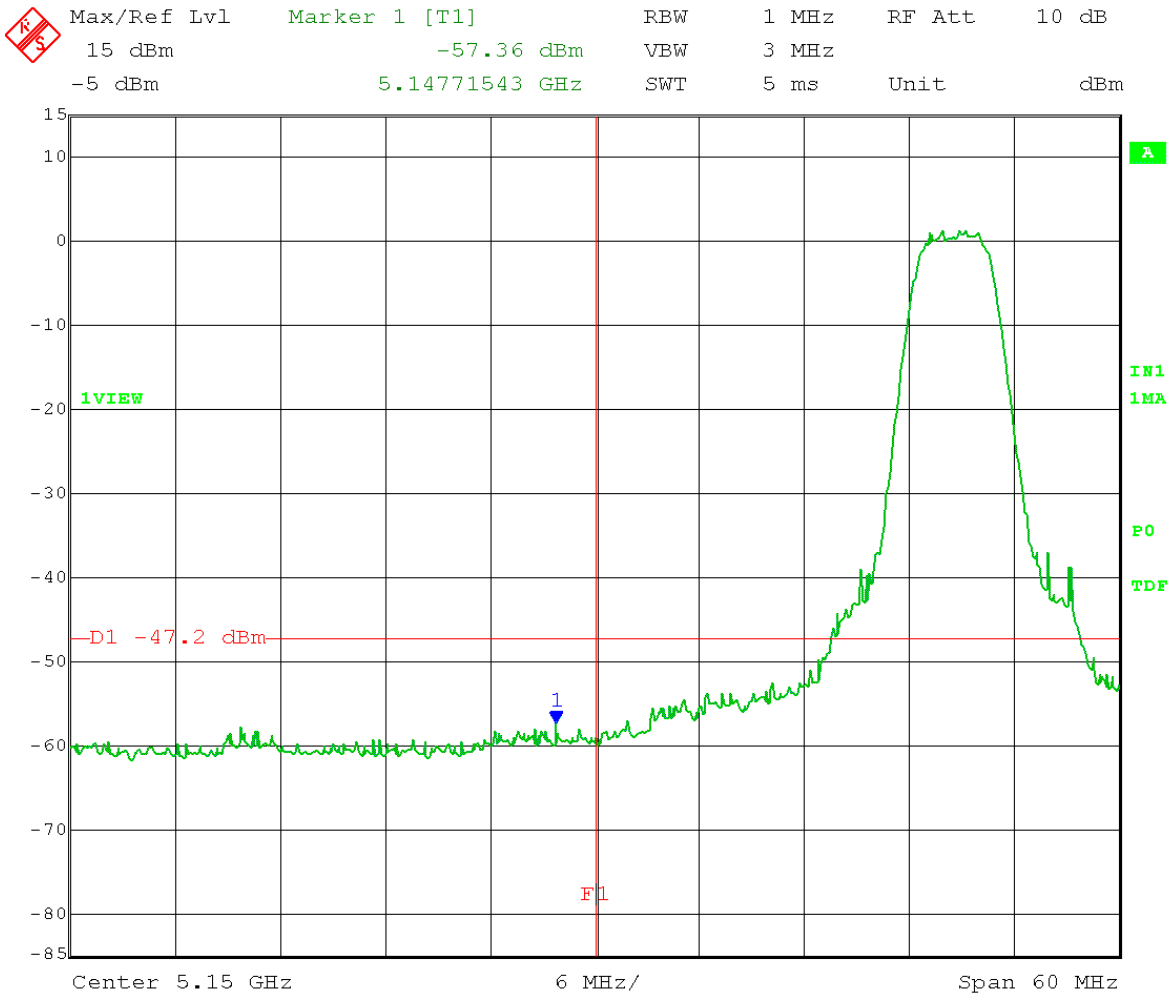
Date: 19.MAY.2014 12:02:33

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna assembly gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 11
5 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna assembly gain – 3 dB (MIMO) = -60.2 dBm

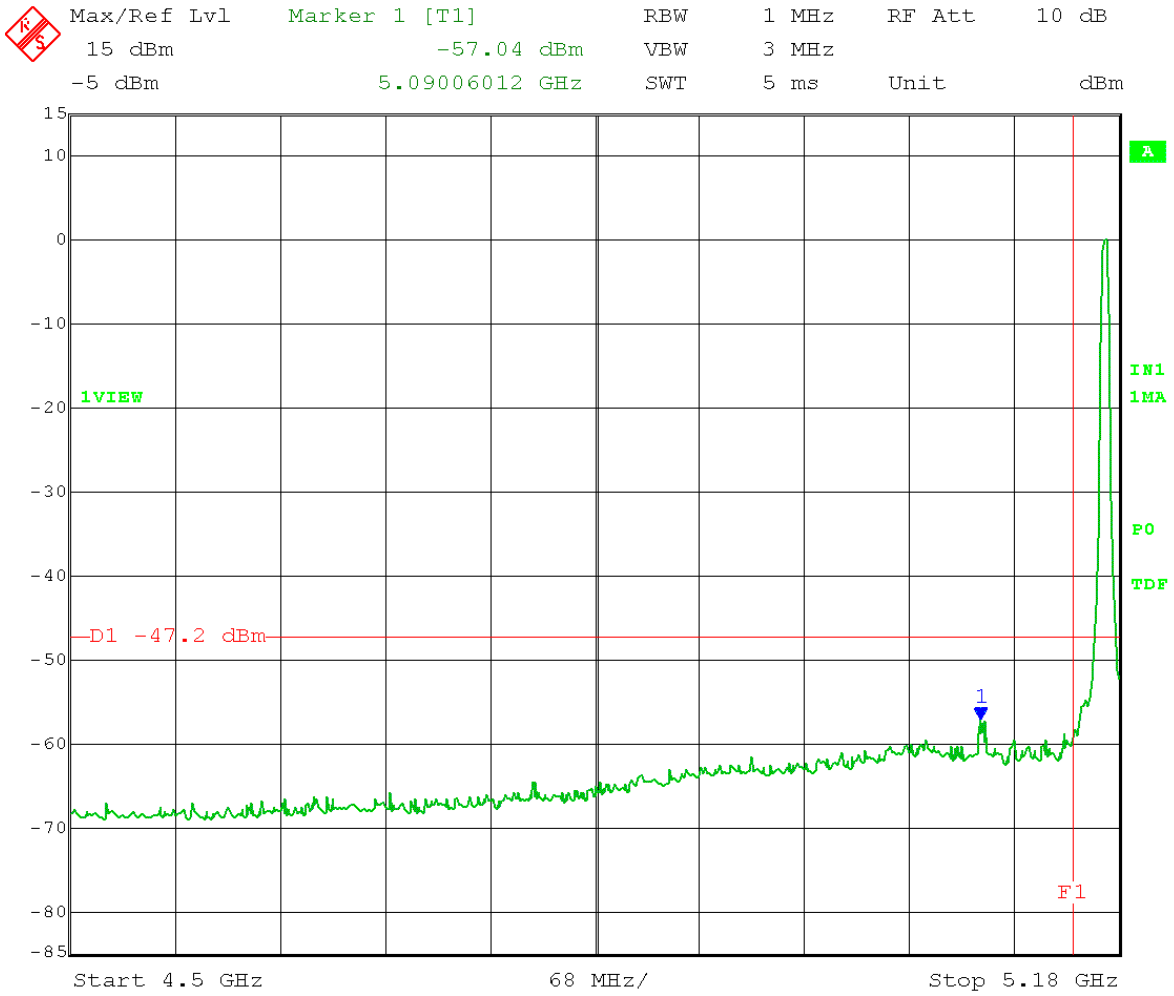


Date: 19.MAY.2014 12:00:36

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.170 GHz Output power setting: 6 – 6 dB
external attenuator = 0
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain
– 3 dB (MIMO) = -47.2 dBm

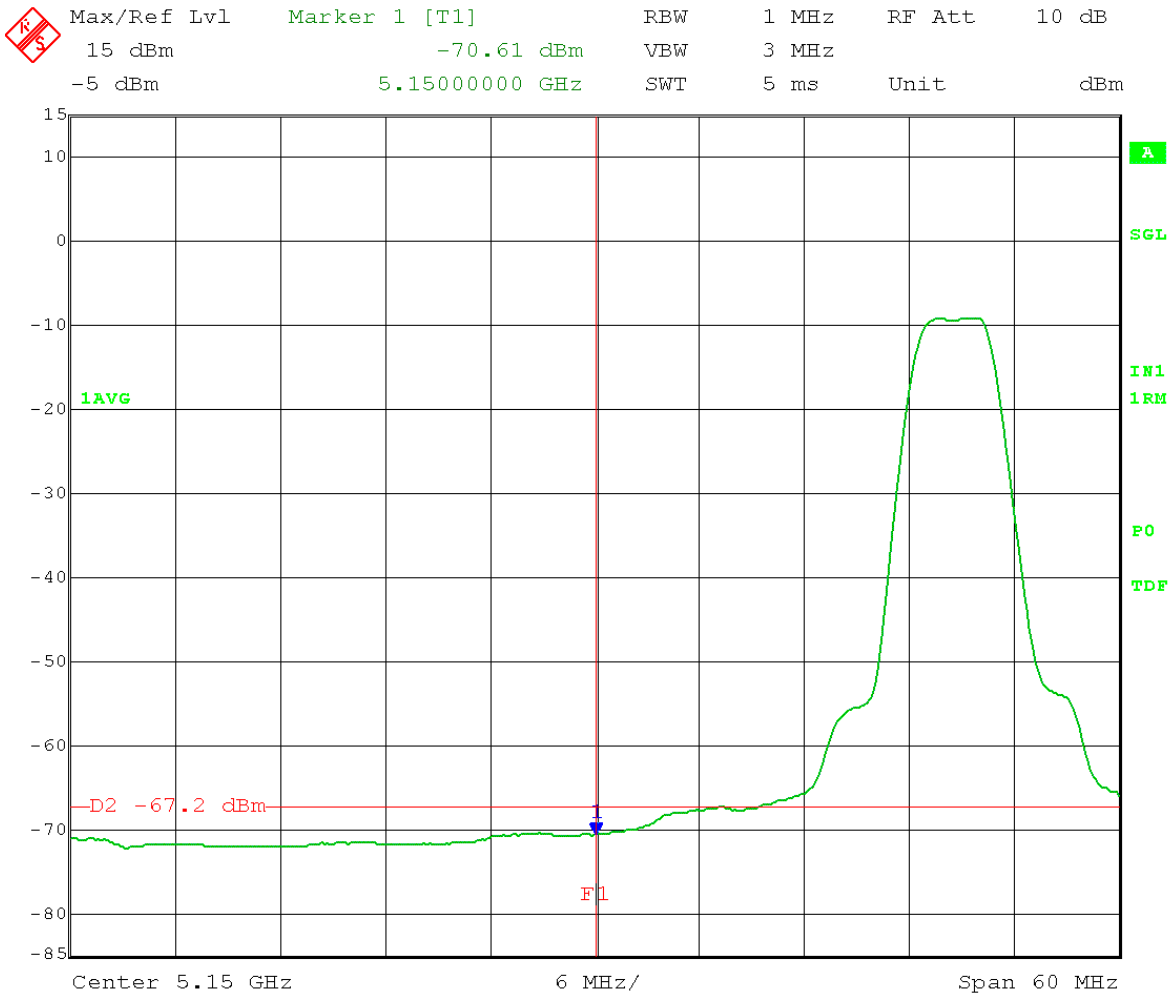


Date: 19.MAY.2014 11:10:55

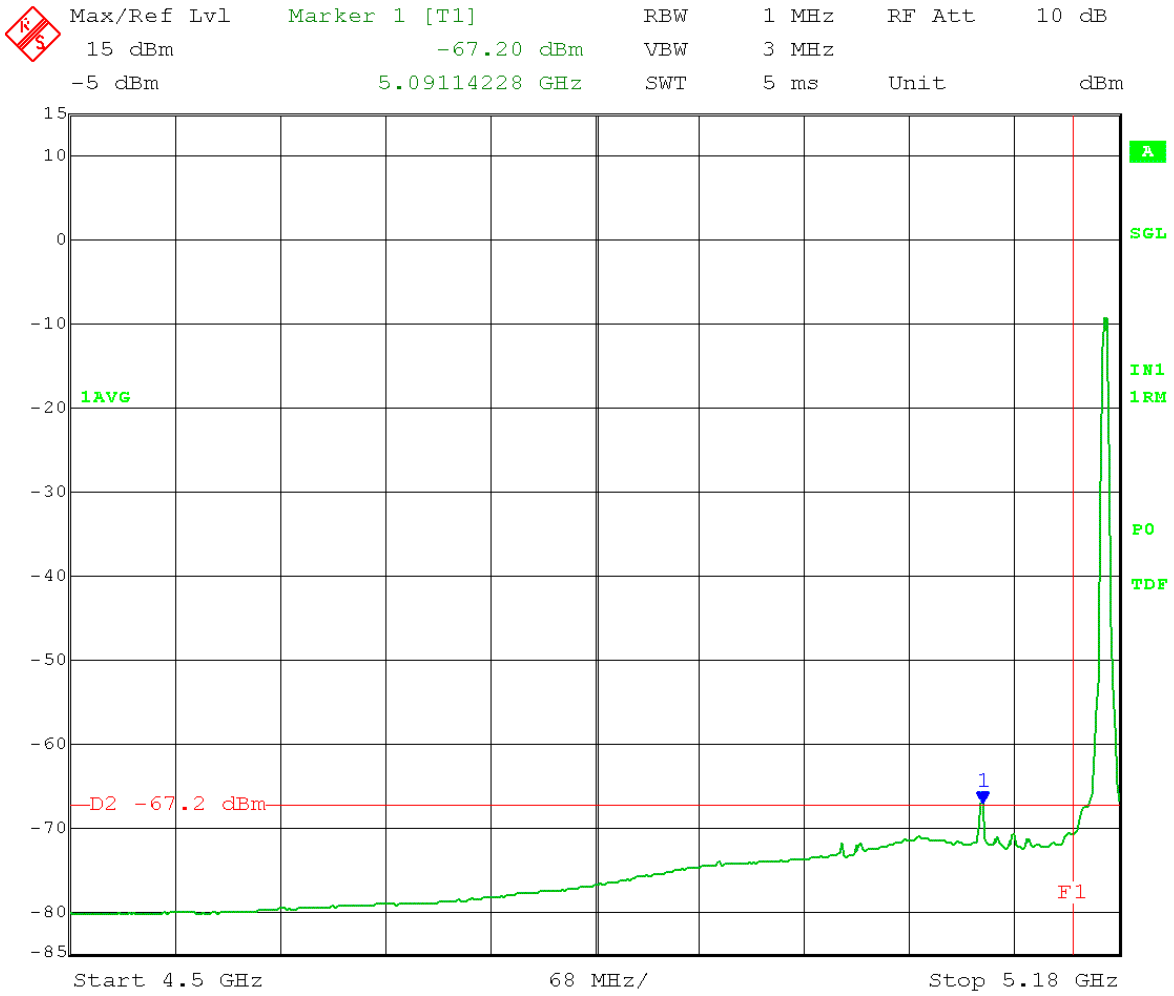


Date: 19.MAY.2014 11:11:43

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.170 GHz Output power setting: 6 – 6 dB
external attenuator = 0
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -67.2 dBm

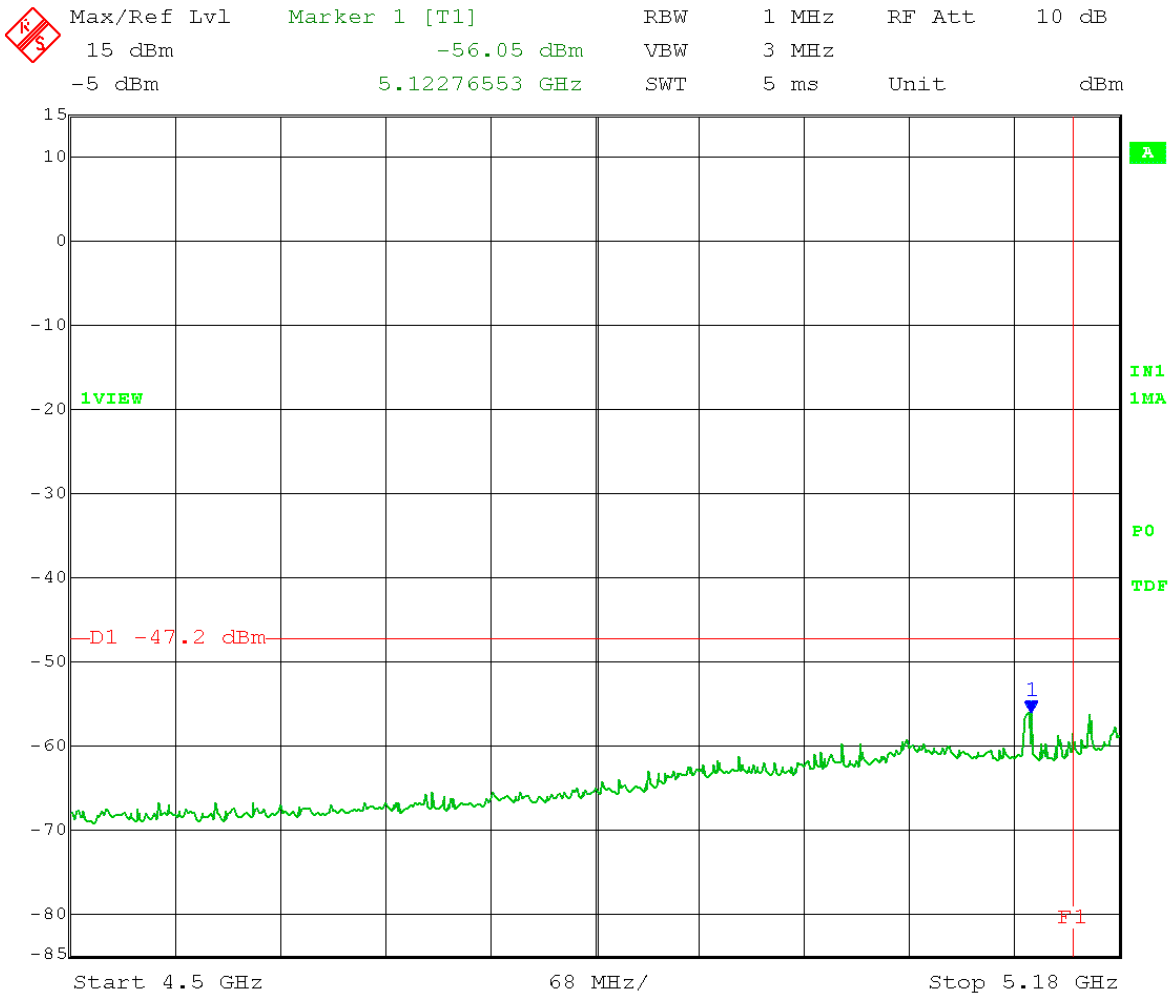


Date: 19.MAY.2014 11:09:23



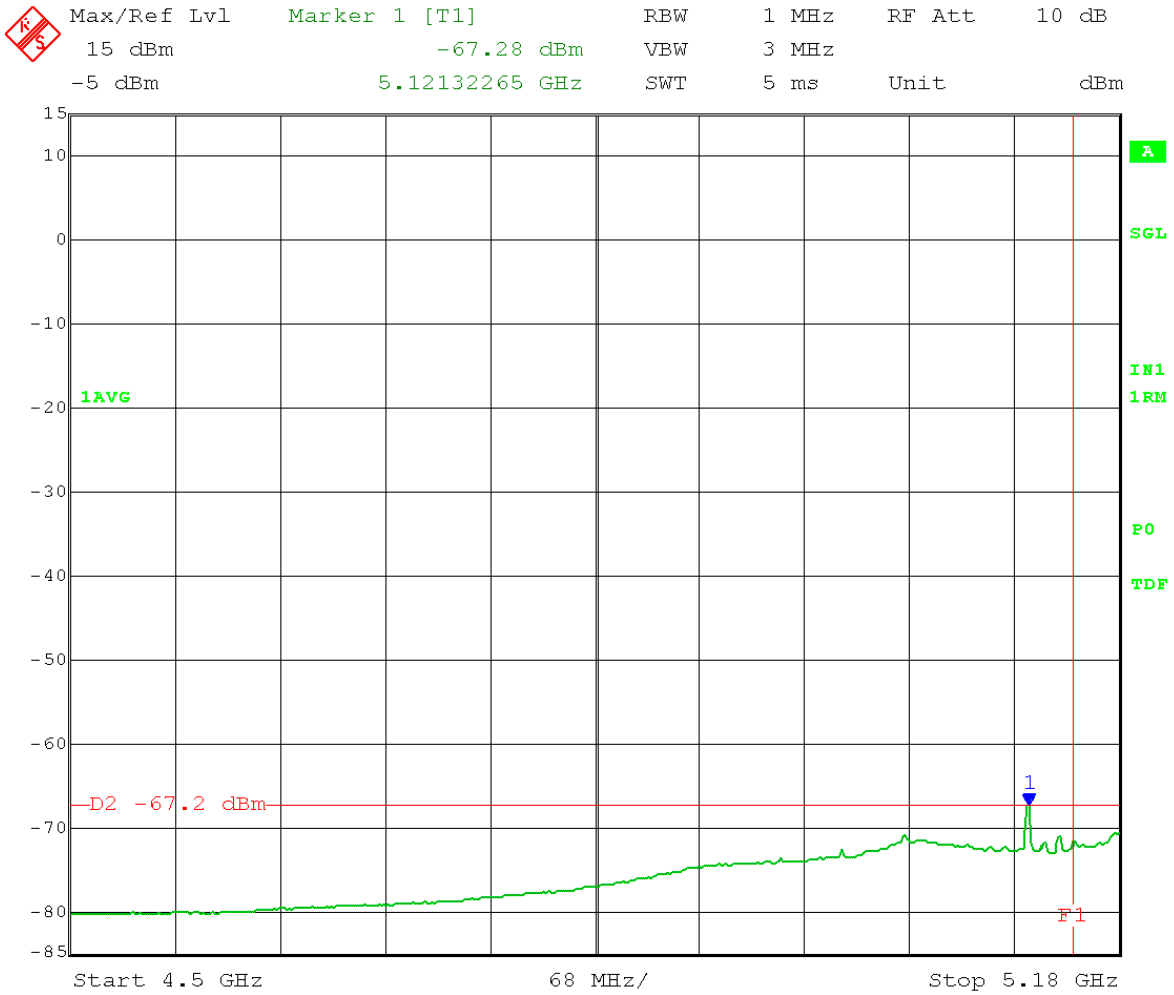
Date: 19.MAY.2014 11:07:10

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 6–6dB
external attenuator = 0
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain
– 3 dB (MIMO) = -47.2 dBm



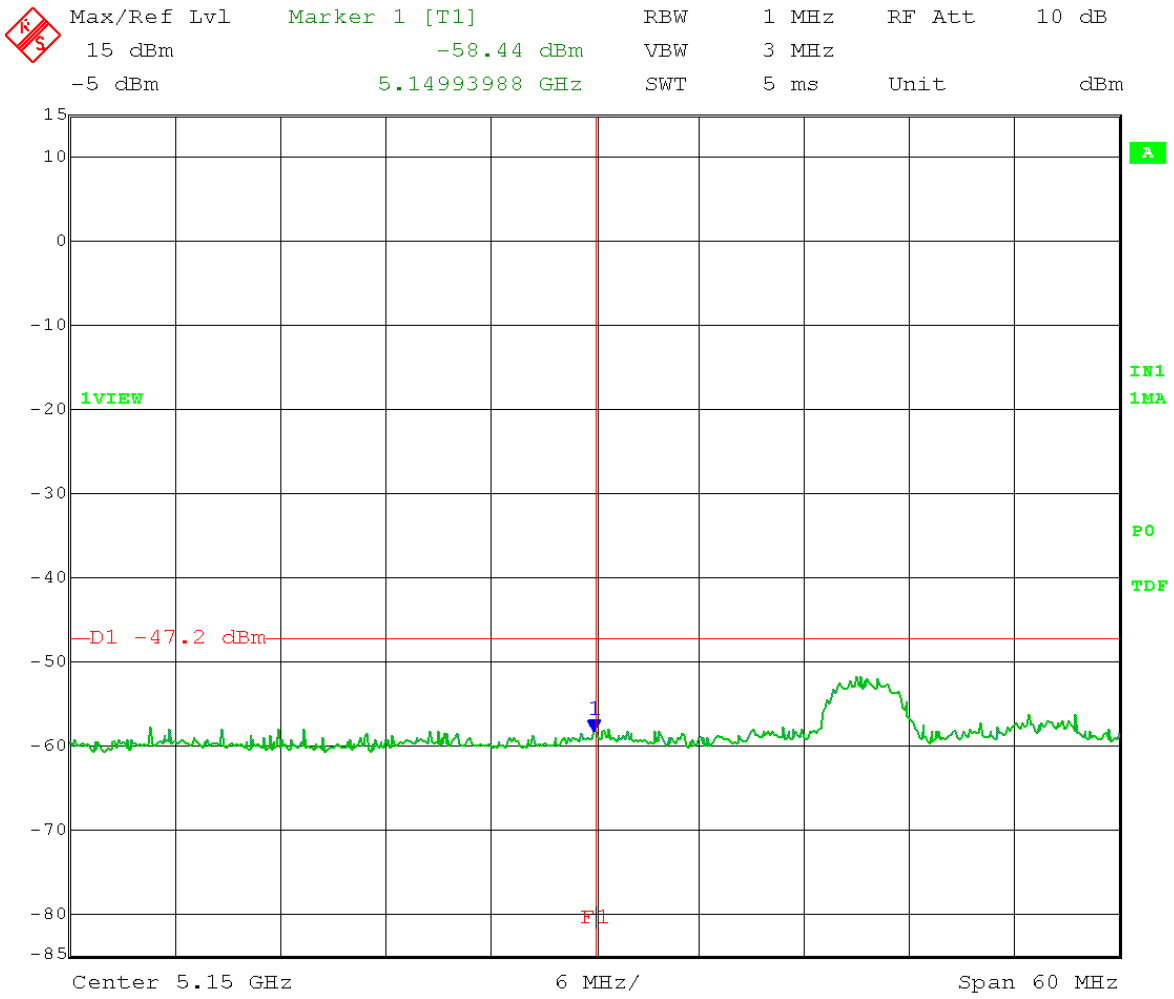
Date: 19.MAY.2014 11:30:59

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 6–6dB
external attenuator = 0
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -67.2 dBm

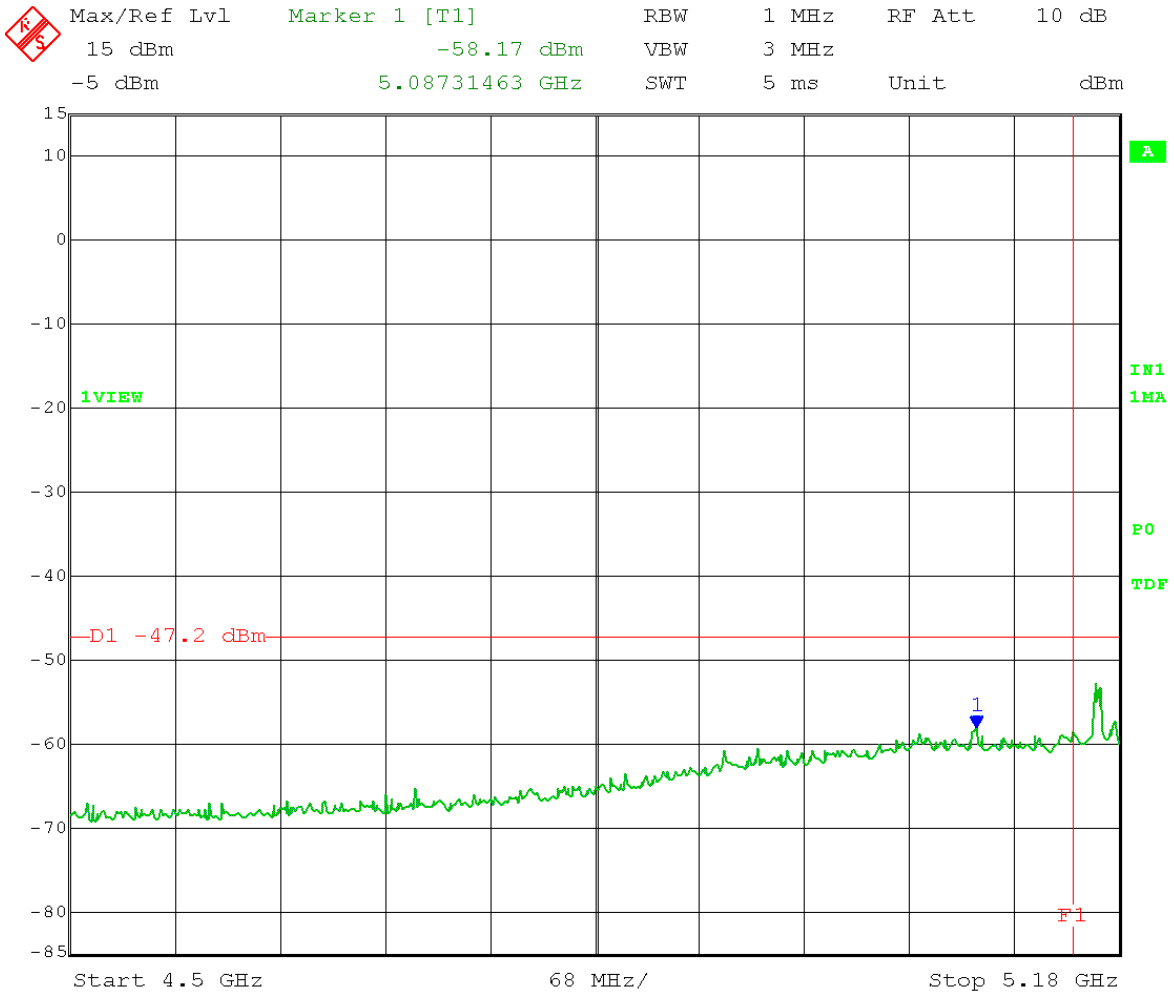


Date: 19.MAY.2014 11:27:57

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 10–6dB
external attenuator = 4
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain
– 3 dB (MIMO) = -47.2 dBm

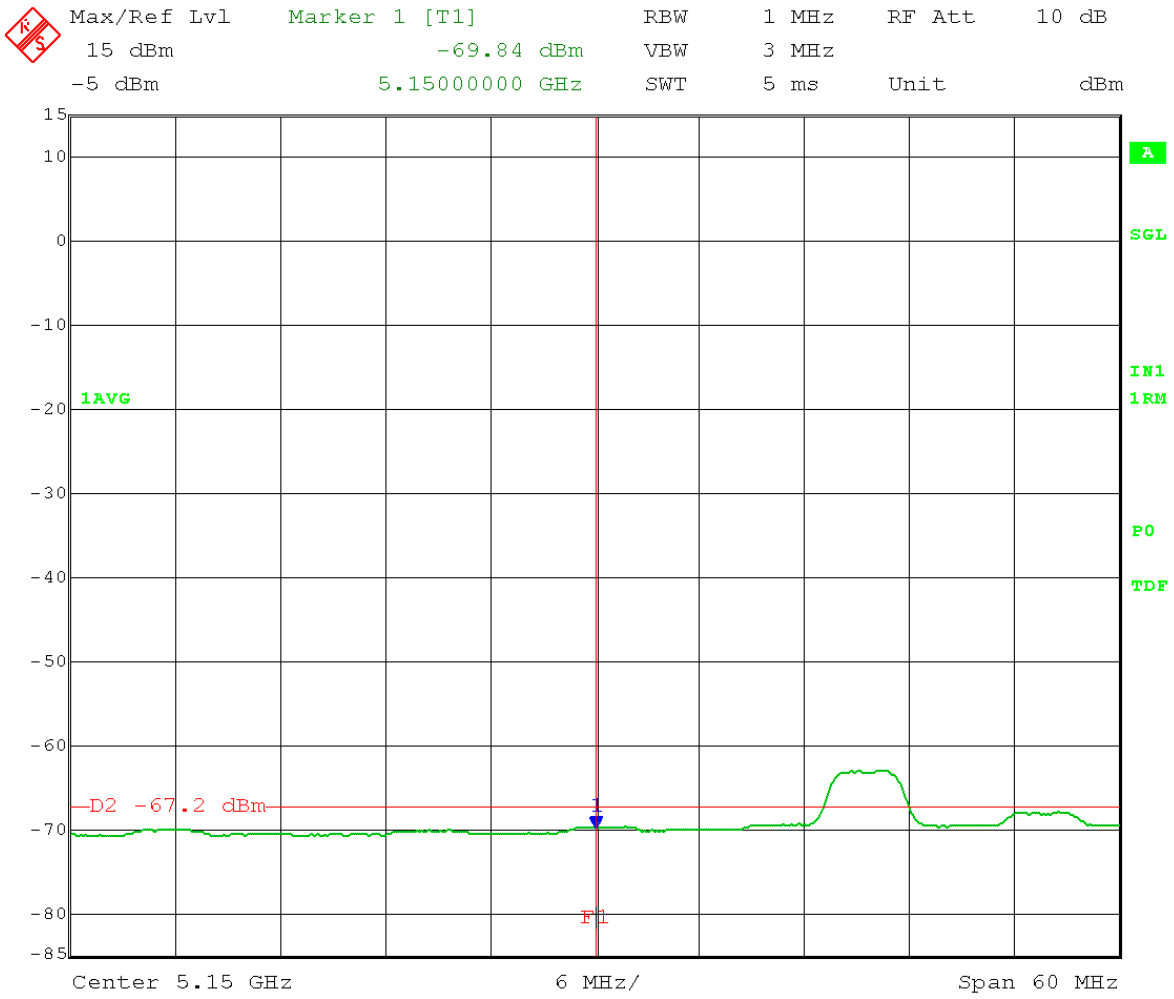


Date: 19.MAY.2014 11:25:16

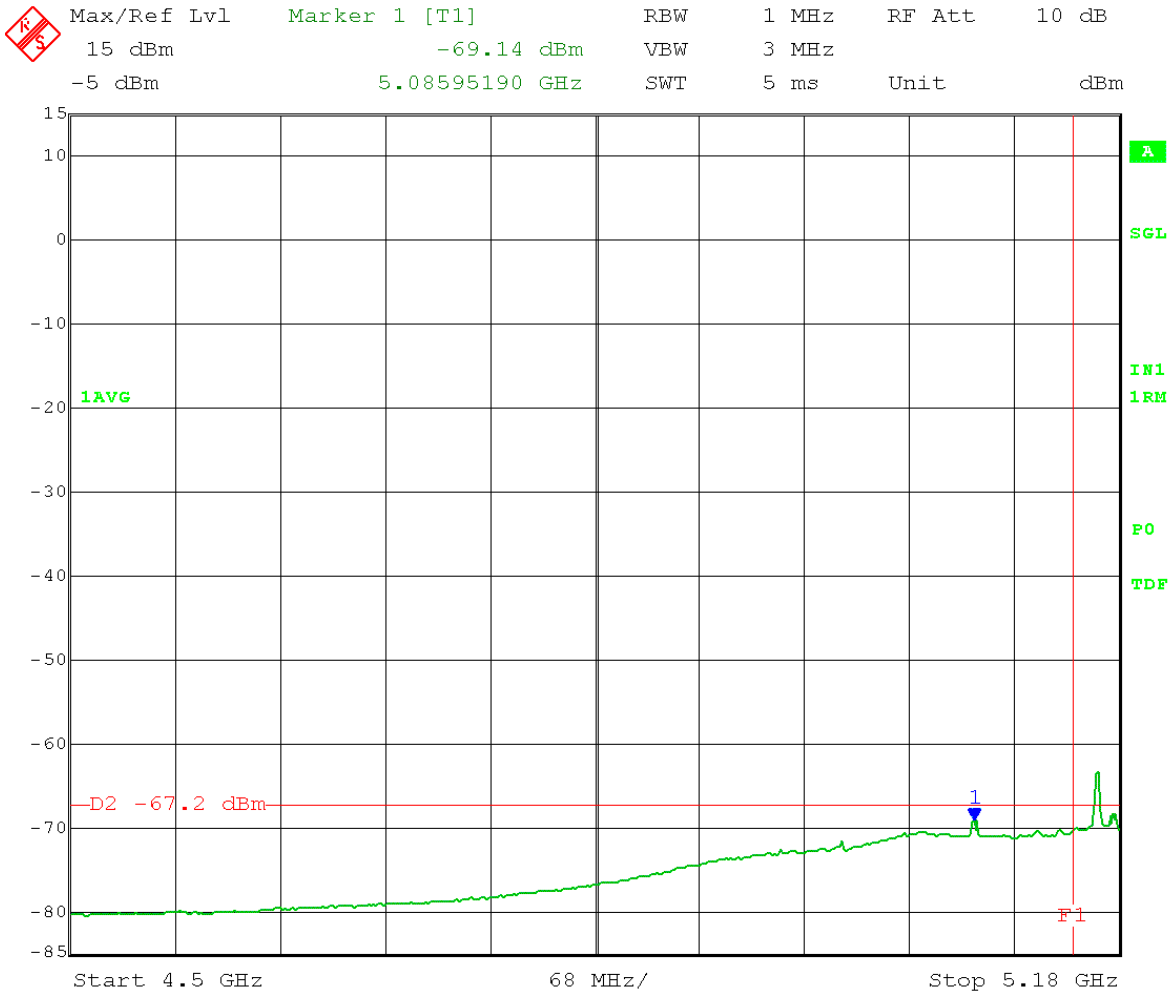


Date: 19.MAY.2014 11:24:34

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 10–6dB
external attenuator = 4
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -67.2 dBm

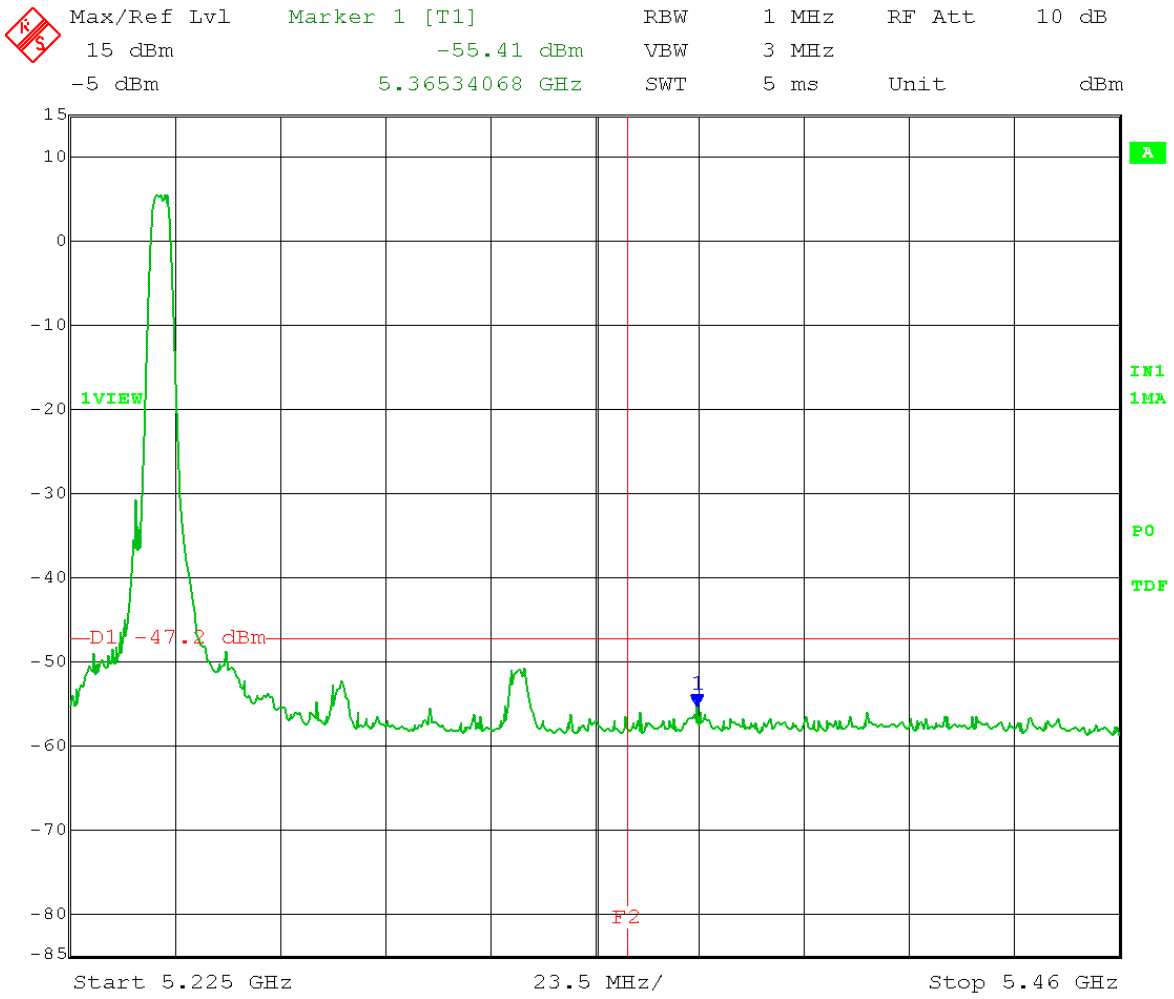


Date: 19.MAY.2014 11:22:48



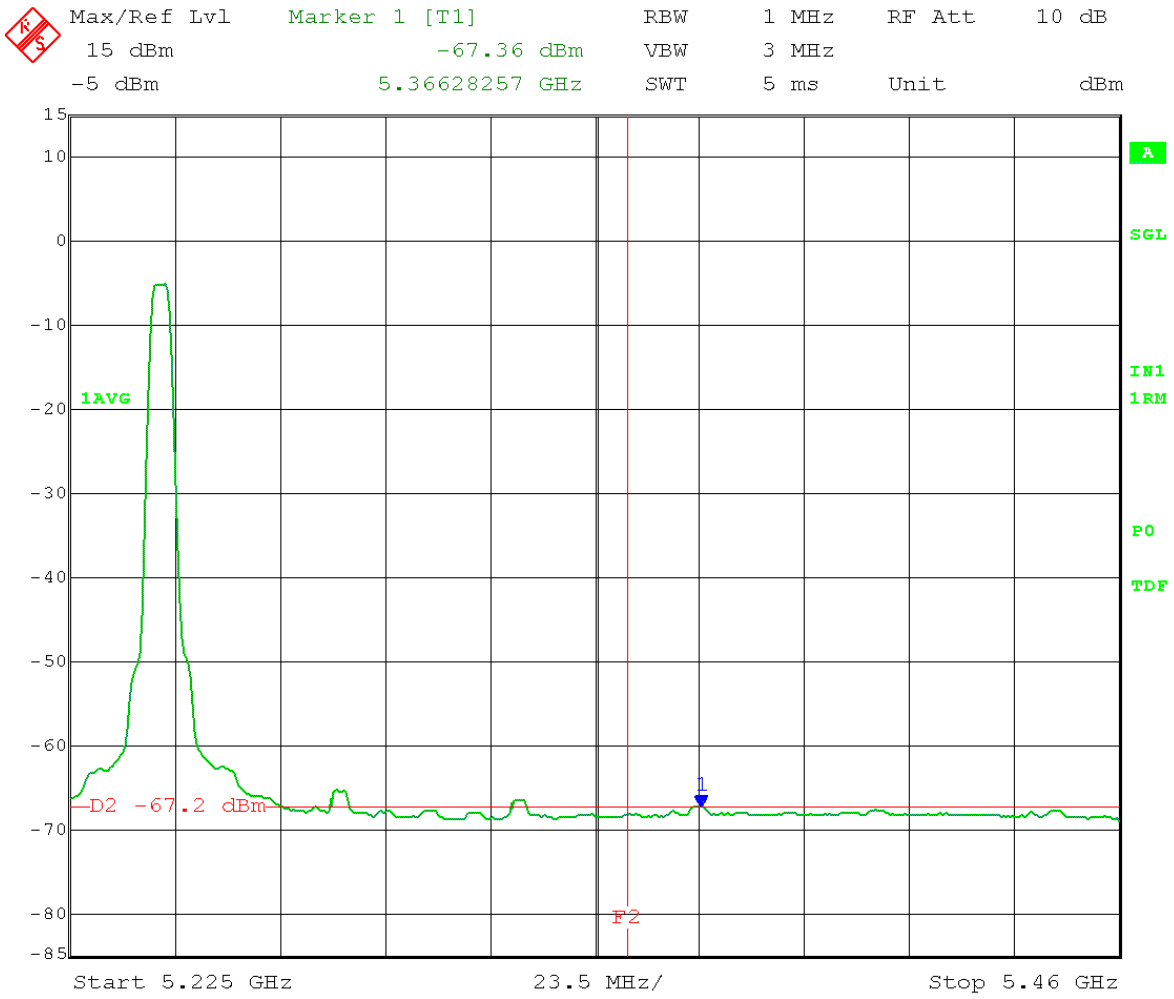
Date: 19.MAY.2014 11:23:41

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 17–10dB
external attenuator = 7
5 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain
– 3 dB (MIMO) = -47.2 dBm



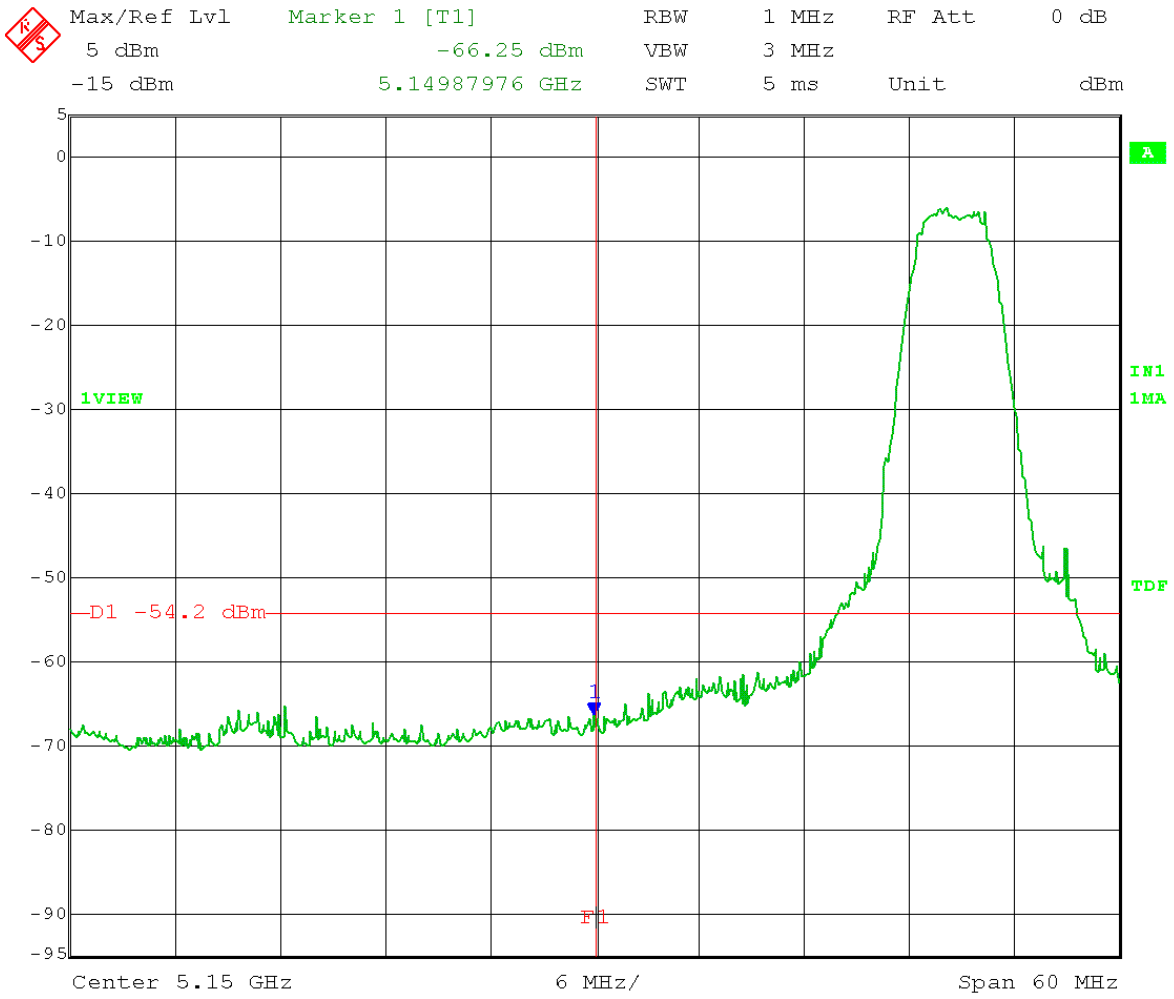
Date: 19.MAY.2014 11:20:04

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 10–6dB
external attenuator = 4
5 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -67.2 dBm

