



166 South Carter, Genoa City, WI 53128

Company: Cambium Networks
Models Tested: C058900P122A
Report Number: 19894
DLS Project: 6493

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 Station 5.4GHz (or 5.2GHz or 5.7GHz) Radio
with 23dBi Panel or 30dBi Dish antenna

Kind of Equipment: Point-to-Point or Point-to-Multipoint Digital Transmission Transceiver

Frequency Range: 5495 to 5600, 5650 to 5705MHz (20 MHz bandwidth)
5510 to 5600, 5650 to 5695MHz (40 MHz bandwidth)

5270 to 5330 MHz (5.2 GHz xcvr with panel or dish antenna) reported to the FCC in report # 19892
5740 to 5835 MHz (5.7 GHz xcvr with panel or dish antenna) reported to the FCC in report # 19896

Test Configuration: Stand-alone

Model Number(s): C058900P122A (connectorized model)

Model(s) Tested: C058900P122A

Serial Number(s): ESN/MAC Address: 000456C560B4

Date of Tests: March 31 to April 15, 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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166 South Carter, Genoa City, WI 53128

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DLS Project:

Cambium Networks
C058900P122A
19894
6493

SIGNATURE PAGE

Tested By:

A handwritten signature in black ink that reads "Craig Brandt". The signature is written in a cursive style with a long horizontal stroke at the end.

Craig Brandt
Senior Test Engineer

Reviewed By:

A handwritten signature in black ink that reads "William Stumpf". The signature is written in a cursive style with a long horizontal stroke at the end.

William Stumpf
OATS Manager

Approved By:

A handwritten signature in black ink that reads "Brian J. Mattson". The signature is written in a cursive style with a long horizontal stroke at the end.

Brian Mattson
General Manager



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Report Number: 19894
DLS Project: 6493

Table of Contents

i. Cover Page	1
ii. Signature Page	2
iii. Table of Contents	3
iv. NVLAP Certificate of Accreditation	5
1.0 Summary of Test Report	6
2.0 Introduction	6
3.0 Test Facilities	7
4.0 Description of Test Sample	7
5.0 Test Equipment	9
6.0 Test Arrangements	10
7.0 Test Conditions	10
8.0 Modifications Made To EUT For Compliance	10
9.0 Additional Descriptions	11
10.0 Results	11
11.0 Conclusion	11
Appendix A – Test Photos	12
Appendix B – Measurement Data	15
B1.0 Maximum Conducted Output Power	15
B1.0a - 20MHz Channel Bandwidth w-Panel	16
B1.0b - 40MHz Channel Bandwidth w-Panel	19
B1.0c - 20MHz Channel Bandwidth w-Dish	22
B1.0d - 40MHz Channel Bandwidth w-Dish	25
B2.0 Peak Power Spectral Density – Conducted	28
B2.0a - 20MHz Channel Bandwidth w-Panel	29
B2.0b - 40MHz Channel Bandwidth w-Panel	32
B2.0c - 20MHz Channel Bandwidth w-Dish	35
B2.0d - 40MHz Channel Bandwidth w-Dish	38
B3.0 Unwanted Emission Levels – Radiated Band-Edge with antenna connected	41
B3.0a - 20MHz Channel Bandwidth w-Panel	42
B3.0b - 40MHz Channel Bandwidth w-Panel	50
B3.0c - 20MHz Channel Bandwidth w-Dish	58
B3.0d - 40MHz Channel Bandwidth w-Dish	66



166 South Carter, Genoa City, WI 53128

Company:	Cambium Networks
Models Tested:	C058900P122A
Report Number:	19894
DLS Project:	6493

B4.0	Unwanted Emission Levels – Radiated with antenna connected	74
B4.0a	- Radiated, 30 to 1000MHz (w-Dish antenna is worst case)	75
B4.0b	- Restricted Band, 1 to 5.46GHz - 20MHz Channel BW w-Panel	81
B4.0c	- Restricted Band, 1 to 5.46GHz - 40MHz Channel BW w-Panel	93
B4.0d	- Restricted Band, 1 to 5.46GHz - 20MHz Channel BW w-Dish.....	105
B4.0e	- Restricted Band, 1 to 5.46GHz - 40MHz Channel BW w-Dish.....	117
B4.0f	- Restricted Band, 7.25 to 7.75GHz - 20 & 40MHz Channel BW's w-Panel	129
B4.0g	- Restricted Band, 7.25 to 7.75GHz - 20 & 40MHz Channel BW's w-Dish	131
B4.0h	- Non-Restricted Band, 1 to 7.25GHz - 20MHz Channel BW w-Panel	133
B4.0i	- Non-Restricted Band, 1 to 7.25GHz - 40MHz Channel BW w-Panel	139
B4.0j	- Non-Restricted Band, 1 to 7.25GHz - 20MHz Channel BW w-Dish	145
B4.0k	- Non-Restricted Band, 1 to 7.25GHz - 40MHz Channel BW w-Dish	151
B4.0l	- Radiated, 7.75 to 40GHz - 20 & 40MHz Channel BW's w-Panel	157
B4.0m	- Radiated, 7.75 to 40GHz - 20 & 40MHz Channel BW's w-Dish.....	175



166 South Carter, Genoa City, WI 53128

Company:
Models Tested:
Report Number:
DLS Project:

Cambium Networks
C058900P122A
19894
6493

United States Department of Commerce
National Institute of Standards and Technology



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 Communiqué dated January 2009).*



John R. M. L.

For the National Institute of Standards and Technology

2013-10-01 through 2014-09-30

Effective dates

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



166 South Carter, Genoa City, WI 53128

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Report Number: 19894
DLS Project: 6493

1.0 Summary of Test Report

Subpart E Section 15.407 Applicable Technical Requirements Tested:

Section	Description	Procedure	Note	Compliant?
15.407(a)(2)	Maximum Conducted Output Power	FCC KDB 789033 D01 General UNII Test Procedures v01r03 Section E(3)(a)	1	Yes
15.407(a)(2)	Peak Power Spectral Density - Conducted	FCC KDB 789033 D01 General UNII Test Procedures v01r03 Sections F & E(2)(b)	1	Yes
15.407(b)(3) 15.407(b)(5)	Unwanted Emission Levels – Radiated Band-Edge with antenna connected	FCC KDB 789033 D01 General UNII Test Procedures v01r03 Sections H, H(1), H(2), H(3)	2	Yes
15.407(b)(3) & 15.407(b)(6)	Unwanted Emission Levels – Radiated with antenna connected	FCC KDB 789033 D01 General UNII Test Procedures v01r03 Sections H(1), H(2), H(3)	2	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.

1.0 Summary of Test Report - continued

It was determined that the Cambium Networks ePMP Station 5.4GHz Radio, Connectorized model: C058900P122A with 23dBi Panel or 30dBi Dish antenna added, complies with the requirements of CFR 47 Part 15 Subpart E Section 15.407. The data demonstrating FCC compliance of the 5.2 GHz and 5.7GHz radios is found in D.L.S. Electronics, Inc. Reports #19892 and #19896.

2.0 Introduction

From March 31 to April 15, 2014 the ePMP Station 5.4GHz Radio, Model C058900P122A, as provided from Cambium Networks, was tested with a 23dBi Panel or a 30dBi Dish antenna 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.



166 South Carter, Genoa City, WI 53128

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Models Tested:	C058900P122A
Report Number:	19894
DLS Project:	6493

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 5.4GHz (or 5.2GHz or 5.7GHz) 802.11 fixed indoor/outdoor transceiver with either 20 MHz or 40 MHz channel bandwidth. OFDM modulation. This is a software defined radio. This report includes data to show compliance of the radio with a 23dBi Panel or 30dBi Dish antenna added.

Type of Equipment / Frequency Range:

Stand-Alone / 5495 to 5600, 5650 to 5705 MHz (20 MHz bandwidth) (in this report)
5510 to 5600, 5650 to 5695 MHz (40 MHz bandwidth) (in this report)

5270 to 5330 MHz (5.2 GHz xcvr) reported to the FCC in report # 19892
5740 to 5835 MHz (5.7 GHz xcvr) reported to the FCC in report # 19896

Physical Dimensions of Equipment Under Test:

Connectorized Unit: Length: 3 in. Width: 1 in. Height: 8.5 in. (tested with Panel or Dish antenna)
Integrated Unit:: Length: 4 in. Width: 2 in. Height: 10 in. (not tested) - it is larger with an integral antenna

Power Source:

29 VDC (Power Over Ethernet to Radio)
120 Vac, 60 Hz using power supply model: PSA-15M-300 (SM)



166 South Carter, Genoa City, WI 53128

Company: Cambium Networks
Models Tested: C058900P122A
Report Number: 19894
DLS Project: 6493

Internal Frequencies:

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

Transmit / Receive Frequencies Used For Test Purpose:

20 MHz Channel Bandwidth: Low channel: 5495 MHz, Middle channel: 5575 MHz,
High channel: 5705 MHz

40 MHz Channel Bandwidth: Low channel: 5510 MHz, Middle channel: 5575 MHz,
High channel: 5695 MHz

Type of Modulation(s):

OFDM: 802.11n: MCS15

Description of Circuit Board(s) / Part Number:

Cambium Networks Connectorized PC Board ESN/MAC Address	00456C560B4
MARS 23dBi Panel Antenna	MA-WA56-DP23
ARC Wireless Solutions 30dBi Dish Antenna	ARC-DA5830SD1



166 South Carter, Genoa City, WI 53128

Company:
Models Tested:
Report Number:
DLS Project:

Cambium Networks
C058900P122A
19894
6493

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
Preamplifier	Rohde & Schwarz	TS-PR10	032001/003	9 kHz – 1 GHz	1-4-14	1-4-15
Preamp	Ciao	CA118-4010	101	1GHz-18GHz	2-14-14	2-14-15
Horn Antenna	EMCO	3115	9903-5731	1-18GHz	7-11-13	7-11-15
Filter- High-Pass	Planar	HP8G-7G8-CD-SFF	PF1225/0782	7.5GHz-18GHz	8-14-13	8-14-14
Preamp	Miteq	AMF-8B-180265-40-10P-H/S	438727	18GHz-26GHz	8-13-13	8-13-14
Preamp	Rohde & Schwarz	TS-PR40	052002/025	26GHz-40GHz	5-28-13	5-28-14
Preamp	DLS	642-1	1	1GHz-26GHz	8-15-13	8-15-14
Horn Antenna	EMCO	3116	2549	18 – 40GHz	9-6-12	9-6-14
High Pass Filter	K & I	11SH10-18000/T40000-K-K	8	18-40GHz	3-6-14	3-6-15
10 dB attenuator	Pasternack Enterprises	PE7014-10	DLS#198	DC – 18 GHz	3-16-13	3-16-15
Receiver	Rohde & Schwarz	ESI 40	837808/006	20 Hz – 40 GHz	7-23-13	7-23-14
Low Pass Filter	Mini-Circuits	VLFX-1125	RUU92600920	DC-1 GHz	8-13-13	8-13-14
Preamplifier	Rohde & Schwarz	TS-PR10	032001/004	9 kHz – 1 GHz	1-4-14	1-4-15
Antenna	EMCO	3104C	00054892	20 MHz – 200 MHz	9-13-12	9-13-14
Antenna	EMCO	3146	1205	200 MHz – 1 GHz	9-19-12	9-19-14
Thermal Power Sensor	Rohde & Schwarz	NRP-Z51	1138.0005.03-104290-Wq	DC - 18GHz	12-12-13	12-12-14



166 South Carter, Genoa City, WI 53128

Company: Cambium Networks
Models Tested: C058900P122A
Report Number: 19894
DLS Project: 6493

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 D01 General UNII test Procedures v01r03 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:

68°F at 32% RH (or noted on the test data)

Supply Voltage:

29 VDC (Power Over Ethernet to Radio)

120 Vac, 60 Hz using power supply model: PSA-15M-300 (SM)

8.0 Modifications Made To EUT For Compliance

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



166 South Carter, Genoa City, WI 53128

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Models Tested:	C058900P122A
Report Number:	19894
DLS Project:	6493

9.0 Additional Descriptions

Testing was performed at low, mid, and high channels over 2 modulation bandwidths (20MHz & 40MHz). The antenna ports were tested (Channel 0 & 1) using the connectorized model attached to either the 23dBi Panel or 30dBi Dish antenna.. Worst case emissions were recorded.

Testing with the 23dBi Panel antenna was performed with the antenna rotated 45° from standard horizontal/vertical. Testing included a 3dB attenuator on the antenna & 3dB attenuator on the radio. The final Power Settings for the 5.4GHz radio with the Panel antenna are:

For the 20MHz Bandwidth:	Low Channel 8.0, Mid Channel 9.0, High Channel 9.5
For the 40MHz Bandwidth:	Low Channel 6.0, Mid Channel 9.0, High Channel 5.5

Testing with the 30dBi Dish antenna was also performed with the antenna rotated 45° from standard horizontal/vertical. Testing included a 3dB attenuator on the antenna & 3dB attenuator on the radio. The Cal Table was changed so that power setting 24.0 = 0.0. The final Power Settings for the 5.4GHz radio with the Dish antenna are:

For the 20MHz Bandwidth:	Low Channel 26.0, Mid Channel 26.5, High Channel 27.5
For the 40MHz Bandwidth:	Low Channel 26.0, Mid Channel 27.0, High Channel 26.5

Power Settings are noted on the test data.

The Emission Designators are: 20M0x1D, 40M0x1D

10.0 Results

Measurements were performed in accordance with FCC Publication KDB 789033 D01 General UNII test Procedures v01r03 and ANSI C63.10-2009. Graphical and tabular data can be found in Appendix B at the end of this report.

11.0 Conclusion

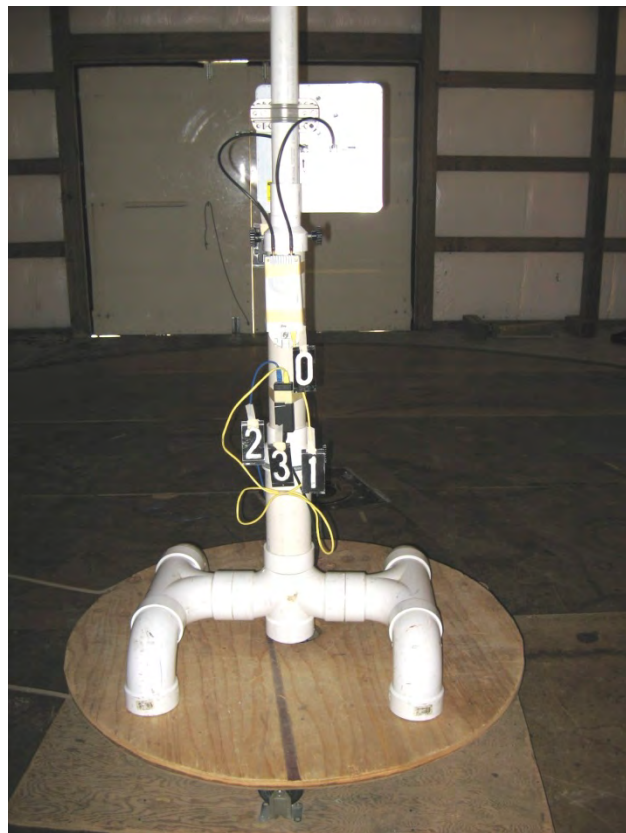
Dynamic Frequency Selection (DFS) testing was not performed by DLS Electronic Systems, Inc. Otherwise, the ePMP Station 5.4GHz Radio, Model C058900P122A with either the 23dBi Panel or 30dBi Dish antenna, as provided from Cambium Networks tested from March 31 to April 15, 2014 **meets** the requirements of CFR 47 Part 15 Subpart E Section 15.407.