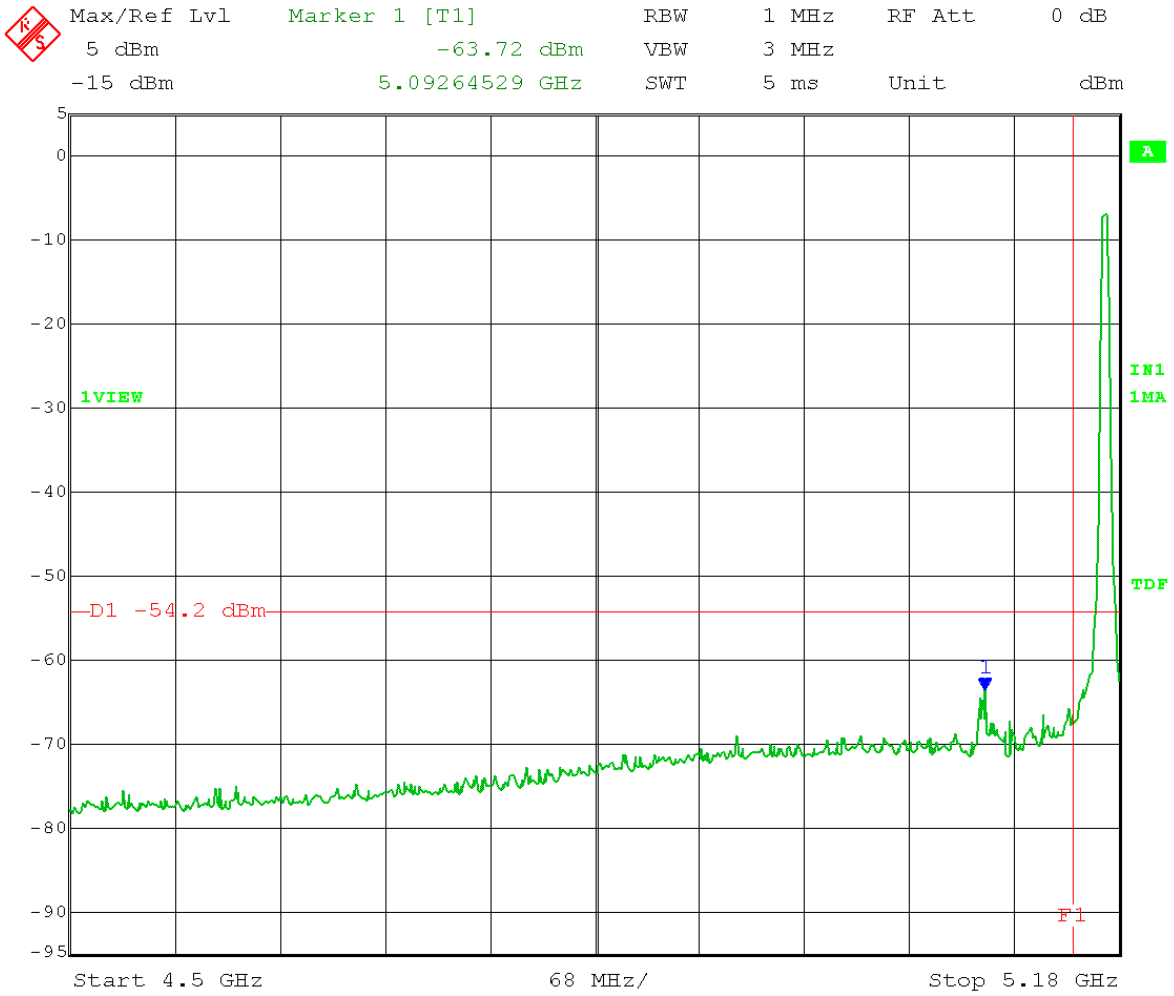


Date: 19.MAY.2014 11:19:13

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.170 GHz Output power setting: 4 – 10dB
external atten. = -6
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain
– 3 dB (MIMO) = -54.2 dBm

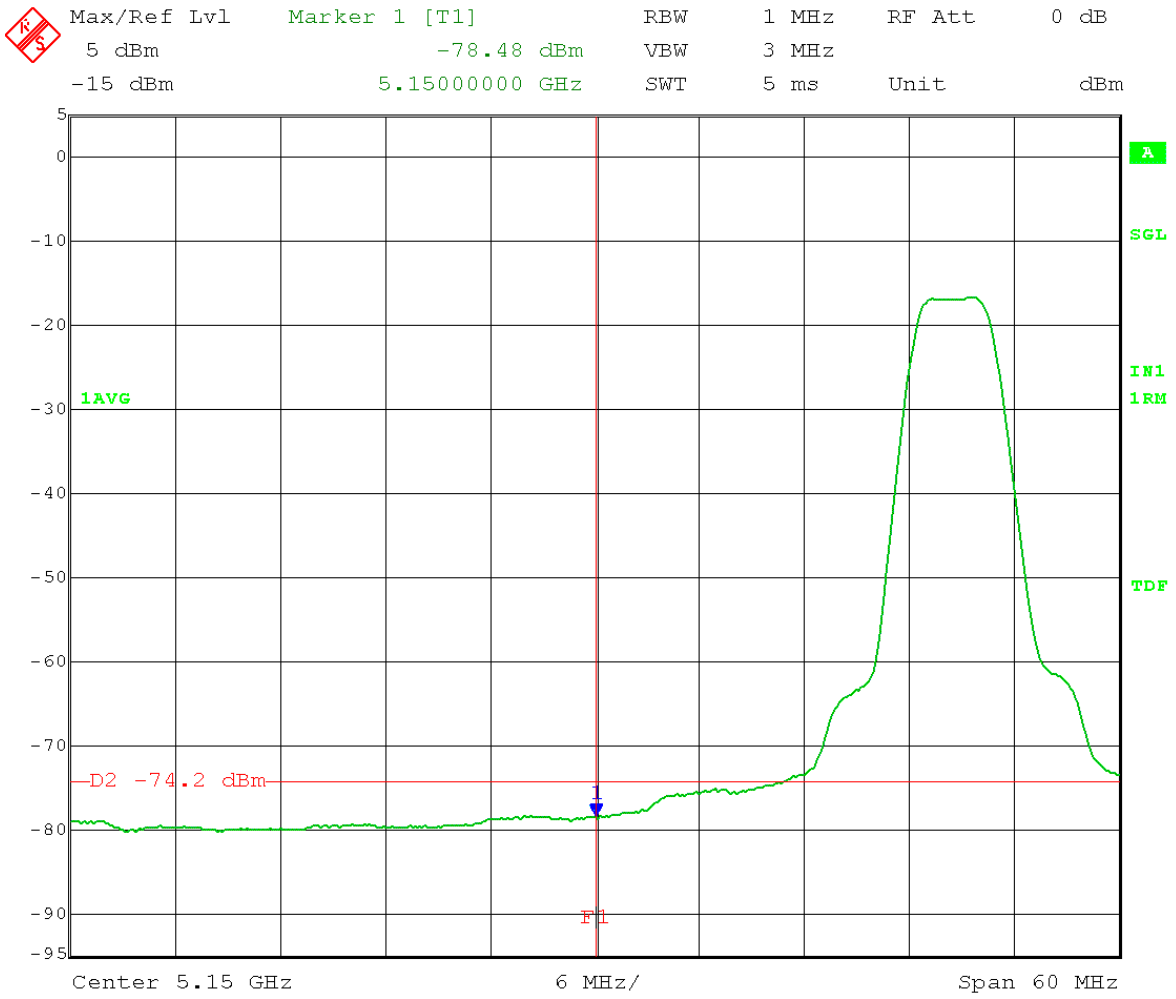


Date: 19.MAY.2014 10:06:24

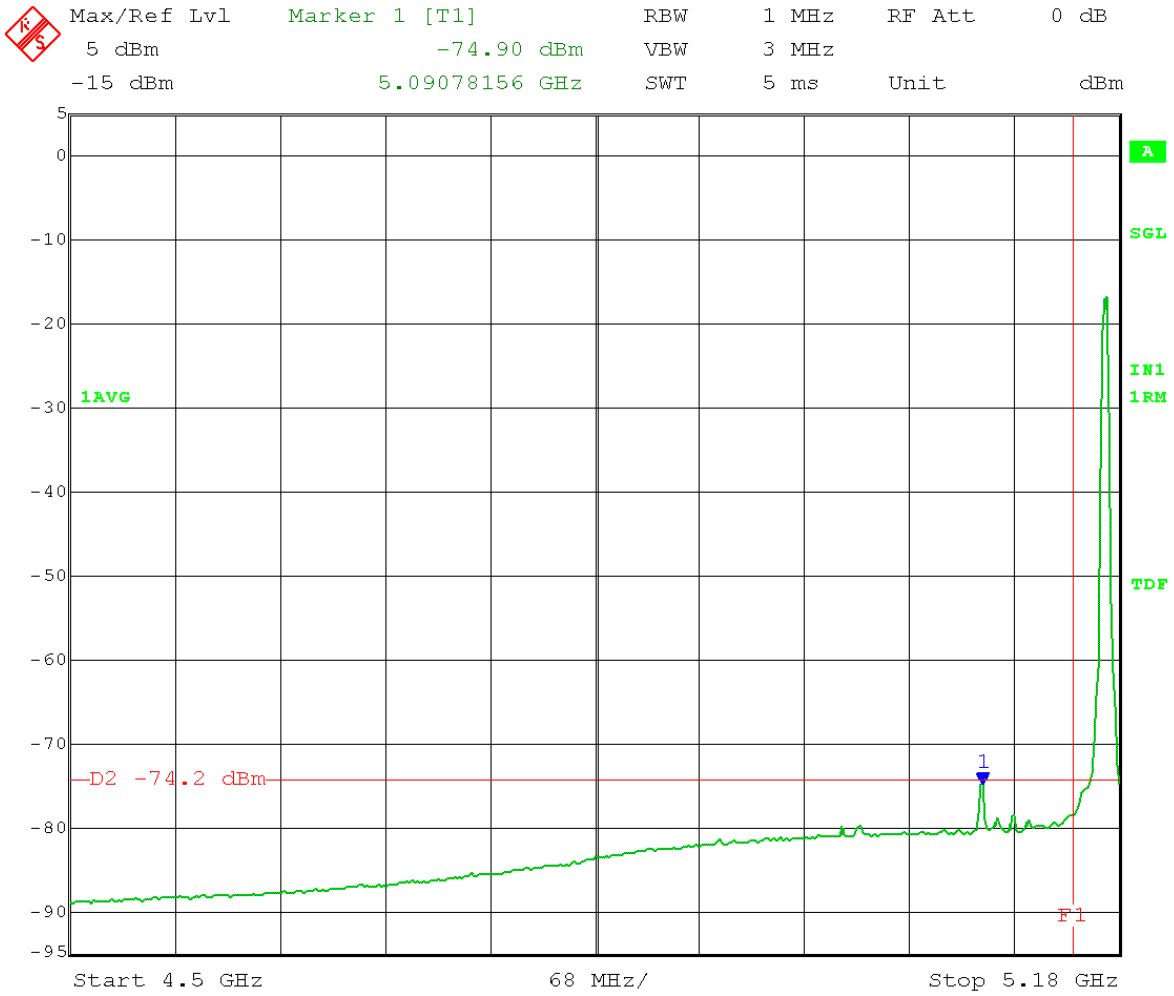


Date: 19.MAY.2014 10:07:23

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.170 GHz Output power setting: 4 – 10dB
external atten. = -6
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -74.2 dBm

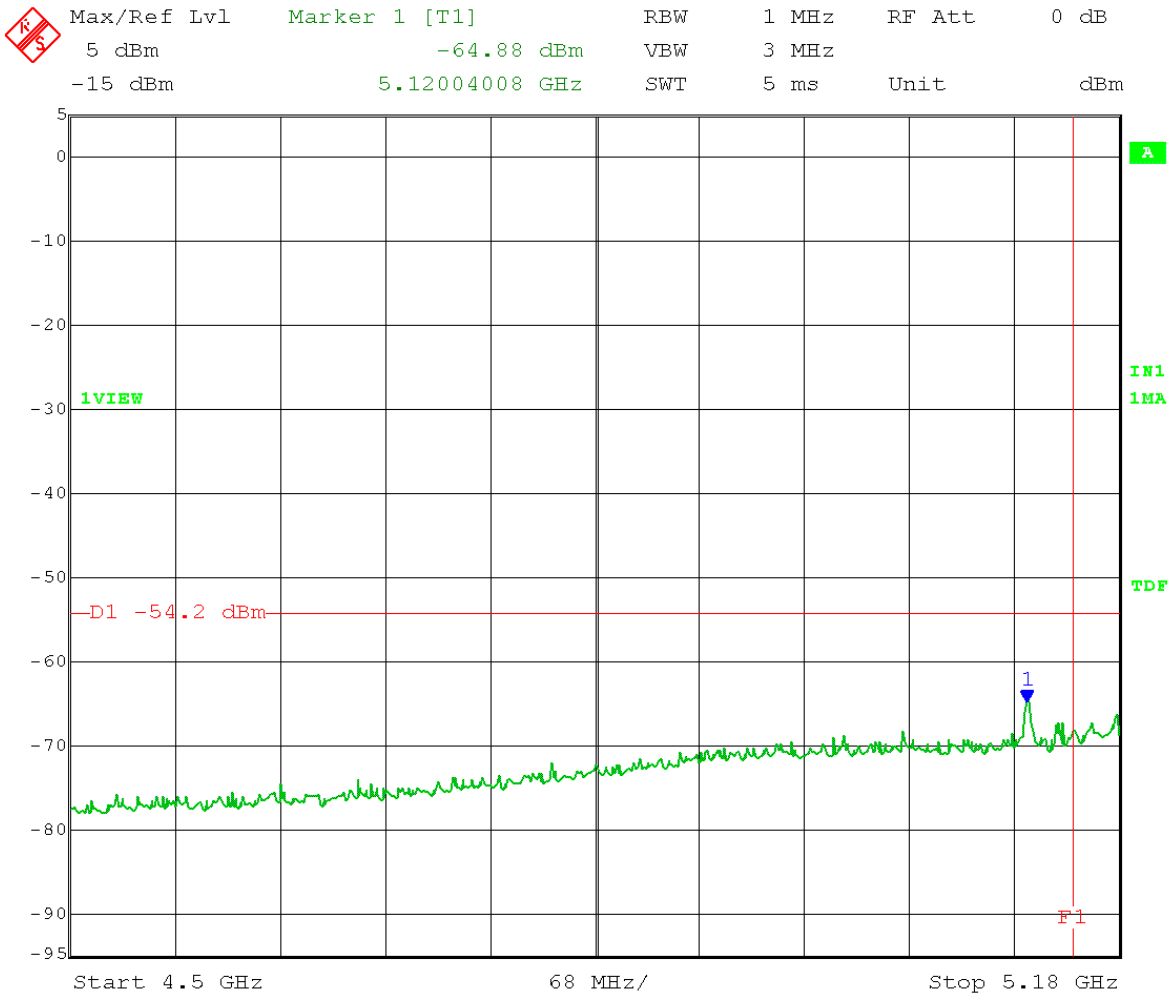


Date: 19.MAY.2014 10:05:19



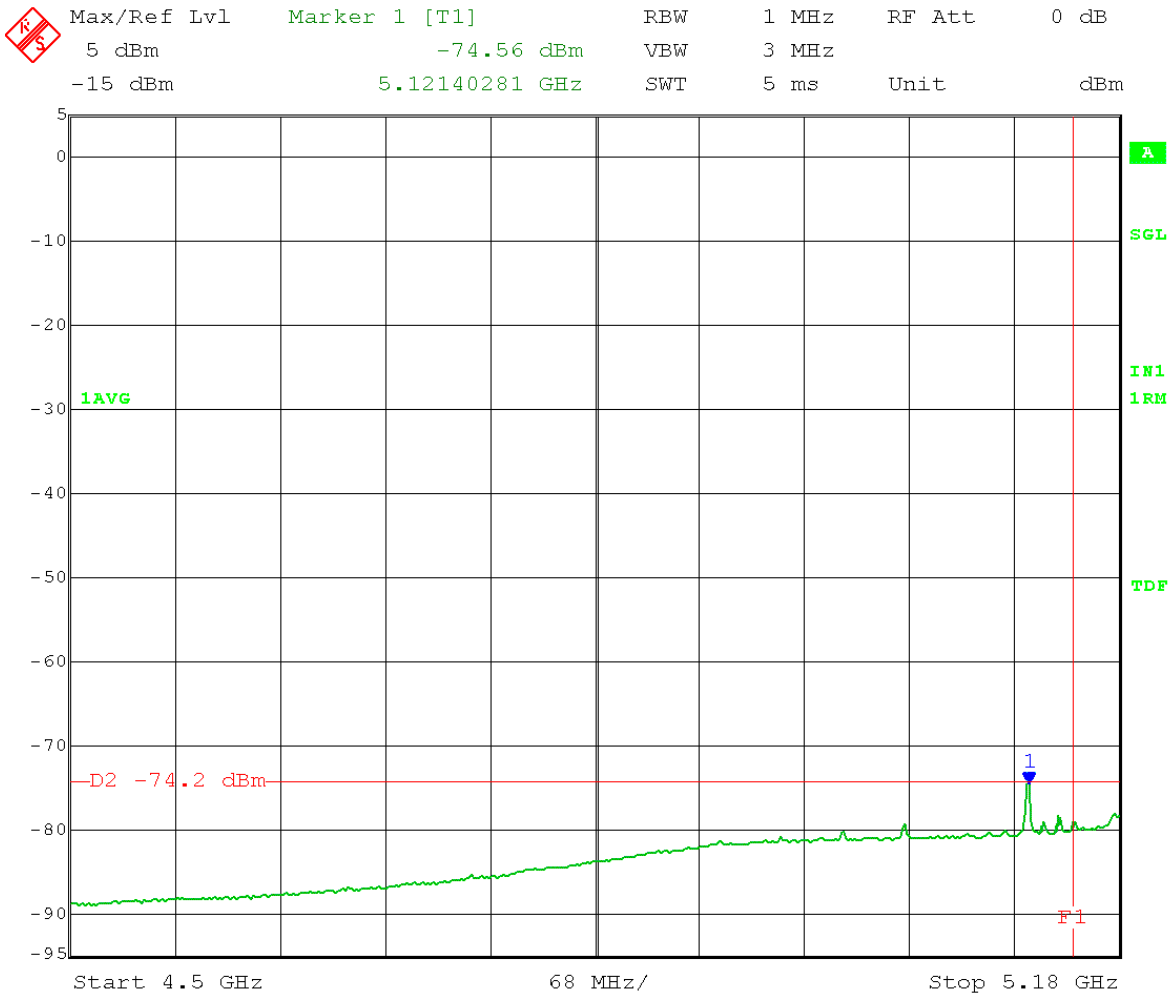
Date: 19.MAY.2014 10:04:22

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 4 – 10dB
external atten. = -6
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain
– 3 dB (MIMO) = -54.2 dBm



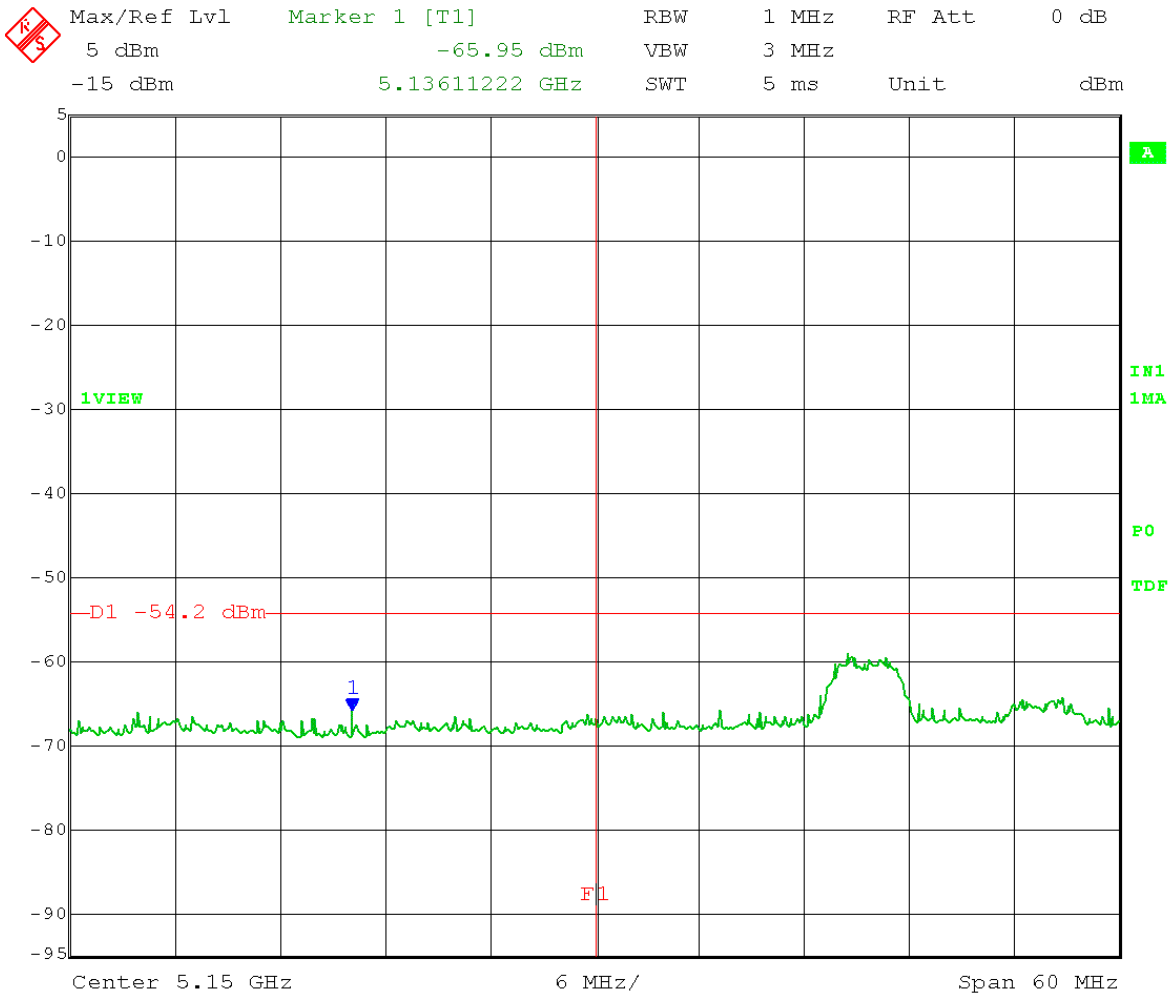
Date: 19.MAY.2014 10:27:58

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 4 – 10dB
external atten. = -6
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -74.2 dBm

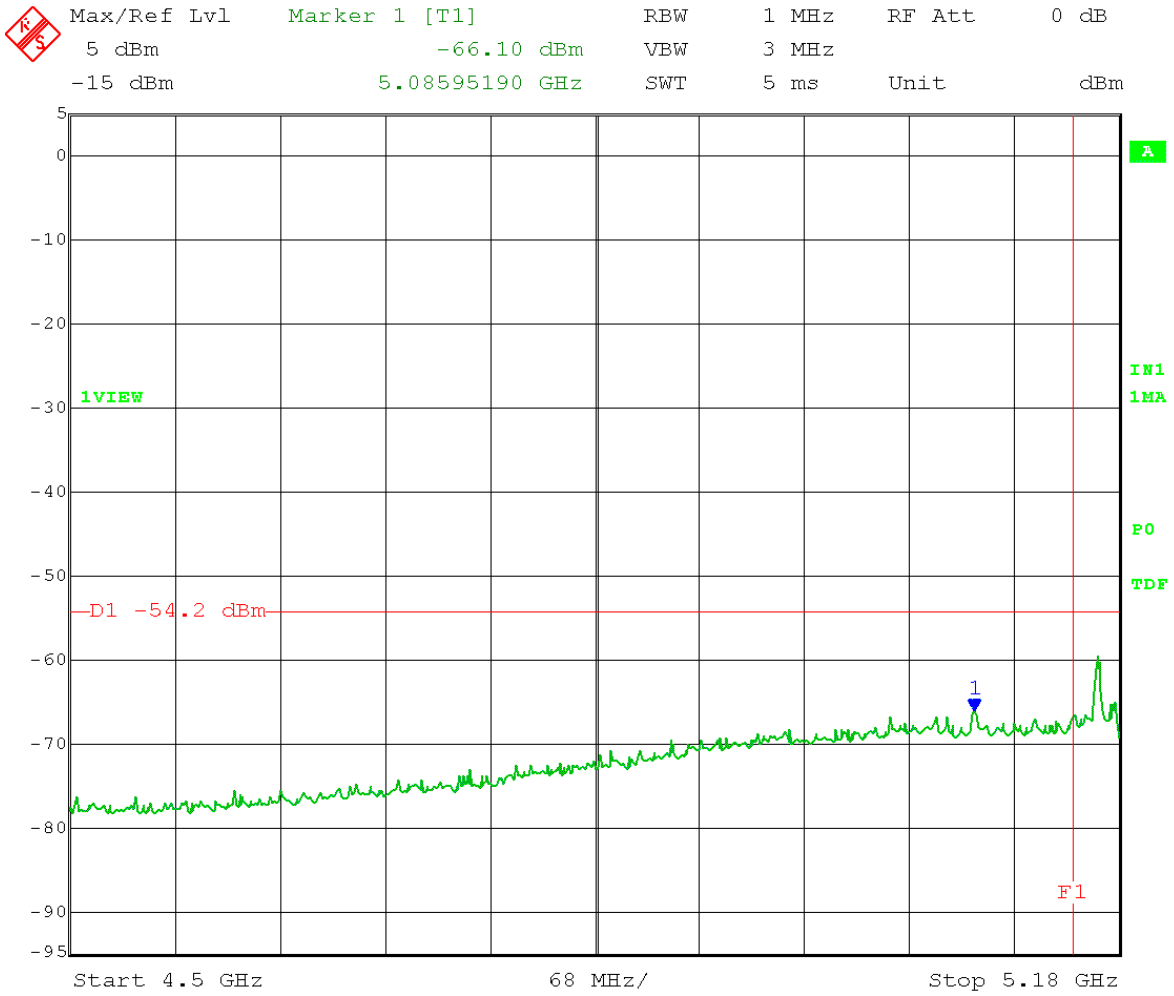


Date: 19.MAY.2014 10:26:38

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 9–10dB
external atten. = -1
5 MHz BW Band-edge = 5.150 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain
– 3 dB (MIMO) = -54.2 dBm

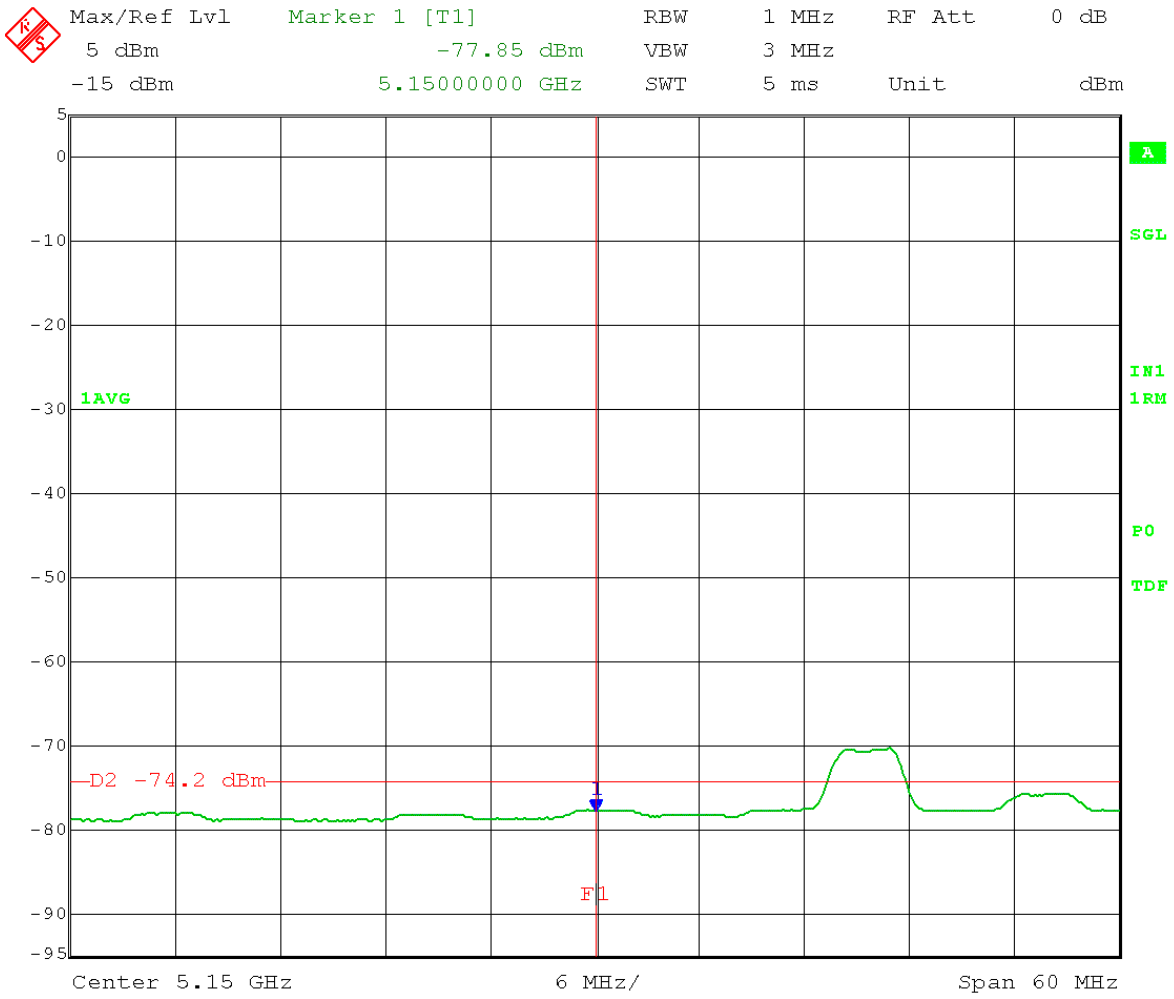


Date: 19.MAY.2014 10:56:52

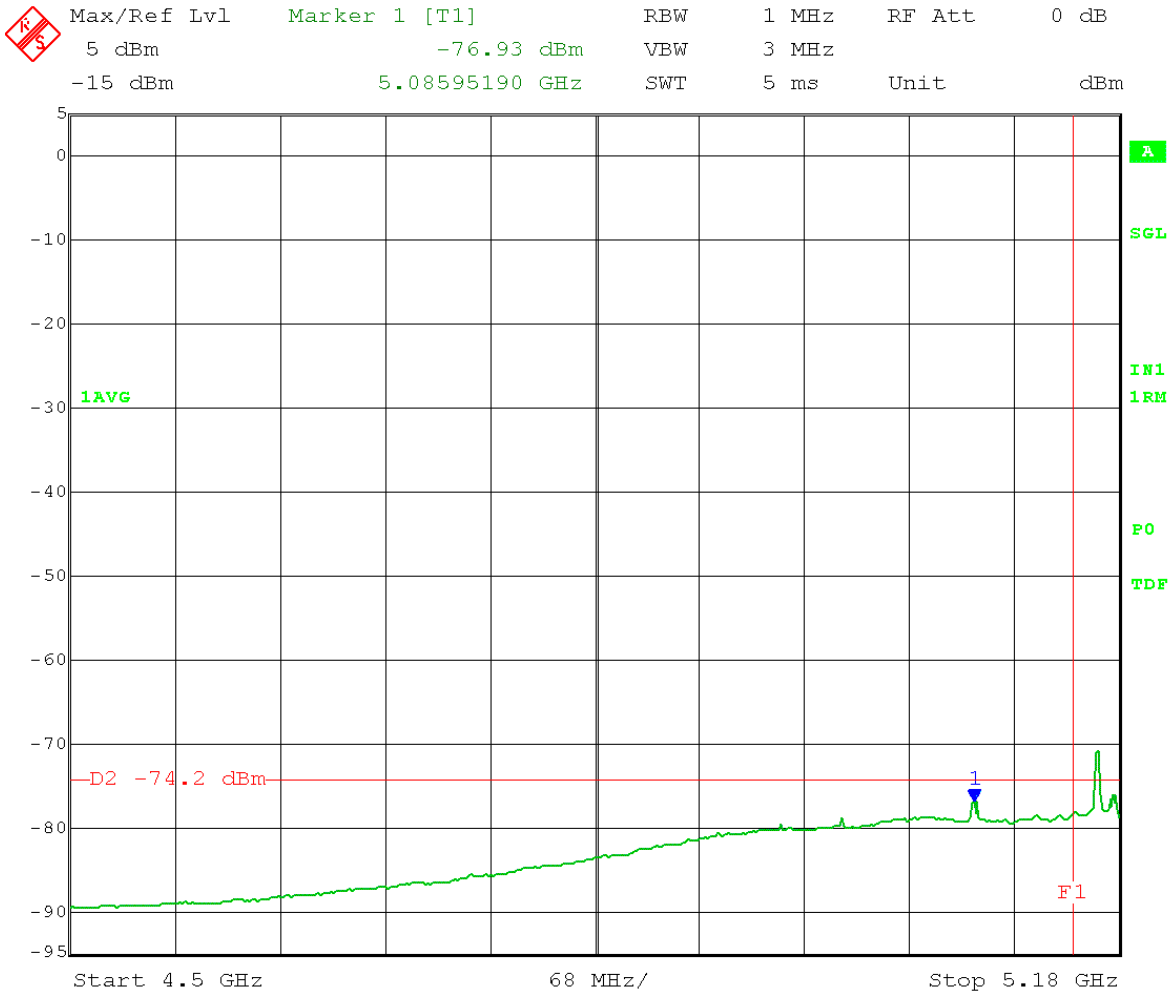


Date: 19.MAY.2014 10:56:00

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 9–10dB
external atten. = -1
5 MHz BW Band-edge = 5.150 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -74.2 dBm

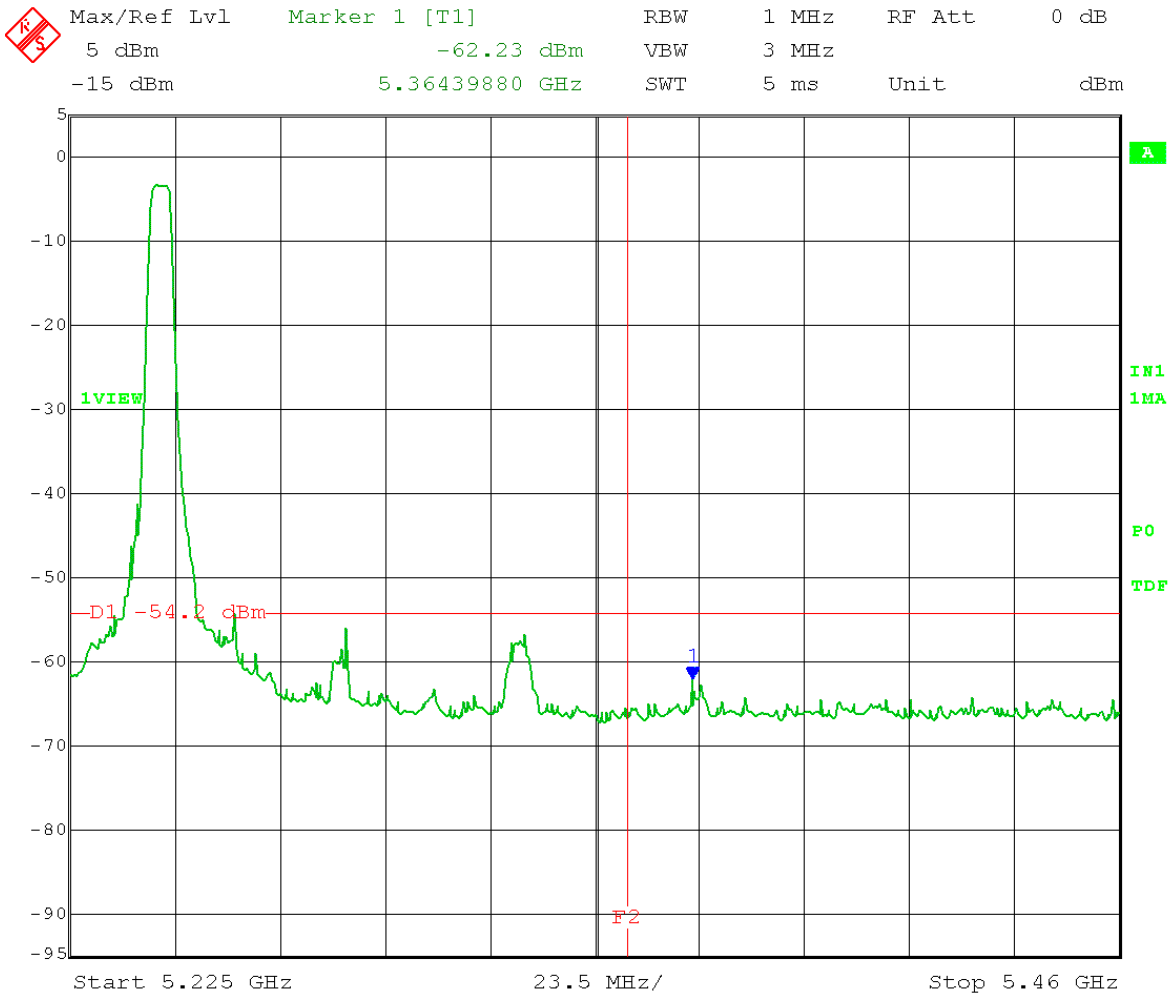


Date: 19.MAY.2014 10:54:16



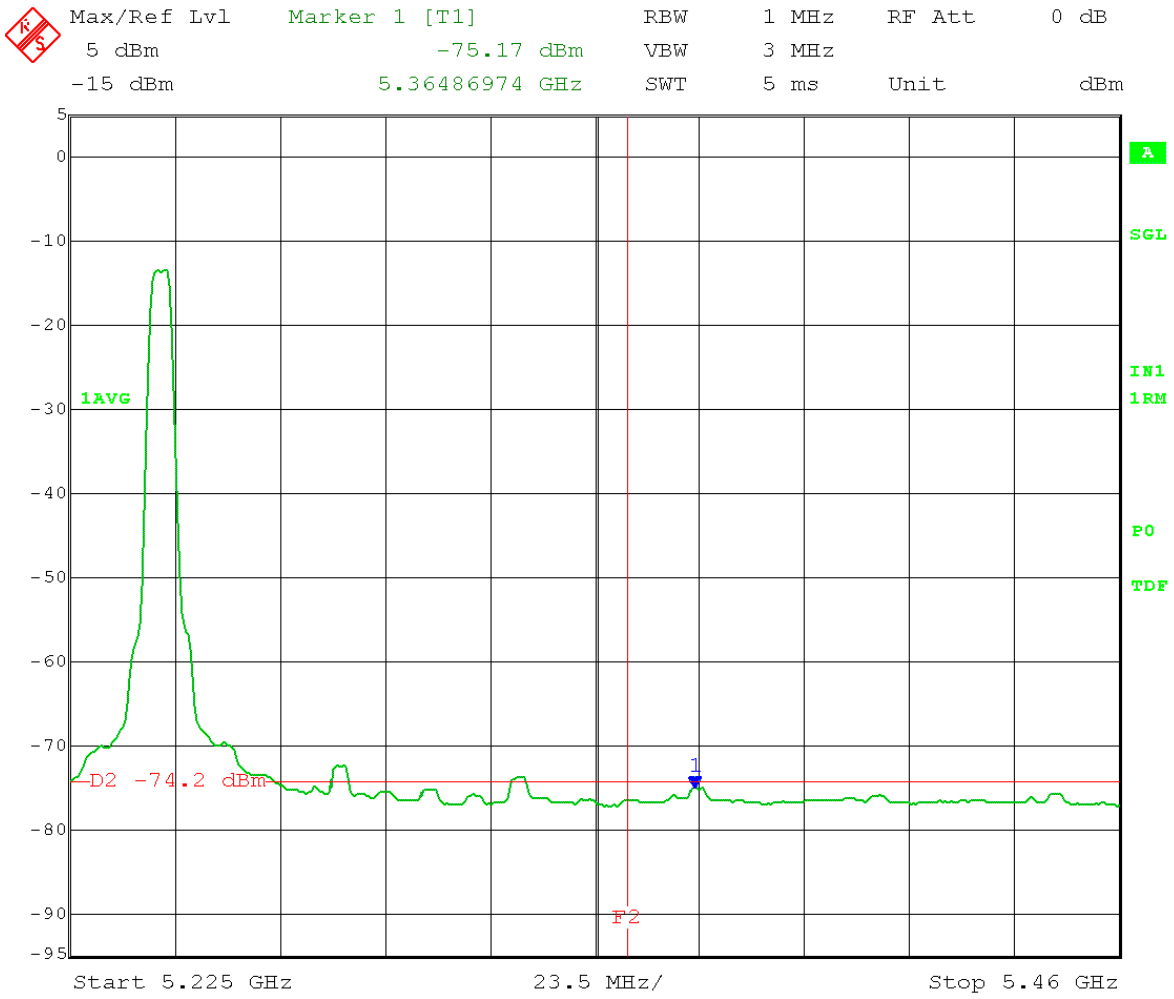
Date: 19.MAY.2014 10:55:11

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 9–10dB
external atten. = -1
5 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain
– 3 dB (MIMO) = -54.2 dBm



Date: 19.MAY.2014 10:44:07

Test Date: 05-19-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.245 GHz Output power setting: 9–10dB
external atten. = -1
5 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -74.2 dBm



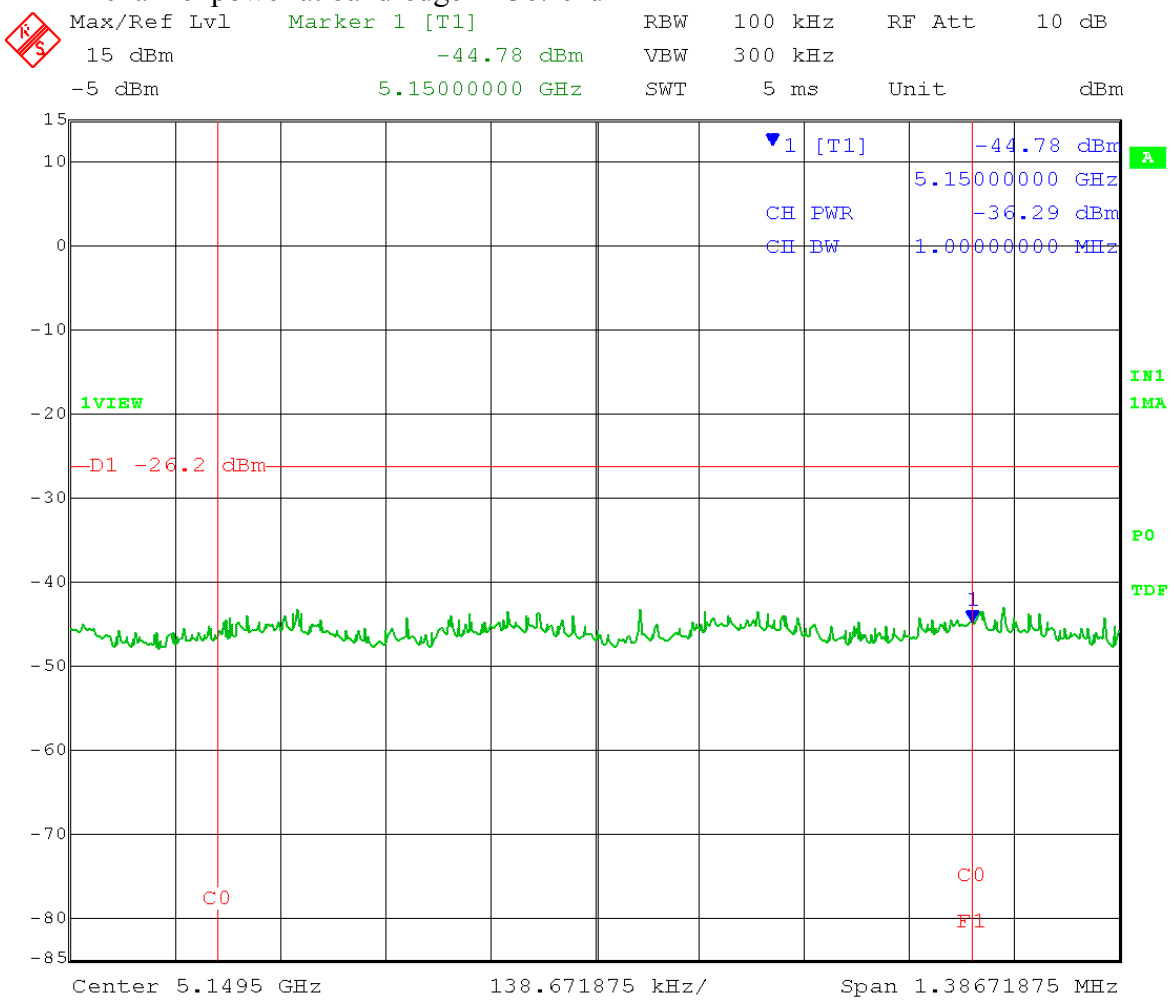
Date: 19.MAY.2014 10:42:20

Test Date: 06-06-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 14.5
40 MHz BW Band-edge = 5.150 GHz

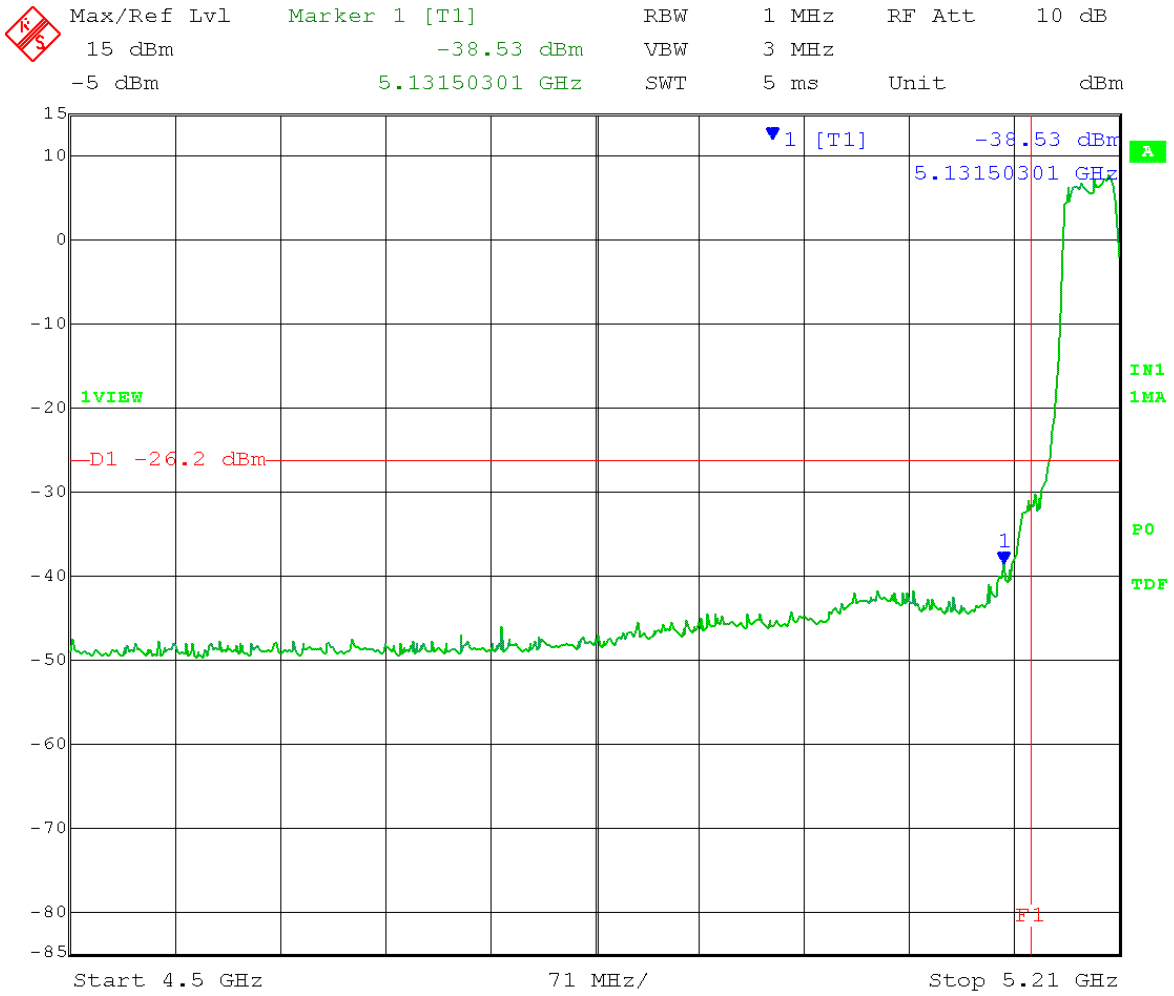
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -26.2 dBm