Appendix A – Test Photos

Photo Information and Test Setup:

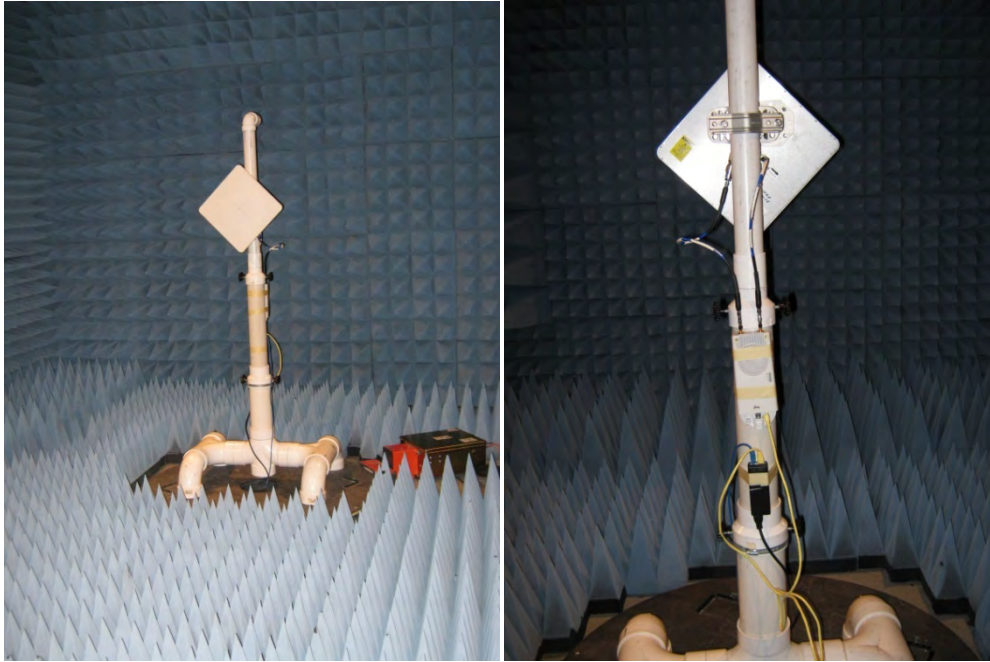
- Item0: Cambium Networks ePMP Station 5.4 GHz OFDM MIMO Radio, Model C058900P122A
Item1: Unshielded CAT 5e POE Cable - 1.5 meters long
Item2: Unshielded CAT 5e Ethernet Cable - not terminated - 8 meters long
Item3: Phihong Power Supply PSA-15M-300(SM)
Item4: MARS model MA-WA56-DP23 4.9-6.1 GHz 23 dBi Panel antenna, SN: 5111 or ARC Wireless Solutions model ARC-DA5830SD1 4.94-5.875 GHz 30 dBi Dish antenna, SN: none

Radiated - Below 1 GHz - Front & Back - with 23 dBi Panel Antenna

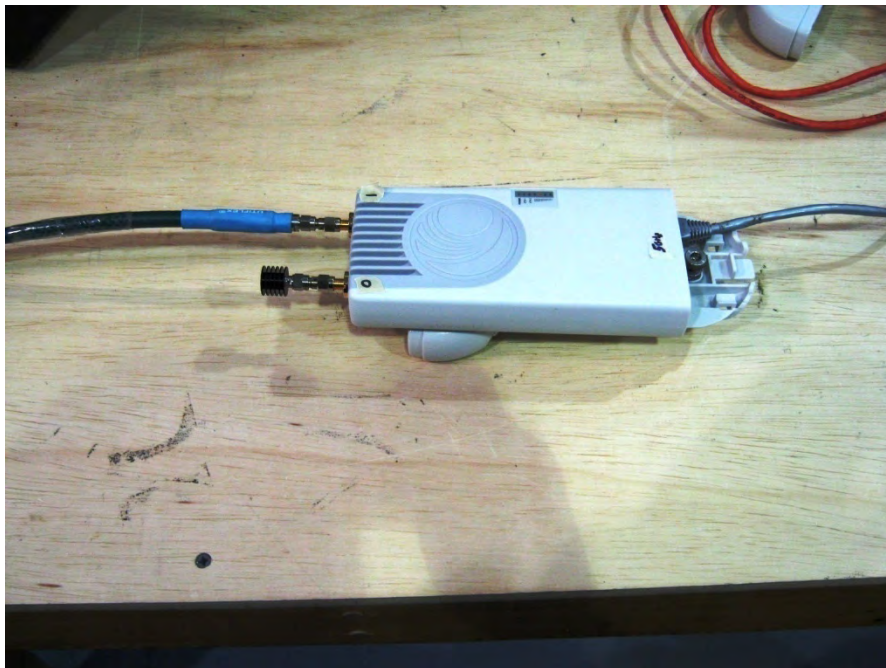


Appendix A – Test Photos

Radiated - Above 1 GHz - Front & Back - with 23 dBi Panel Antenna

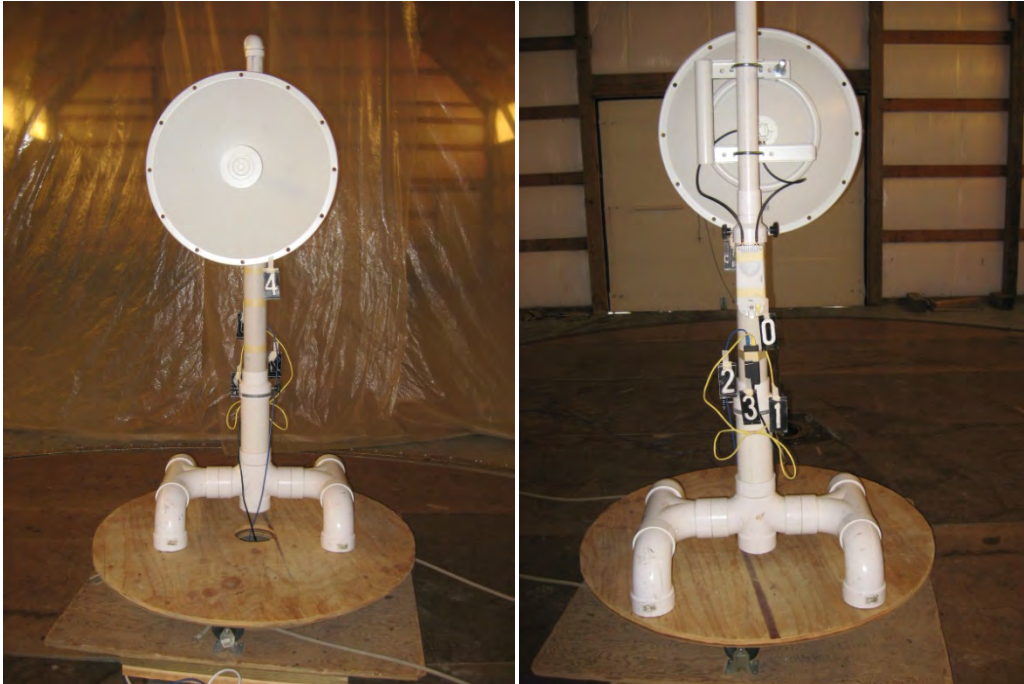


RF Conducted

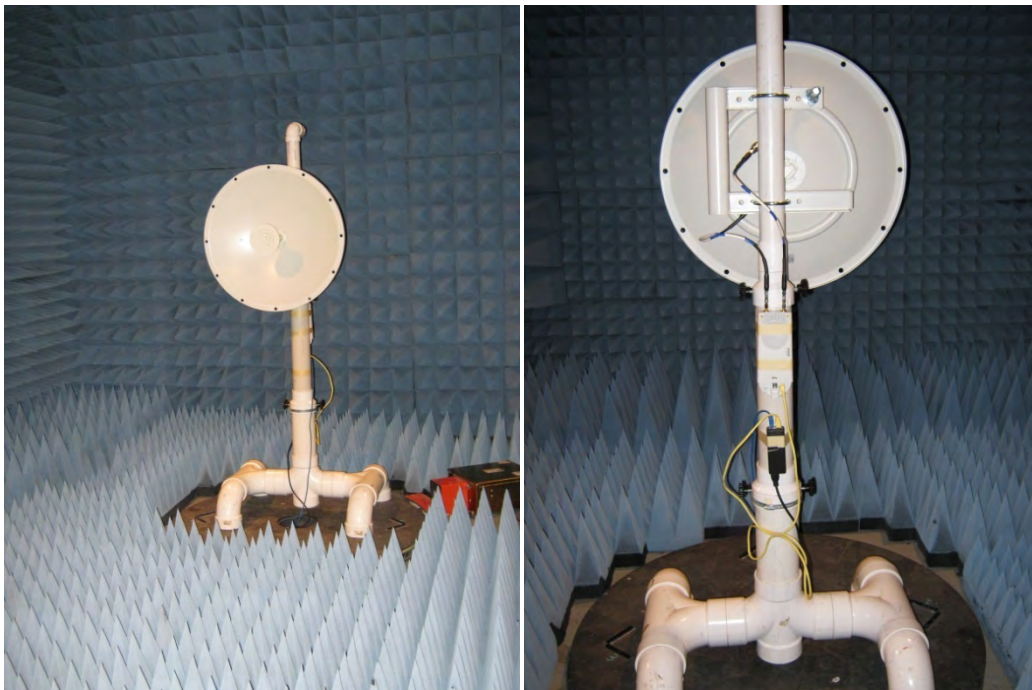


Appendix A – Test Photos

Radiated - Below 1 GHz - Front & Back - with 30 dBi Dish Antenna



Radiated - Above 1 GHz - Front & Back - with 30 dBi Dish Antenna





166 South Carter, Genoa City, WI 53128

Company:	Cambium Networks
Models Tested:	C058900P122A
Report Number:	19894
DLS Project:	6493

Appendix B – Measurement Data

B1.0 Maximum Conducted Output Power

Rule Section: Section 15.407(a)(2)

Test Procedure: FCC KDB 789033 D01 General UNII Test Procedures v01r03 – *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: Lesser of: 250 mW (24 dBm) or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz.
Limit shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

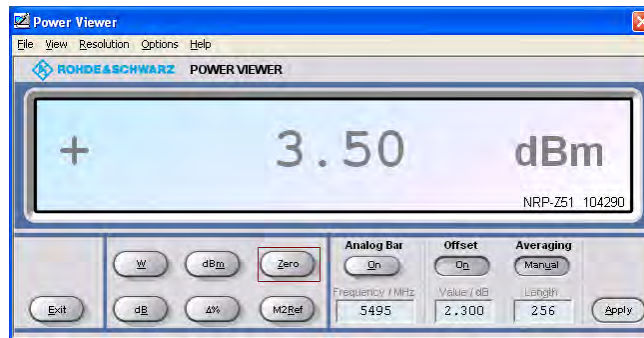
Results: Passed

Notes: Measurements were taken for MCS15 OFDM modulation at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously with 100% duty cycle.

Tested output port 1 only as it was determined to be worst case from previous testing of this device (original certification).

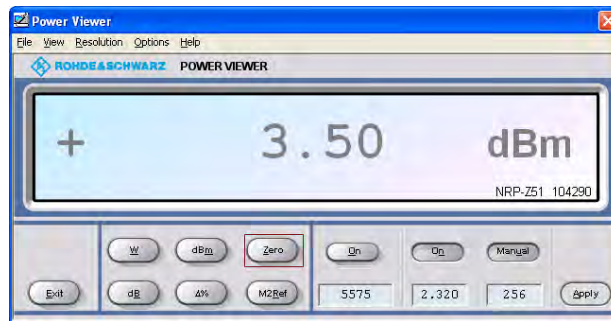
Test Date: 04-01-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 23 dBi
EUT Limit: $24 - (23 - 6) = 7$ dBm
Low Channel: Transmit = 5.495 GHz 20MHz BW
Output power setting: 2

Port 1:
Maximum conducted output power = 3.50 dBm + 3 dB (MIMO)
= 6.50 dBm



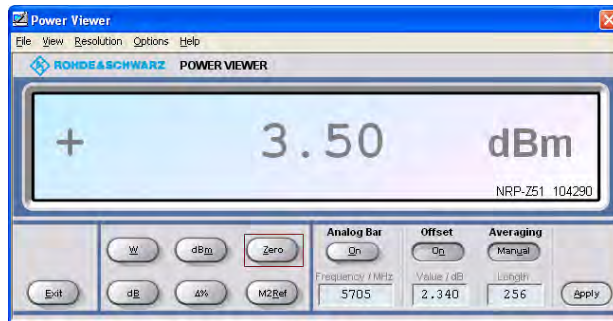
Test Date: 04-01-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 23 dBi
EUT Limit: $24 - (23 - 6) = 7$ dBm
Mid Channel: Transmit = 5.575 GHz 20MHz BW
Output power setting: 3

Port 1:
Maximum conducted output power = 3.50 dBm + 3 dB (MIMO)
= 6.50 dBm



Test Date: 04-01-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 23 dBi
EUT Limit: $24 - (23 - 6) = 7$ dBm
High Channel: Transmit = 5.705 GHz 20MHz BW
Output power setting: 3.5

Port 1:
Maximum conducted output power = 3.50 dBm + 3 dB (MIMO)
= 6.50 dBm

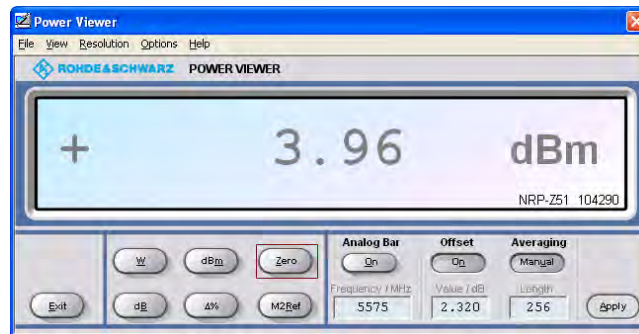


Port 1:
Maximum conducted output power = 3.99 dBm + 3 dB (MIMO)
= 6.99 dBm



Test Date: 04-01-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 23 dBi
EUT Limit: $24 - (23 - 6) = 7$ dBm
Mid Channel: Transmit = 5.575 GHz 40MHz BW
Output power setting: 3