1 MHz channel power at band-edge = -36.29 dBm



Date: 6.JUN.2014 14:34:20



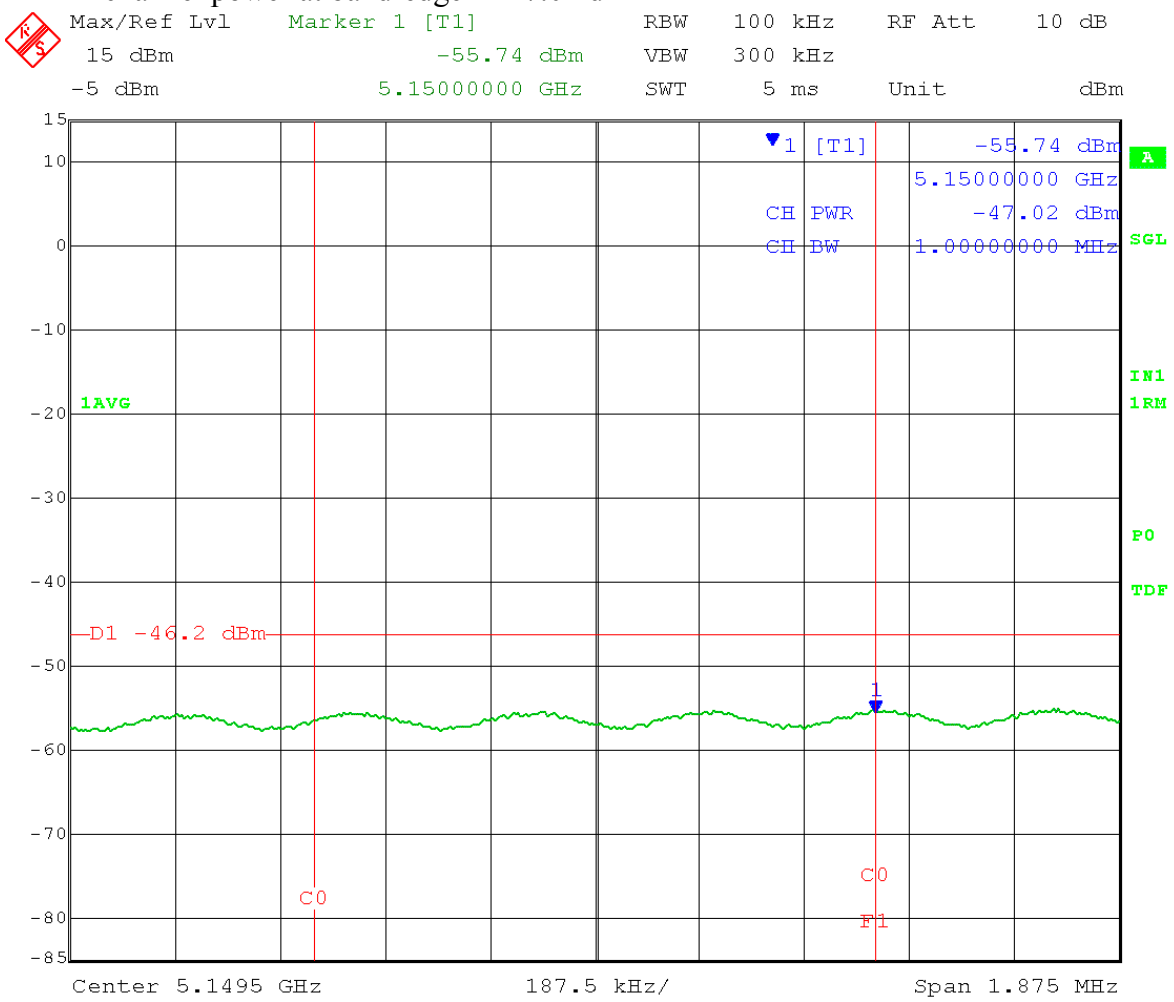
Date: 6.JUN.2014 14:31:38

Test Date: 06-06-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 14.5
40 MHz BW Band-edge = 5.150 GHz

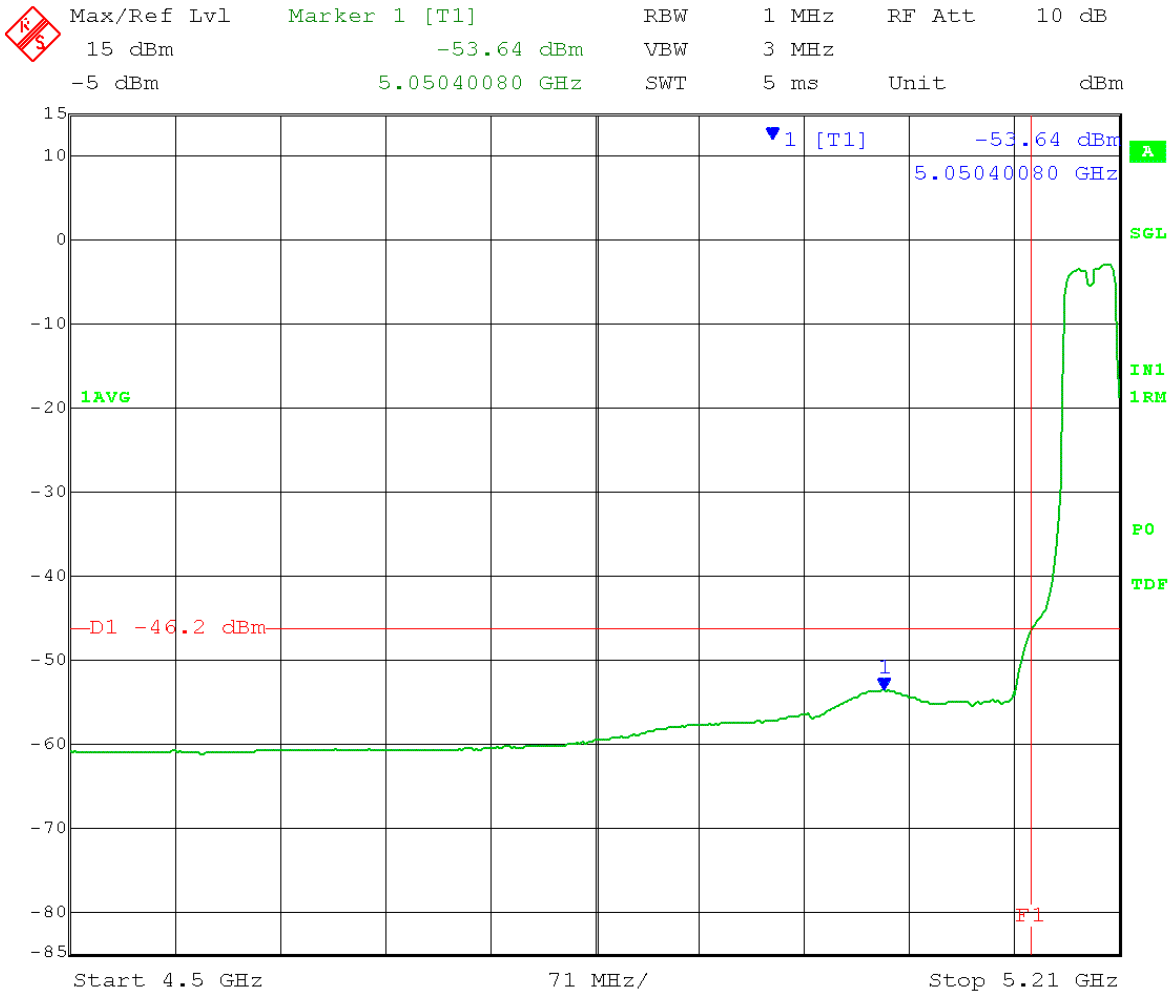
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -46.2 dBm

1 MHz channel power at band-edge = -47.02 dBm



Date: 6.JUN.2014 14:28:45



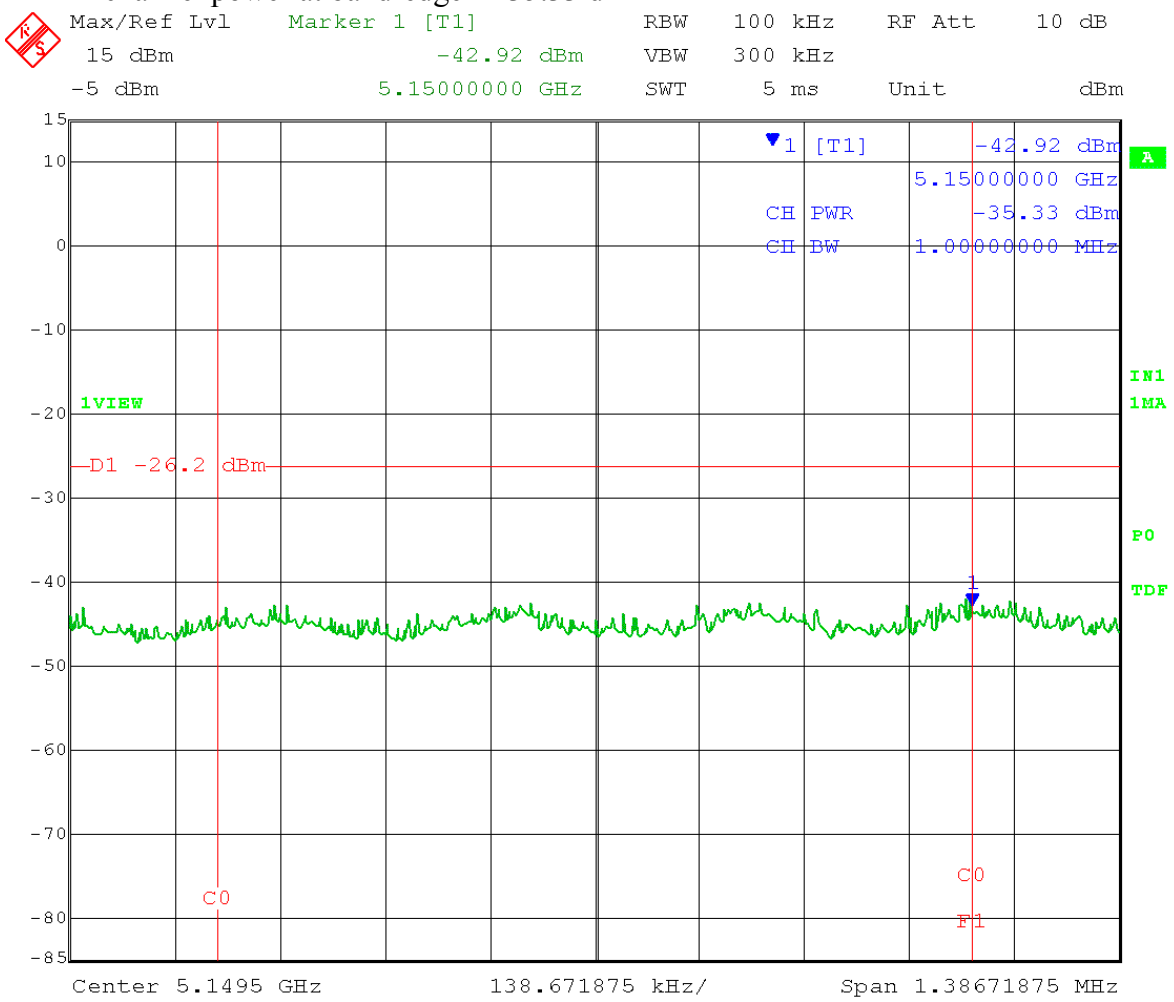
Date: 6.JUN.2014 14:30:10

Test Date: 06-06-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 17.5
40 MHz BW Band-edge = 5.150 GHz

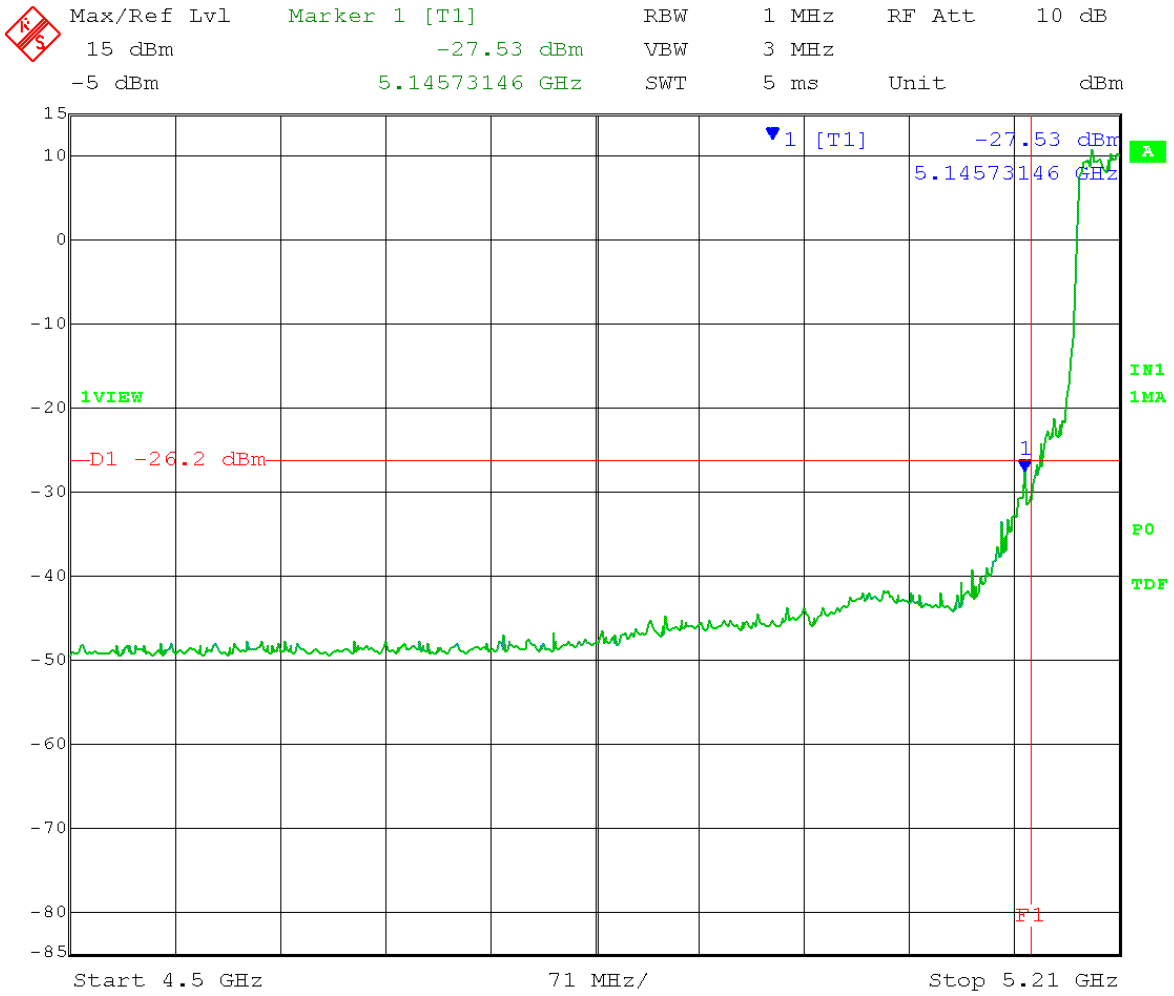
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -26.2 dBm

1 MHz channel power at band-edge = -35.33 dBm



Date: 6.JUN.2014 14:46:39



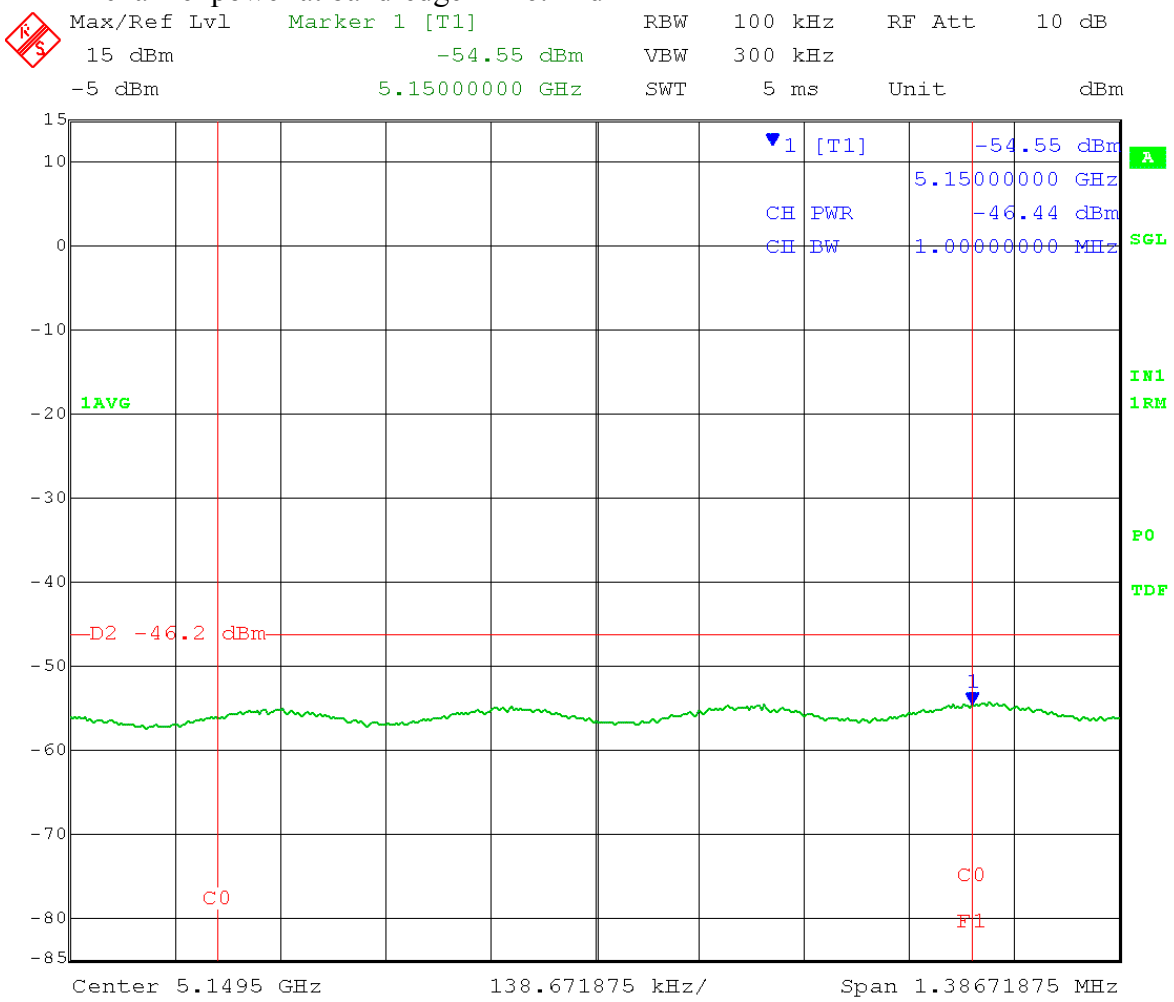
Date: 6.JUN.2014 14:44:46

Test Date: 06-06-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 17.5
40 MHz BW Band-edge = 5.150 GHz

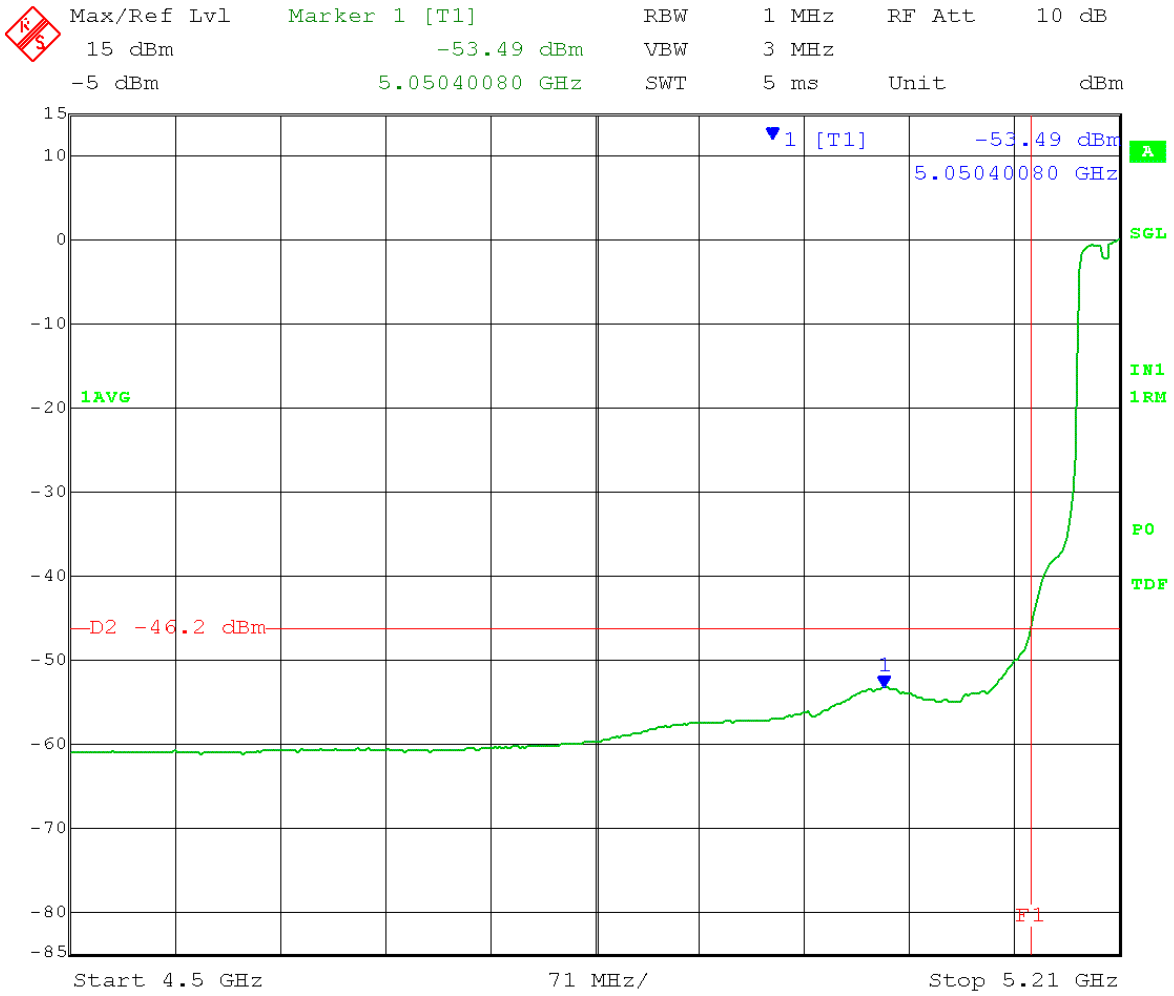
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -46.2 dBm

1 MHz channel power at band-edge = -46.44 dBm



Date: 6.JUN.2014 14:41:00



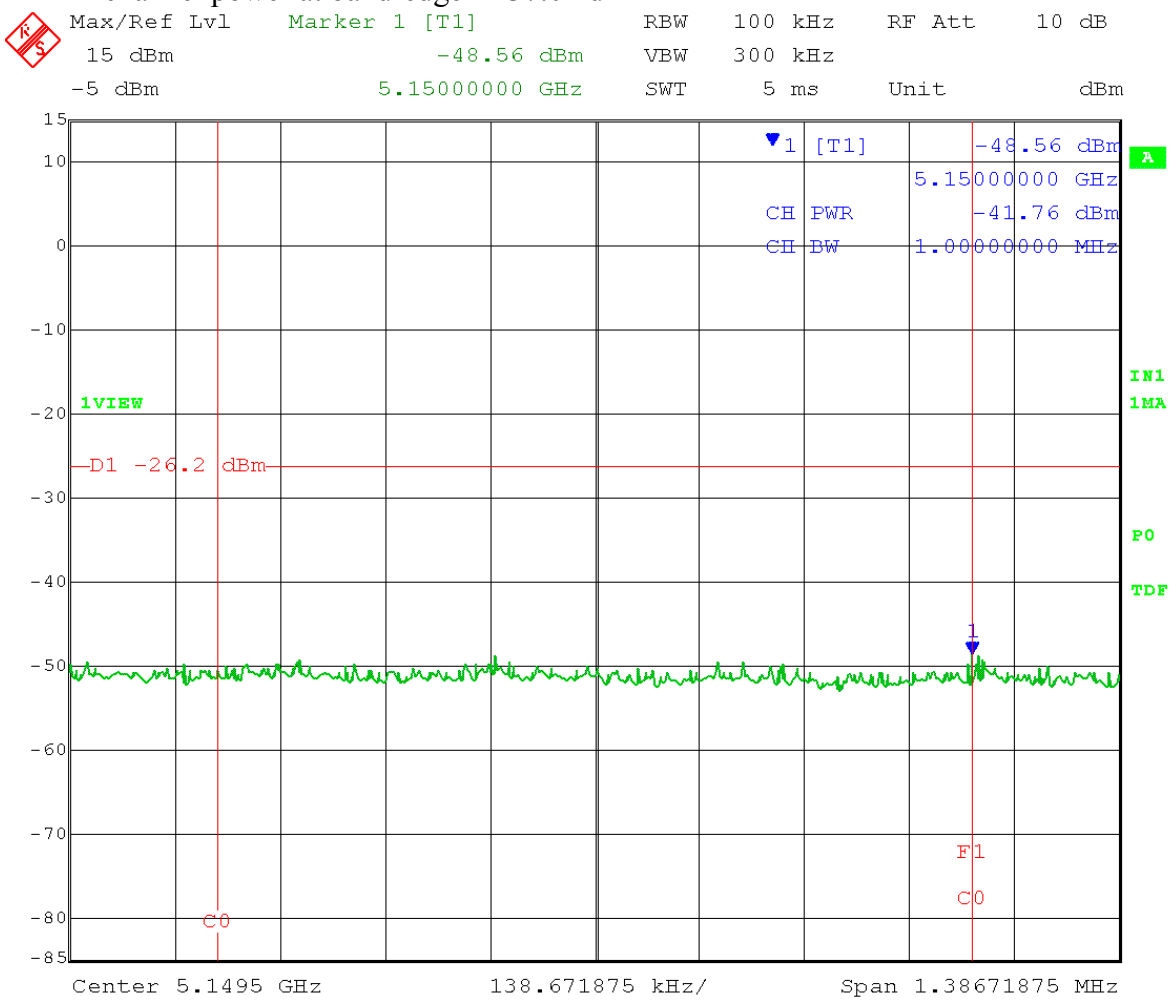
Date: 6.JUN.2014 14:43:14

Test Date:	06-09-2014	
Company:	Cambium Networks	
EUT:	ePMP 5.1 AP UNII with 2 dBi antenna gain	
Test:	Operating Band-edge Measurement - Conducted	
Operator:	Craig B / Paul	
Comment:	RBW = 1 MHz	VBW ≥ 3 MHz
	Detector = Peak	Trace = Max Hold
	Channel 0	ESN# 000456C005E4
	High Channel Transmit = 5.230 GHz	Output power setting: 18
	40 MHz BW	Band-edge = 5.150 GHz

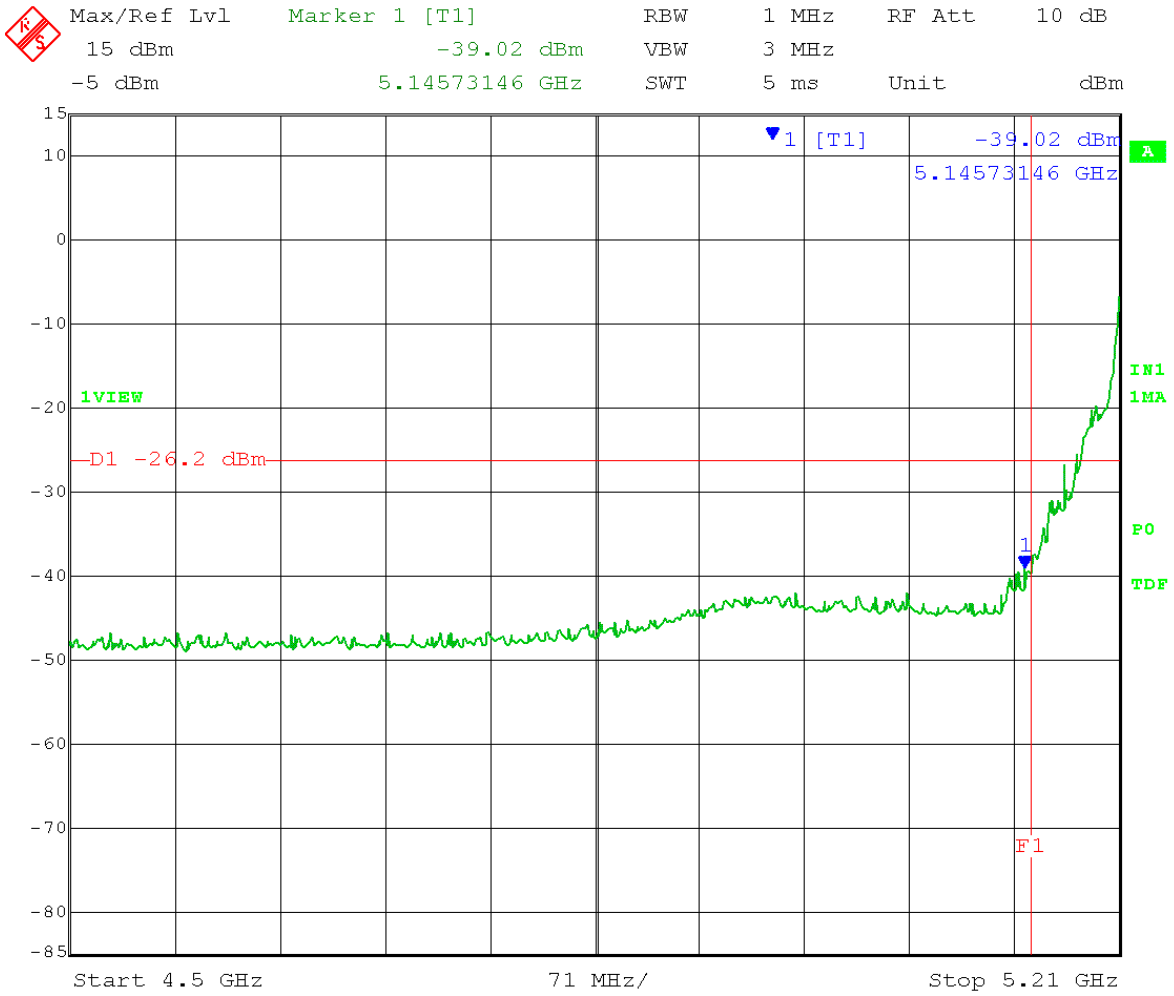
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -26.2 dBm

1 MHz channel power at band-edge = -37.02 dBm



Date: 9.JUN.2014 09:34:44



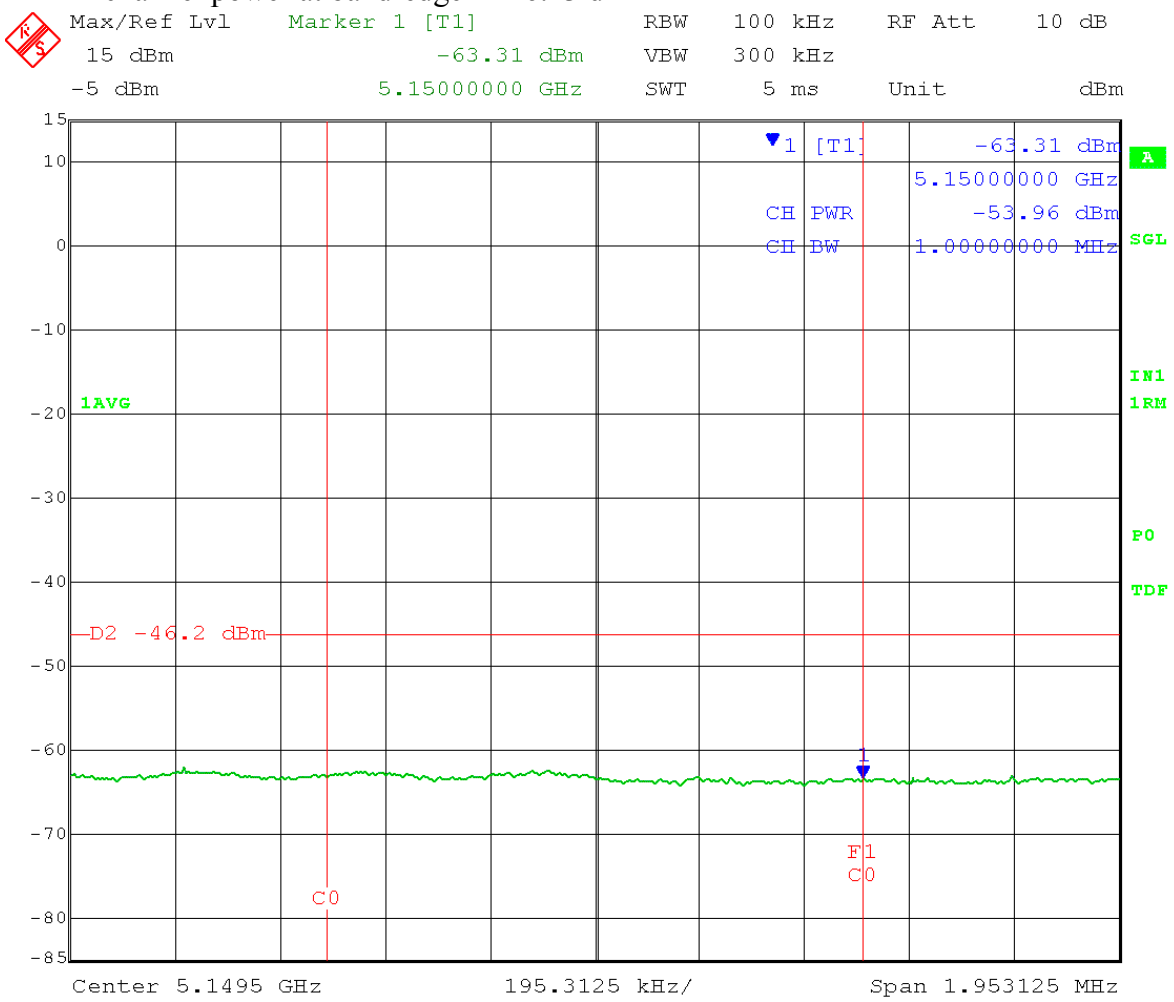
Date: 9.JUN.2014 09:32:39

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 18
40 MHz BW Band-edge = 5.150 GHz

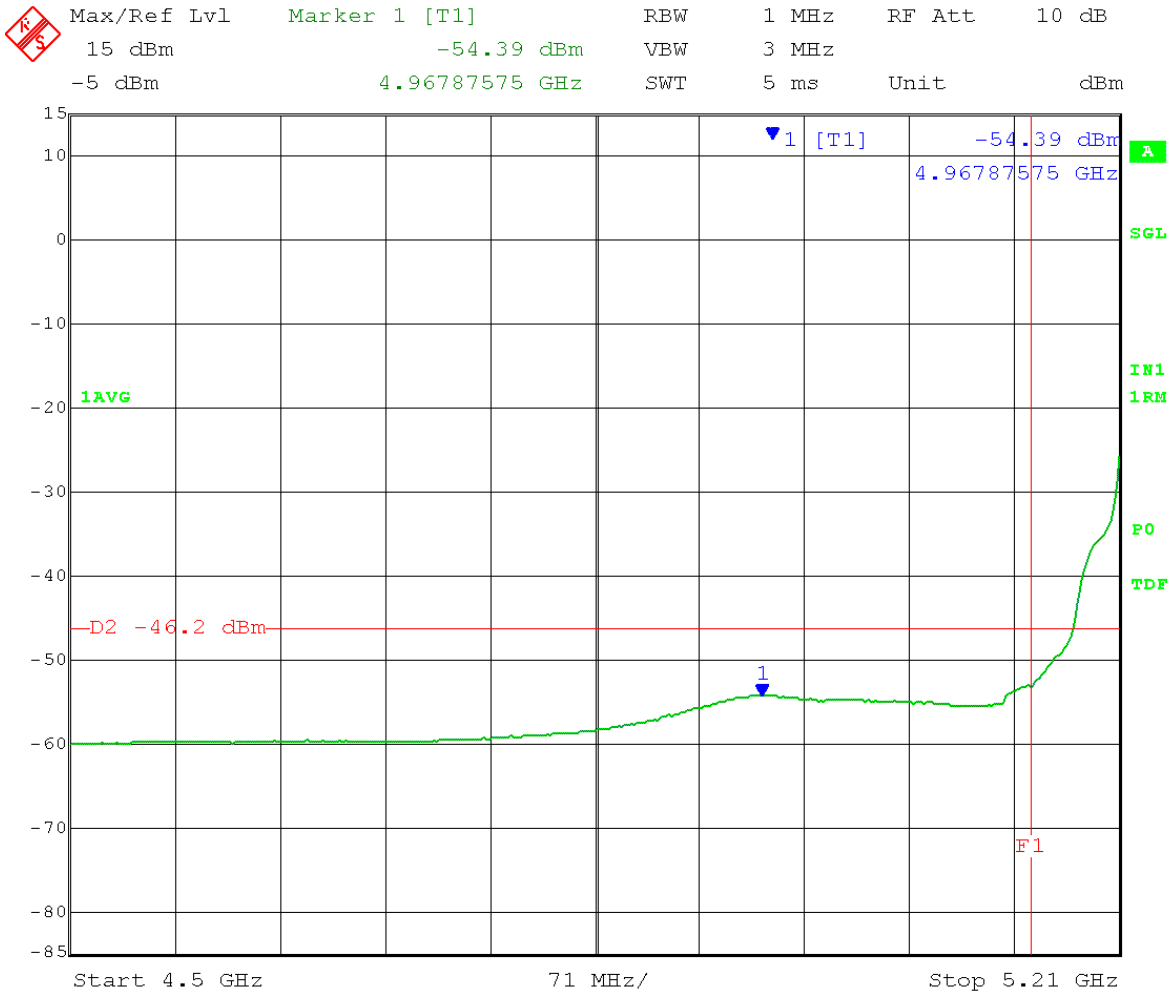
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -46.2 dBm

1 MHz channel power at band-edge = -46.43 dBm

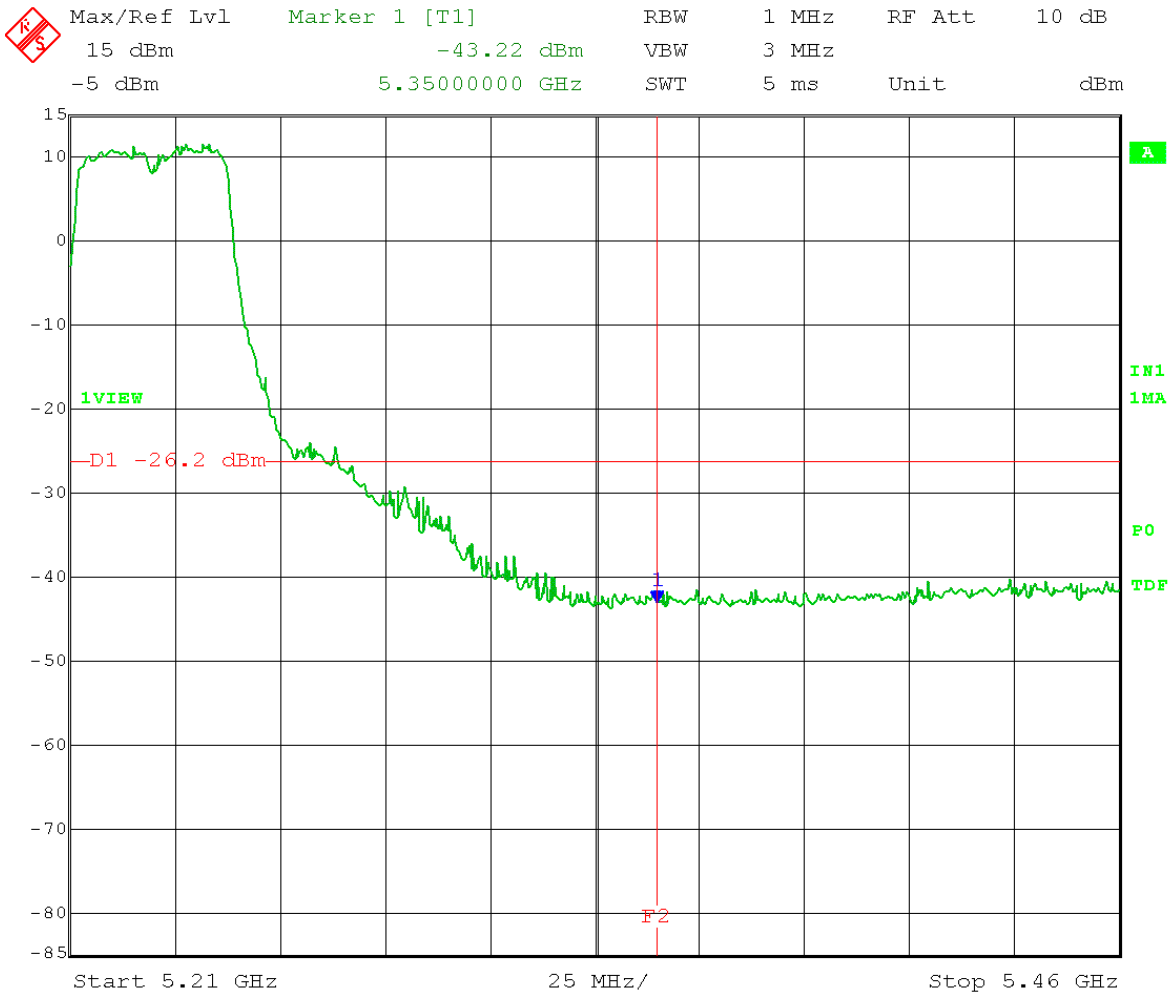


Date: 9.JUN.2014 09:30:44



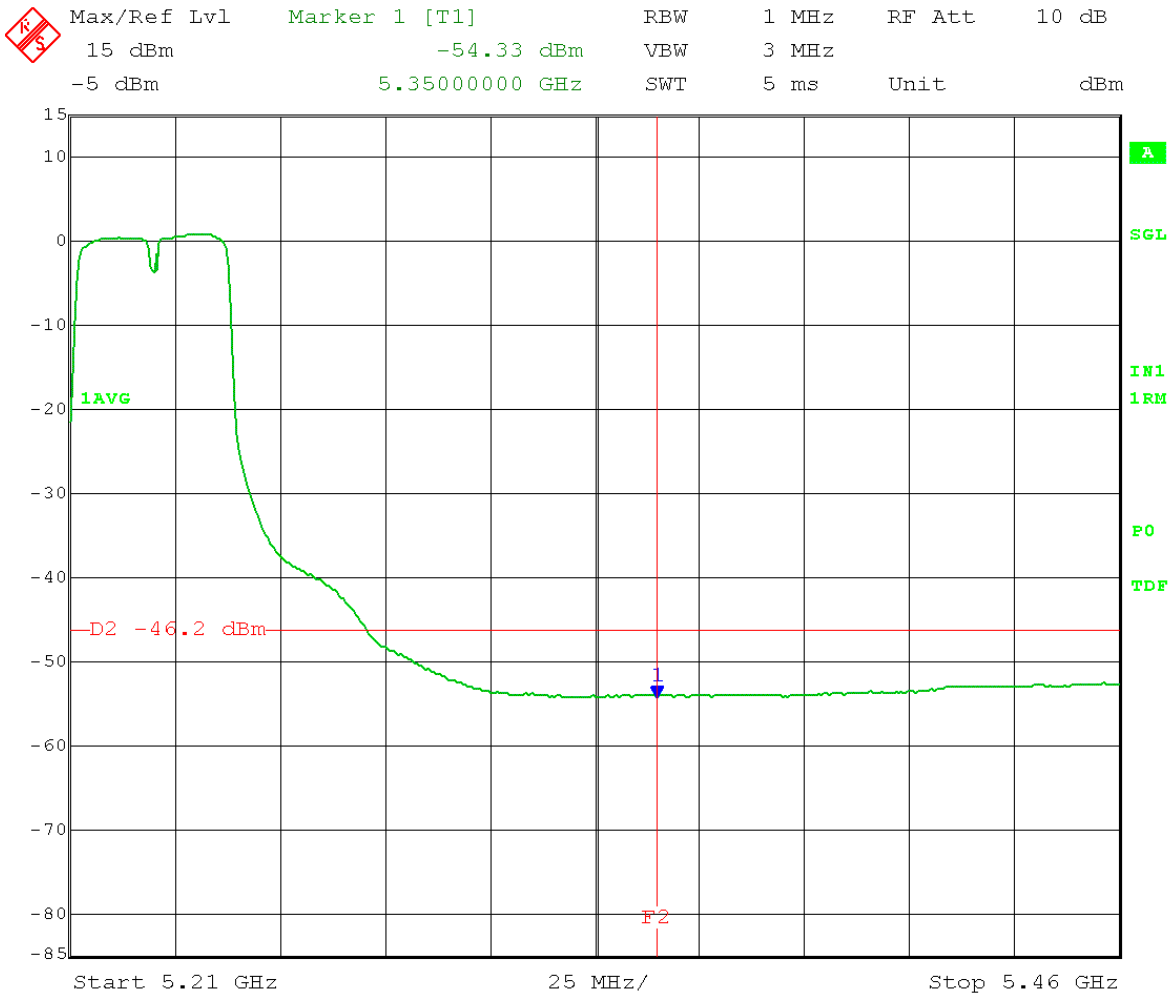
Date: 9.JUN.2014 09:31:42

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 STA UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 18
40 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -26.2 dBm



Date: 9.JUN.2014 09:28:49

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 2 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 18
40 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 2 dBi antenna gain – 3 dB (MIMO) = -46.2 dBm



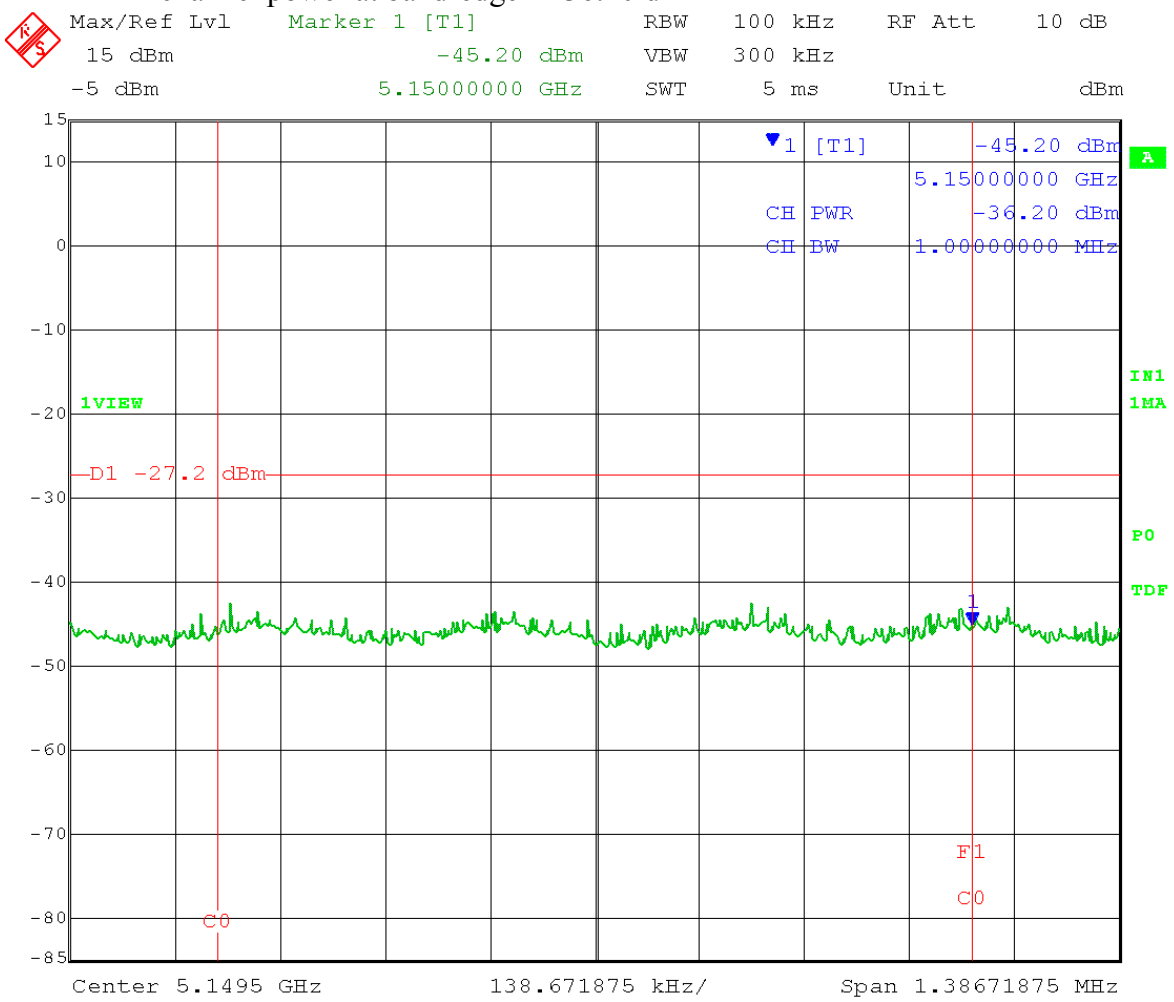
Date: 9.JUN.2014 09:27:05

Test Date:	06-09-2014	
Company:	Cambium Networks	
EUT:	ePMP 5.1 AP UNII with 3 dBi antenna gain	
Test:	Operating Band-edge Measurement - Conducted	
Operator:	Craig B / Paul	
Comment:	RBW = 1 MHz	VBW ≥ 3 MHz
	Detector = Peak	Trace = Max Hold
	Channel 0	ESN# 000456C005E4
	Low Channel Transmit = 5.190 GHz	Output power setting: 14.0
	40 MHz BW	Band-edge = 5.150 GHz