Port 1:
Maximum conducted output power = 3.96 dBm + 3 dB (MIMO)
= 6.96 dBm



Test Date: 04-01-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 23 dBi
EUT Limit: $24 - (23 - 6) = 7$ dBm
High Channel: Transmit = 5.695 GHz 40MHz BW
Output power setting: 3

Port 1:
Maximum conducted output power = 3.99 dBm + 3 dB (MIMO)
= 6.99 dBm

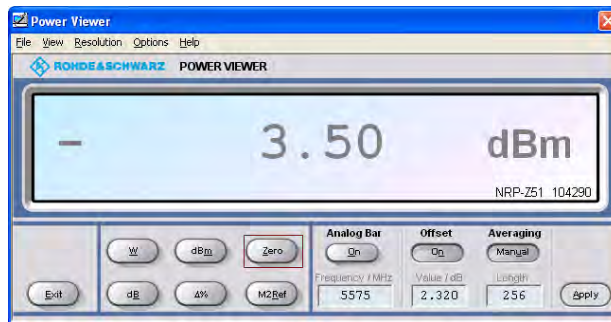


Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 30 dBi
EUT Limit: $24 - (30 - 6) = 0$ dBm
Low Channel: Transmit = 5.495 GHz 20MHz BW
Output power setting: 20.0*
*Software cal table was modified so that power setting 24.0 = 0.0

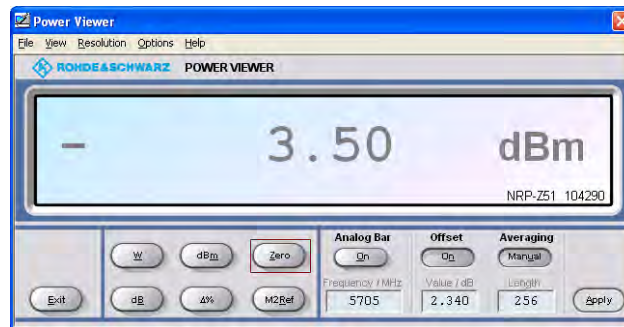
Port 1:
Maximum conducted output power = -3.50 dBm + 3 dB (MIMO)
= -0.50 dBm



Port 1:
Maximum conducted output power = -3.50 dBm + 3 dB (MIMO)
= -0.50 dBm



Port 1:
Maximum conducted output power = $-3.50 \text{ dBm} + 3 \text{ dB (MIMO)}$
= -0.50 dBm



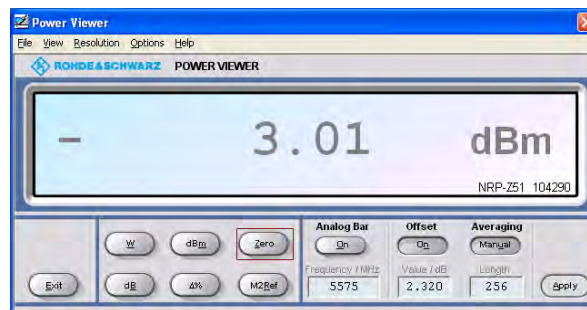
Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 30 dBi
EUT Limit: $24 - (30 - 6) = 0$ dBm
Low Channel: Transmit = 5.510 GHz 40MHz BW
Output power setting: 20.0*
*Software cal table was modified so that power setting 24.0 = 0.0

Port 1:
Maximum conducted output power = -3.06 dBm + 3 dB (MIMO)
= -0.06 dBm



Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 30 dBi
EUT Limit: $24 - (30 - 6) = 0$ dBm
Mid Channel: Transmit = 5.575 GHz 40MHz BW
Output power setting: 21.0*
*Software cal table was modified so that power setting 24.0 = 0.0

Port 1:
Maximum conducted output power = -3.01 dBm + 3 dB (MIMO)
= -0.01 dBm



Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Maximum conducted output power – Conducted
Operator: Craig B
Comment: FCC UNII operating under 15.407
E)3) Measurement using an average power meter with a thermocouple detector
Limit: [15.407(a)(2)]: 24.0 dBm conducted.
Antenna Gain = 30 dBi
EUT Limit: $24 - (30 - 6) = 0$ dBm
High Channel: Transmit = 5.695 GHz 40MHz BW
Output power setting: 20.5*
*Software cal table was modified so that power setting 24.0 = 0.0

Port 1:
Maximum conducted output power = -3.02 dBm + 3 dB (MIMO)
= -0.02 dBm





166 South Carter, Genoa City, WI 53128

Company:	Cambium Networks
Models Tested:	C058900P122A
Report Number:	19894
DLS Project:	6493

Appendix B – Measurement Data

B2.0 Peak Power Spectral Density – Conducted

Rule Section: Section 15.407(a)(2)

Test Procedure: FCC KDB 789033 D01 General UNII Test Procedures v01r03 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*

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

Description: SPAN: set to encompass entire emission bandwidth
RBW = 1 MHz
VBW $\geq$ 3 MHz
Number of points $\geq 2 \times$ 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: 11 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

Results: Passed

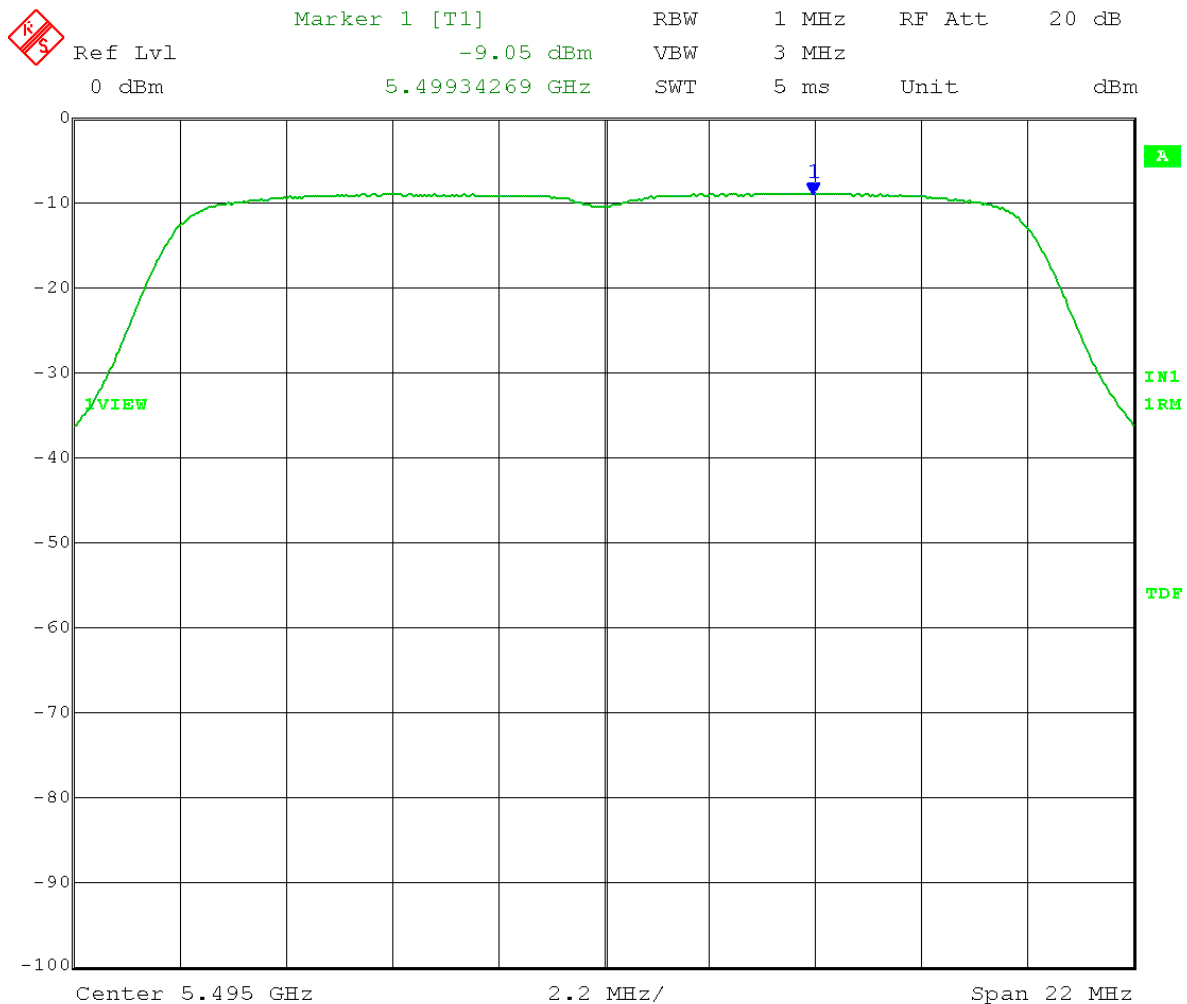
Notes: Measurements were taken for MCS15 OFDM modulation at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously with 100% duty cycle.

Tested output port 1 only as it was determined to be worst case from previous testing of this device (original certification).

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 17 dB (amount antenna gain exceeds 6 dBi) = -6 dBm/MHz
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 Low Channel: Transmit = 5.495 GHz 20MHz BW
 Output power setting: 2.0

Port 1:

PPSD = -9.05 dBm/MHz + 3 dB (MIMO) = -6.05 dBm/MHz

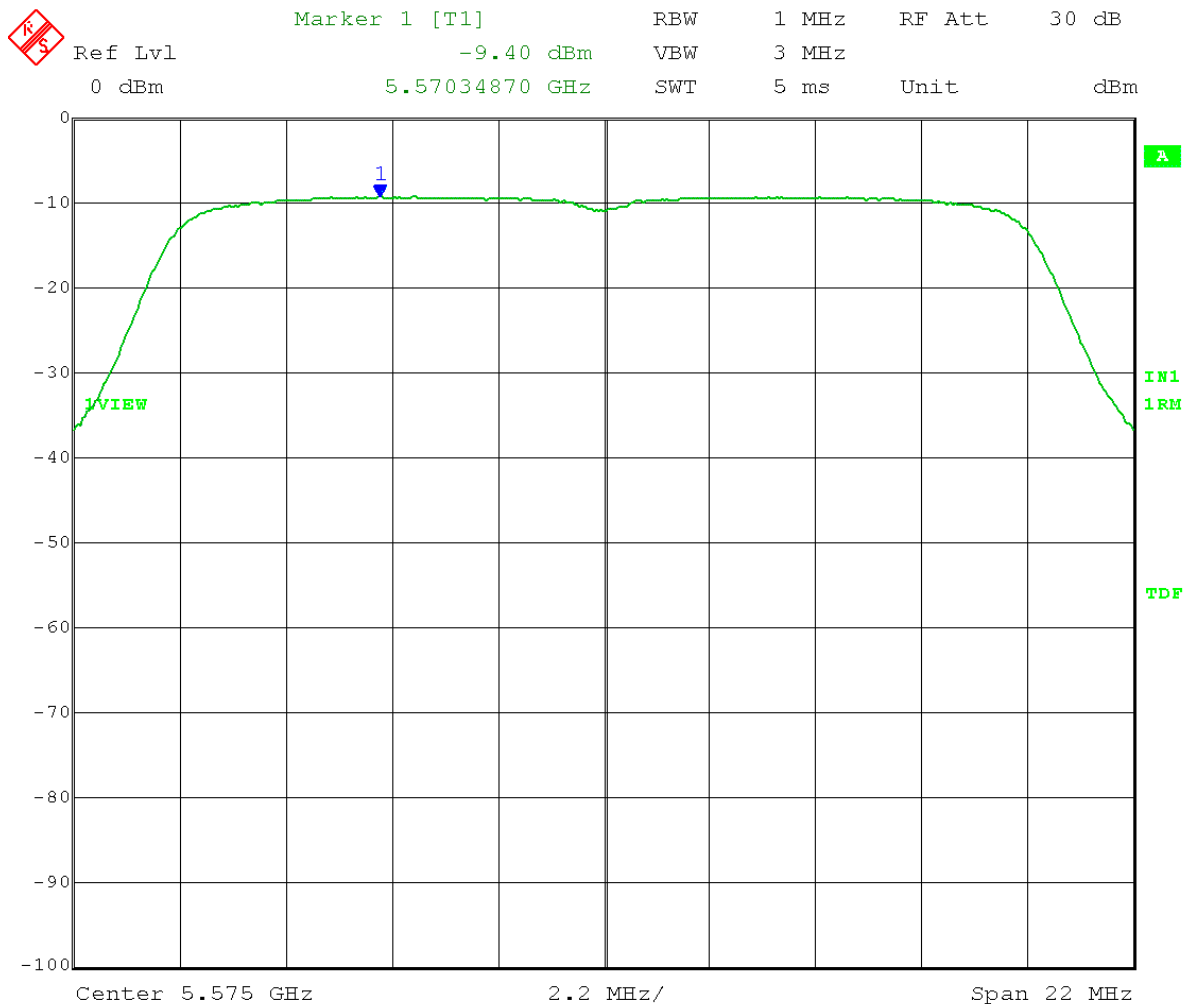


Date: 2.APR.2014 09:35:30

Test Date: 04-01-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 17 dB (amount antenna gain exceeds 6 dBi) = -6 dBm/MHz
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 Mid Channel: Transmit = 5.575 GHz 20MHz BW
 Output power setting: 3.0

Port 1:

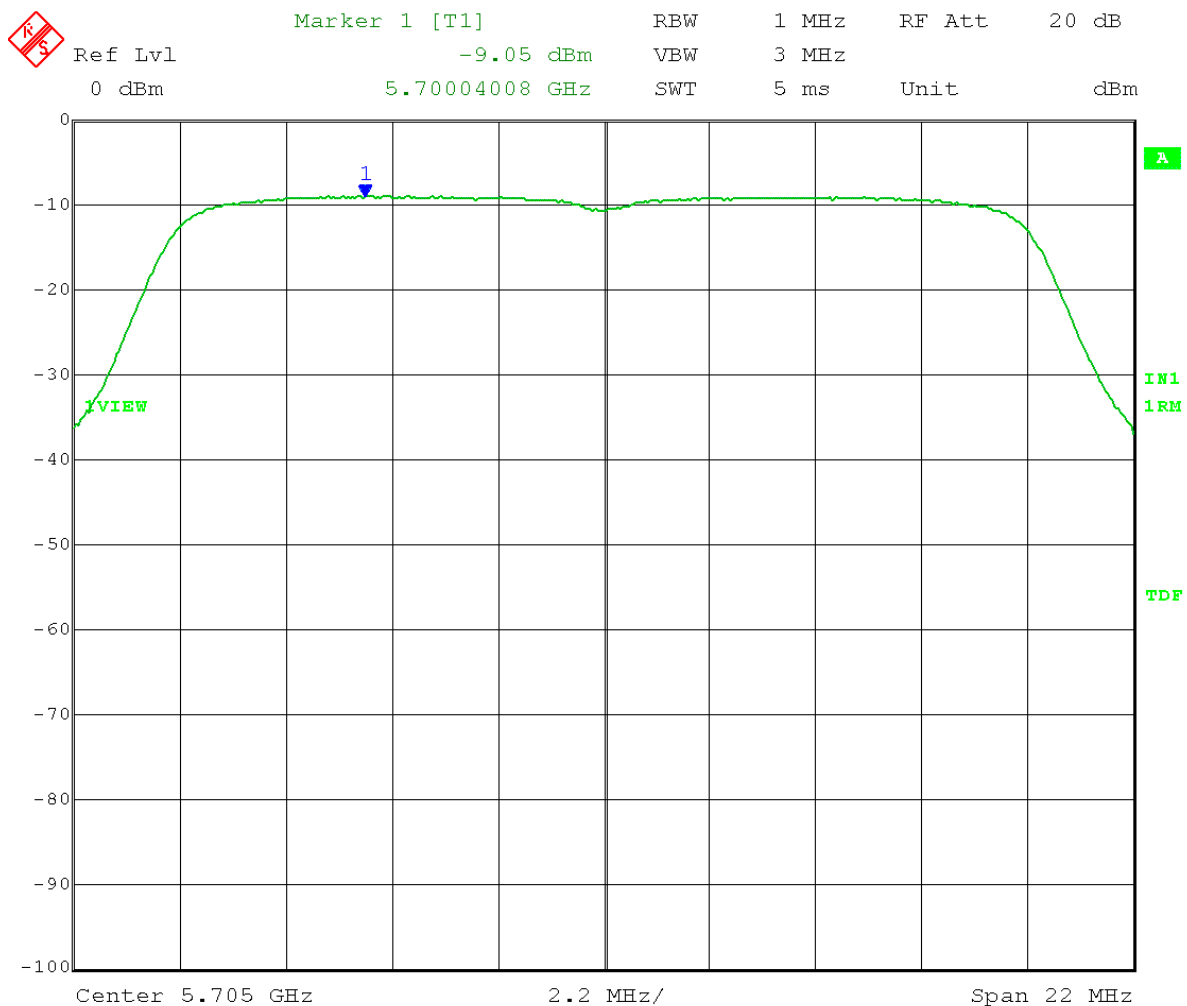
PPSD = -9.40 dBm/MHz + 3 dB (MIMO) = -6.40 dBm/MHz



Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 17 dB (amount antenna gain exceeds 6 dBi) = -6 dBm/MHz
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 High Channel: Transmit = 5.705 GHz 20MHz BW
 Output power setting: 3.5

Port 1:

PPSD = -9.05 dBm/MHz + 3 dB (MIMO) = -6.05 dBm/MHz

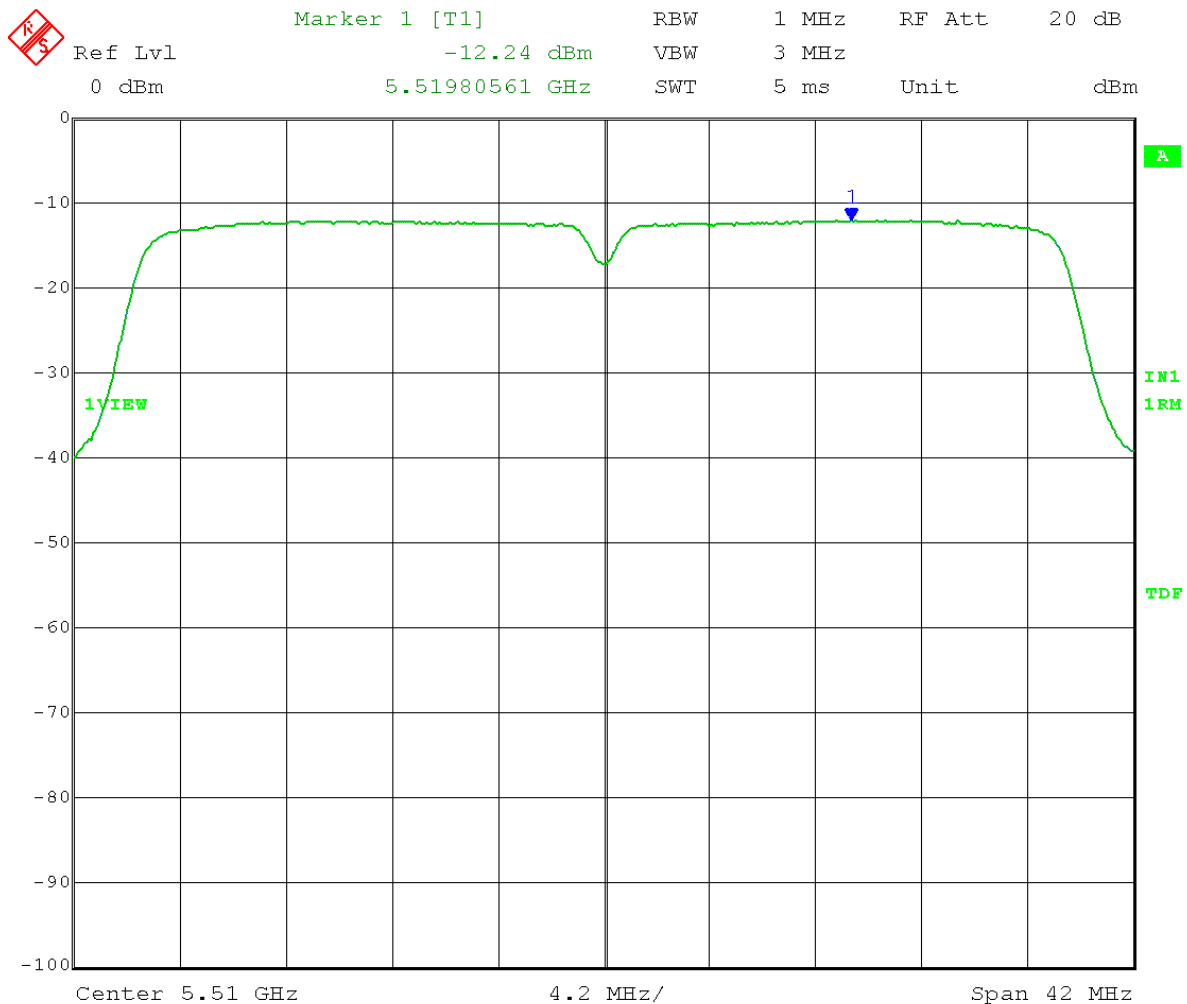


Date: 2.APR.2014 09:38:17

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 17 dB (amount antenna gain exceeds 6 dBi) = -6 dBm/MHz
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 Low Channel: Transmit = 5.510 GHz 40MHz BW
 Output power setting: 2.0

Port 1:

$$\text{PPSD} = -12.24 \text{ dBm/MHz} + 3 \text{ dB (MIMO)} = -9.24 \text{ dBm/MHz}$$