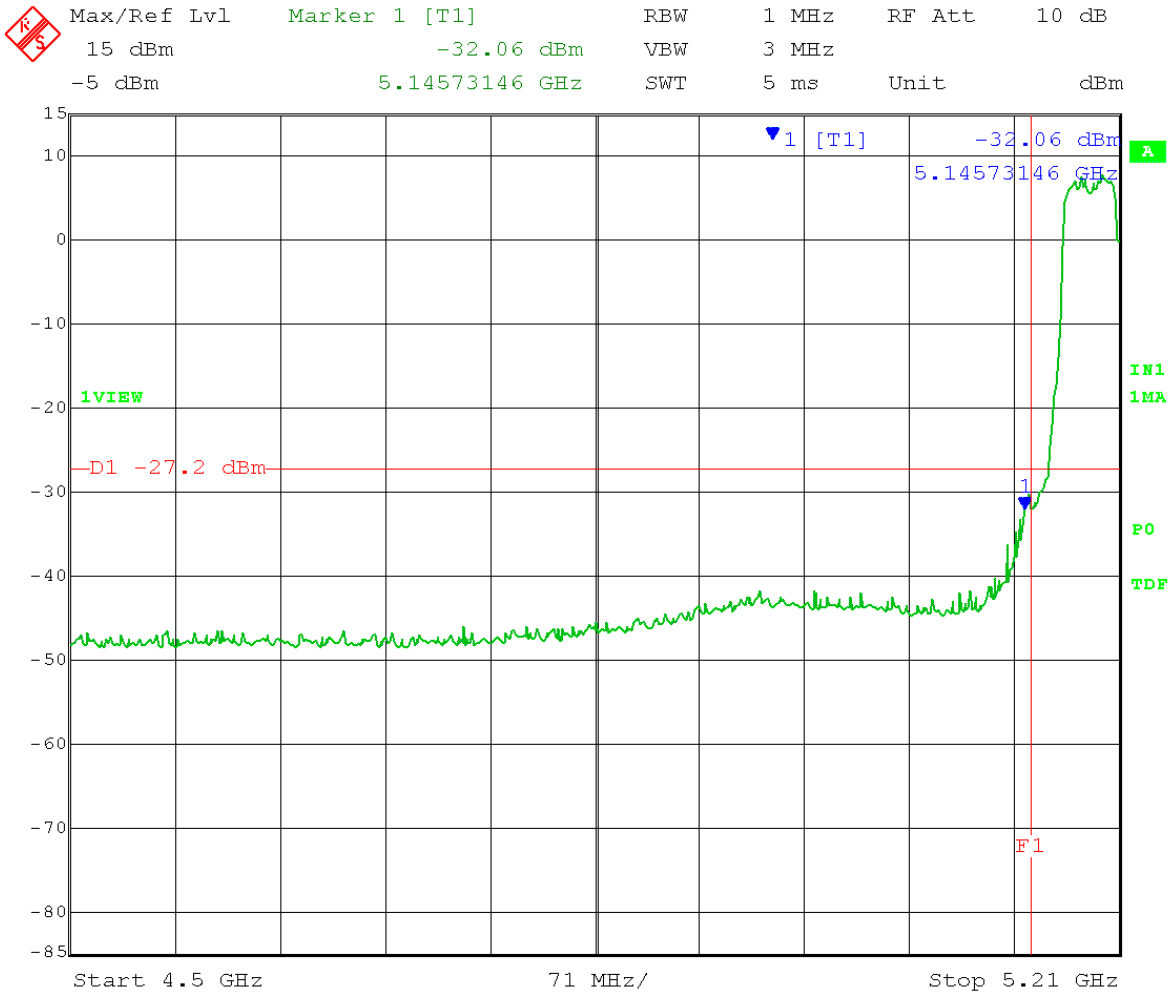
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -27.2 dBm

1 MHz channel power at band-edge = -36.20 dBm



Date: 9.JUN.2014 10:07:50



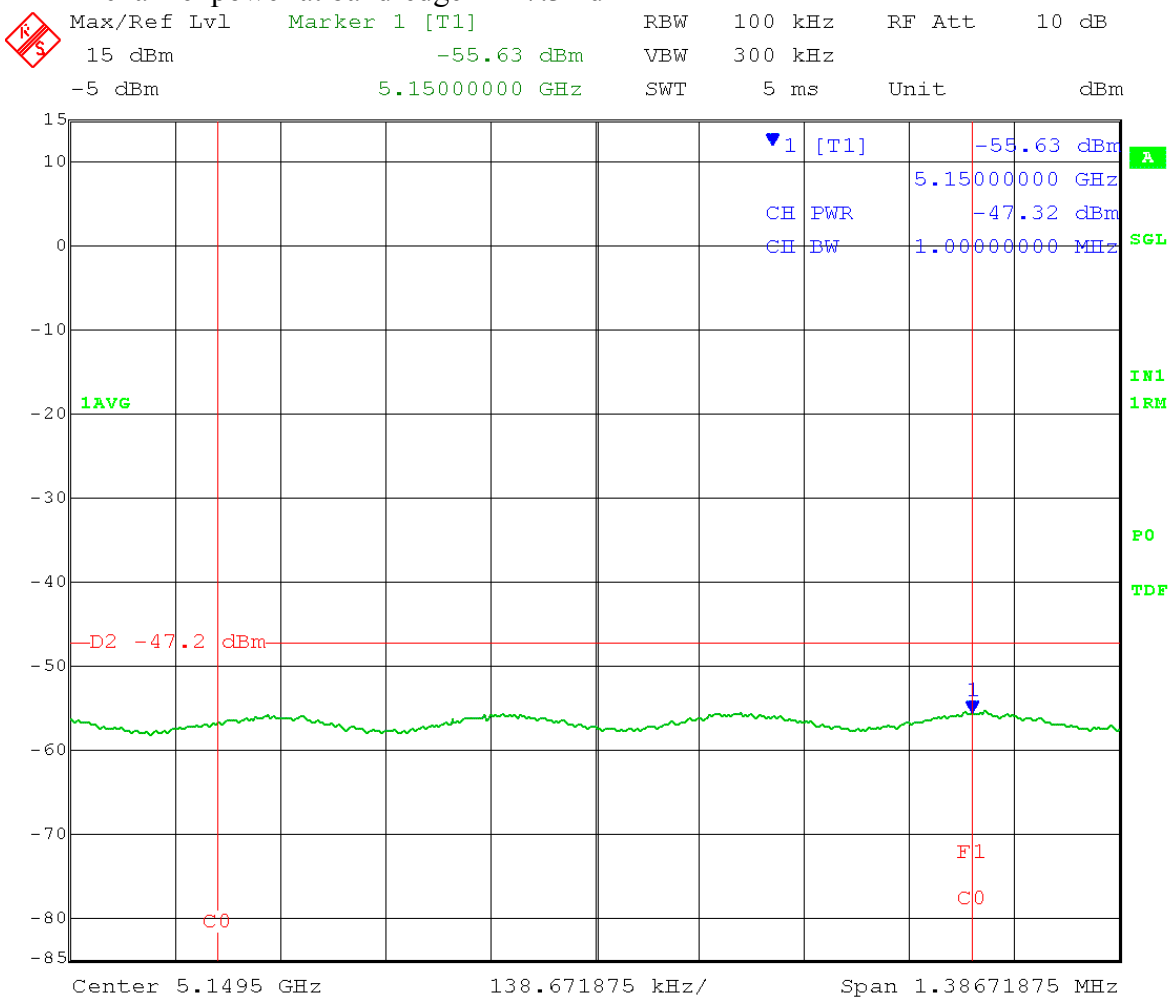
Date: 9.JUN.2014 09:49:30

Test Date:	06-09-2014	
Company:	Cambium Networks	
EUT:	ePMP 5.1 AP UNII with 3 dBi antenna gain	
Test:	Operating Band-edge Measurement - Conducted	
Operator:	Craig B / Paul	
Comment:	RBW = 1 MHz	VBW ≥ 3 MHz
	Detector = RMS	Trace = Average 200 traces
	Channel 0	ESN# 000456C005E4
	Low Channel Transmit = 5.190 GHz	Output power setting: 14.0
	40 MHz BW	Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm

1 MHz channel power at band-edge = -47.32 dBm



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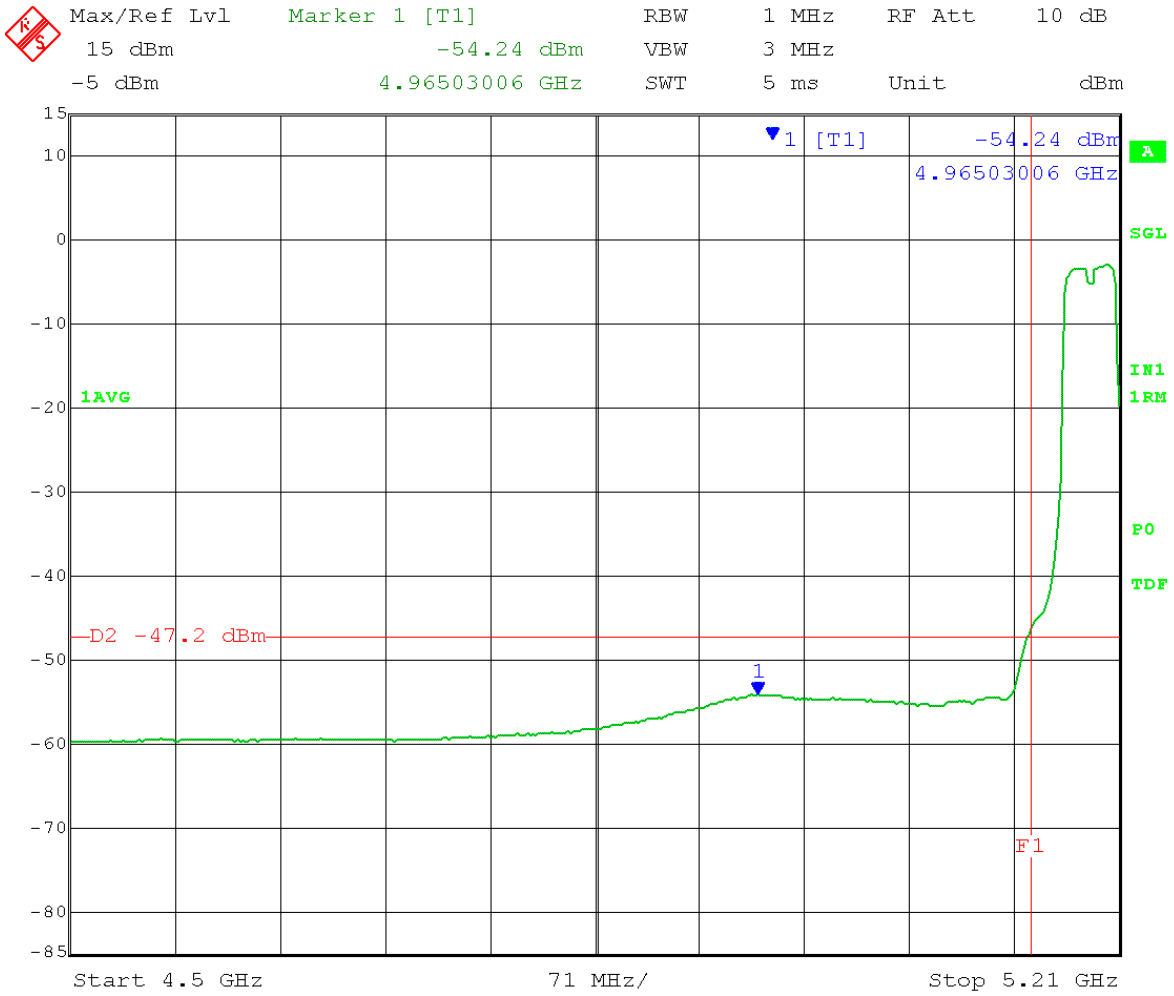


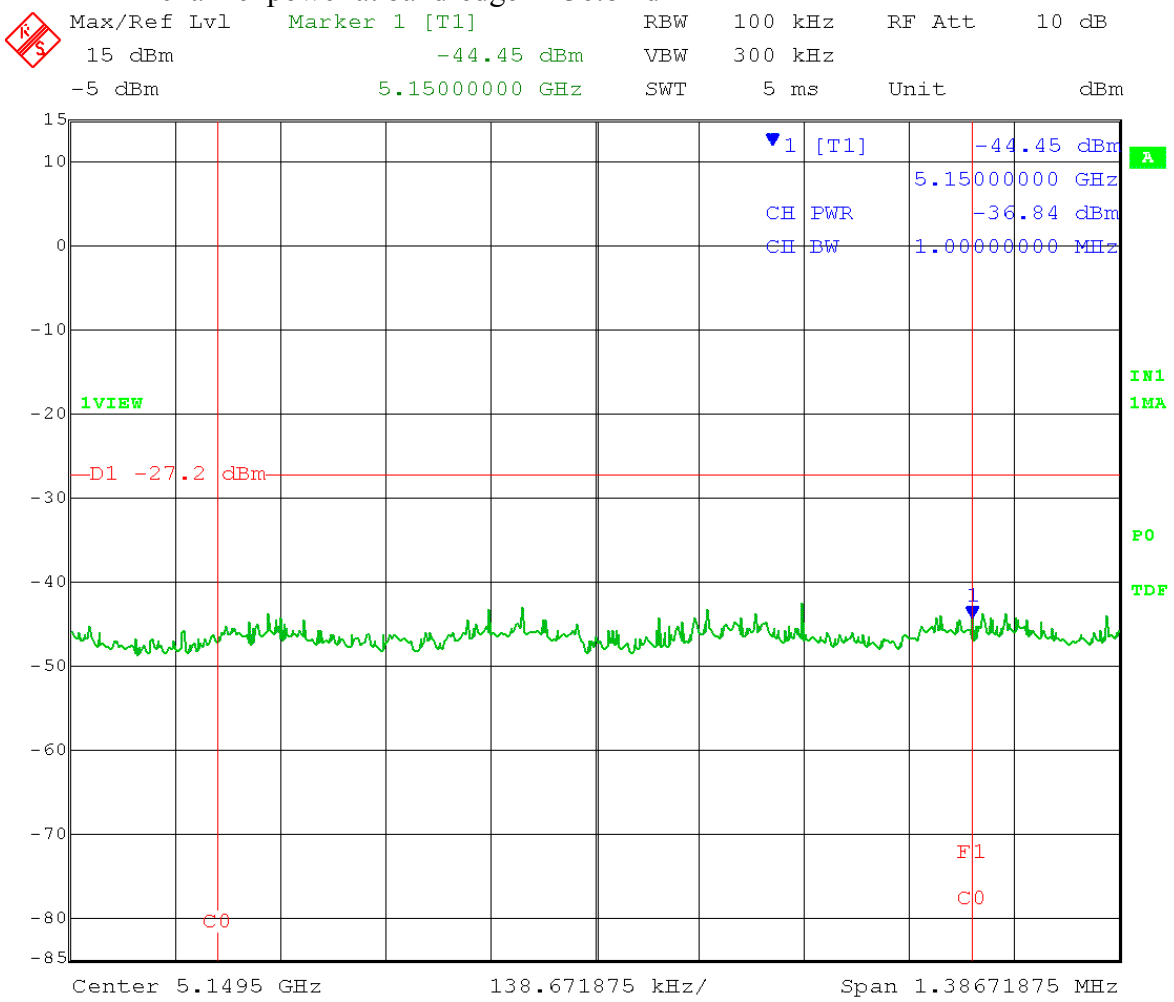
Date: 9.JUN.2014 09:48:05

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 16.5
40 MHz BW Band-edge = 5.150 GHz

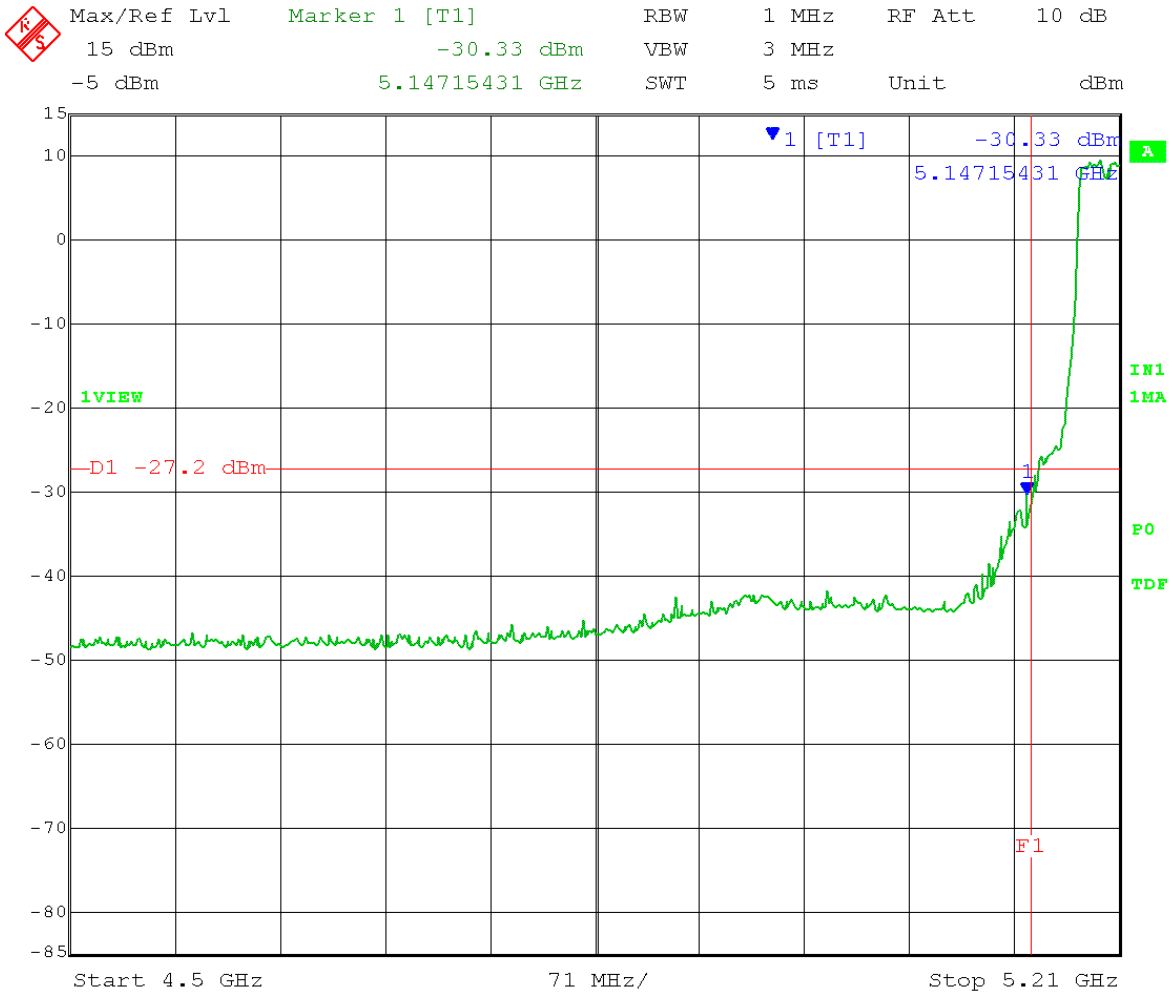
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -27.2 dBm

1 MHz channel power at band-edge = -36.84 dBm



Date: 9.JUN.2014 10:52:38



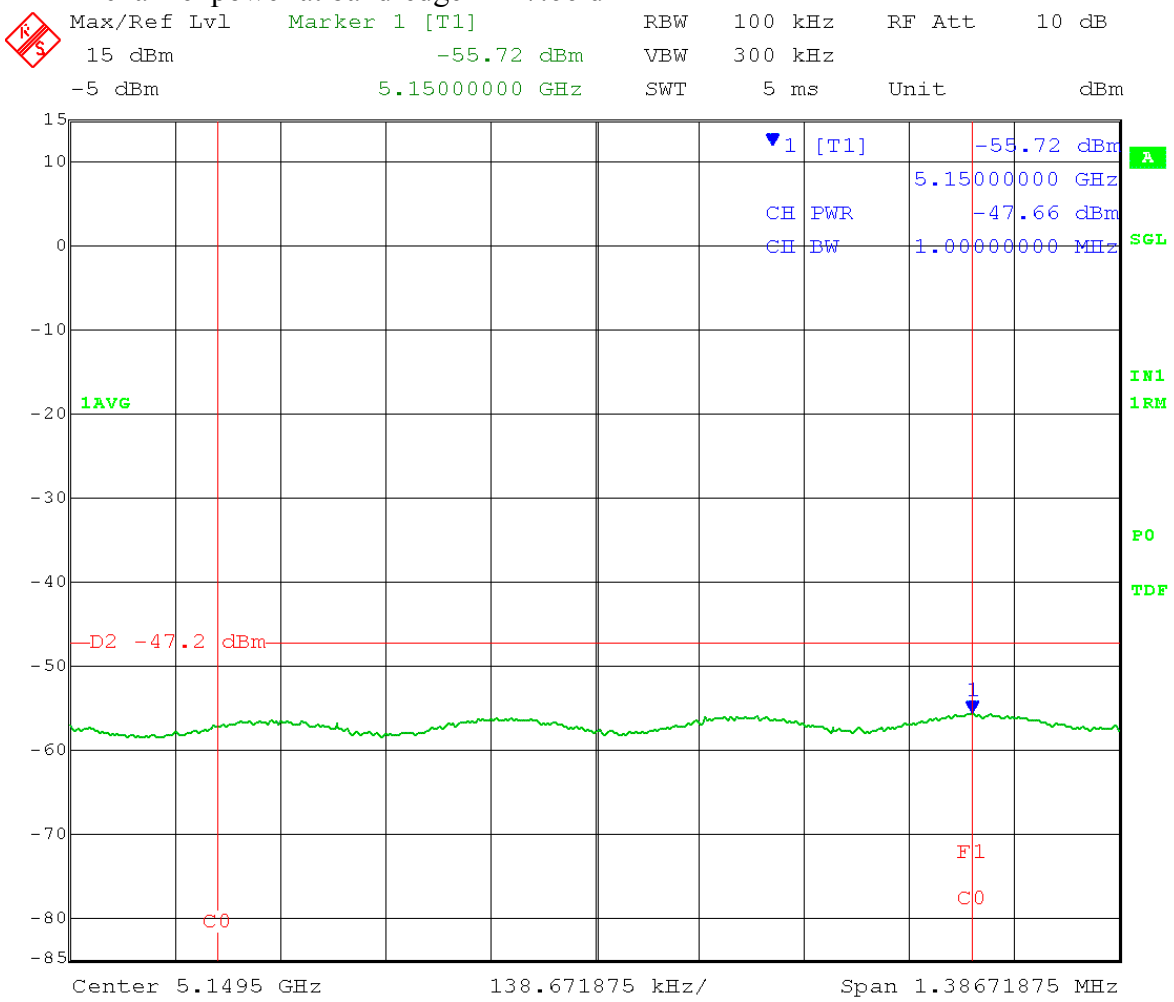
Date: 9.JUN.2014 10:50:57

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 16.5
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm

1 MHz channel power at band-edge = -47.66 dBm



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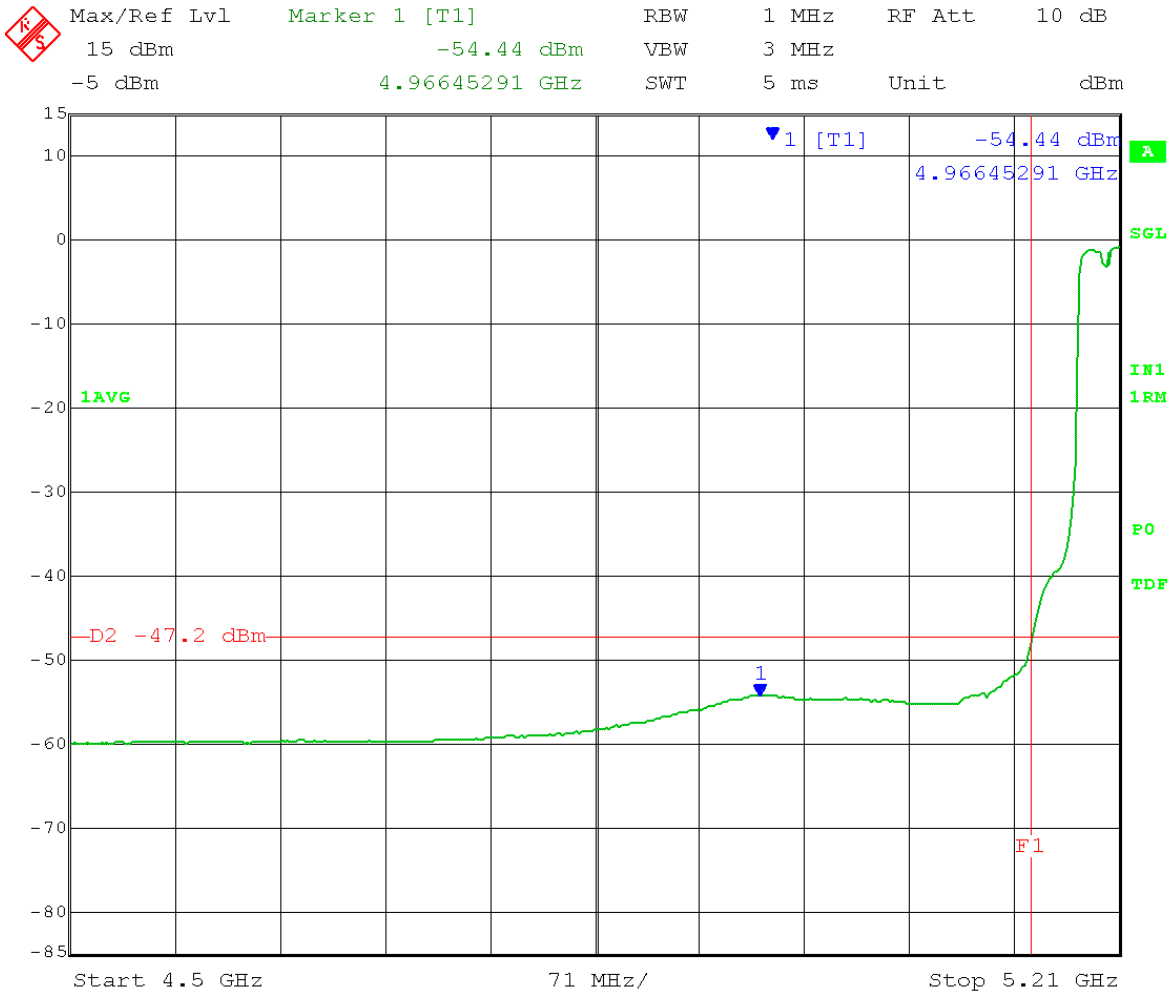


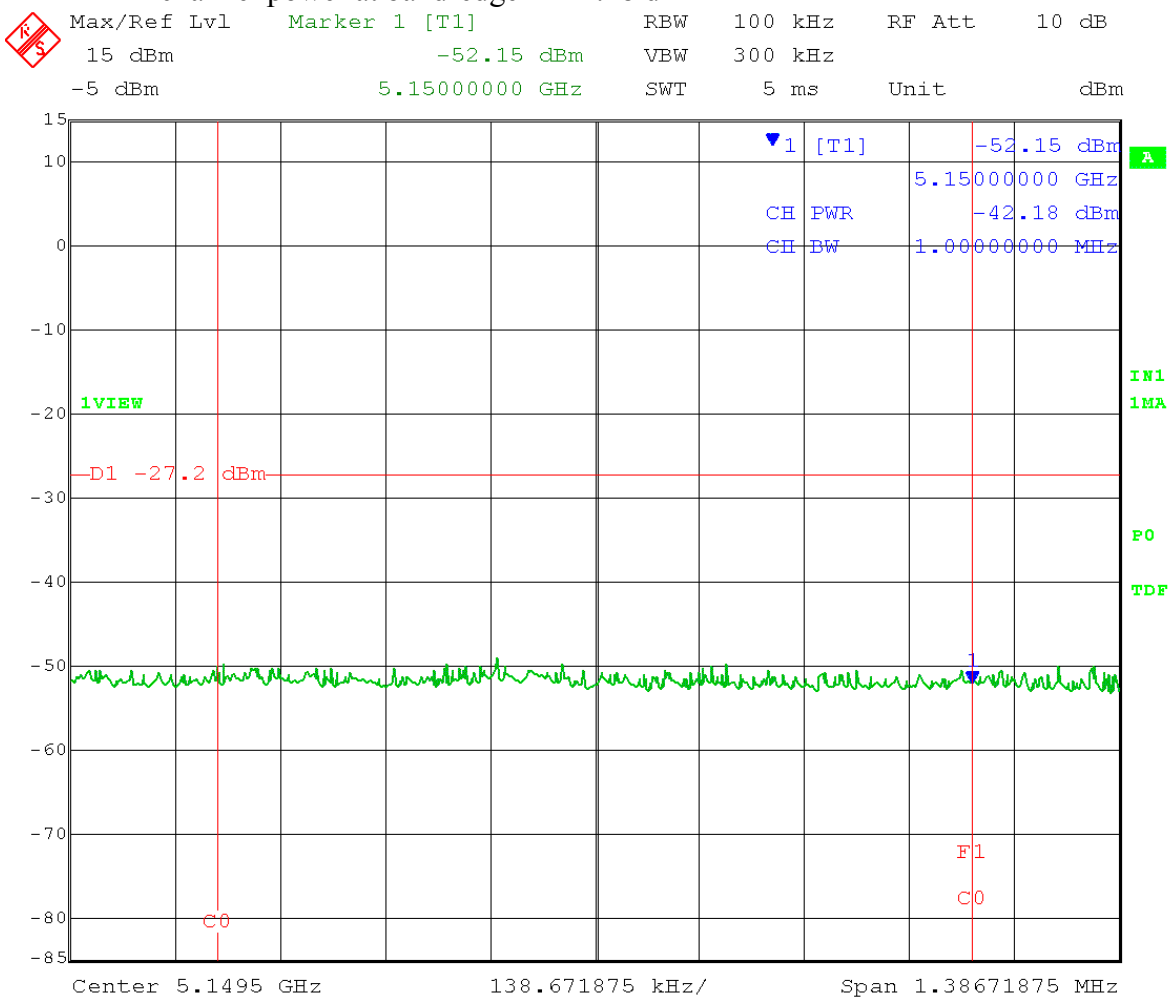
Date: 9.JUN.2014 10:49:33

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 18
40 MHz BW Band-edge = 5.150 GHz

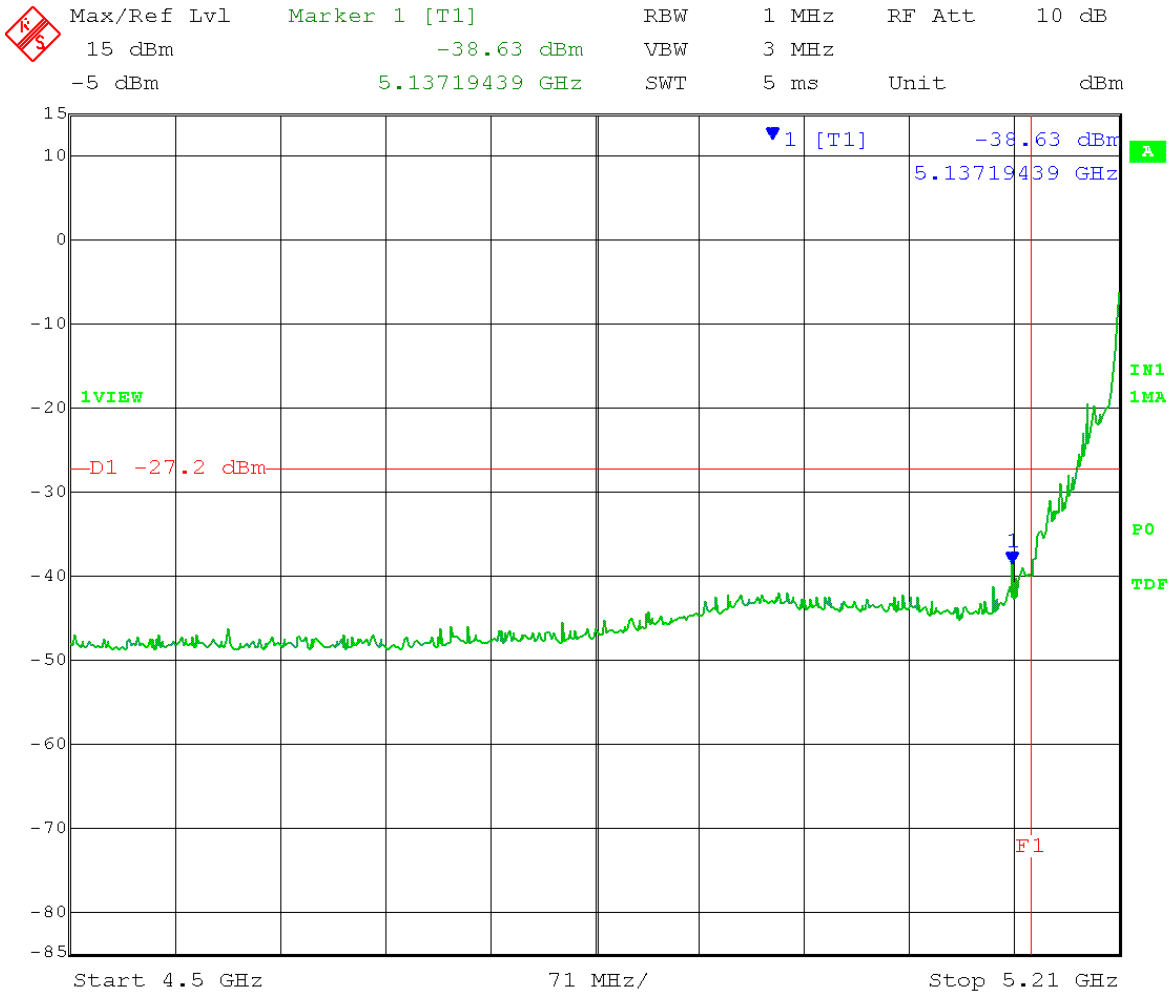
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -27.2 dBm

1 MHz channel power at band-edge = -42.18 dBm



Date: 9.JUN.2014 10:58:40



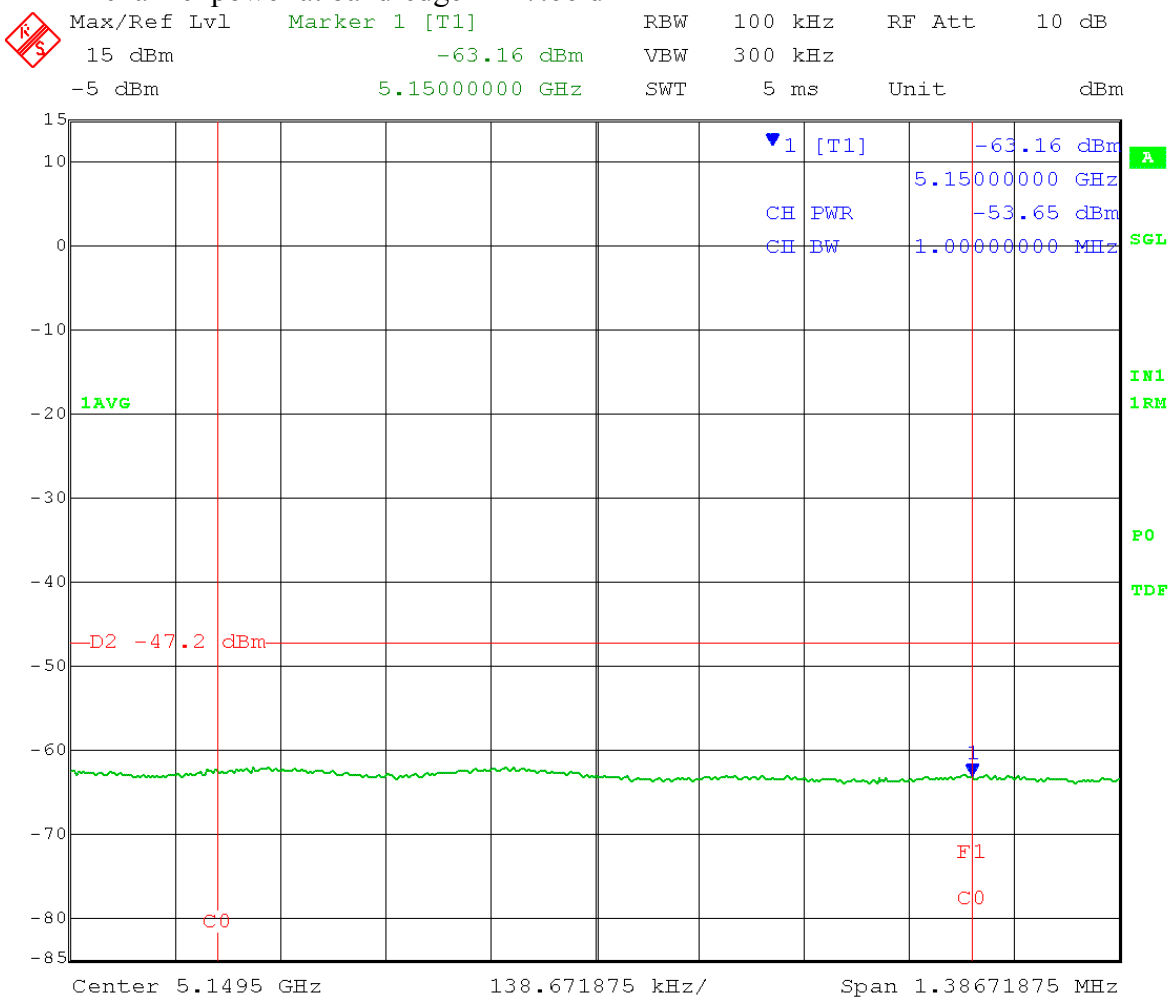
Date: 9.JUN.2014 10:57:30

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 18
40 MHz BW Band-edge = 5.150 GHz

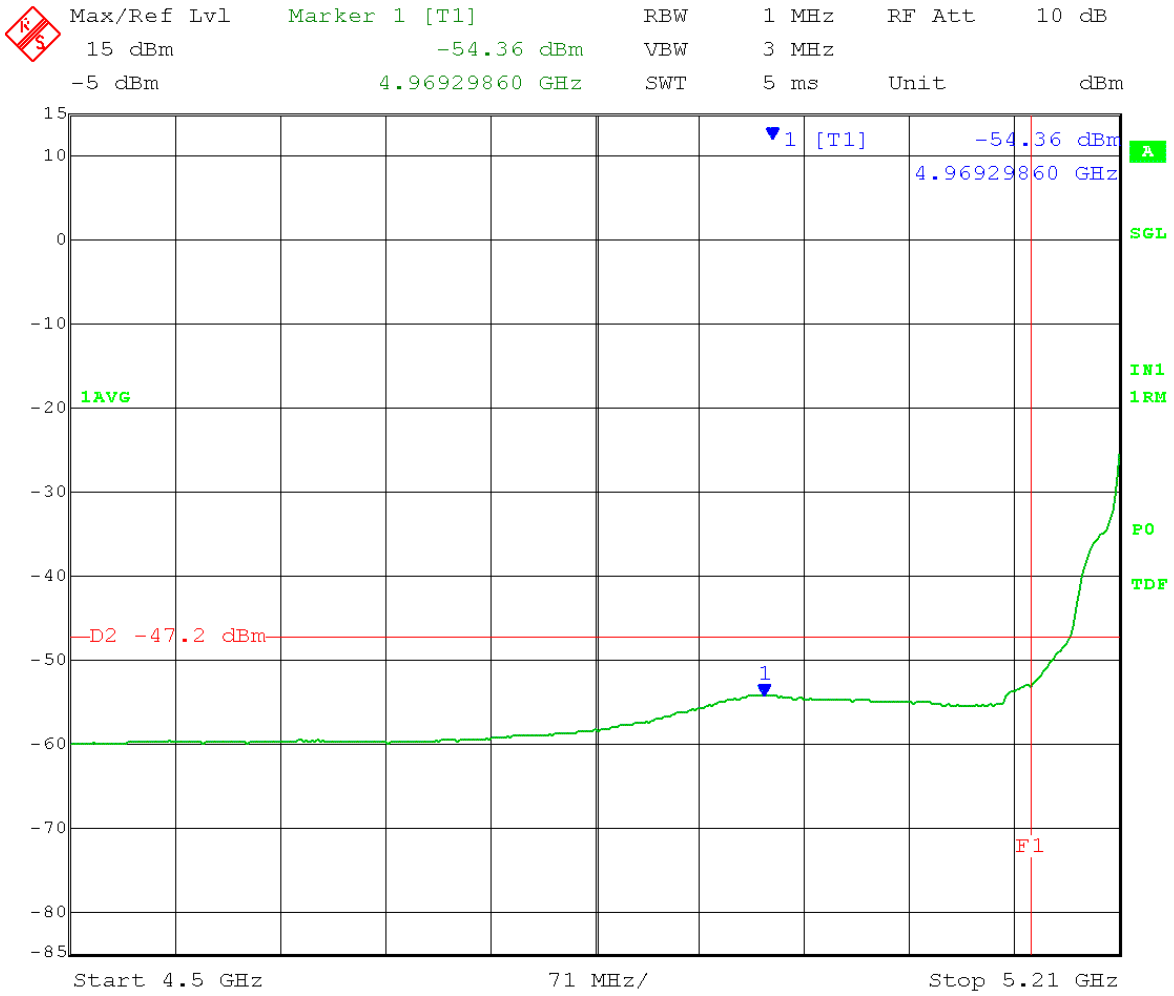
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm

1 MHz channel power at band-edge = -47.66 dBm

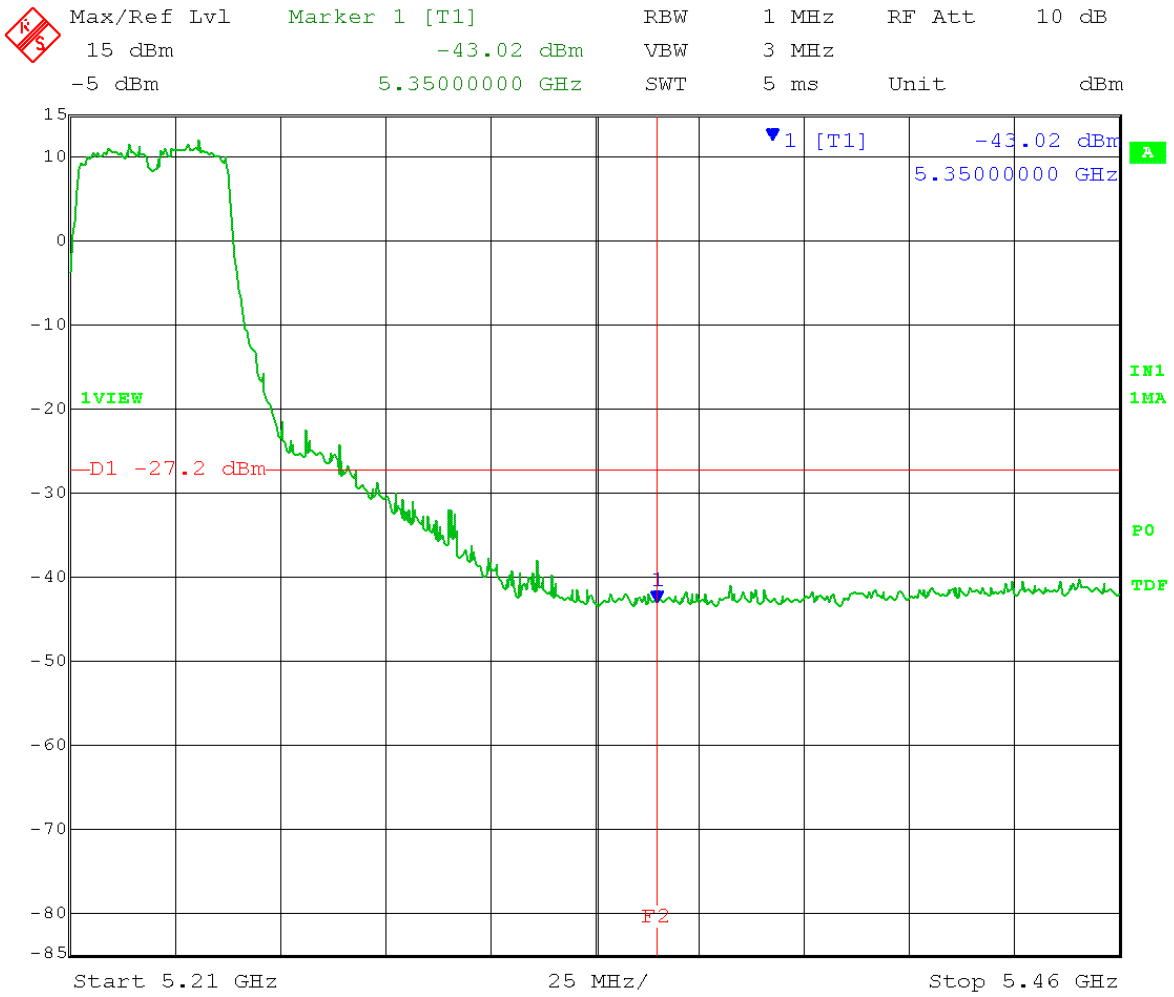


Date: 9.JUN.2014 10:55:43



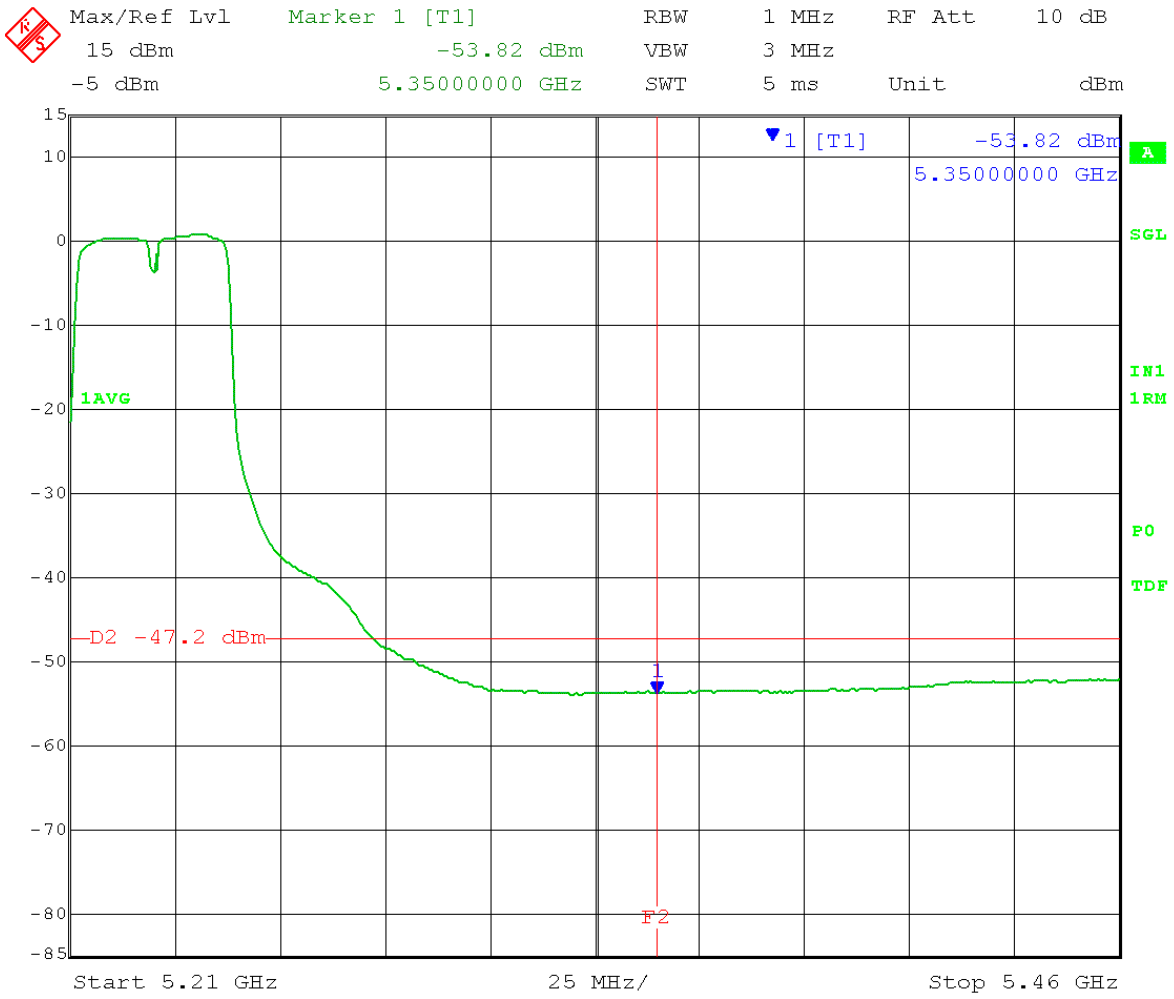
Date: 9.JUN.2014 10:56:33

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 18
40 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -27.2 dBm



Date: 9.JUN.2014 11:01:54

Test Date: 06-9-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 3 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 18
40 MHz BW Band-edge = 5.350 GHz
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 3 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm



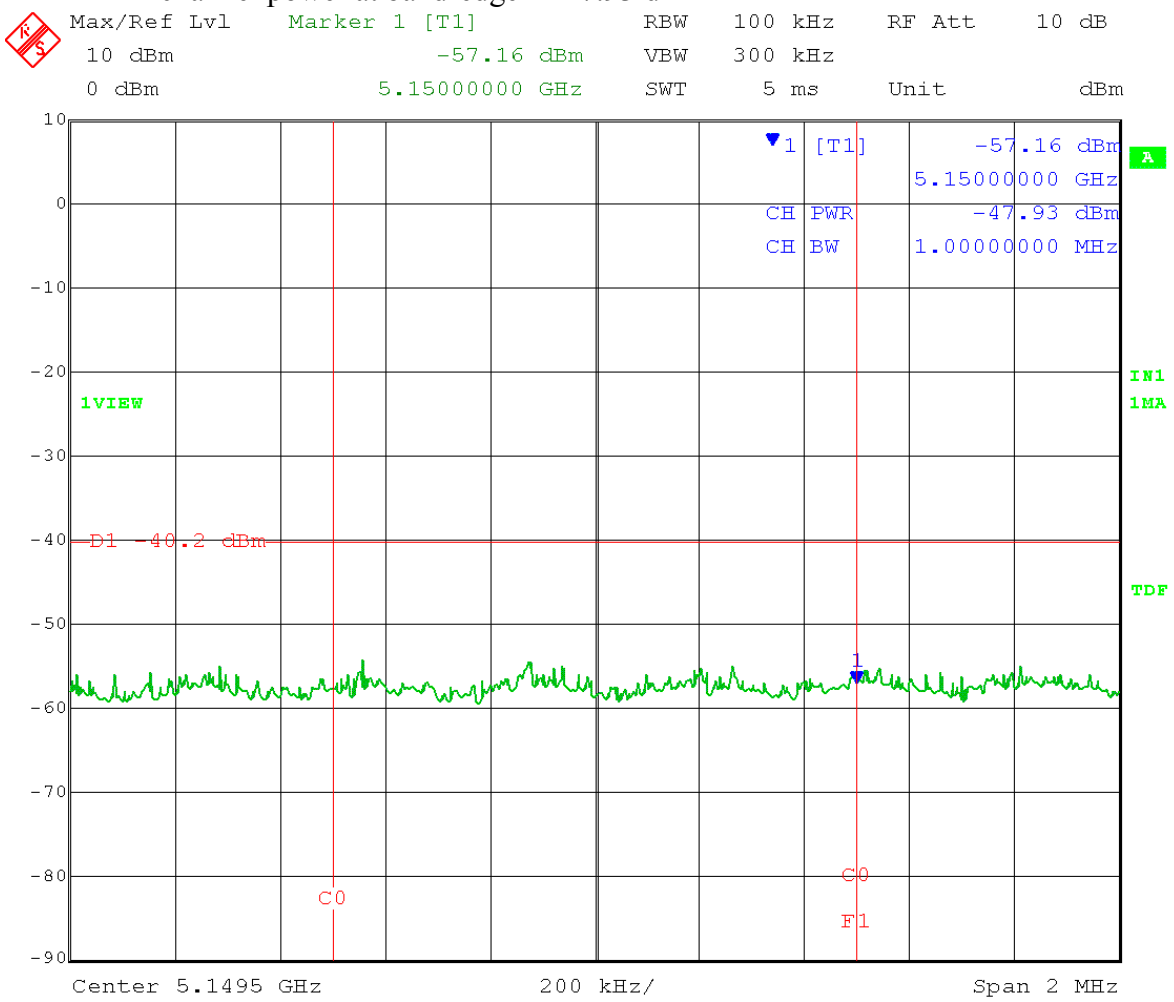
Date: 9.JUN.2014 11:03:18

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 8.0
40 MHz BW Band-edge = 5.150 GHz

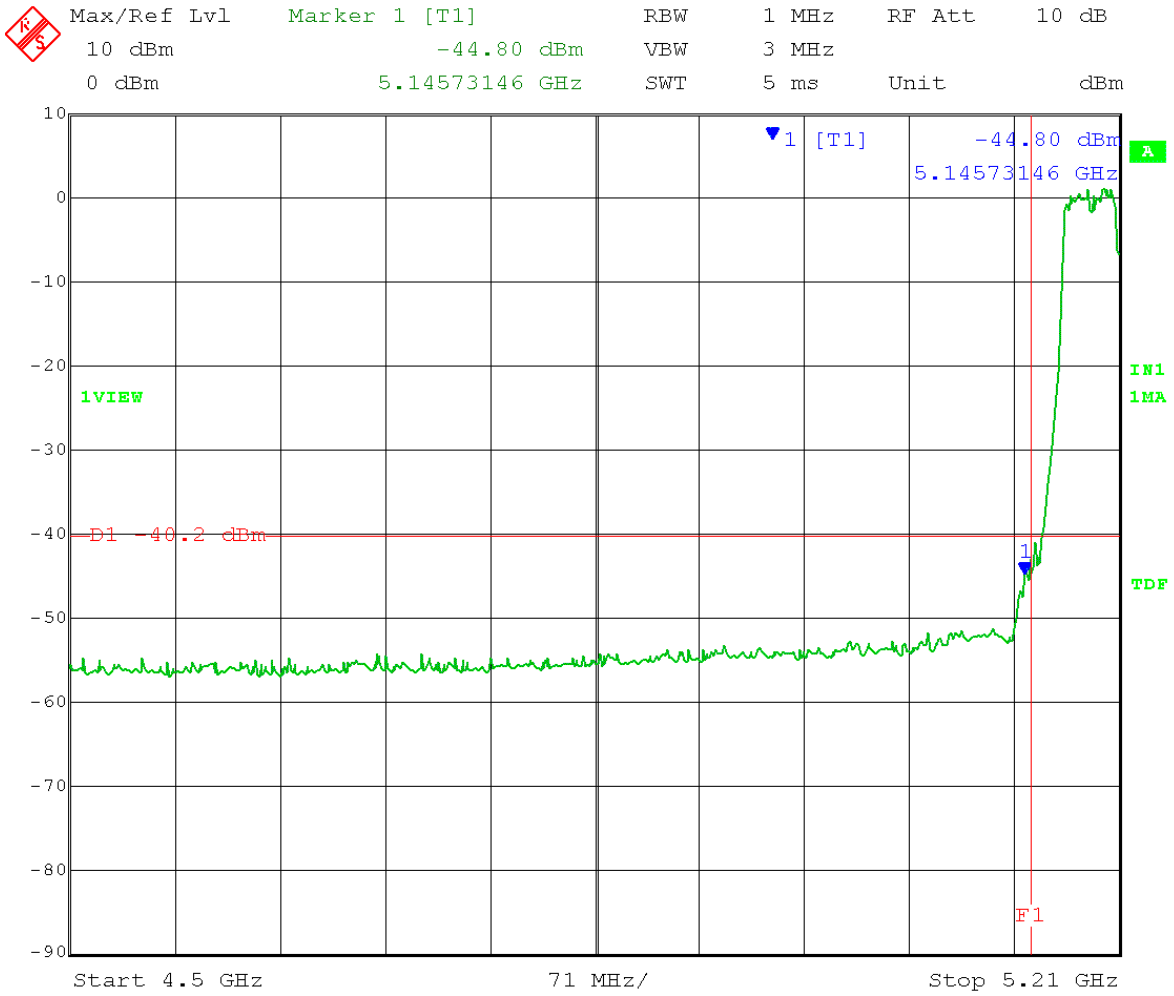
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna gain – 3 dB (MIMO) = -40.2 dBm

1 MHz channel power at band-edge = -47.93 dBm



Date: 9.JUN.2014 11:31:29



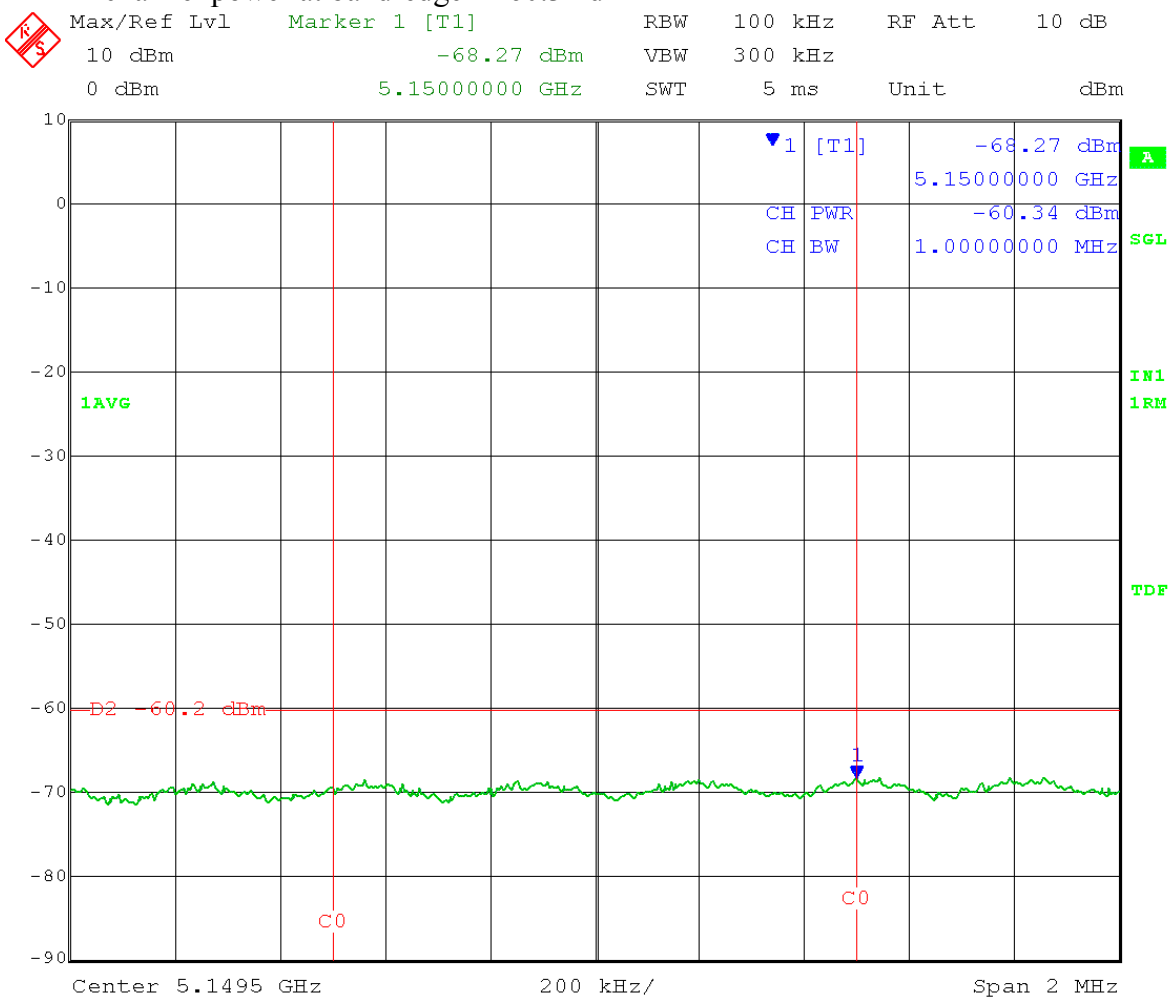
Date: 9.JUN.2014 11:29:42

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 8.0
40 MHz BW Band-edge = 5.150 GHz

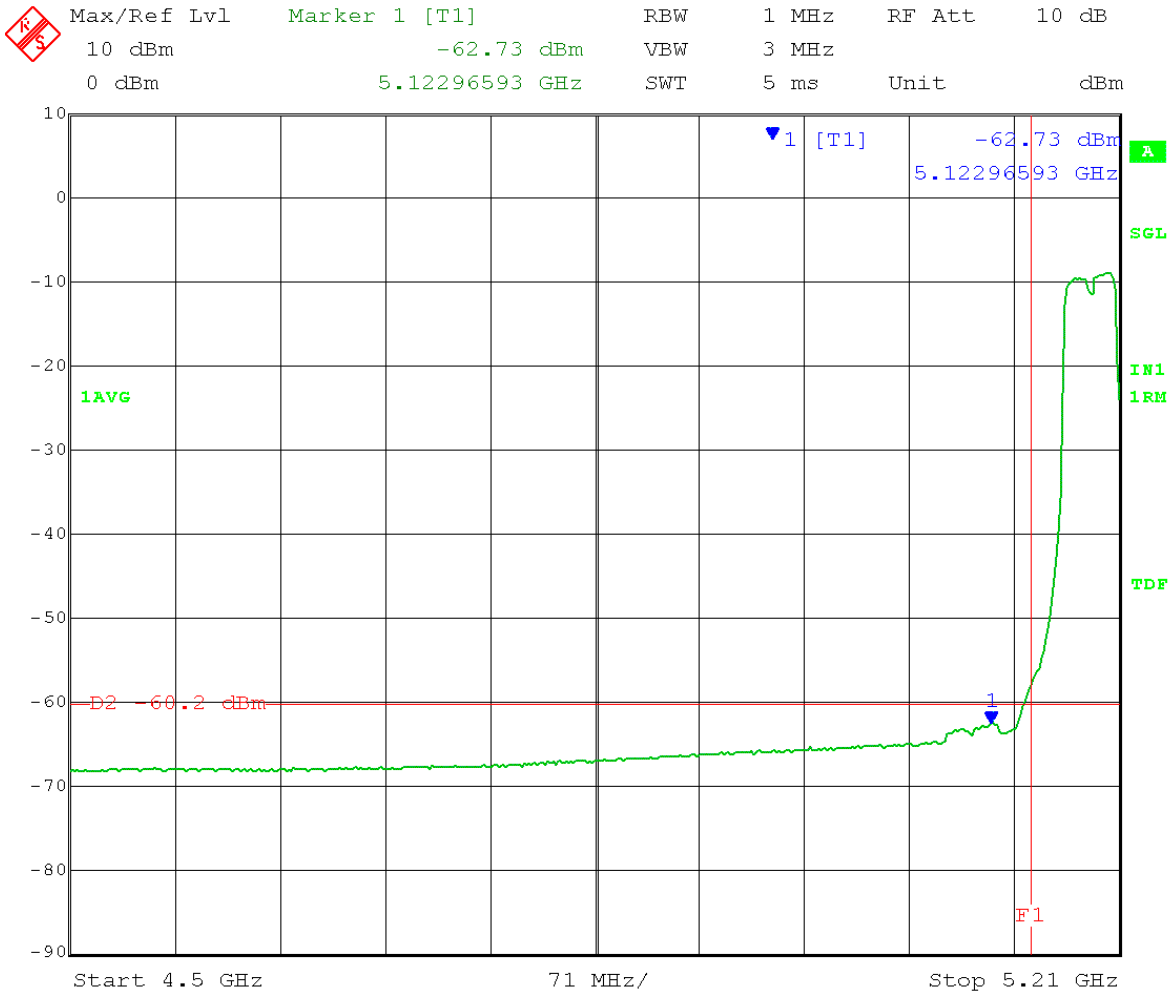
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna gain – 3 dB (MIMO) = -60.2 dBm

1 MHz channel power at band-edge = -60.34 dBm



Date: 9.JUN.2014 11:26:58



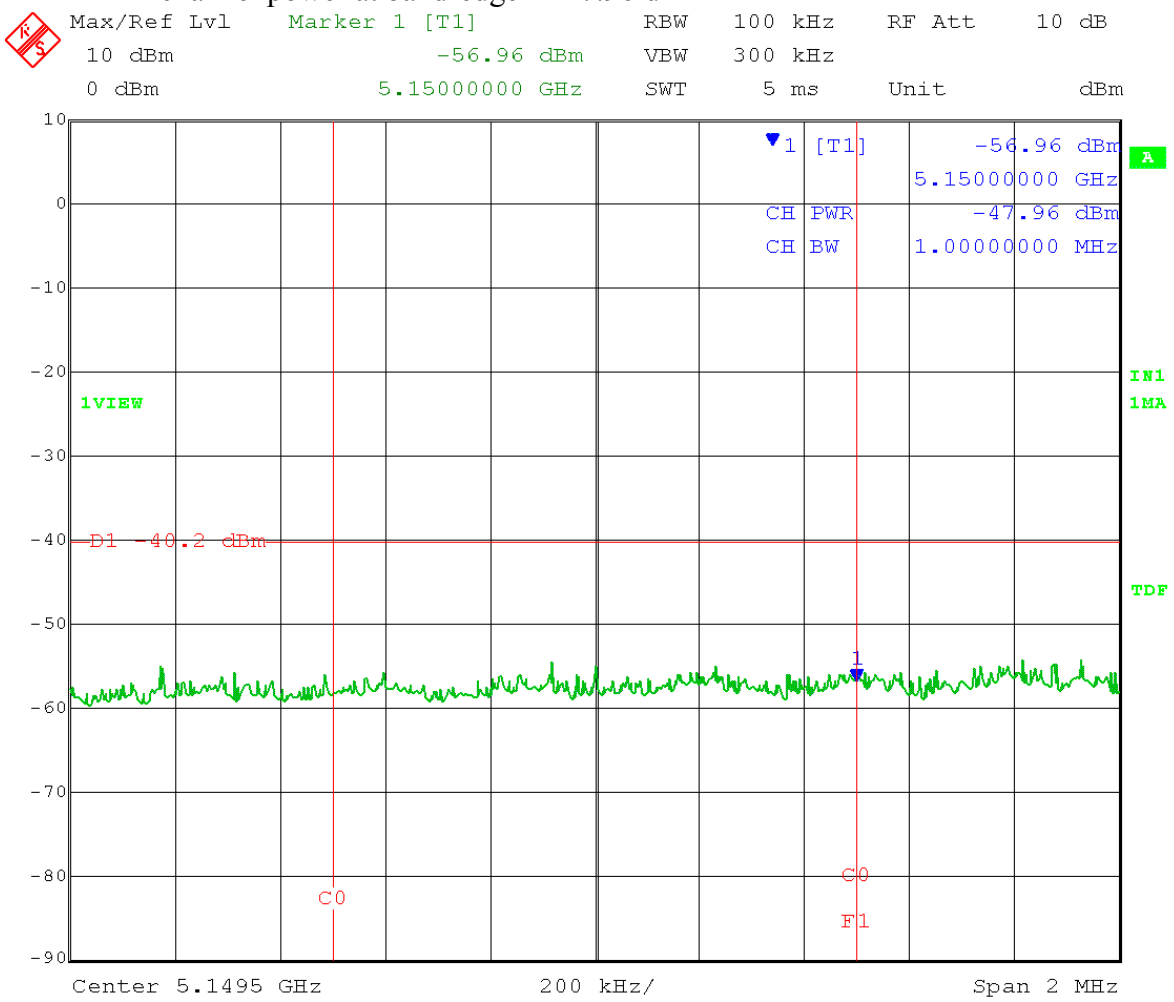
Date: 9.JUN.2014 11:28:28

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 12.0
40 MHz BW Band-edge = 5.150 GHz

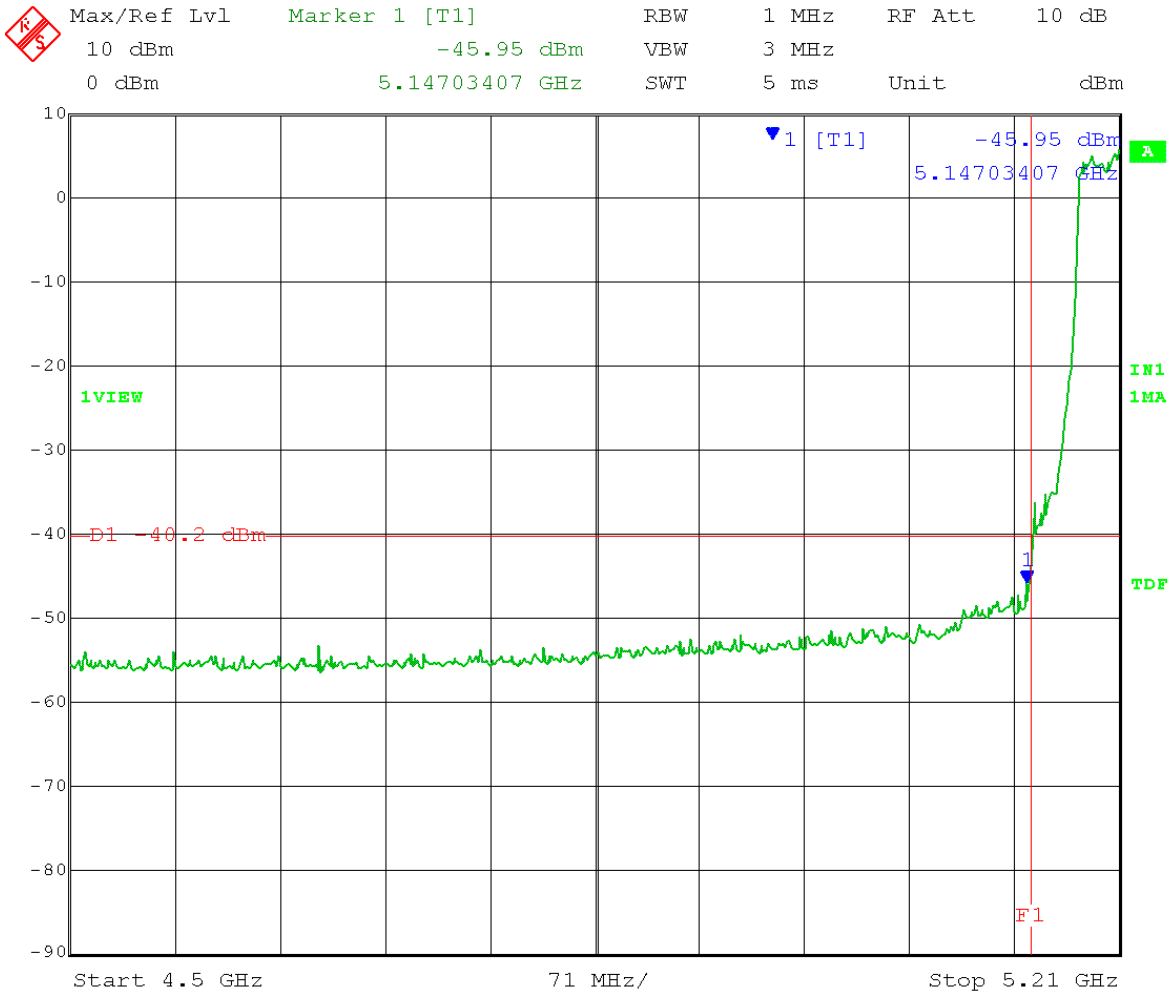
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna gain – 3 dB (MIMO) = -40.2 dBm

1 MHz channel power at band-edge = -47.96 dBm



Date: 9.JUN.2014 11:48:24



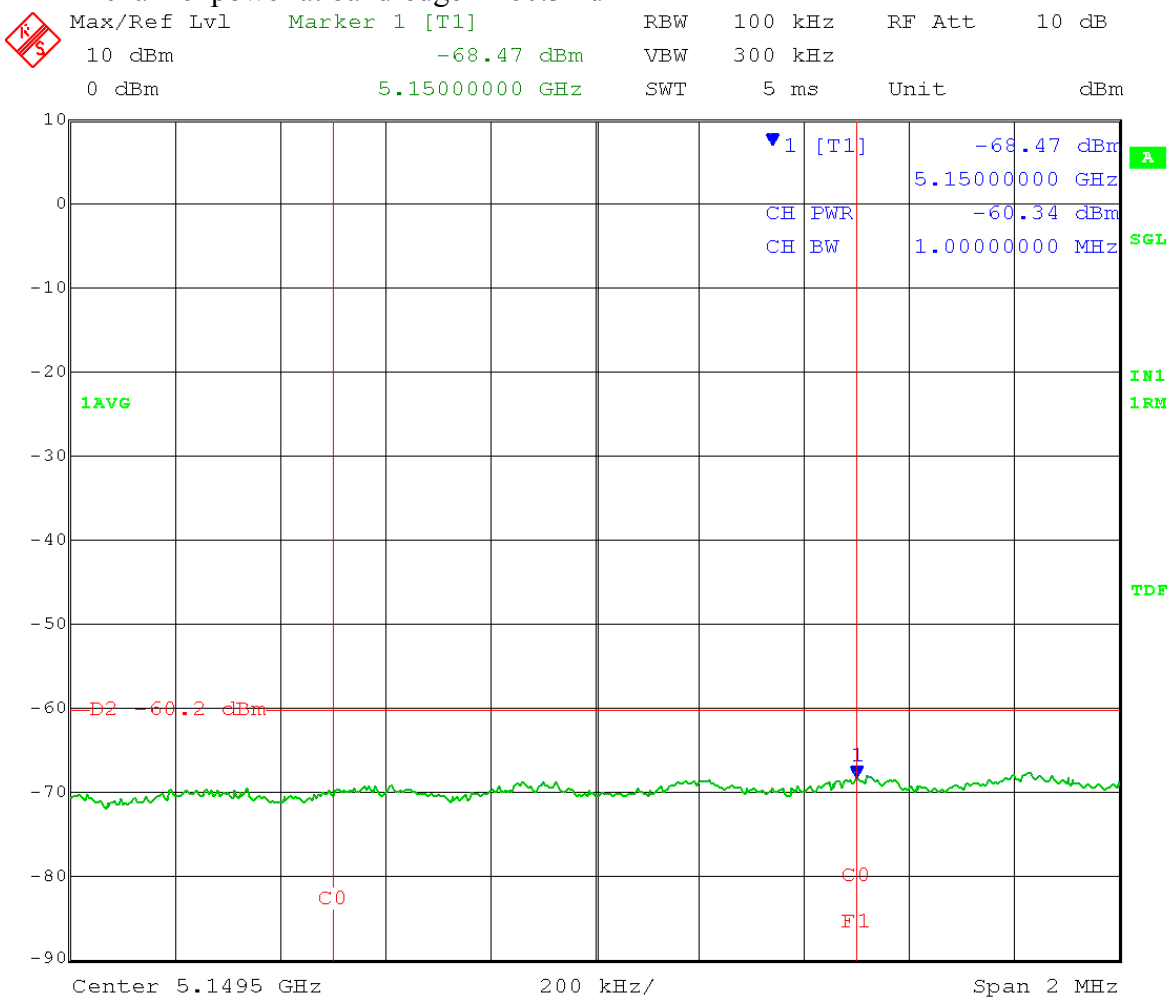
Date: 9.JUN.2014 11:46:47

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 12.0
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

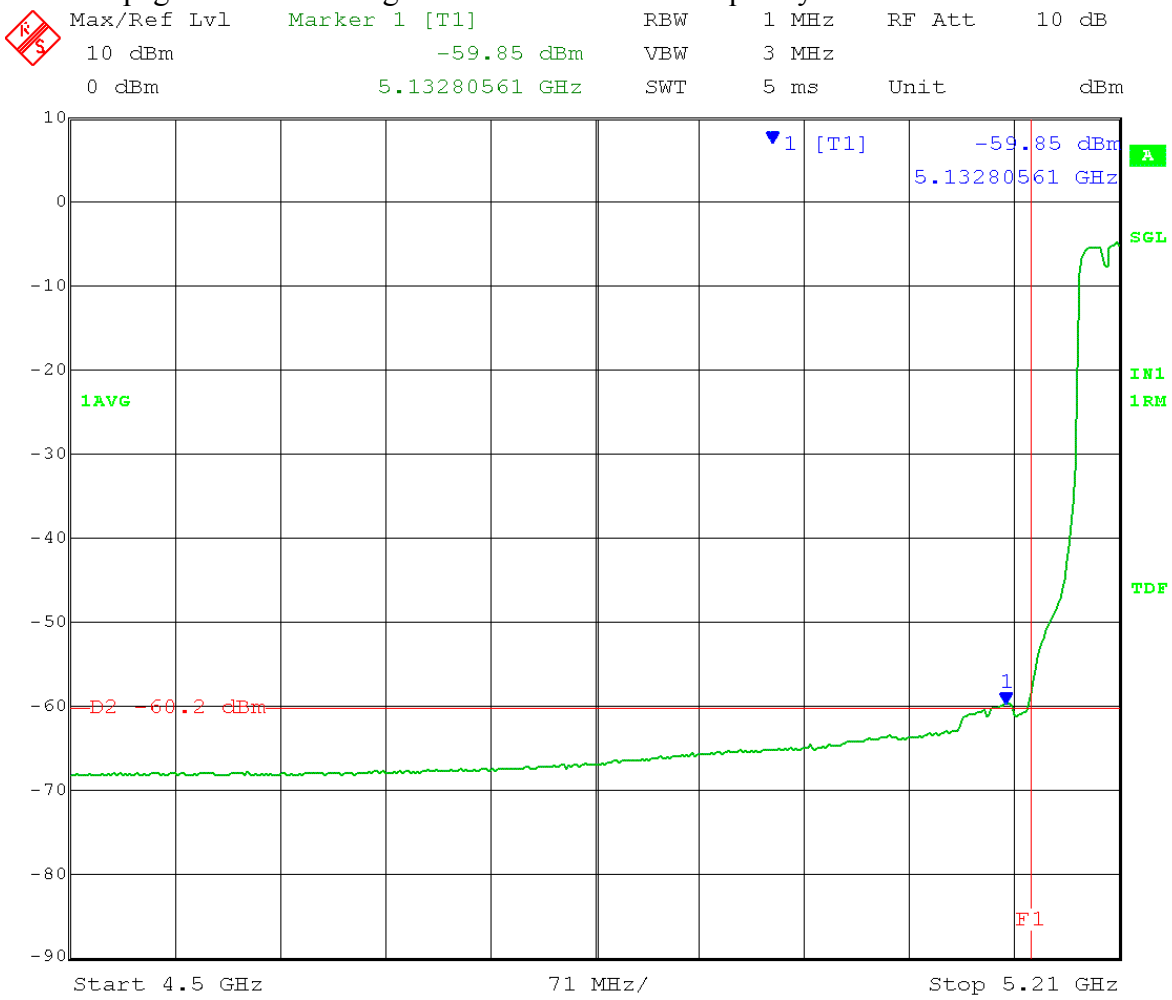
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna gain – 3 dB (MIMO) = -60.2 dBm

1 MHz channel power at band-edge = -60.34 dBm



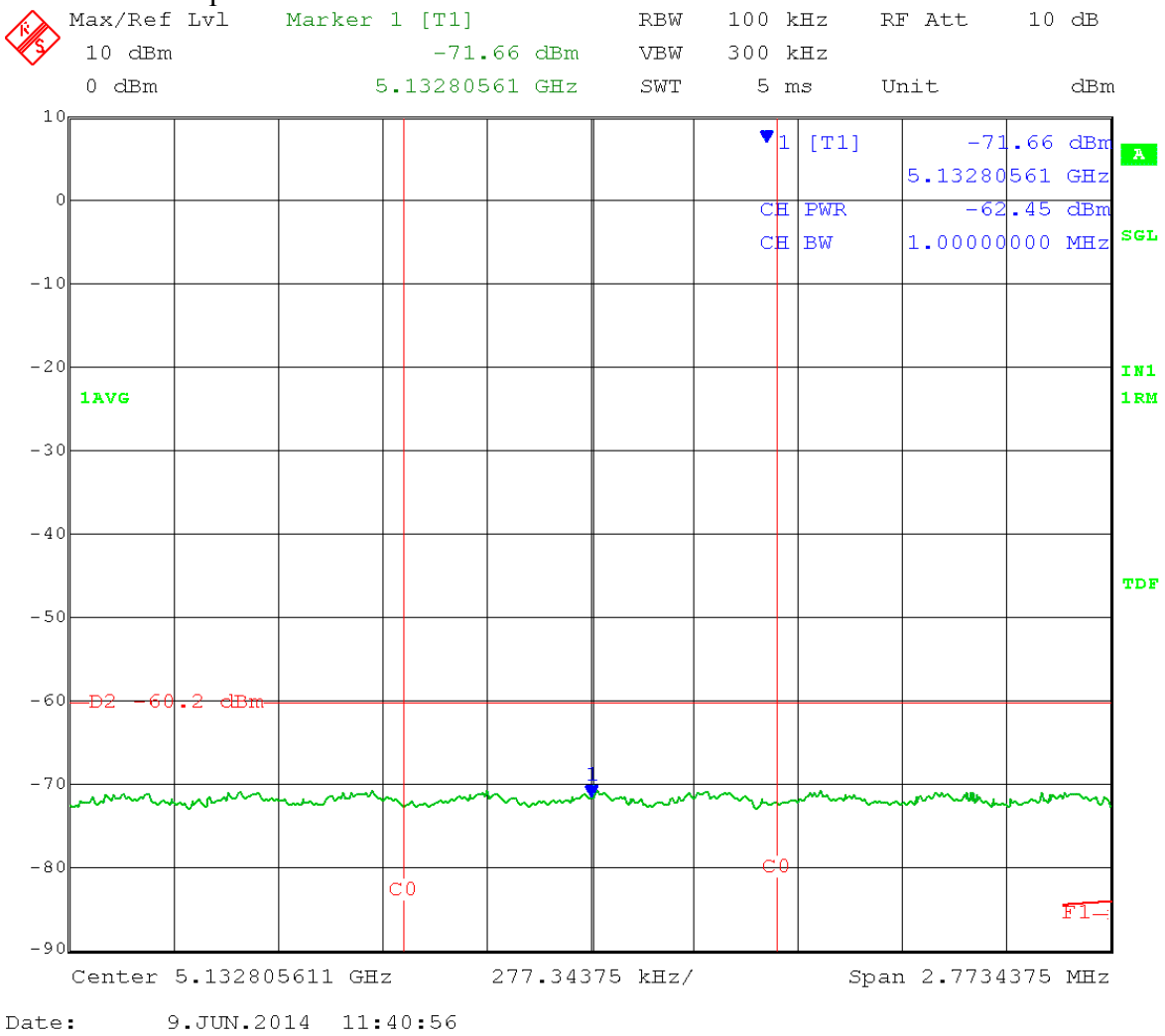
Date: 9.JUN.2014 11:37:36

See next page for 1 MHz integration method for this frequency.



Date: 9.JUN.2014 11:43:10

1 MHz channel power at 5.13280561 GHz = -62.45 dBm



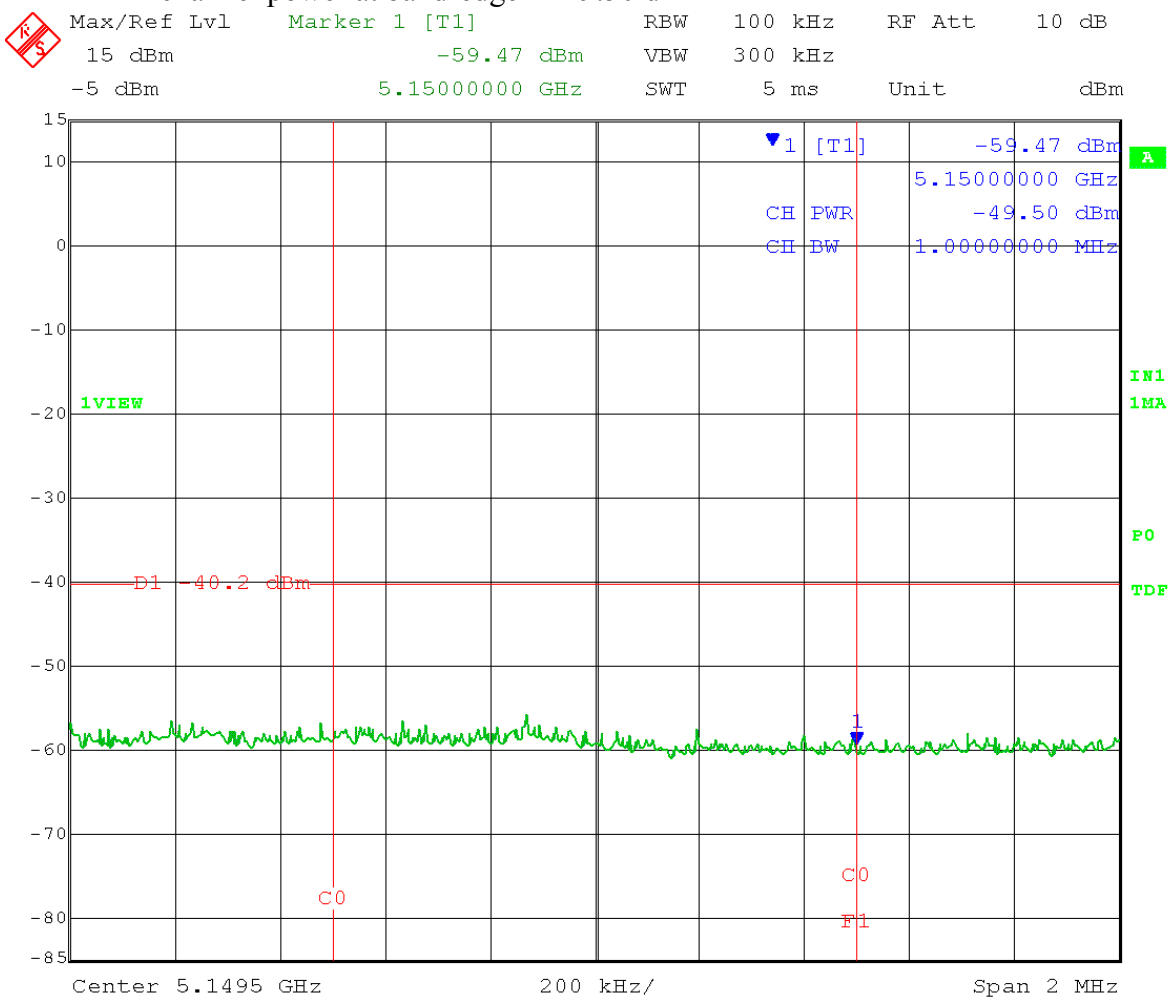
Date: 9.JUN.2014 11:40:56

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 13.5
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna gain – 3 dB (MIMO) = -40.2 dBm

1 MHz channel power at band-edge = -49.50 dBm



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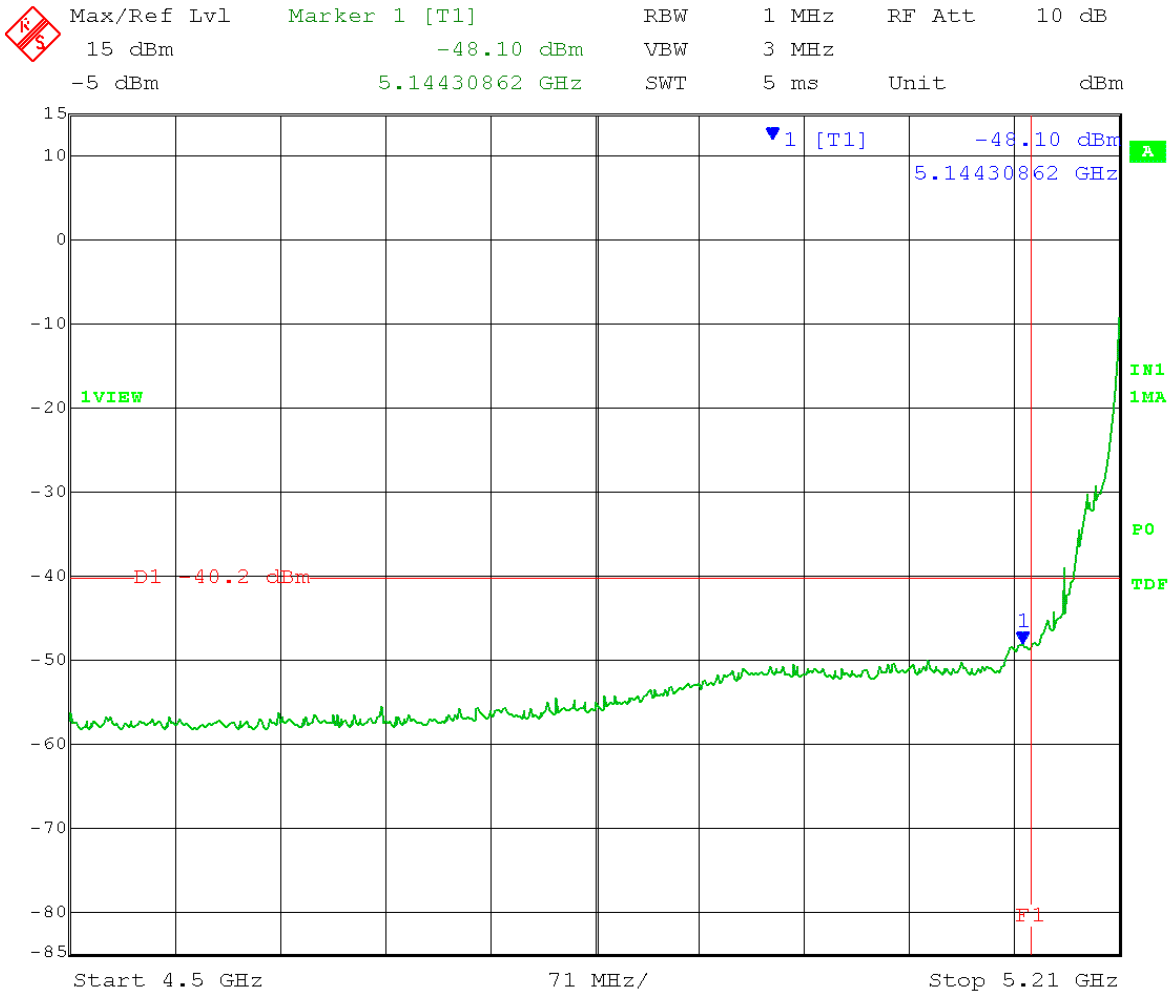


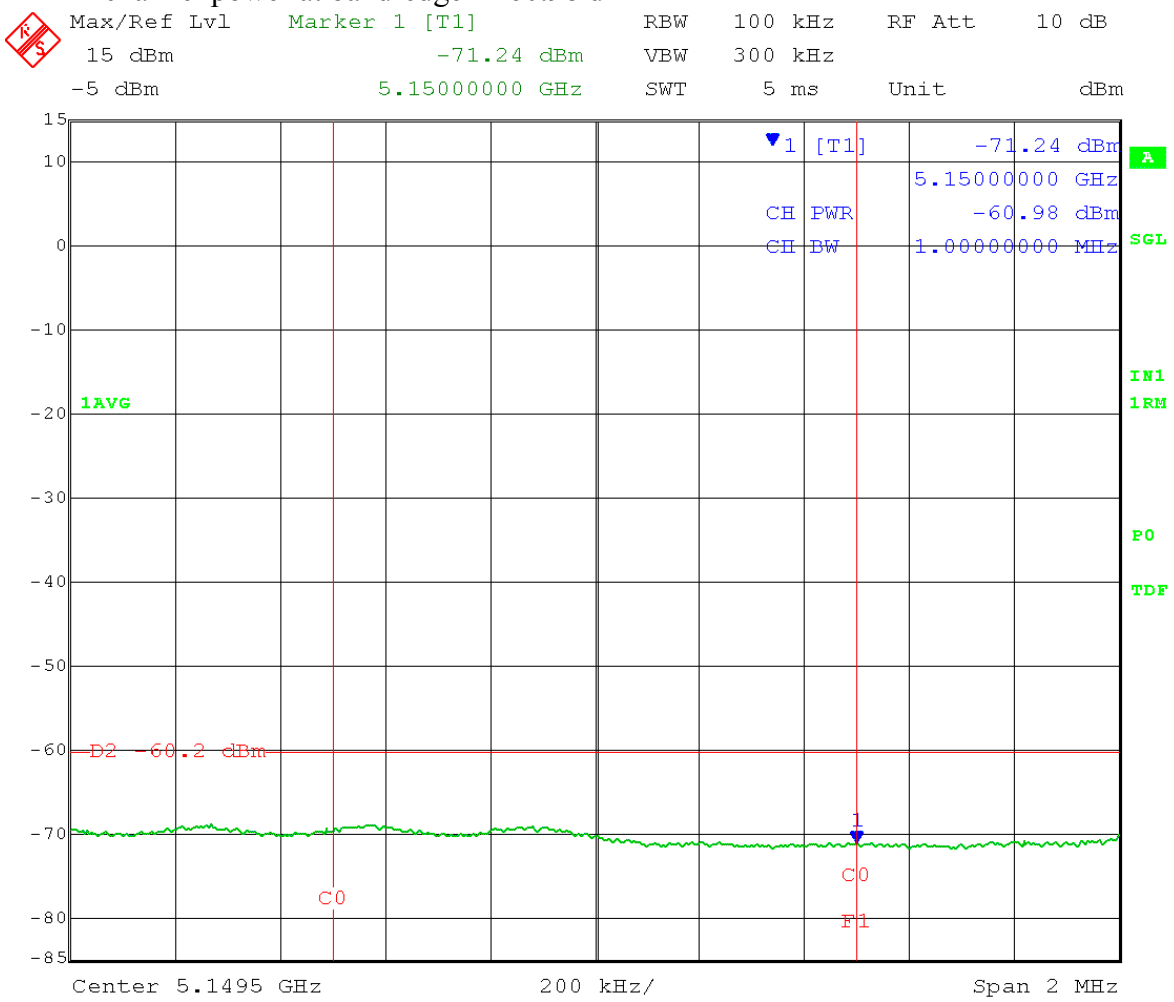
Date: 10.JUN.2014 10:05:47

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 13.5
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

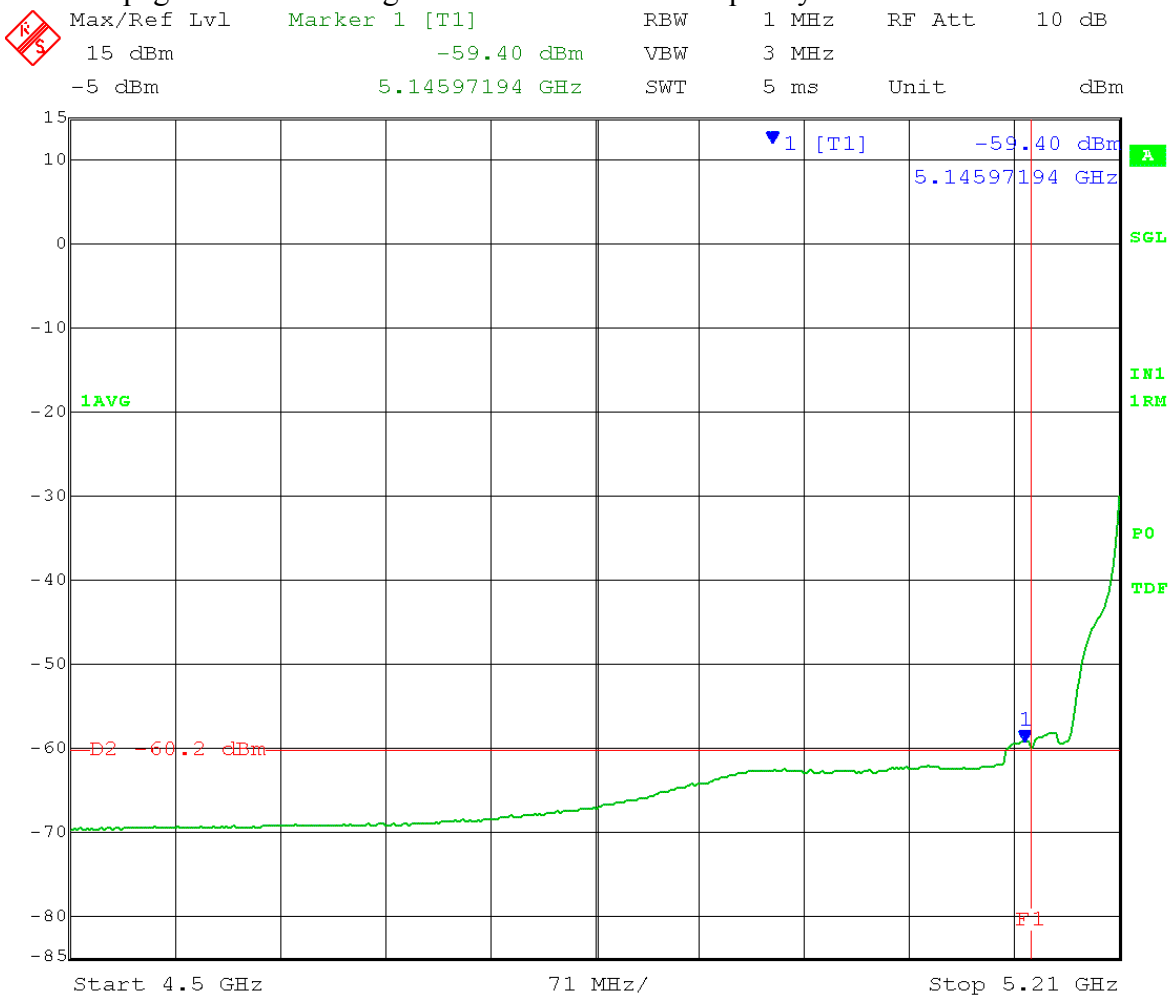
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna gain – 3 dB (MIMO) = -60.2 dBm

1 MHz channel power at band-edge = -60.98 dBm



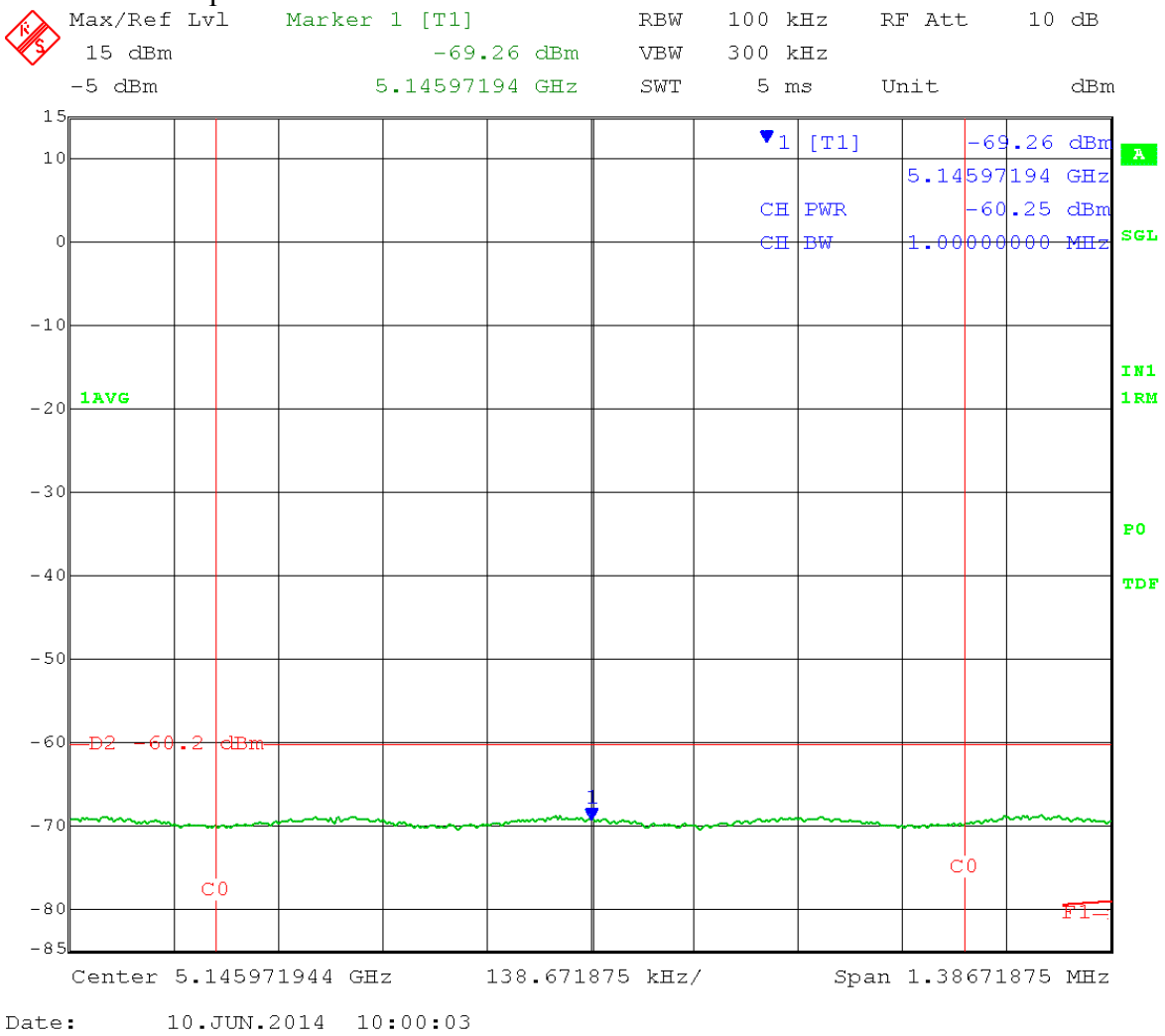
Date: 10.JUN.2014 10:02:33

See next page for 1 MHz integration method for this frequency.



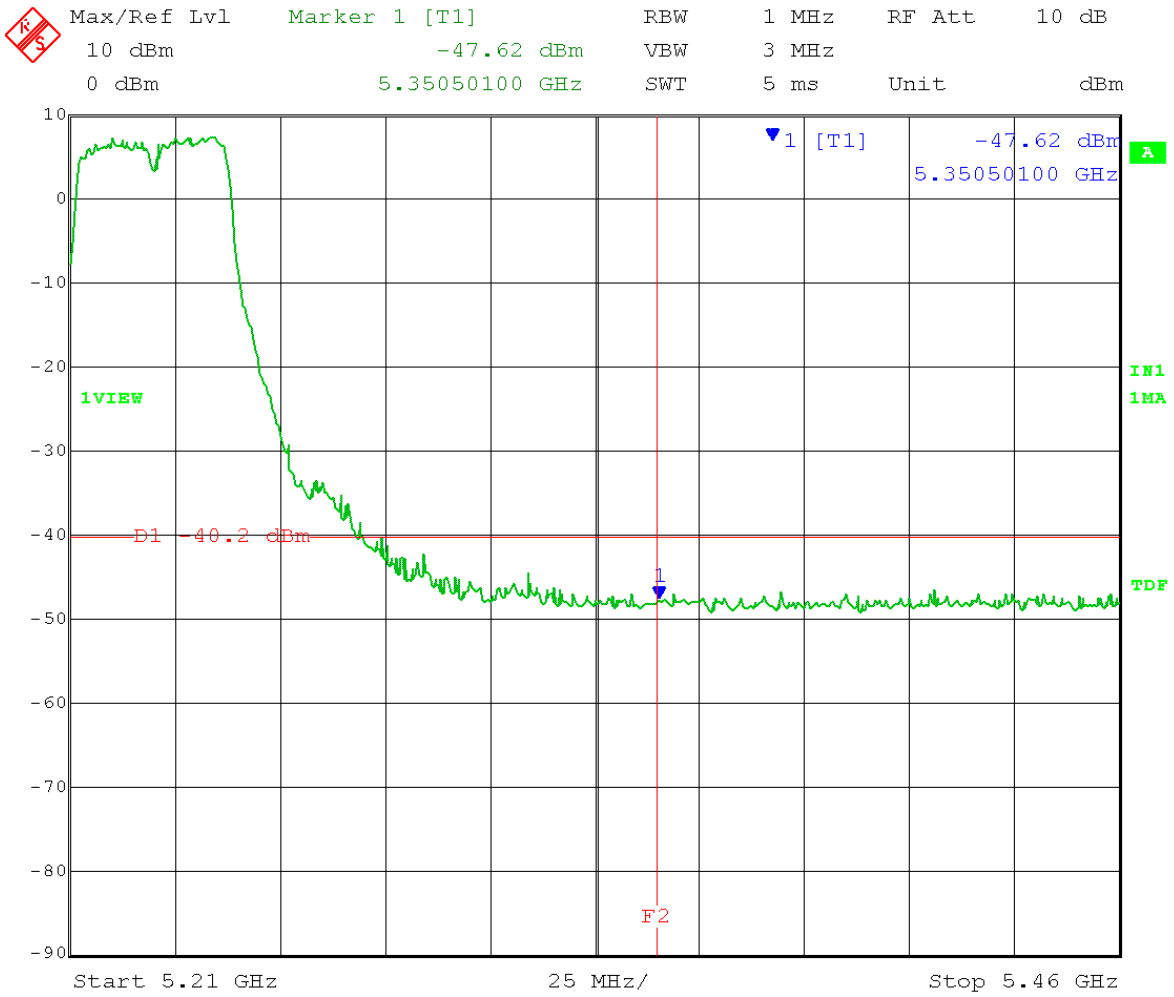
Date: 10.JUN.2014 10:01:23

1 MHz channel power at 5.14597194 GHz = -60.25 dBm



Date: 10.JUN.2014 10:00:03

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 16 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 14.5
40 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna gain – 3 dB (MIMO) = -40.2 dBm



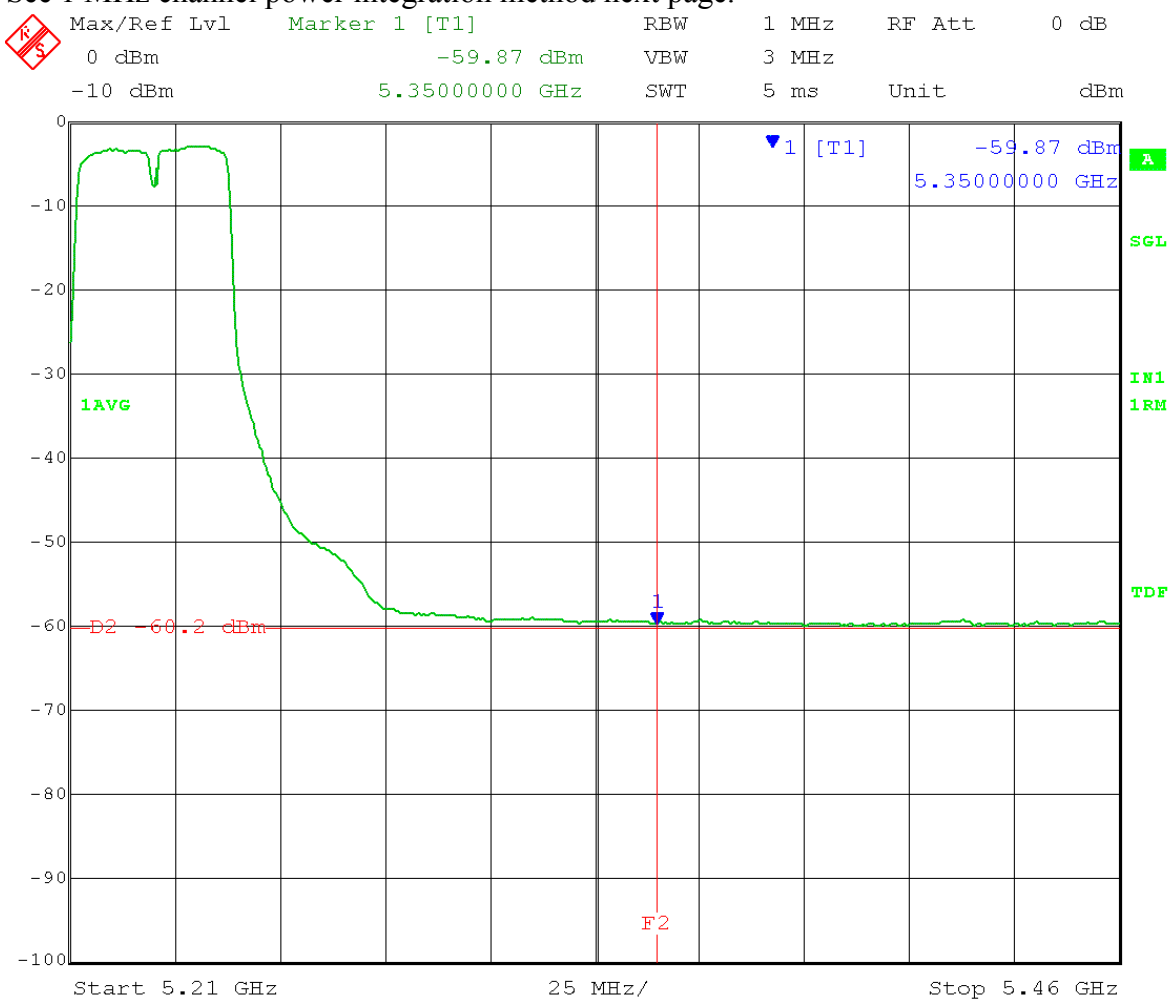
Date: 9.JUN.2014 13:27:01

Test Date:	06-9-2014	
Company:	Cambium Networks	
EUT:	ePMP 5.1 AP UNII with 16 dBi antenna gain	
Test:	Operating Band-edge Measurement - Conducted	
Operator:	Craig B / Paul	
Comment:	RBW = 1 MHz	VBW ≥ 3 MHz
	Detector = RMS	Trace = Average 200 traces
	Channel 0	ESN# 000456C005E4
	High Channel Transmit = 5.230 GHz	Output power setting: 14.5
	40 MHz BW	Band-edge = 5.350 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

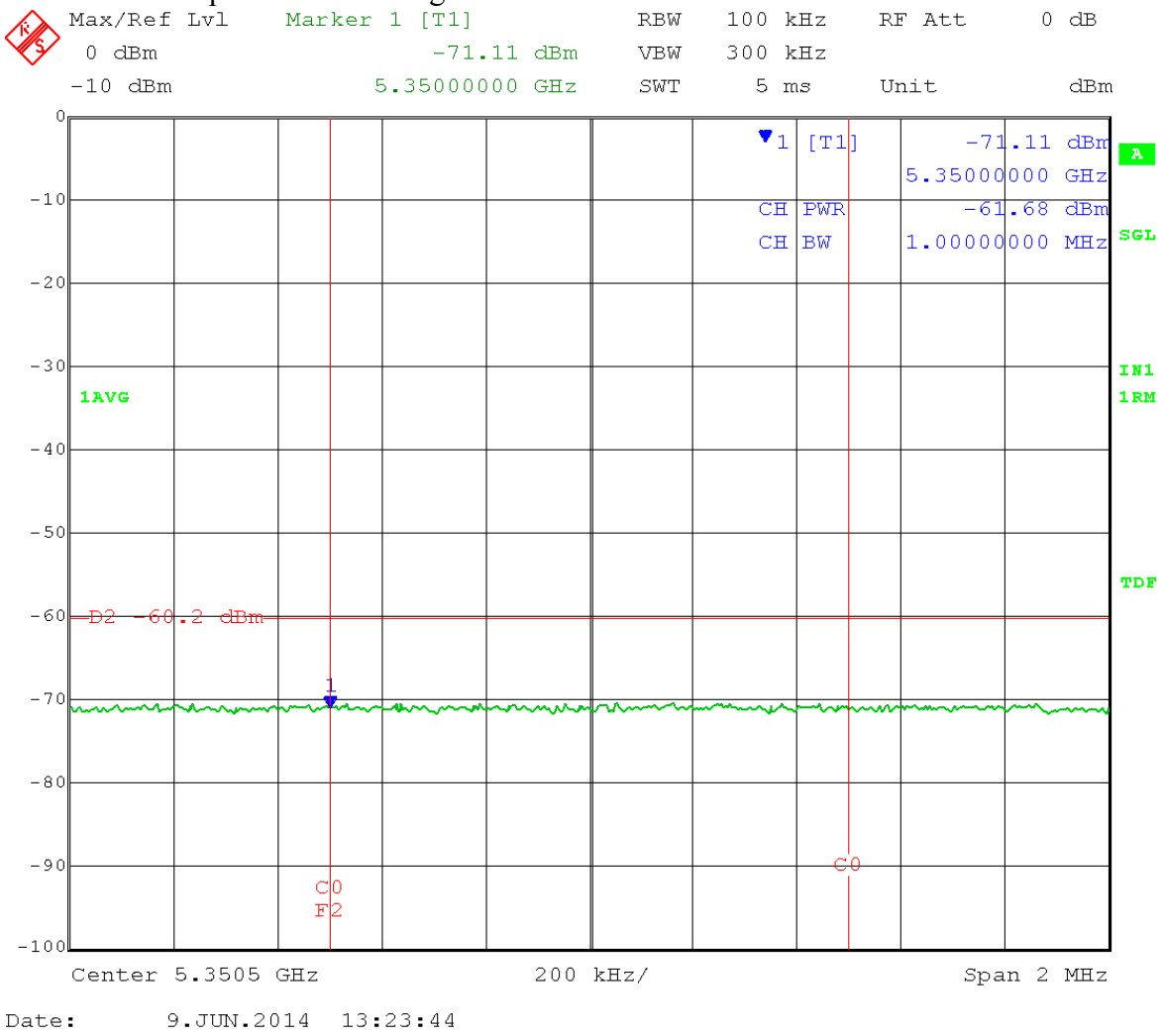
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 16 dBi antenna gain – 3 dB (MIMO) = -60.2 dBm

See 1 MHz channel power integration method next page.



Date: 9.JUN.2014 13:20:31

1 MHz channel power at band-edge = -61.68 dBm



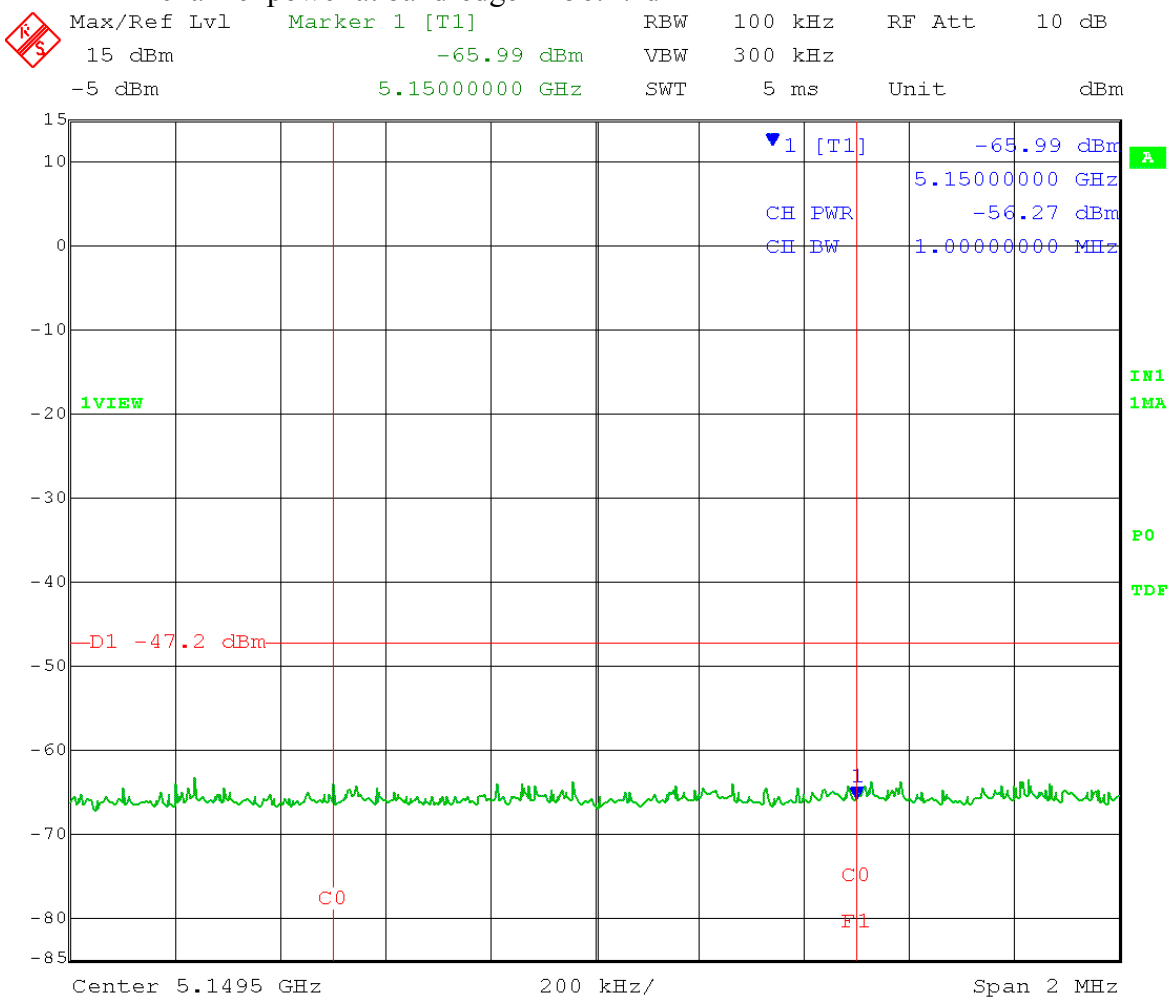
Date: 9.JUN.2014 13:23:44

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 2.0
40 MHz BW Band-edge = 5.150 GHz

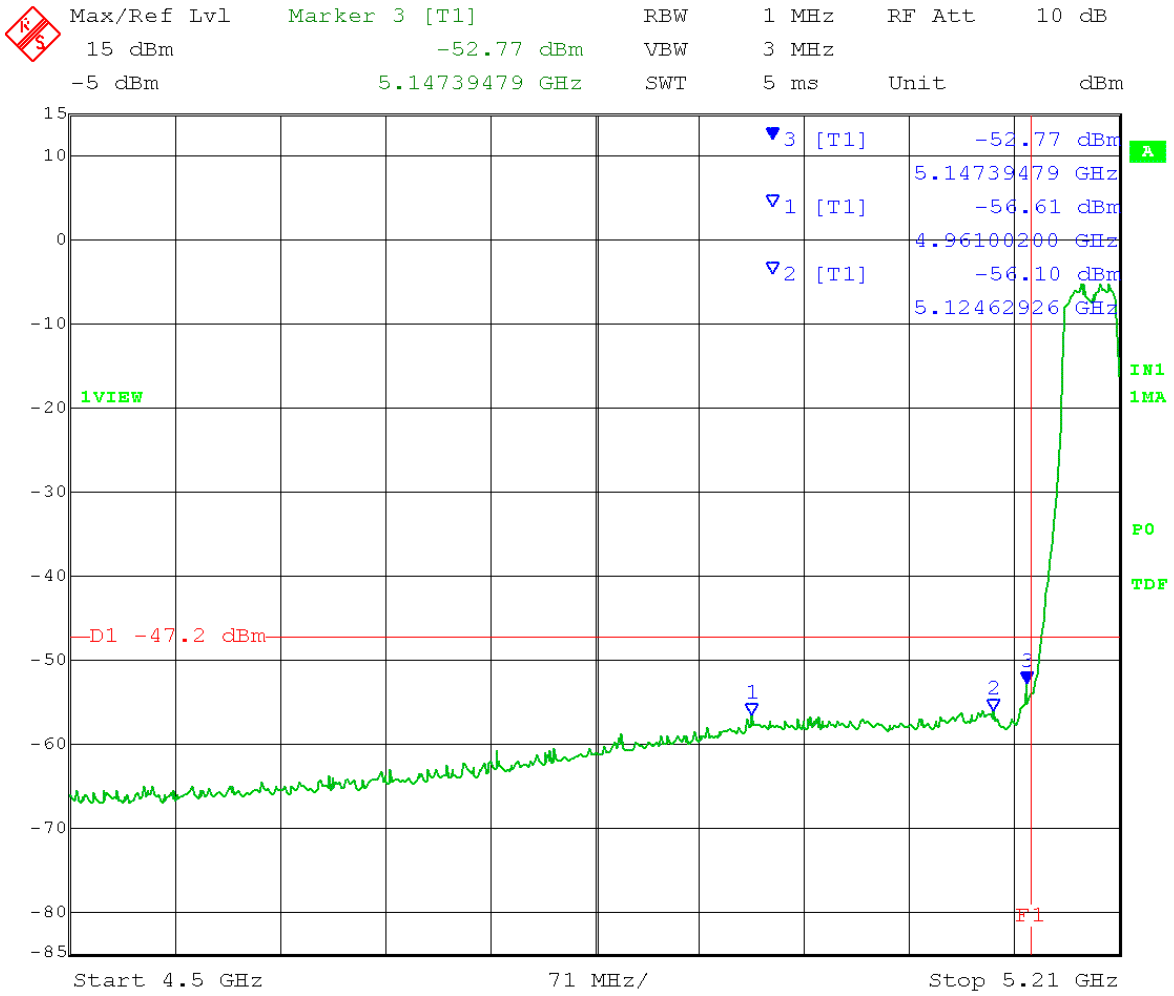
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm

1 MHz channel power at band-edge = -56.27 dBm



Date: 9.JUN.2014 15:04:48



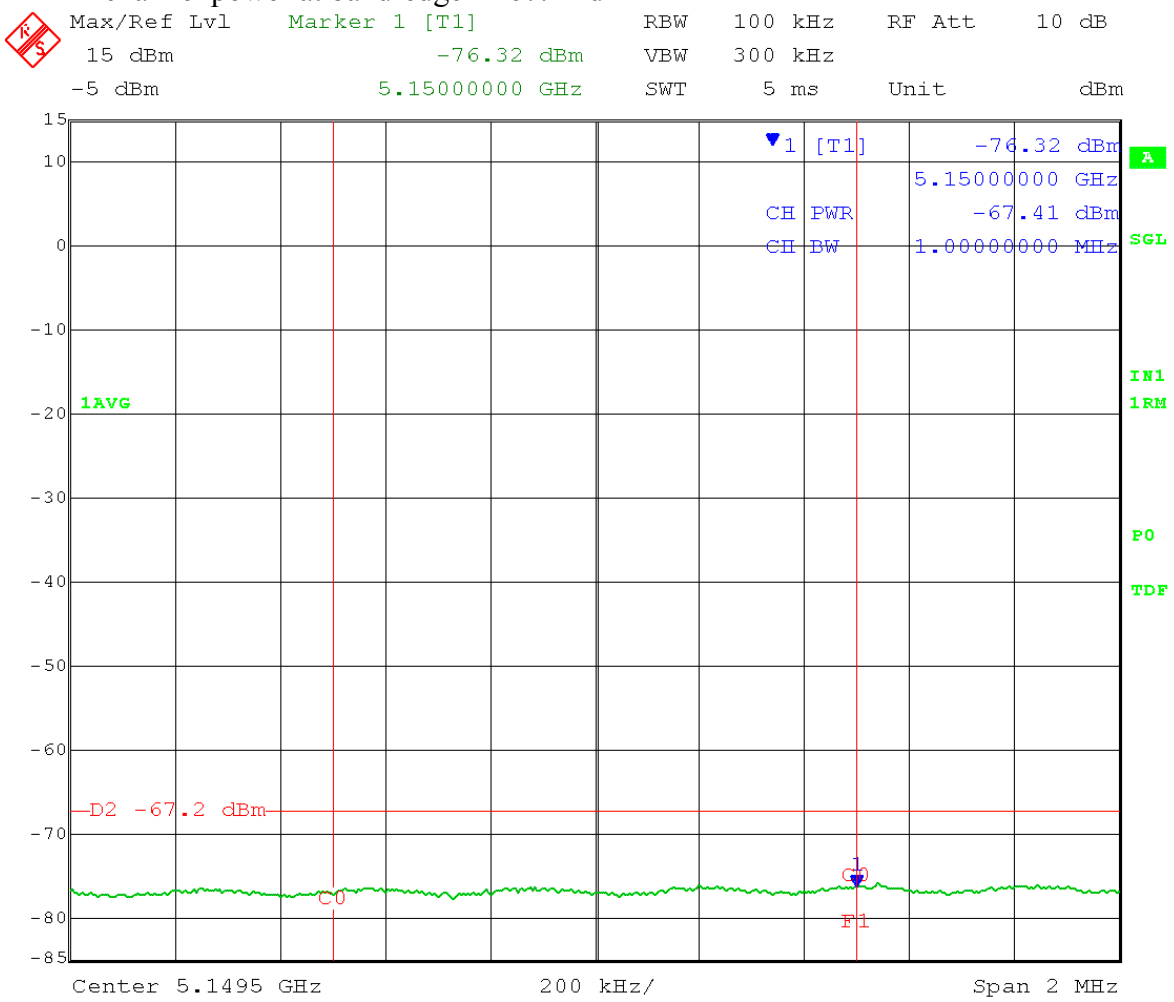
Date: 9.JUN.2014 15:02:13

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 2.0
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -67.2 dBm

1 MHz channel power at band-edge = -67.41 dBm



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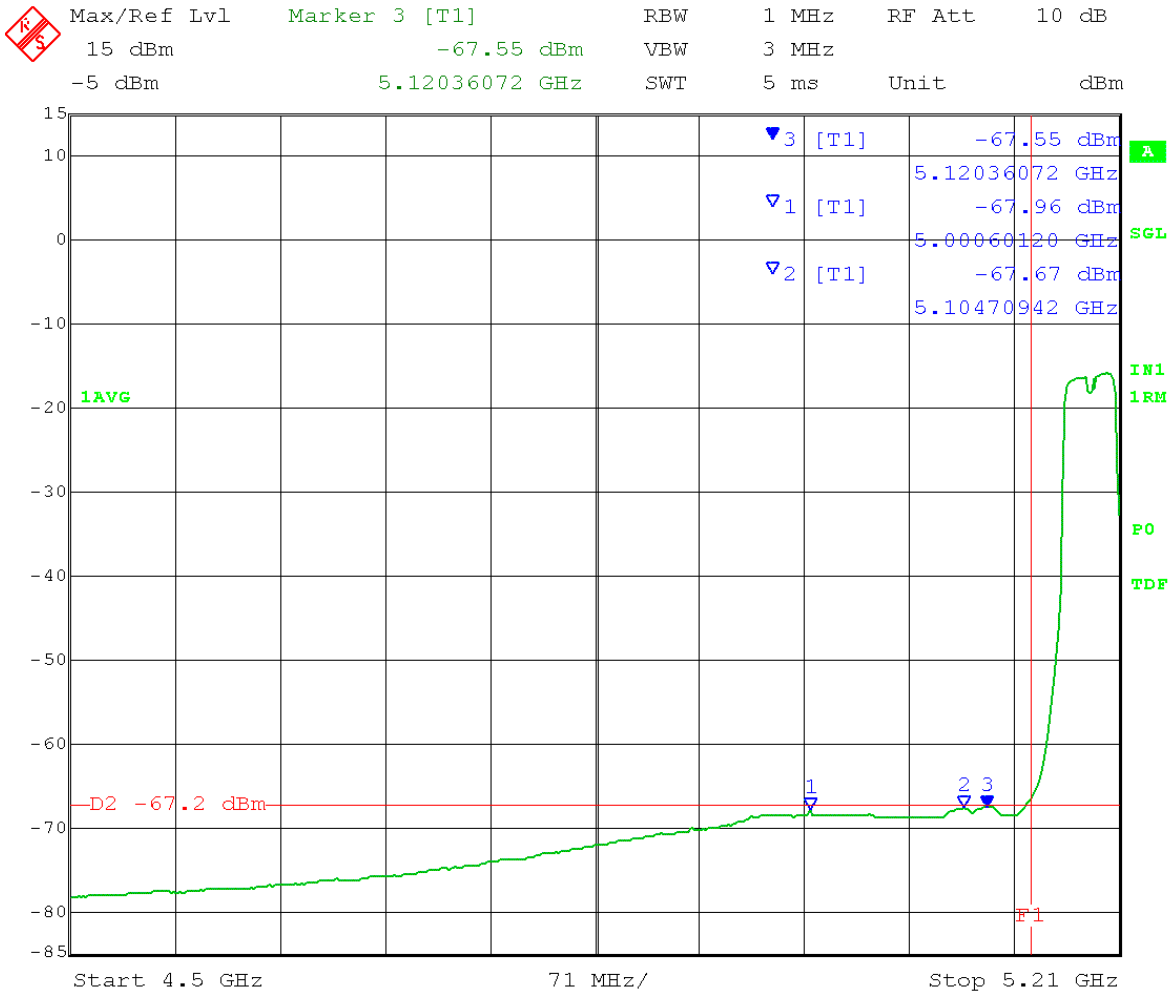


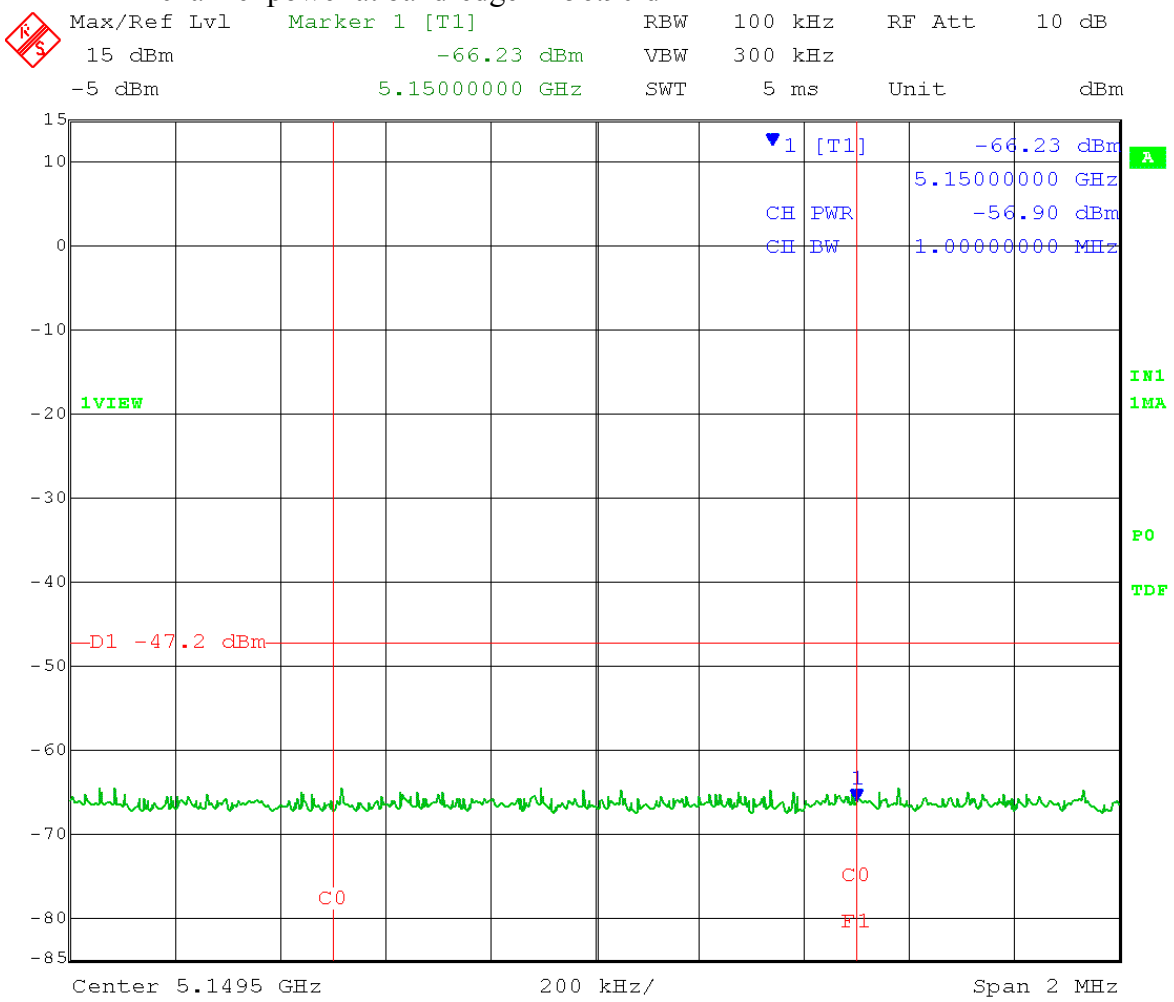
Date: 9.JUN.2014 15:00:40

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 4.5
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm

1 MHz channel power at band-edge = -56.90 dBm



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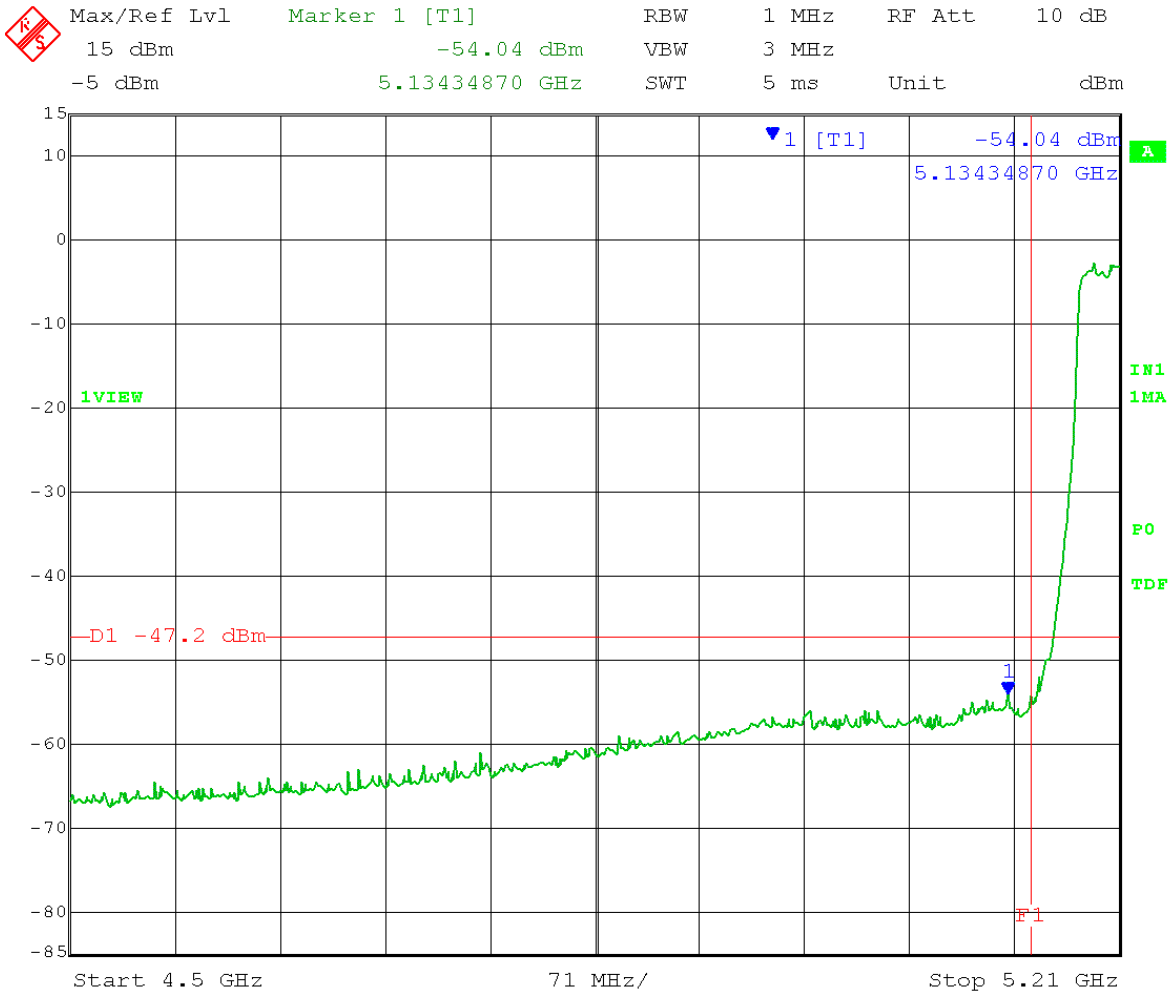


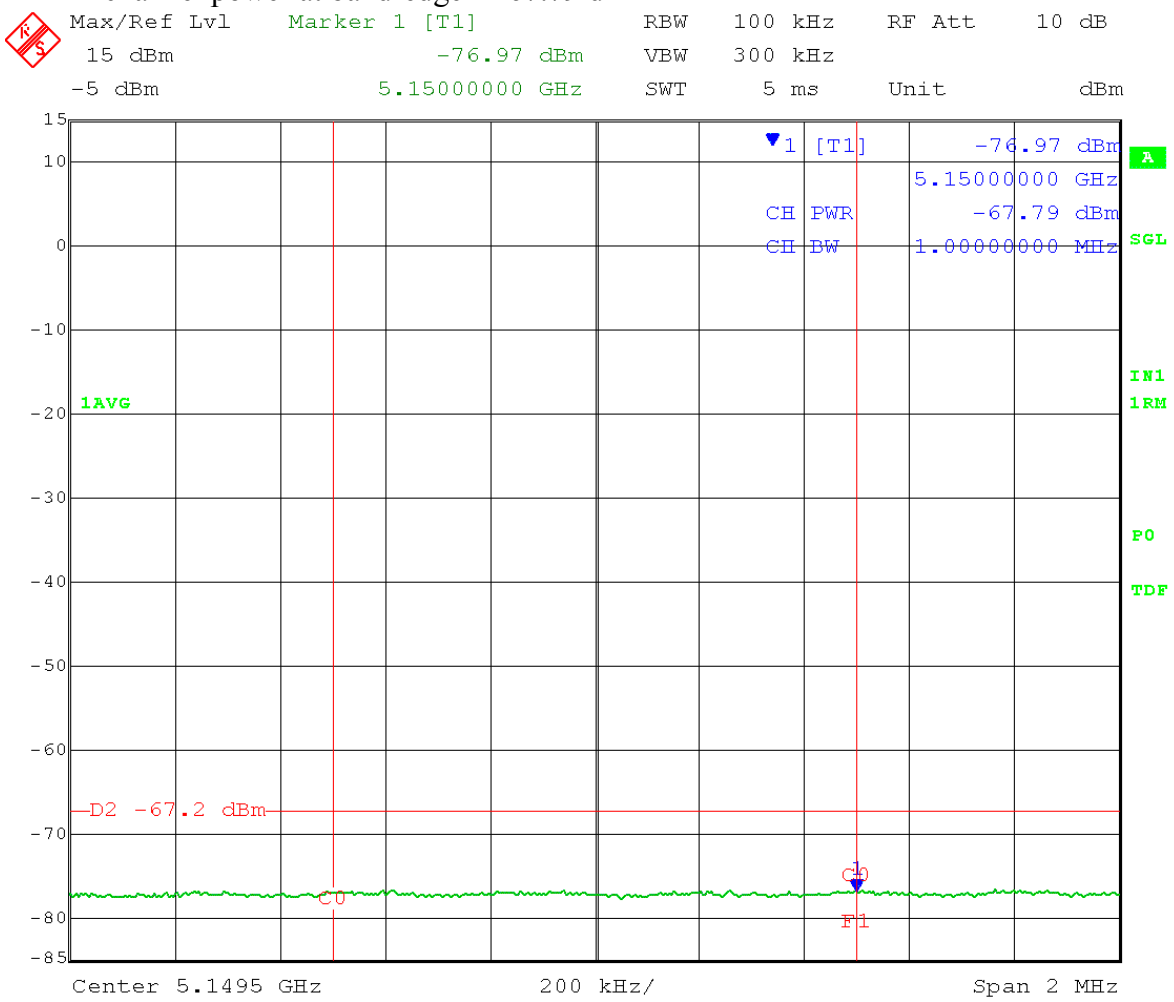
Date: 9.JUN.2014 15:23:58

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 4.5
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

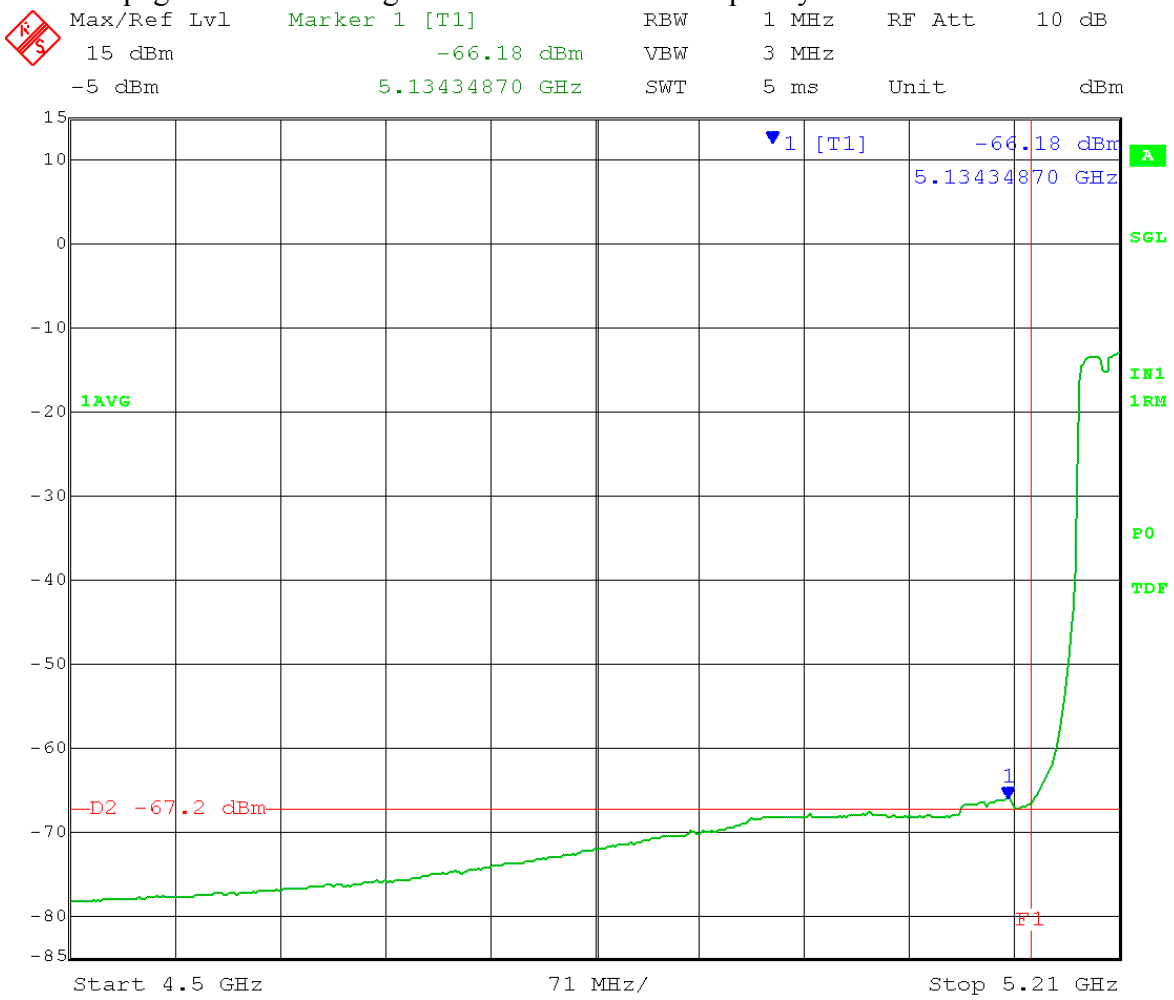
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -67.2 dBm

1 MHz channel power at band-edge = -67.79 dBm



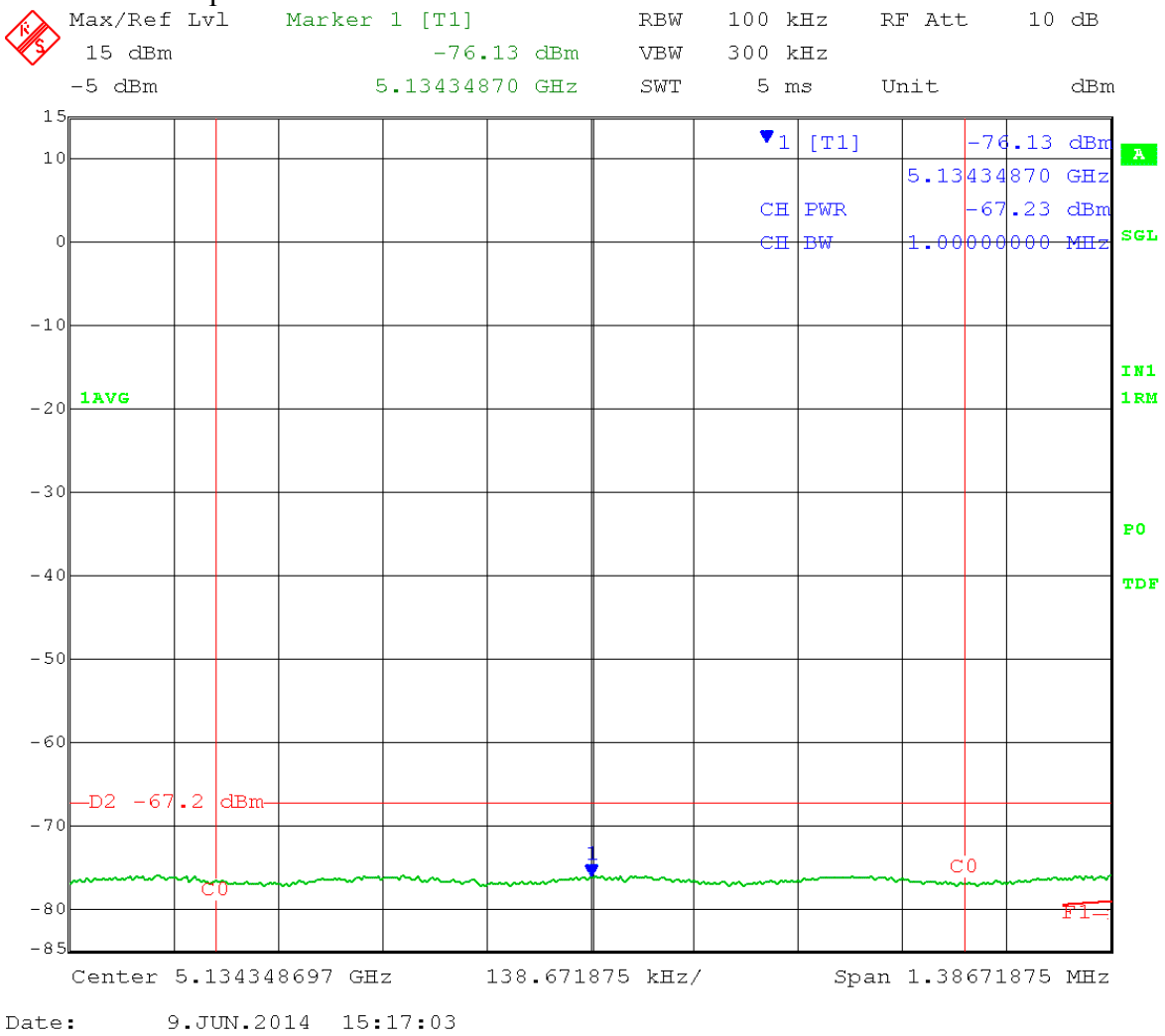
Date: 9.JUN.2014 15:21:19

See next page for 1 MHz integration method for this frequency.



Date: 9.JUN.2014 15:18:35

1 MHz channel power at 5.13434870 GHz = -67.23 dBm



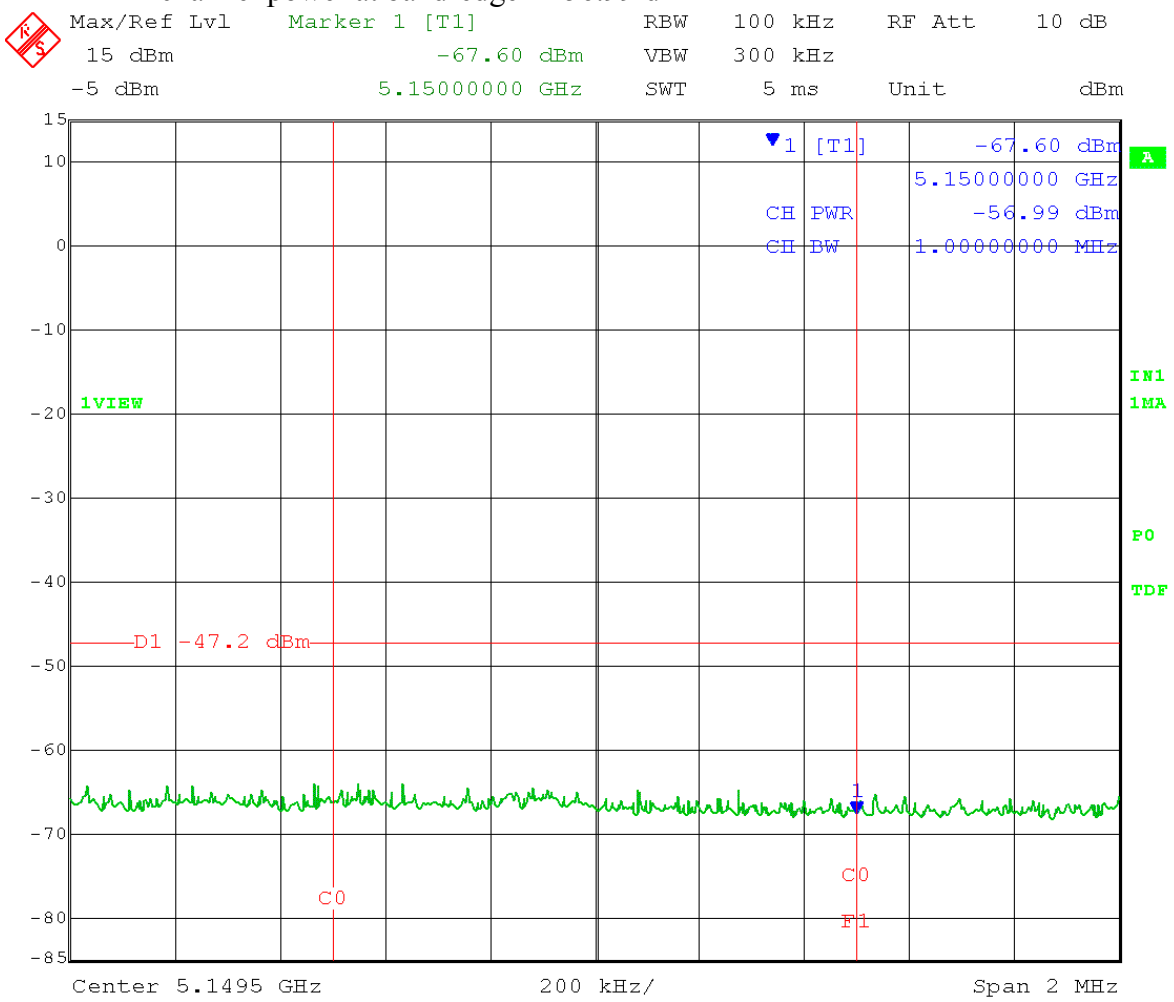
Date: 9.JUN.2014 15:17:03

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 5.0
40 MHz BW Band-edge = 5.150 GHz

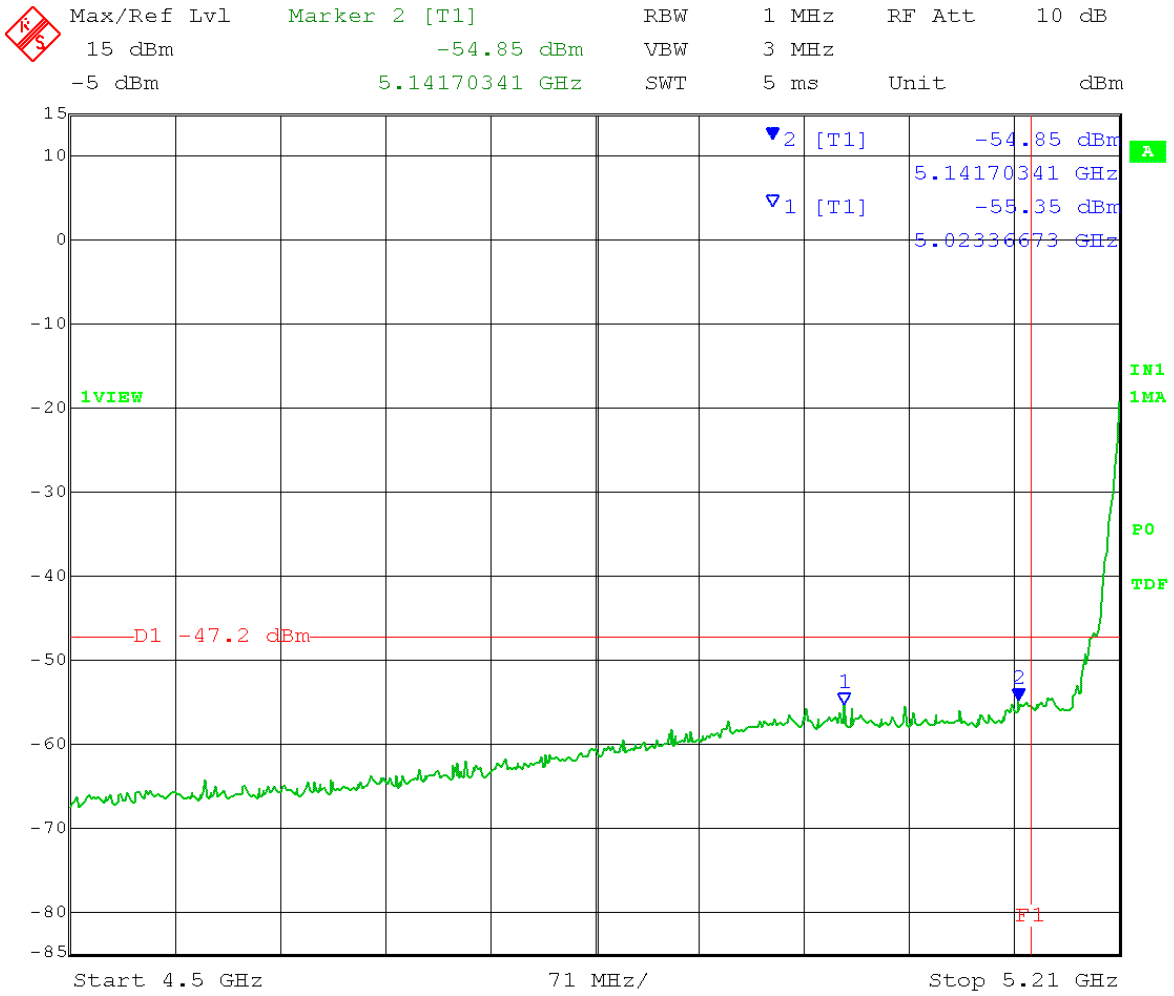
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm

1 MHz channel power at band-edge = -56.99 dBm



Date: 9.JUN.2014 15:35:23



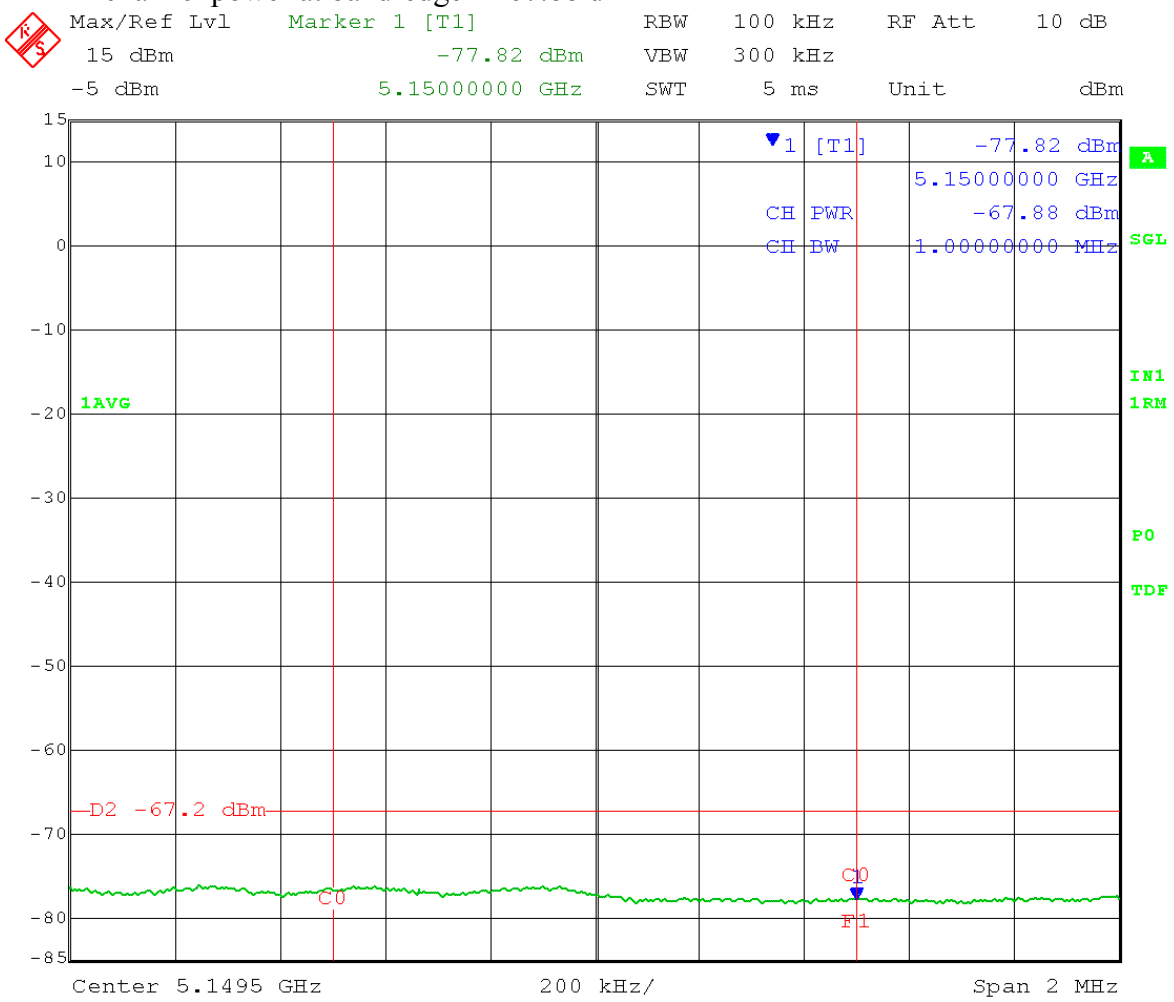
Date: 9.JUN.2014 15:36:52

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 5.0
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

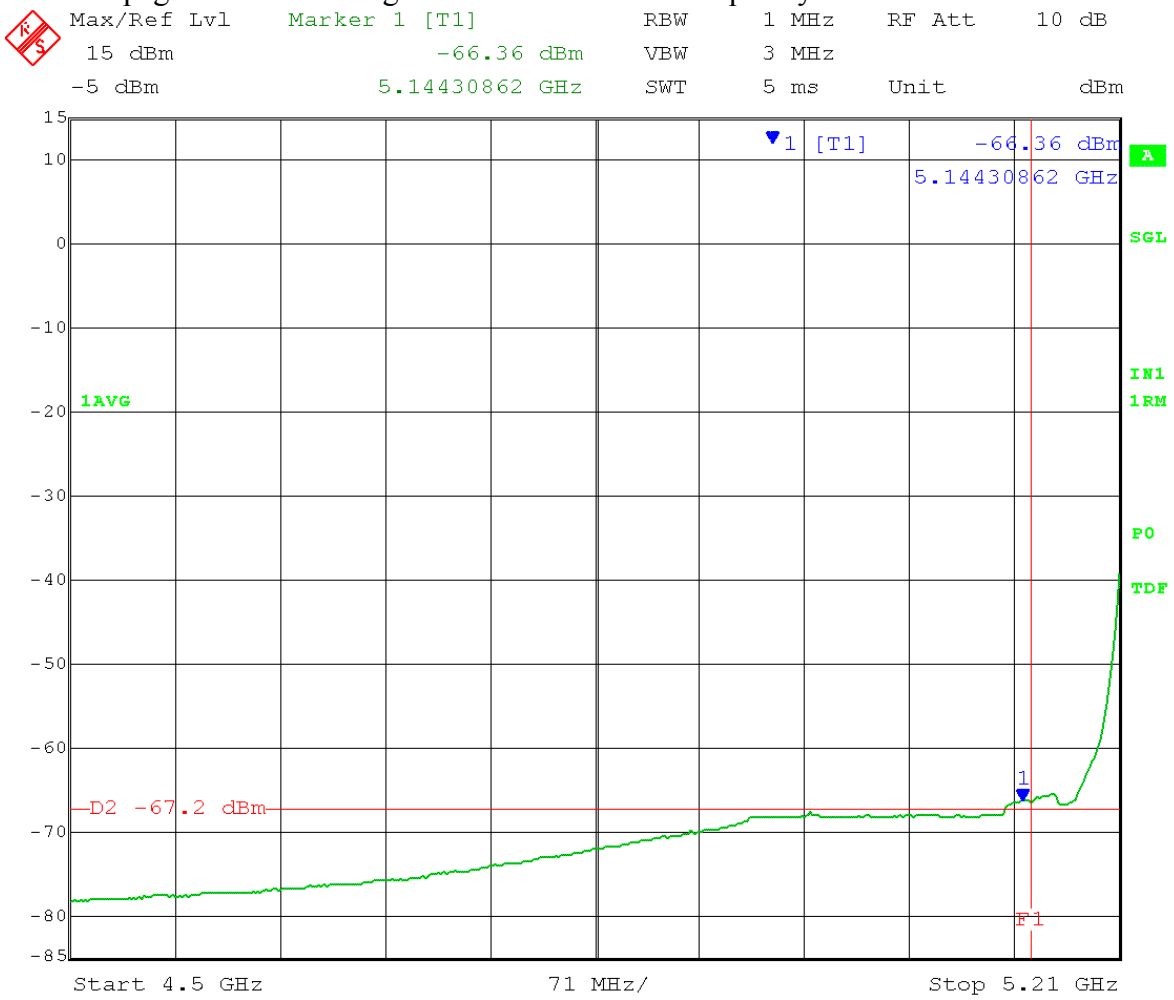
Average limit = 54 dBμV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -67.2 dBm

1 MHz channel power at band-edge = -67.88 dBm



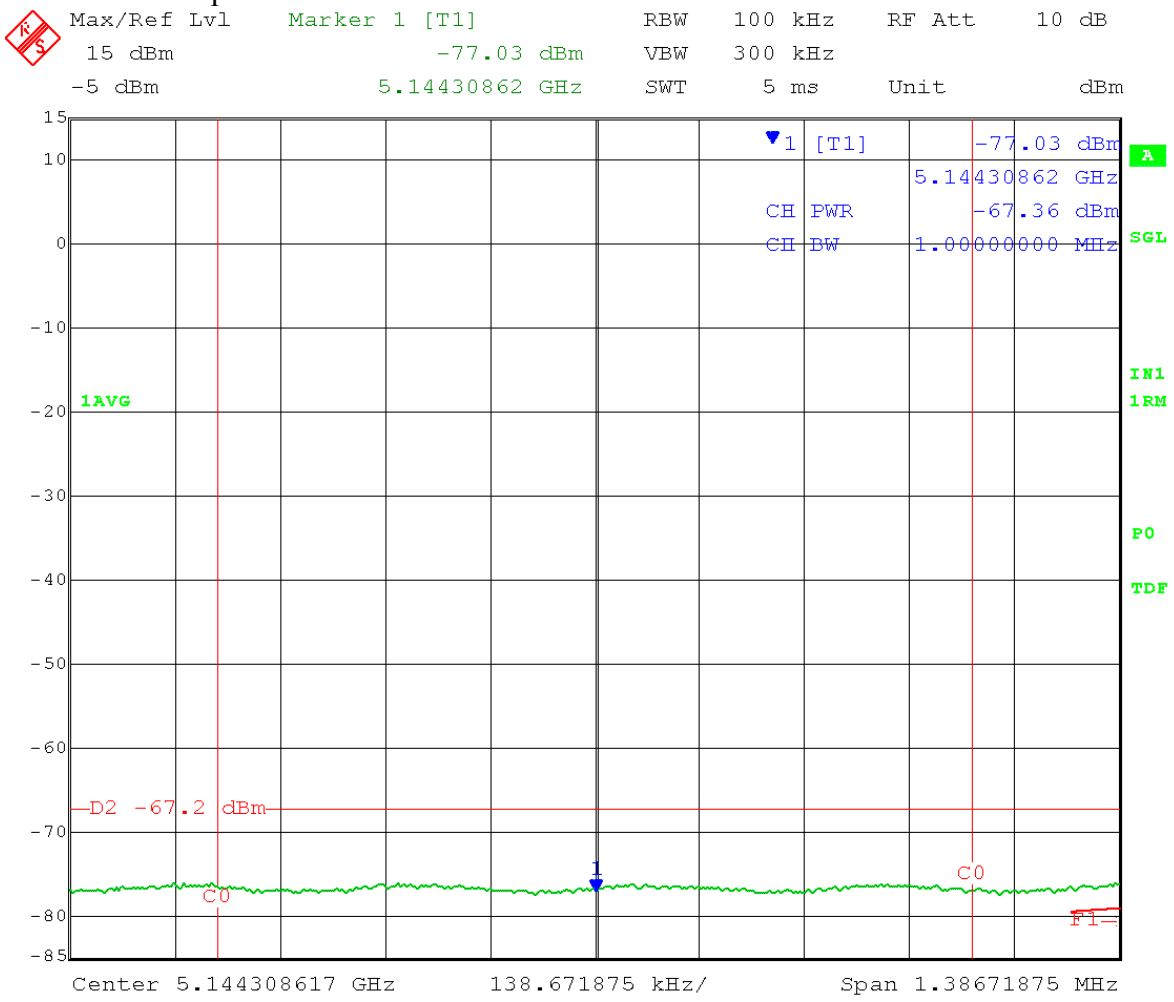
Date: 9.JUN.2014 15:34:06

See next page for 1 MHz integration method for this frequency.



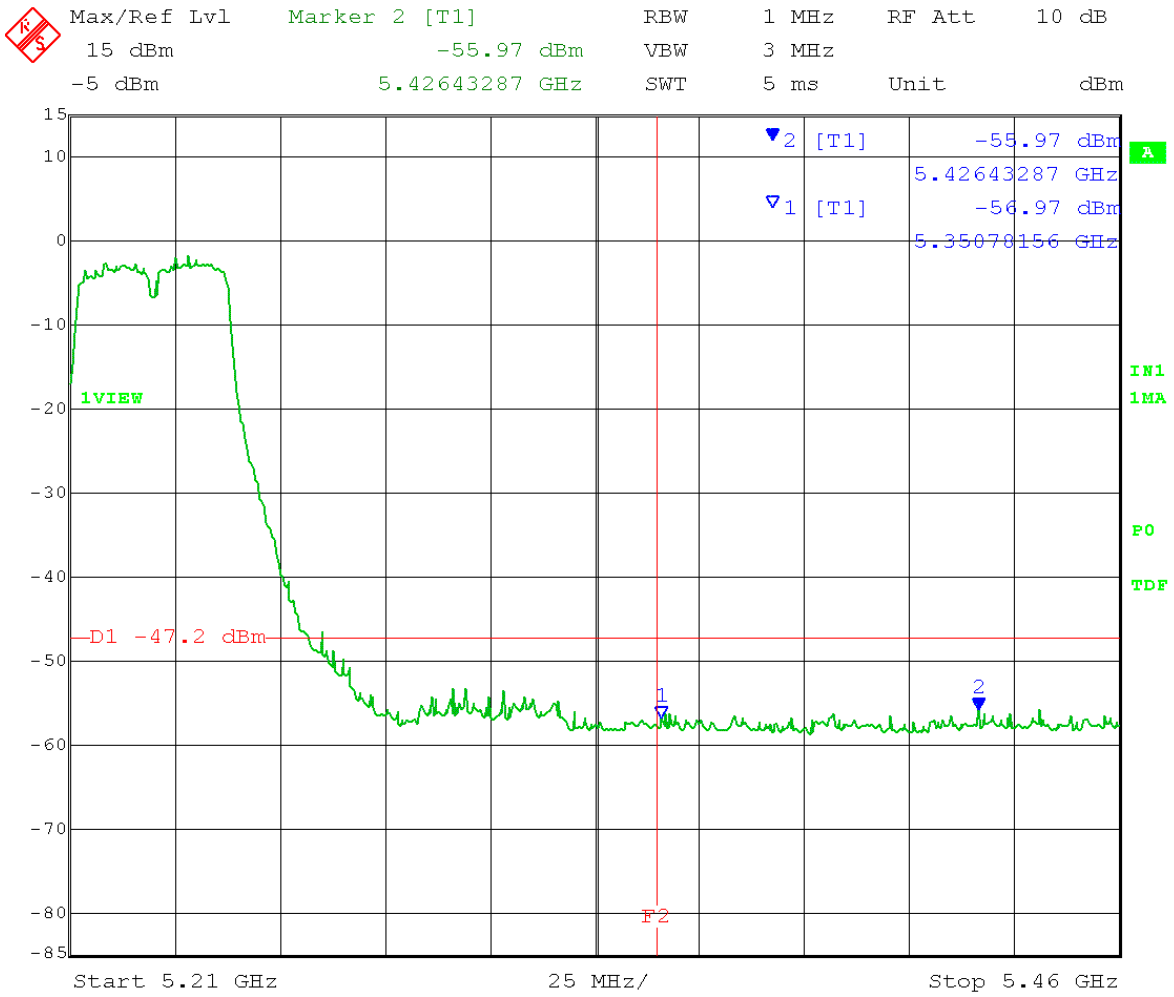
Date: 9.JUN.2014 15:32:57

1 MHz channel power at 5.14430862 GHz = -67.36 dBm



Date: 9.JUN.2014 15:31:34

Test Date: 06-09-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 4.5
40 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -47.2 dBm



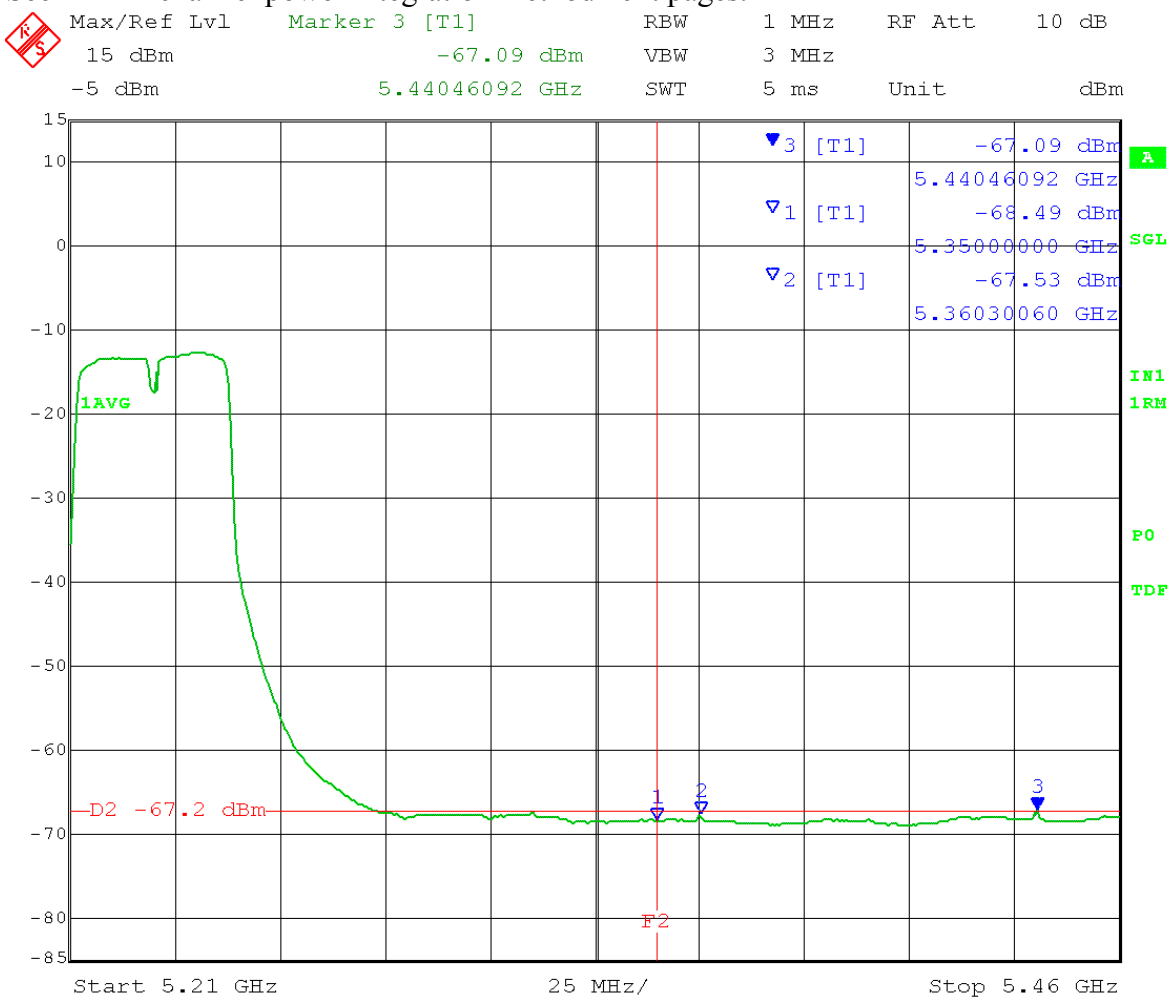
Date: 9.JUN.2014 15:59:14

Test Date: 06-9-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 23 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 4.5
40 MHz BW Band-edge = 5.350 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

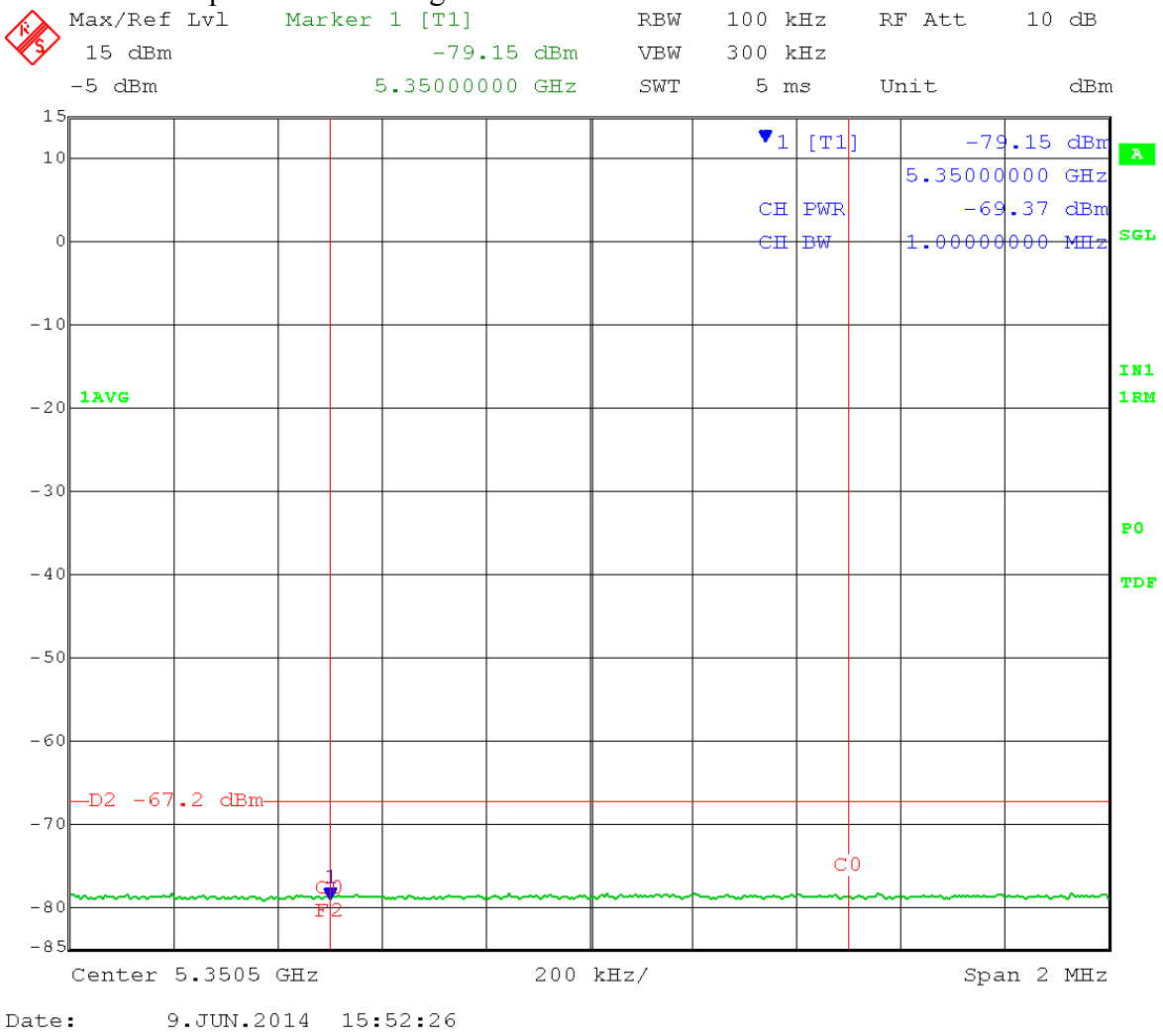
Average limit = 54 dBμV/m – 95.2 (3 meter distance) – 23 dBi antenna gain – 3 dB (MIMO) = -67.2 dBm

See 1 MHz channel power integration method next pages.



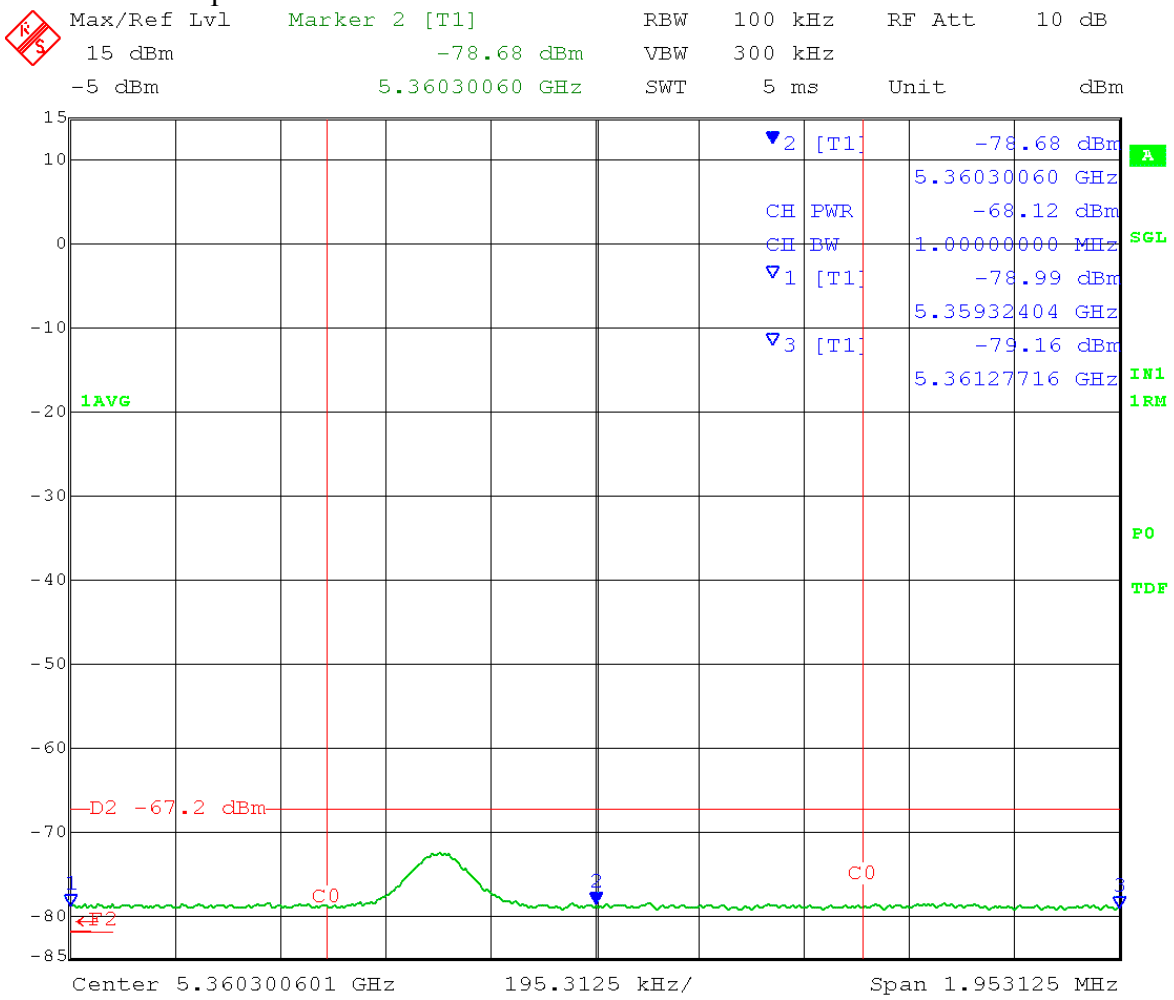
Date: 9.JUN.2014 15:54:55

1 MHz channel power at band-edge = -69.37 dBm



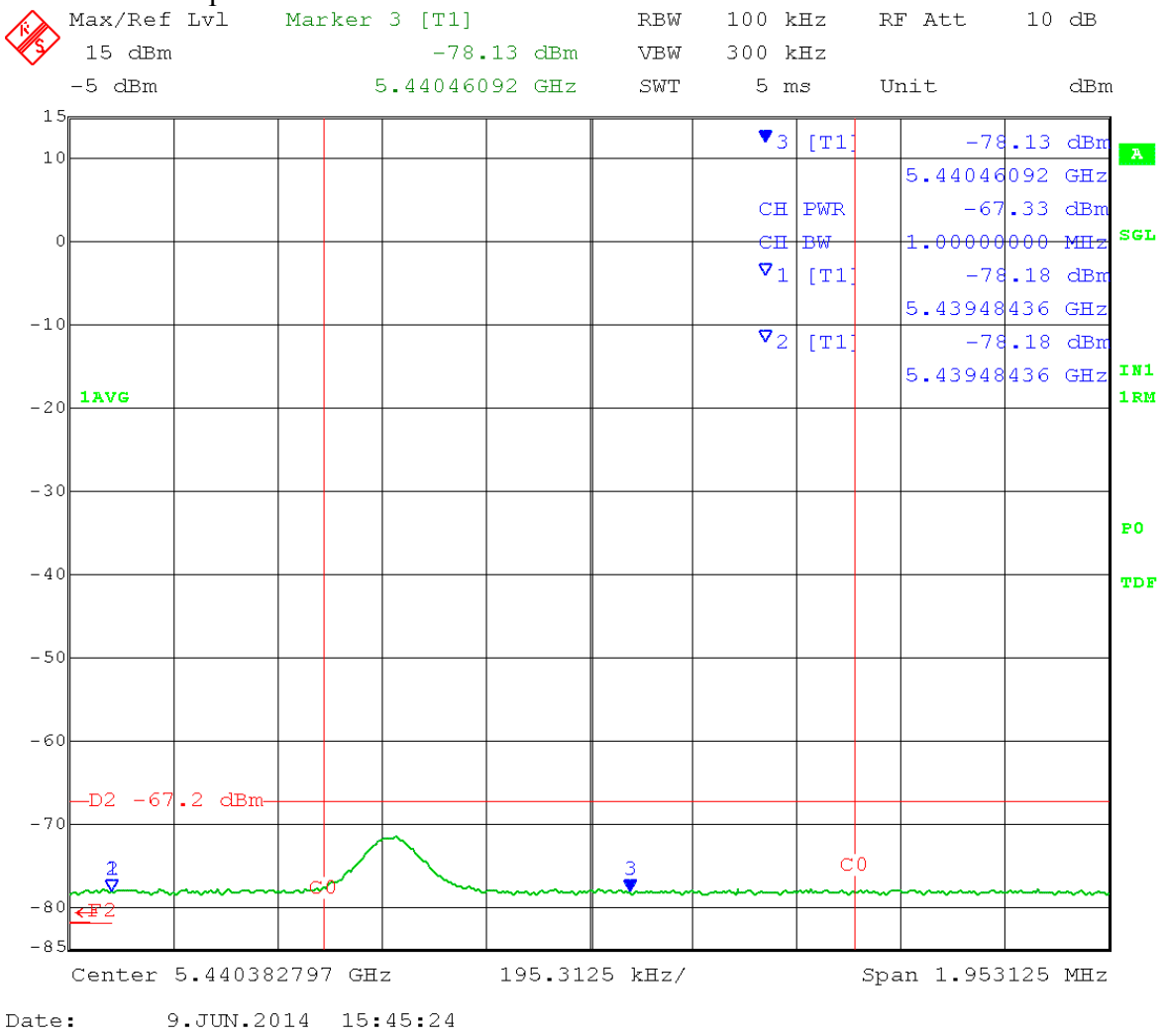
Date: 9.JUN.2014 15:52:26

1 MHz channel power at 5.36030060 = -68.84 dBm



Date: 9.JUN.2014 15:56:27

1 MHz channel power at 5.44046092 = -67.33 dBm



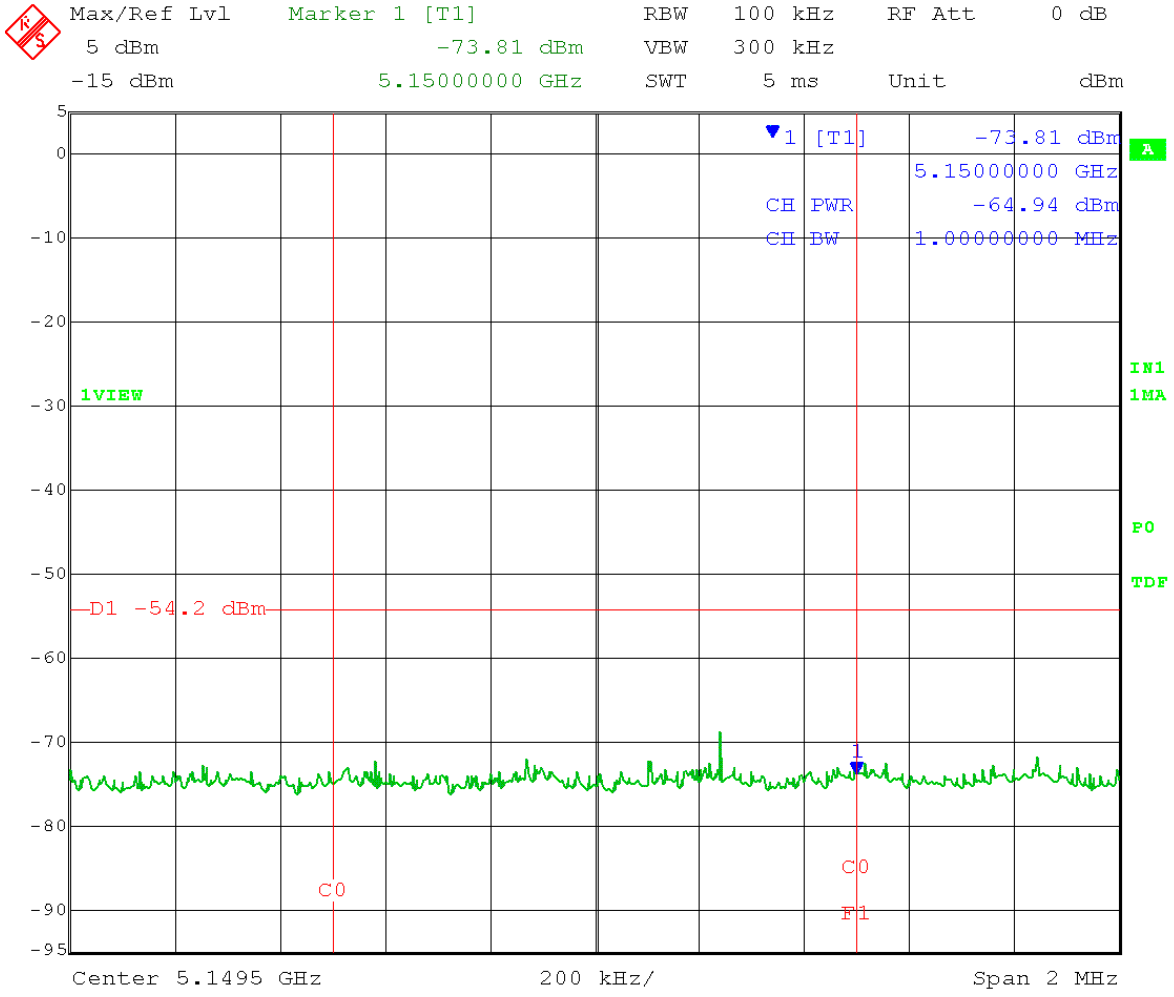
Date: 9.JUN.2014 15:45:24

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 2.5-10dB
external atten. = -7.5
40 MHz BW Band-edge = 5.150 GHz

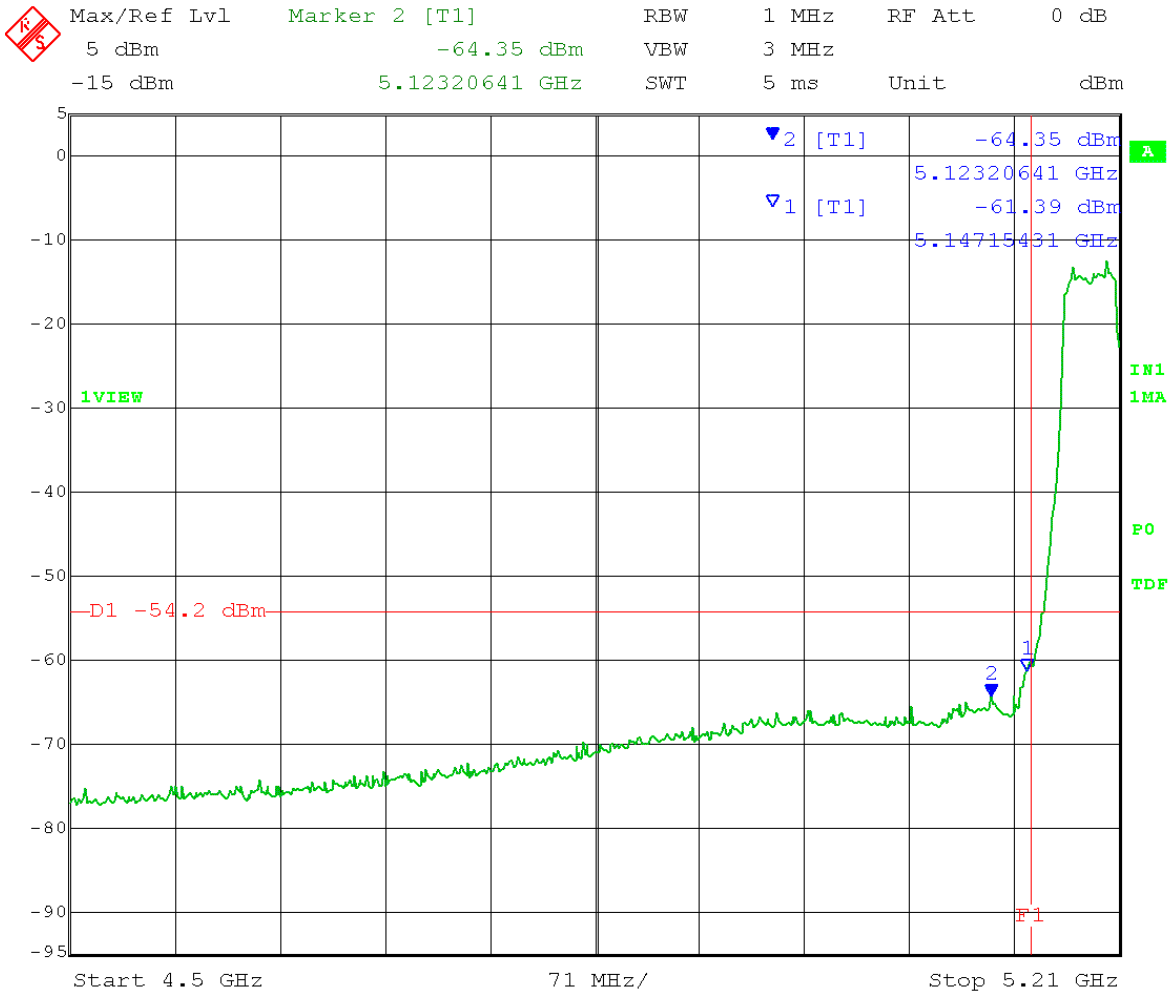
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -54.2 dBm

1 MHz channel power at band-edge = -64.94 dBm



Date: 10.JUN.2014 08:59:52



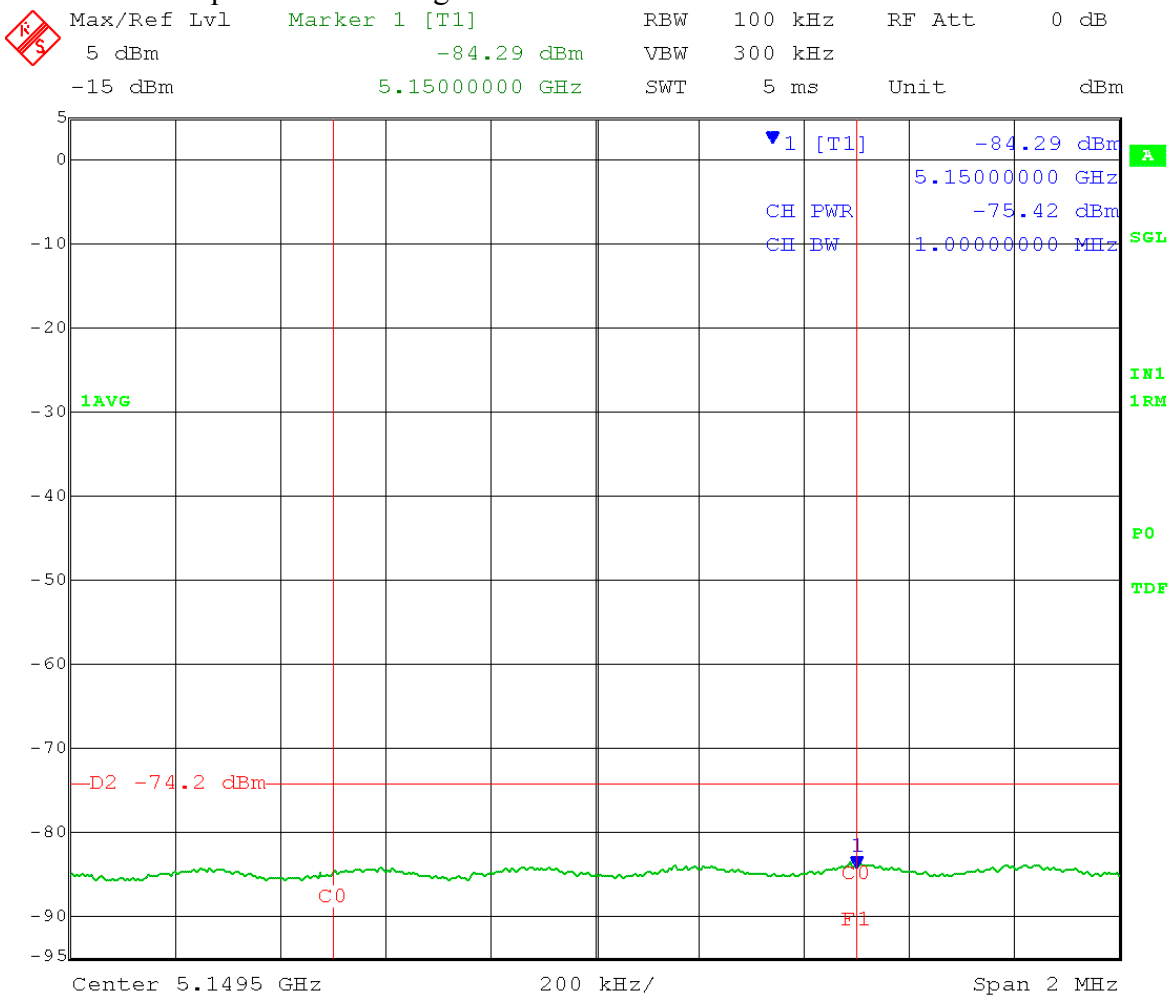
Date: 10.JUN.2014 08:57:06

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Low Channel Transmit = 5.190 GHz Output power setting: 2.5-10dB
external atten. = -7.5
40 MHz BW Band-edge = 5.150 GHz

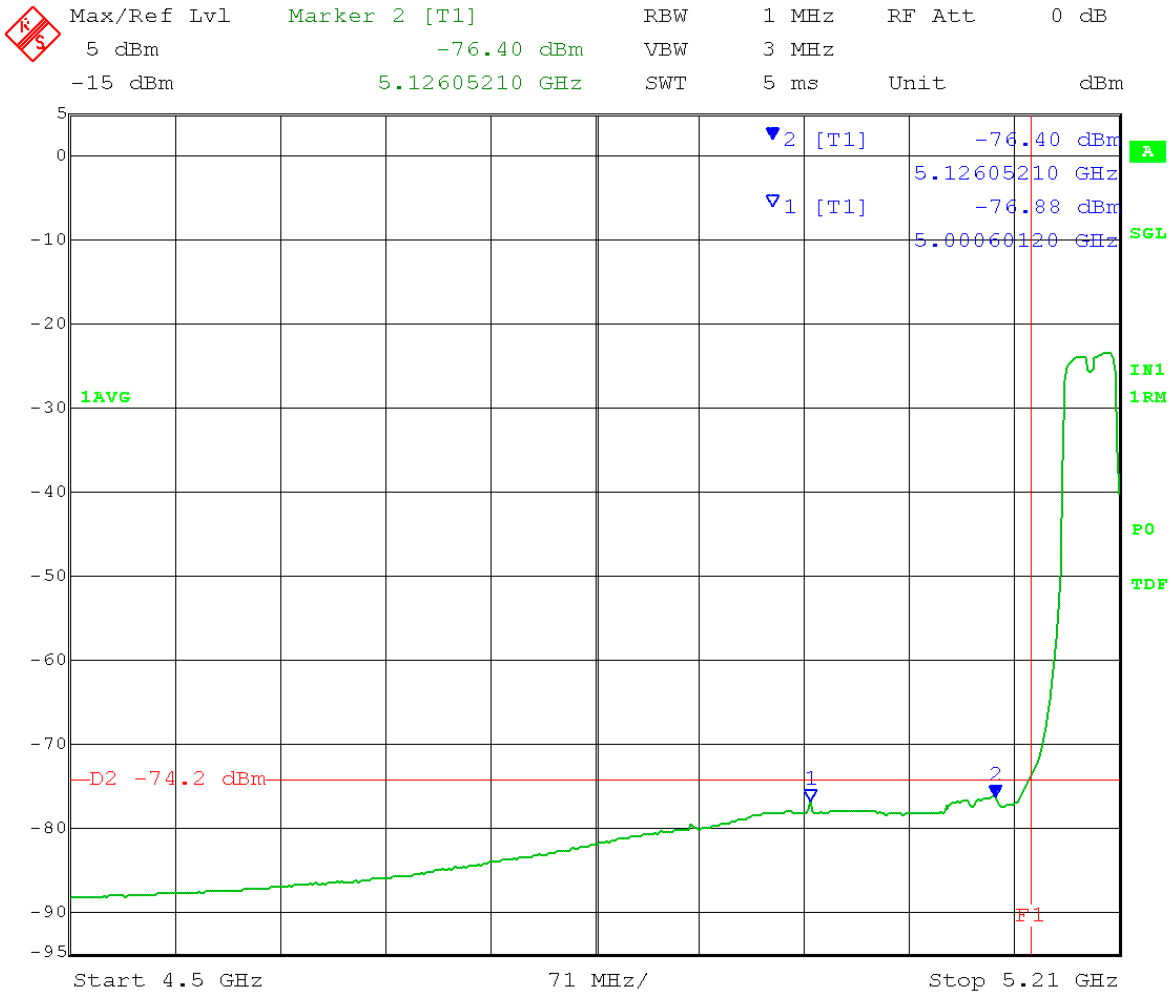
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -74.2 dBm

1 MHz channel power at band-edge = -75.42 dBm



Date: 10.JUN.2014 08:54:04



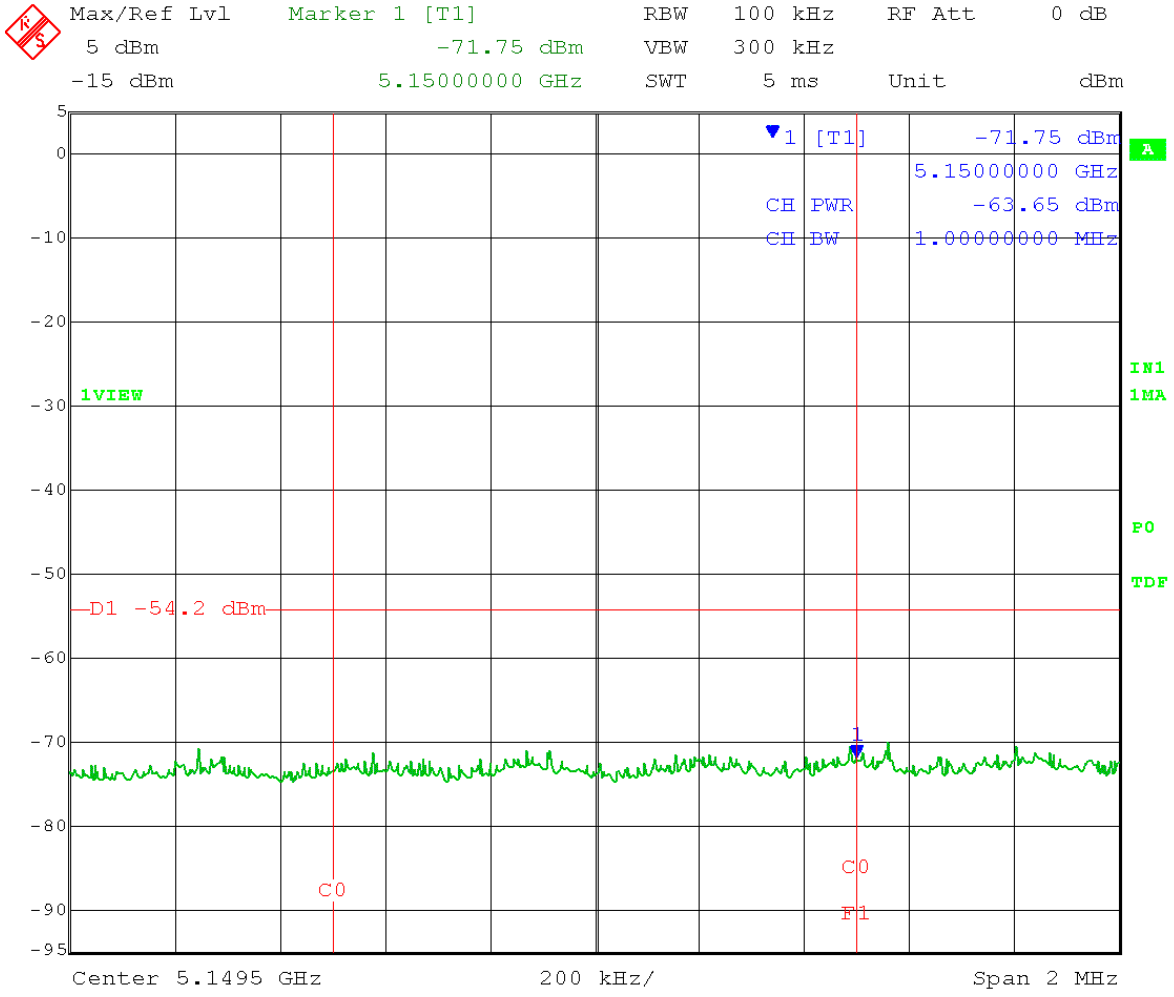
Date: 10.JUN.2014 08:55:27

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 8.5-10dB
external atten. = -1.5
40 MHz BW Band-edge = 5.150 GHz

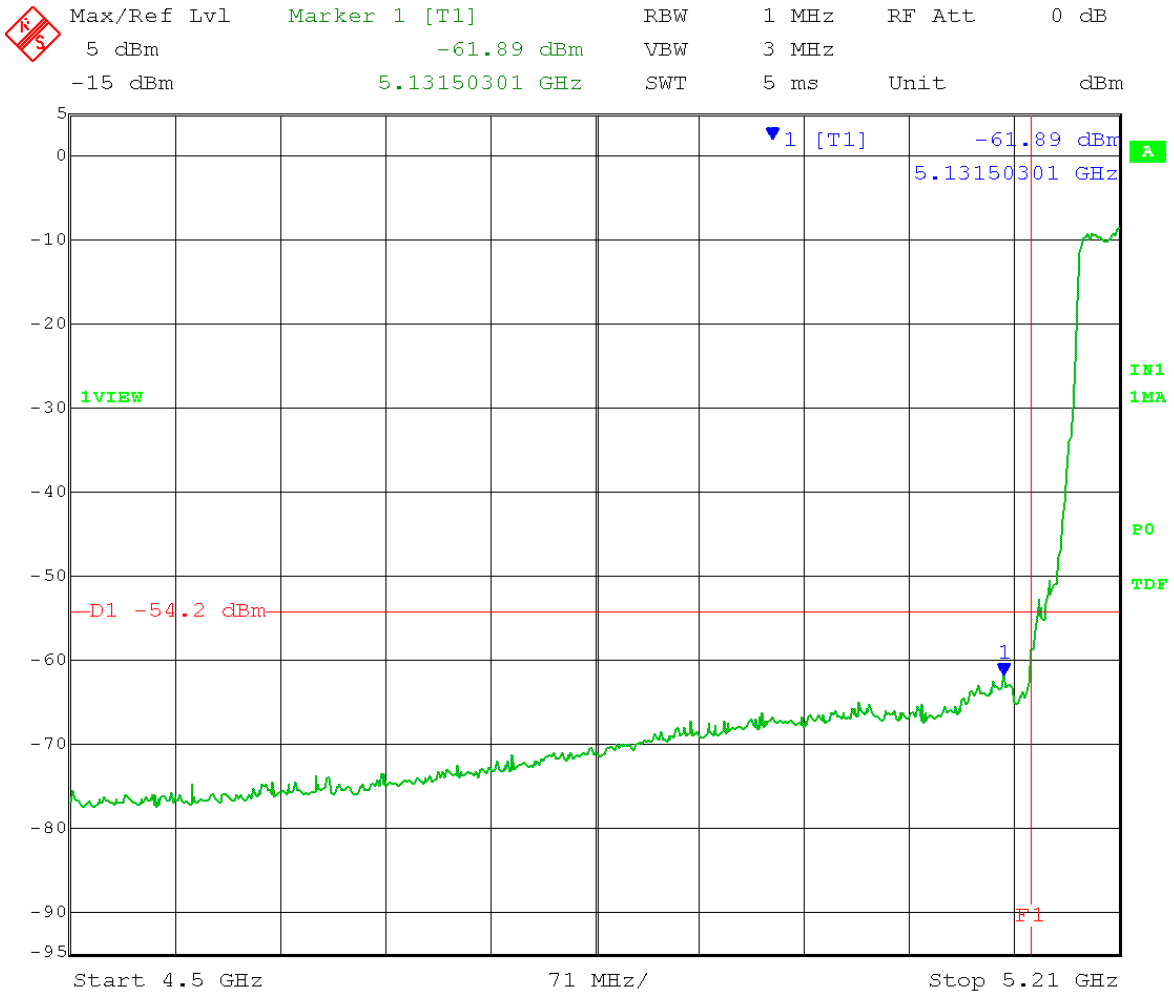
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -54.2 dBm

1 MHz channel power at band-edge = -63.65 dBm



Date: 10.JUN.2014 09:13:40



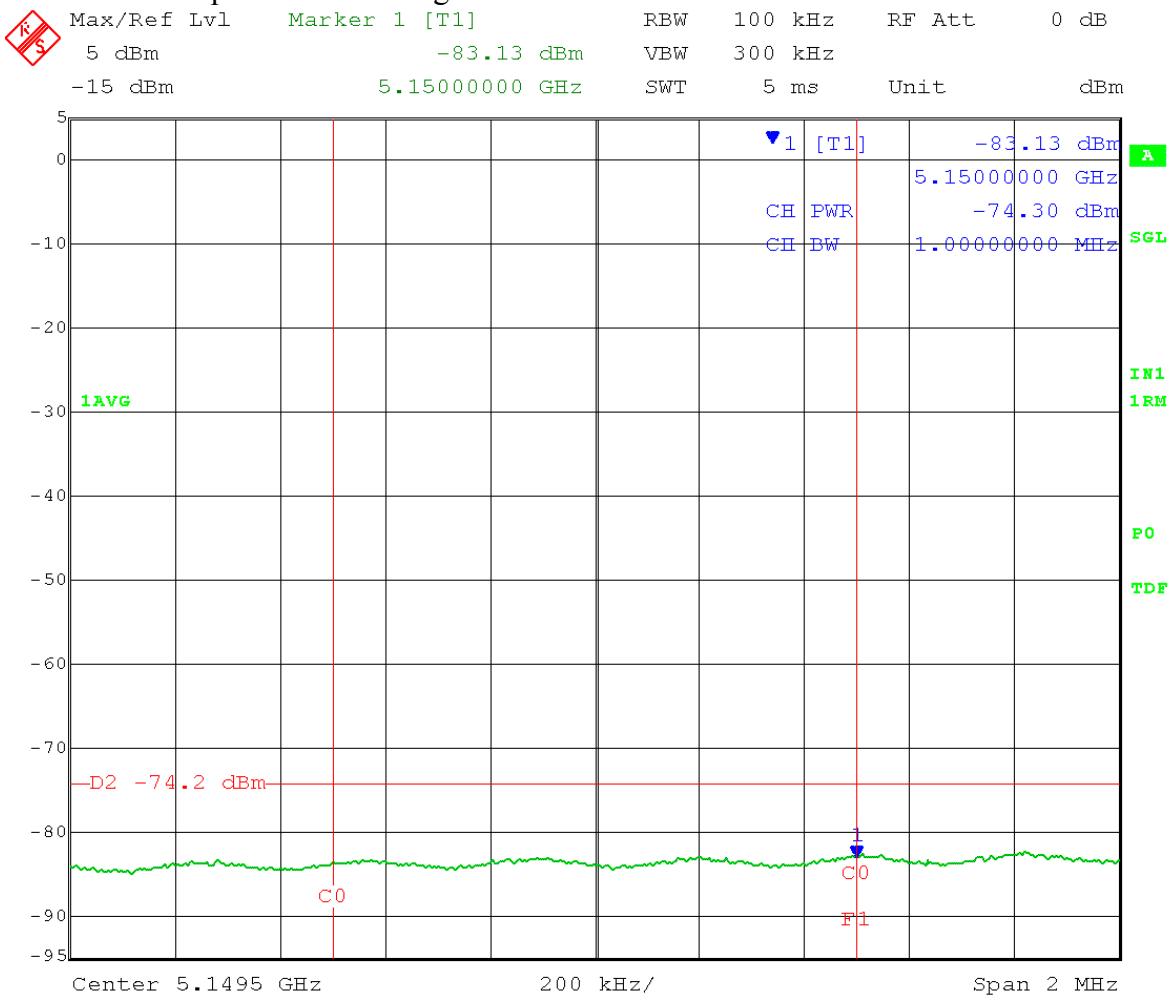
Date: 10.JUN.2014 09:11:54

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
Mid Channel Transmit = 5.200 GHz Output power setting: 8.5-10dB
external atten. = -1.5
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

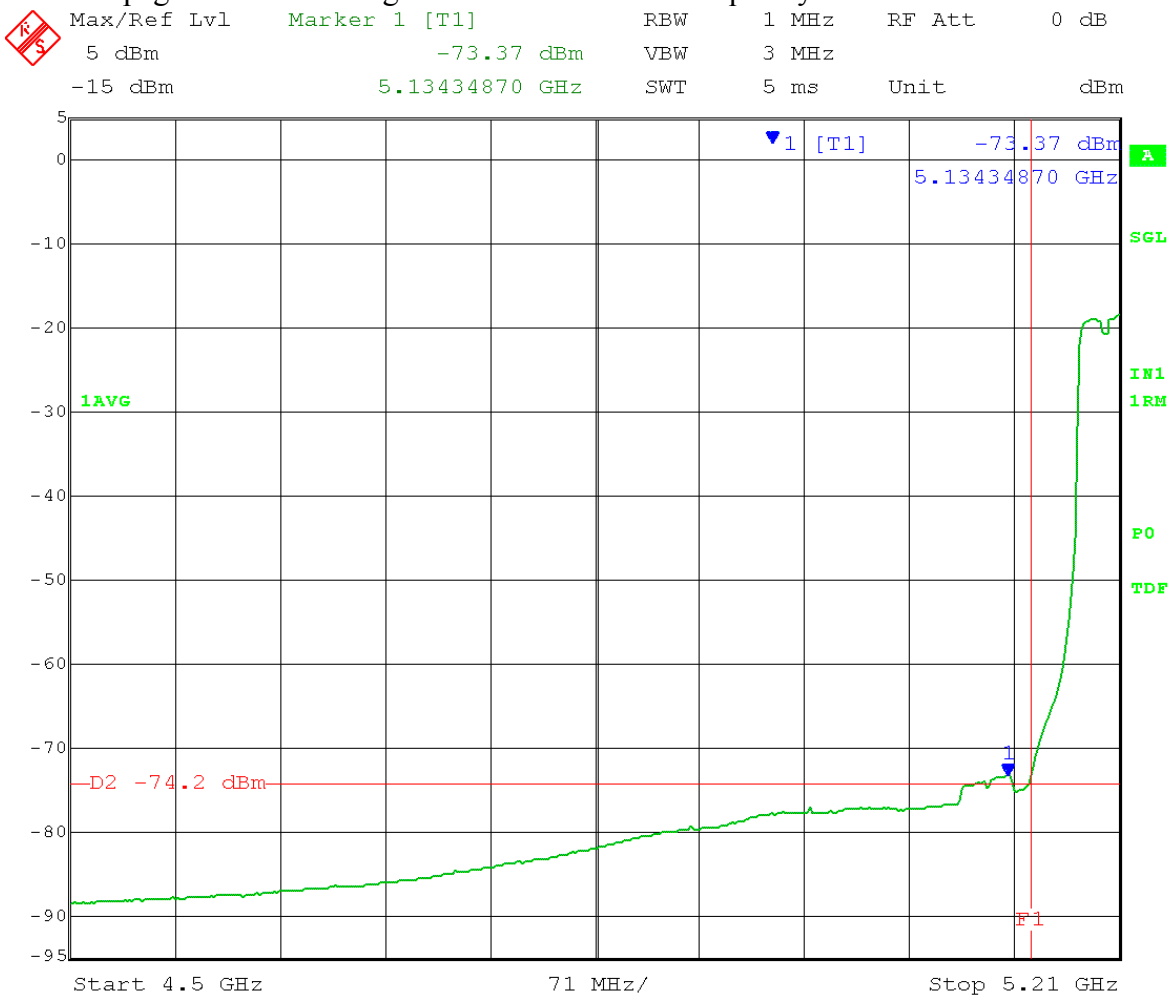
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -74.2 dBm

1 MHz channel power at band-edge = -74.30 dBm



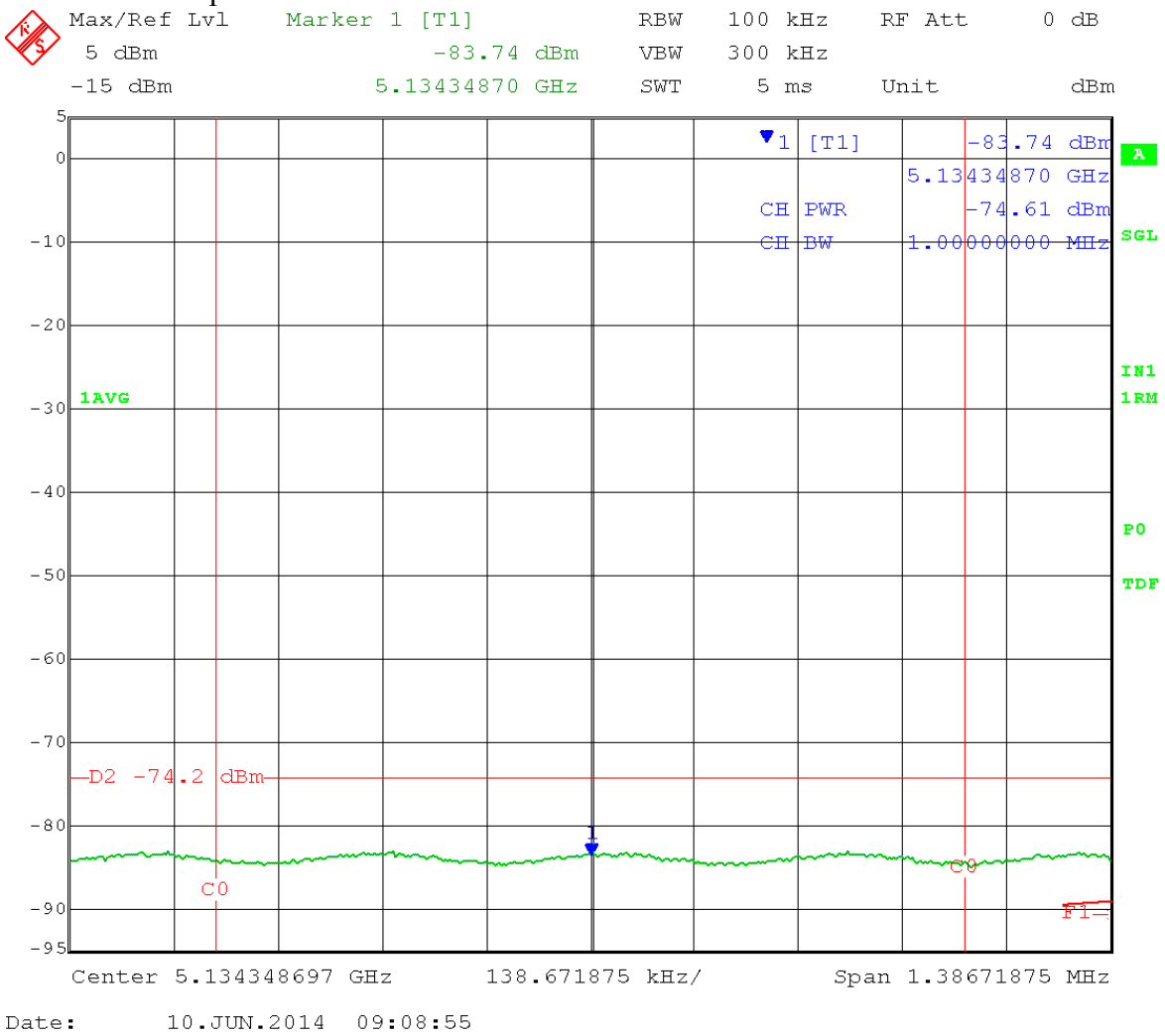
Date: 10.JUN.2014 09:06:12

See next page for 1 MHz integration method for this frequency.



Date: 10.JUN.2014 09:07:26

1 MHz channel power at 5.13434870 GHz = -74.61 dBm



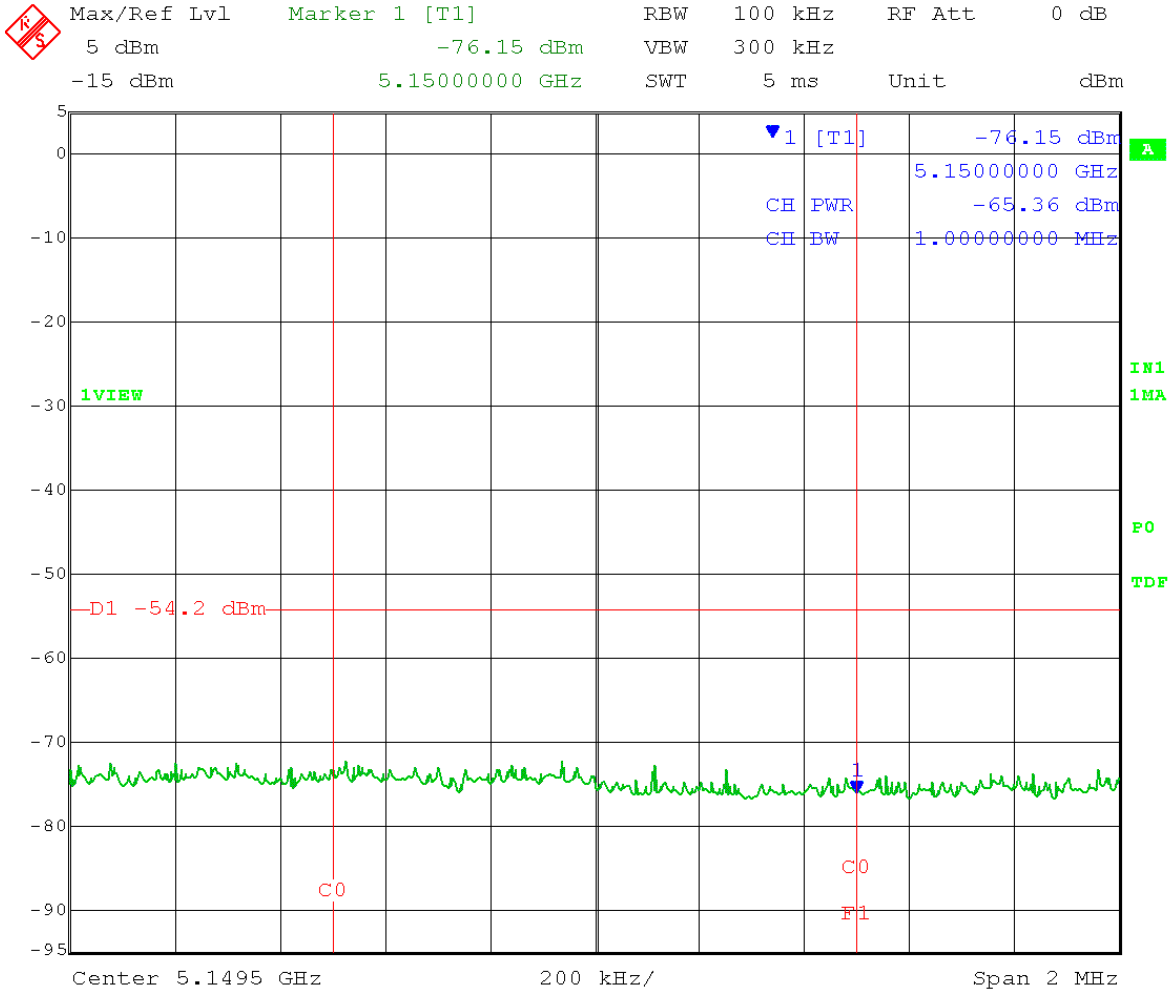
Date: 10.JUN.2014 09:08:55

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 9.0-10dB
external atten. = -1.0
40 MHz BW Band-edge = 5.150 GHz

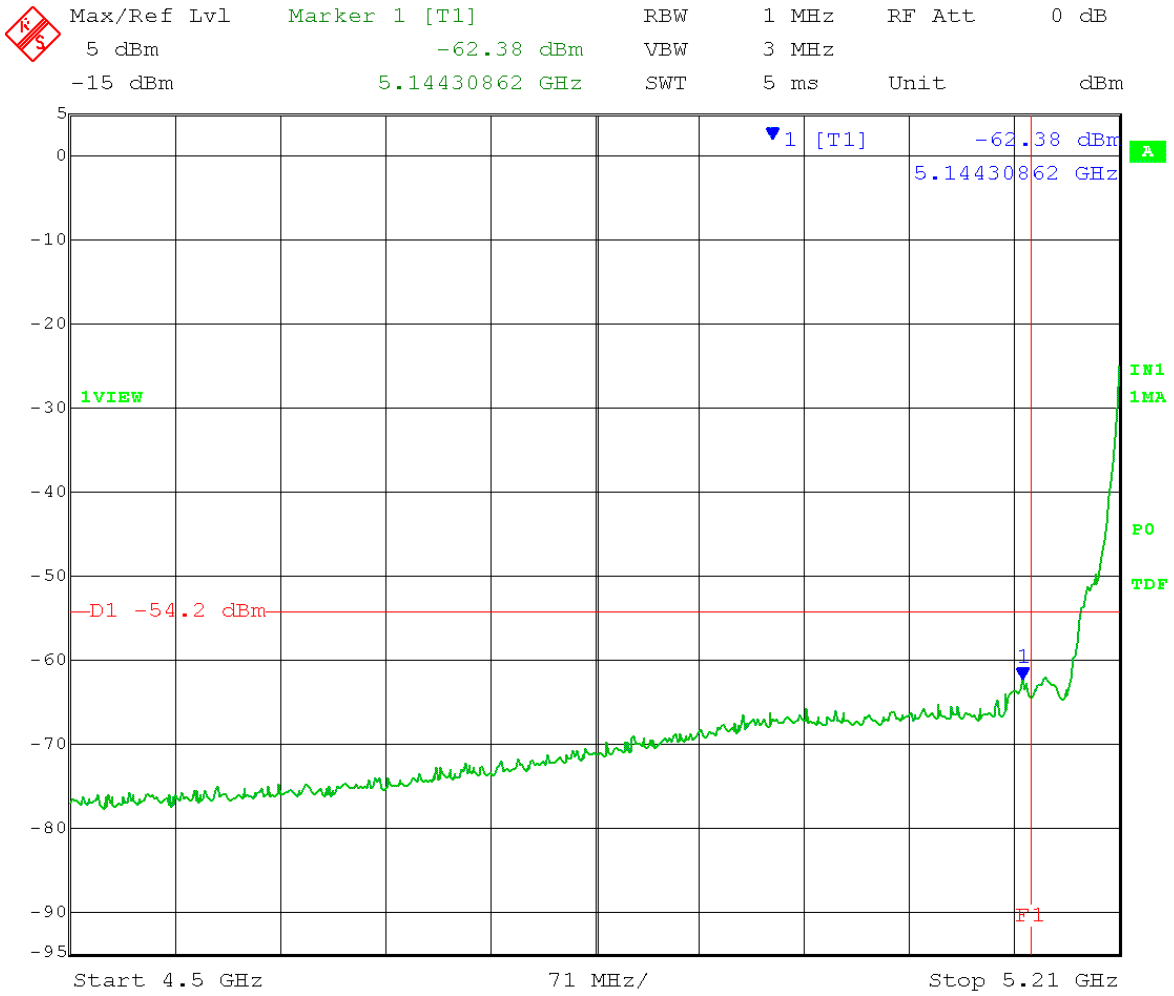
Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -54.2 dBm

1 MHz channel power at band-edge = -65.36 dBm



Date: 10.JUN.2014 09:34:31



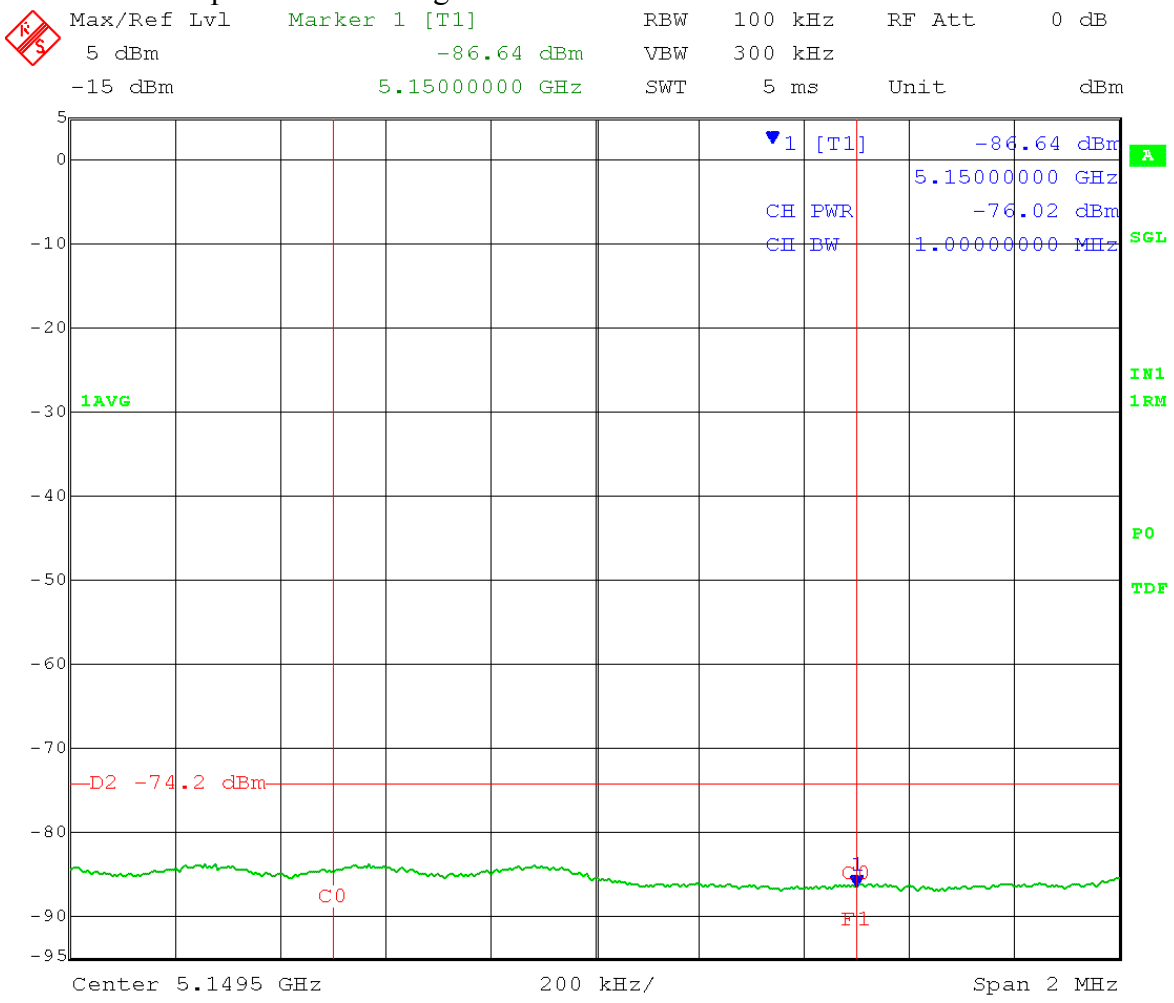
Date: 10.JUN.2014 09:35:54

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 9.0-10dB
external atten. = -1.0
40 MHz BW Band-edge = 5.150 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

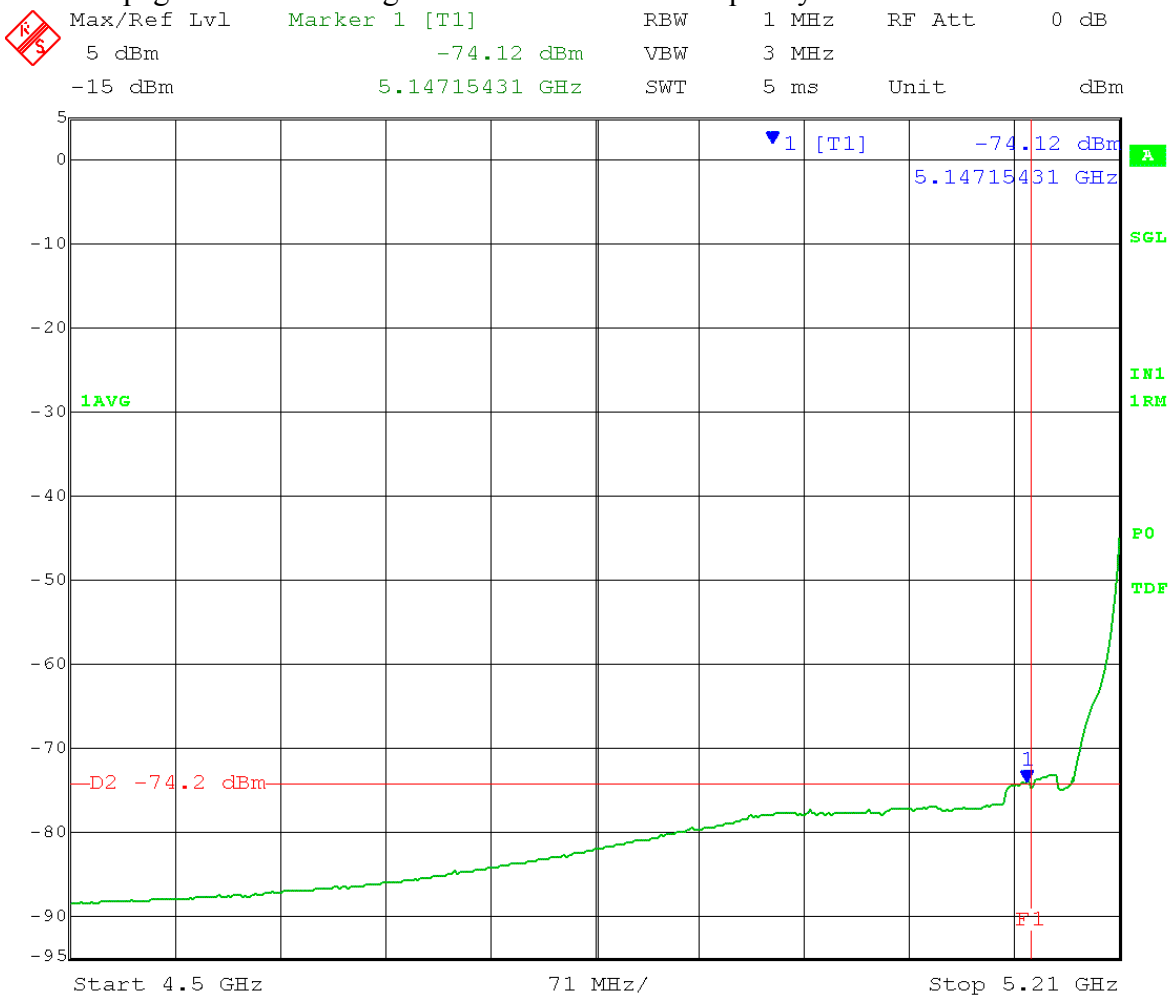
Average limit = 54 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -74.2 dBm

1 MHz channel power at band-edge = -76.02 dBm



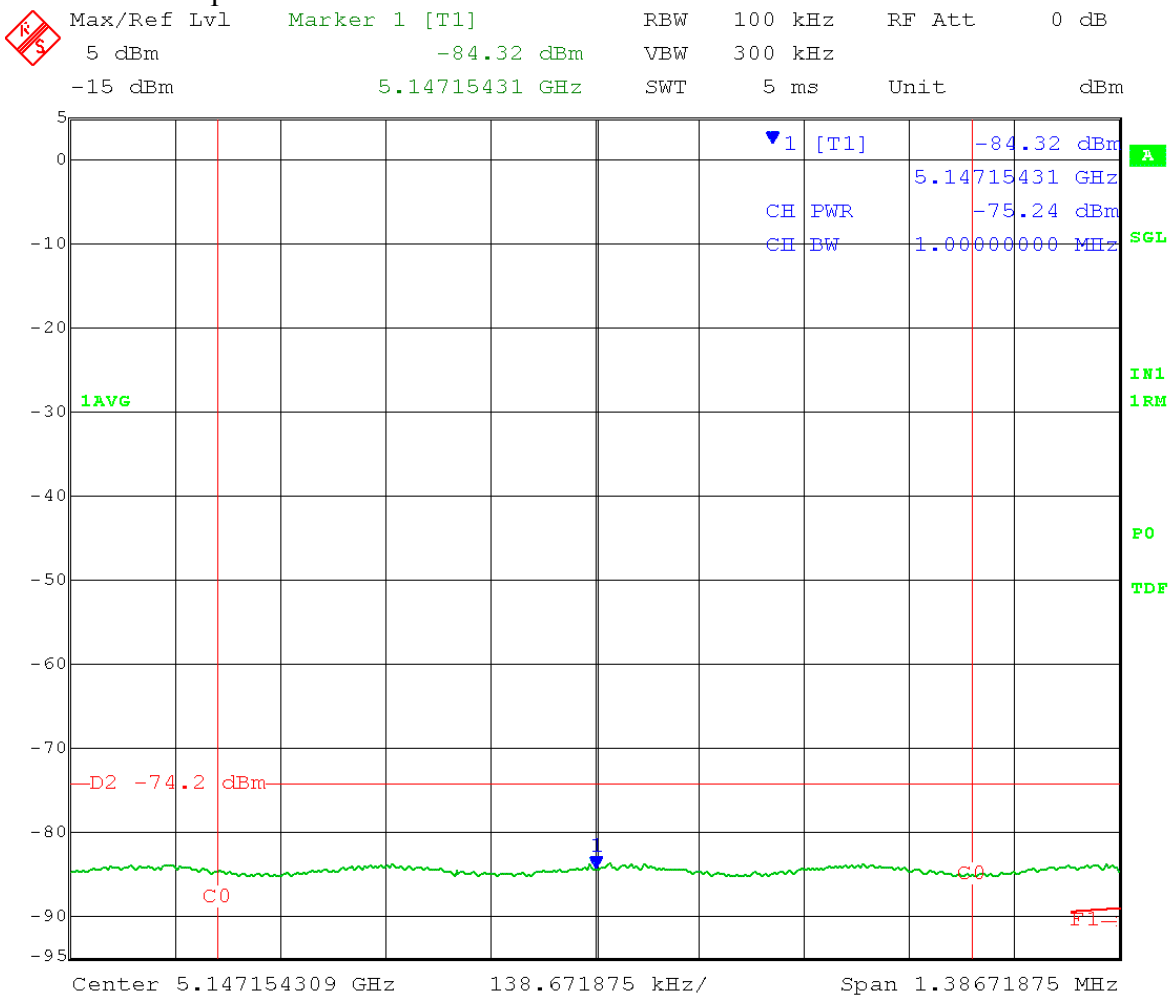
Date: 10.JUN.2014 09:32:26

See next page for 1 MHz integration method for this frequency.



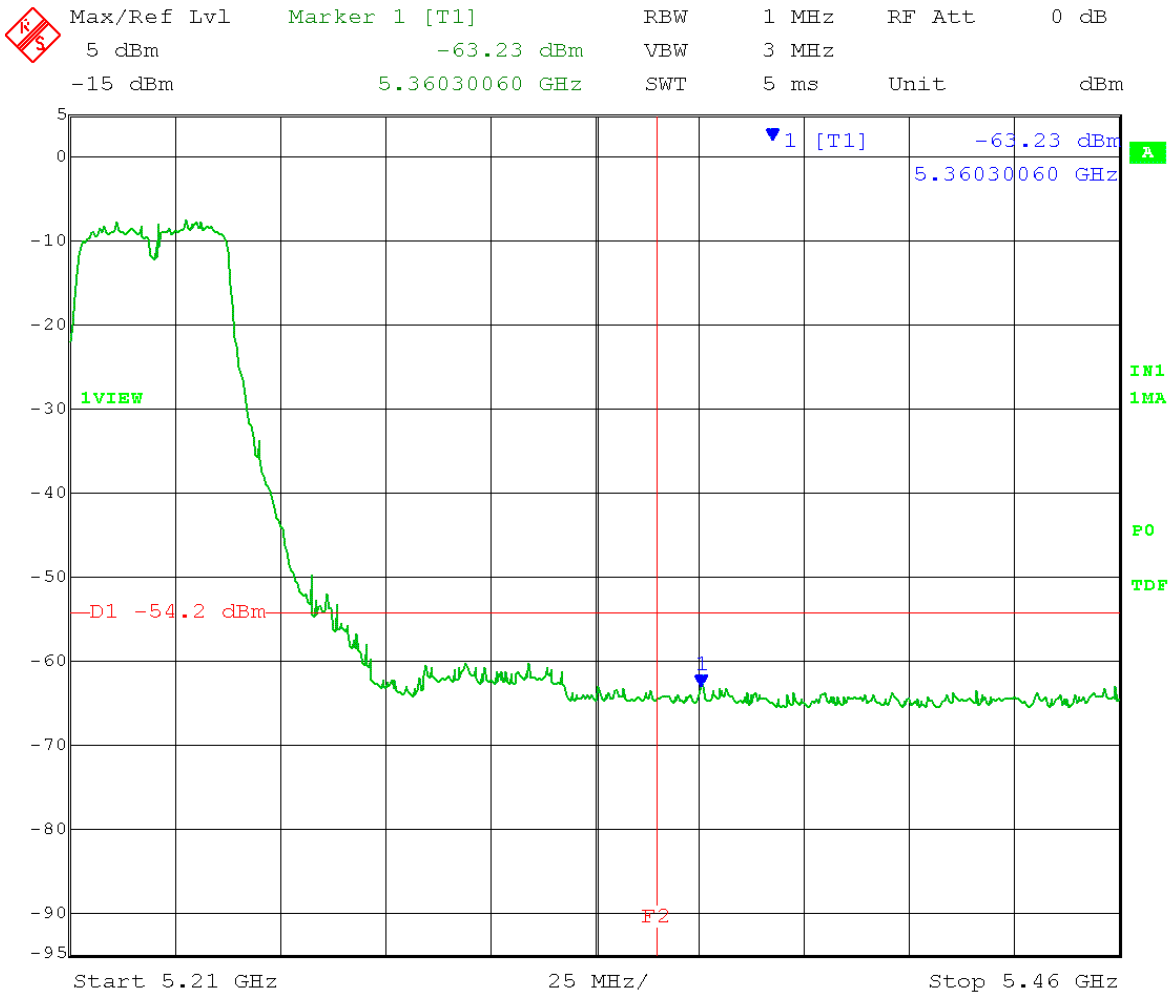
Date: 10.JUN.2014 09:31:17

1 MHz channel power at 5.14715431 GHz = -75.24 dBm



Date: 10.JUN.2014 09:30:00

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = Peak Trace = Max Hold
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 9.0-10dB
external atten. = -1.0
40 MHz BW Band-edge = 5.350 GHz
Peak limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain
– 3 dB (MIMO) = -54.2 dBm

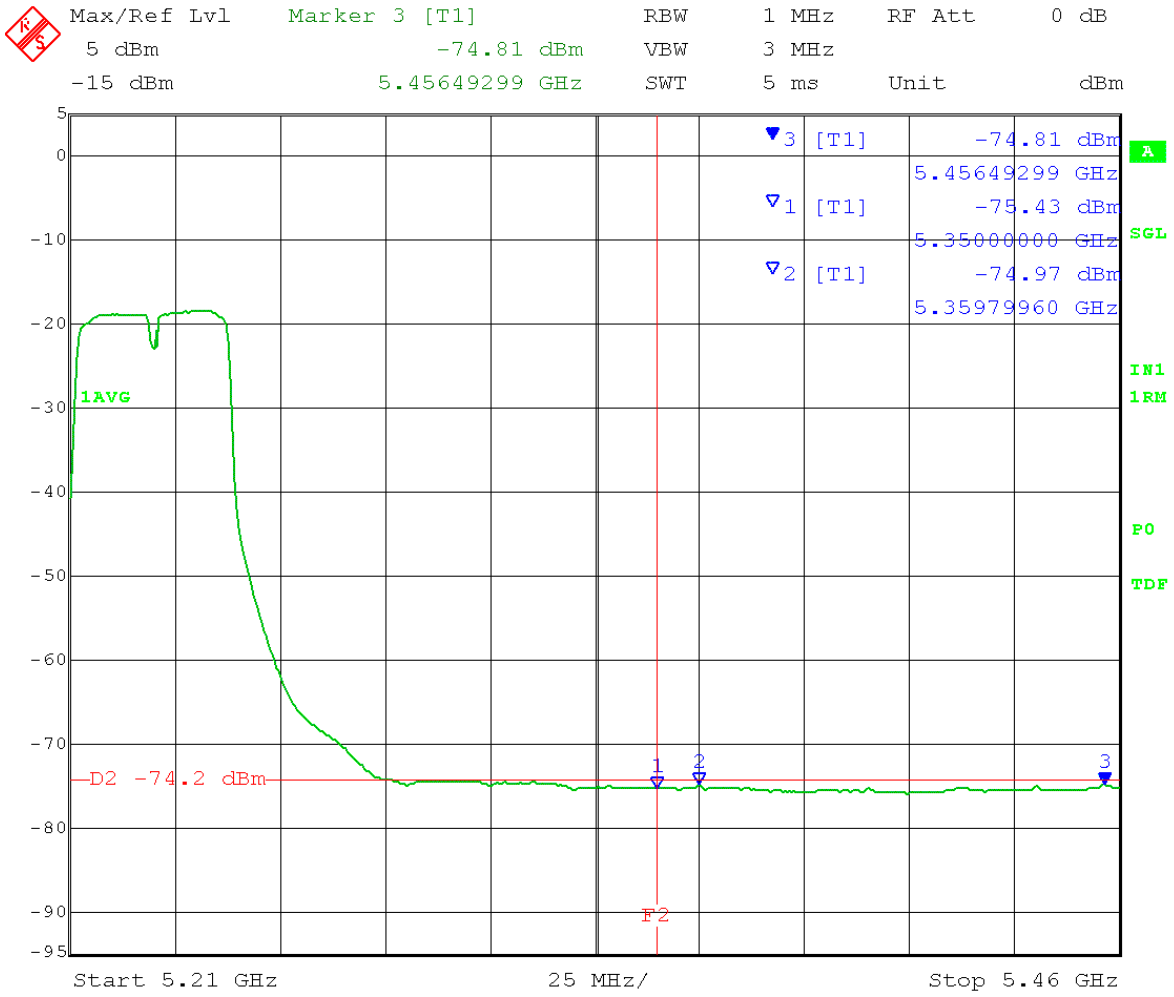


Date: 10.JUN.2014 09:39:45

Test Date: 06-10-2014
Company: Cambium Networks
EUT: ePMP 5.1 AP UNII with 30 dBi antenna gain
Test: Operating Band-edge Measurement - Conducted
Operator: Craig B / Paul
Comment: RBW = 1 MHz VBW ≥ 3 MHz
Detector = RMS Trace = Average 200 traces
Channel 0 ESN# 000456C005E4
High Channel Transmit = 5.230 GHz Output power setting: 9.0-10dB
external atten. = -1.0
40 MHz BW Band-edge = 5.350 GHz

Per FCC KDB 789033 D02 v01, integration method can be used without regard to the displacement of the unwanted emission relative to the authorized bandwidth.

Average limit = 74 dBµV/m – 95.2 (3 meter distance) – 30 dBi antenna gain – 3 dB (MIMO) = -74.2 dBm



Date: 10.JUN.2014 09:41:14