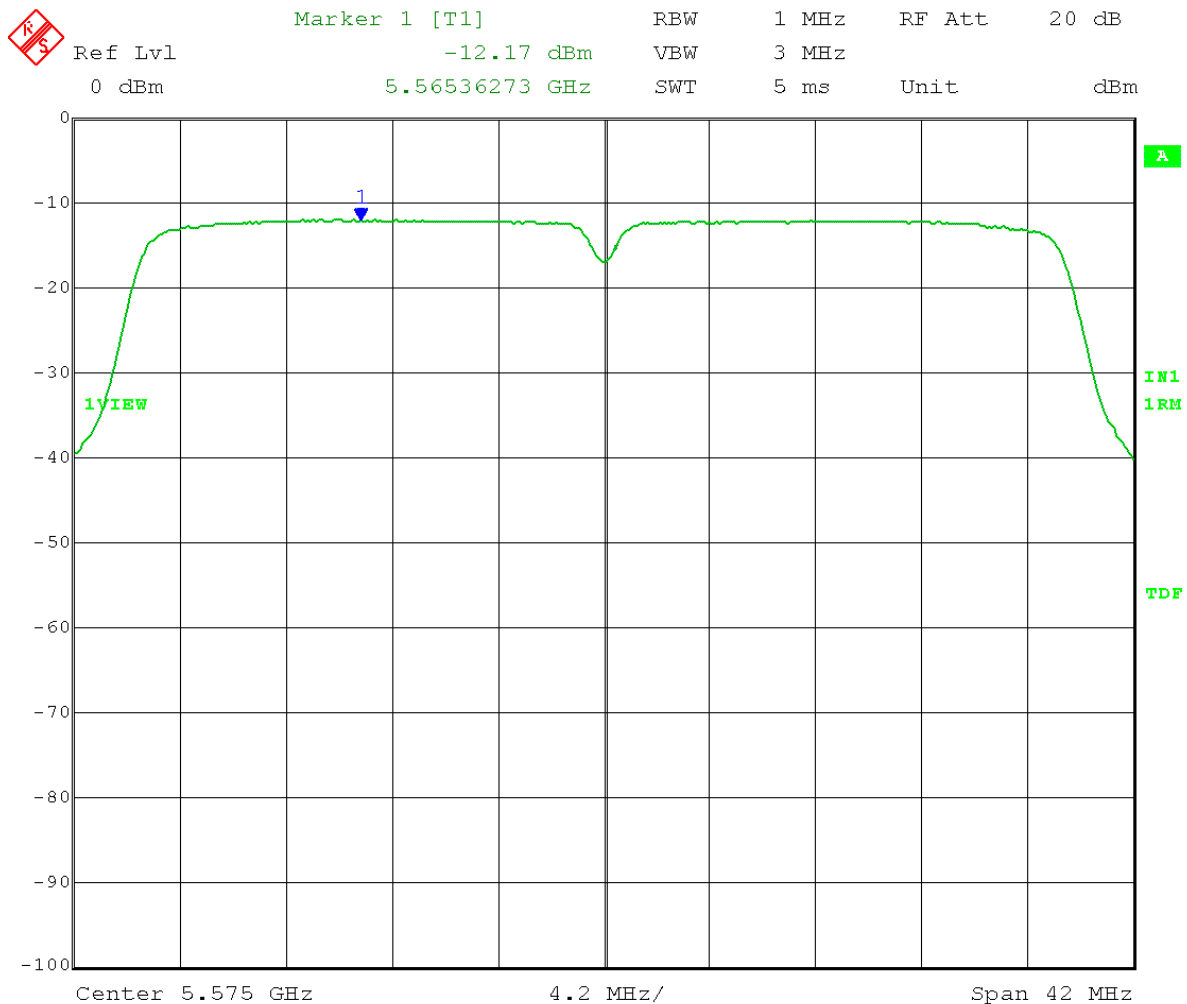


Date: 2.APR.2014 09:49:28

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 17 dB (amount antenna gain exceeds 6 dBi) = -6 dBm/MHz
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 Mid Channel: Transmit = 5.575 GHz 40MHz BW
 Output power setting: 3.0

Port 1:

PPSD = -12.17 dBm/MHz + 3 dB (MIMO) = -9.17 dBm/MHz

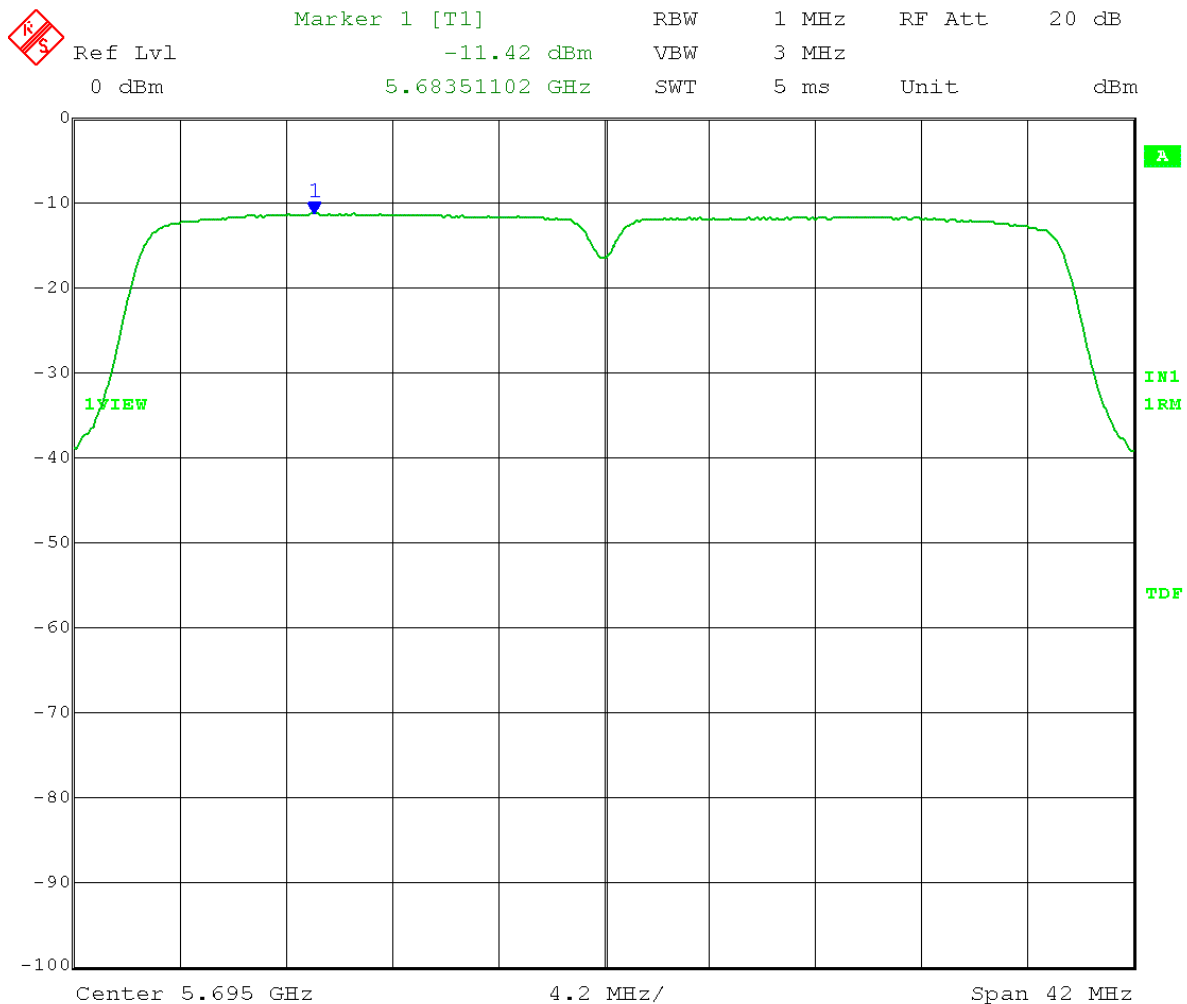


Date: 2.APR.2014 09:46:14

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 17 dB (amount antenna gain exceeds 6 dBi) = -6 dBm/MHz
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 High Channel: Transmit = 5.695 GHz 40MHz BW
 Output power setting: 3.0

Port 1:

$$\text{PPSD} = -11.42 \text{ dBm/MHz} + 3 \text{ dB (MIMO)} = -8.42 \text{ dBm/MHz}$$

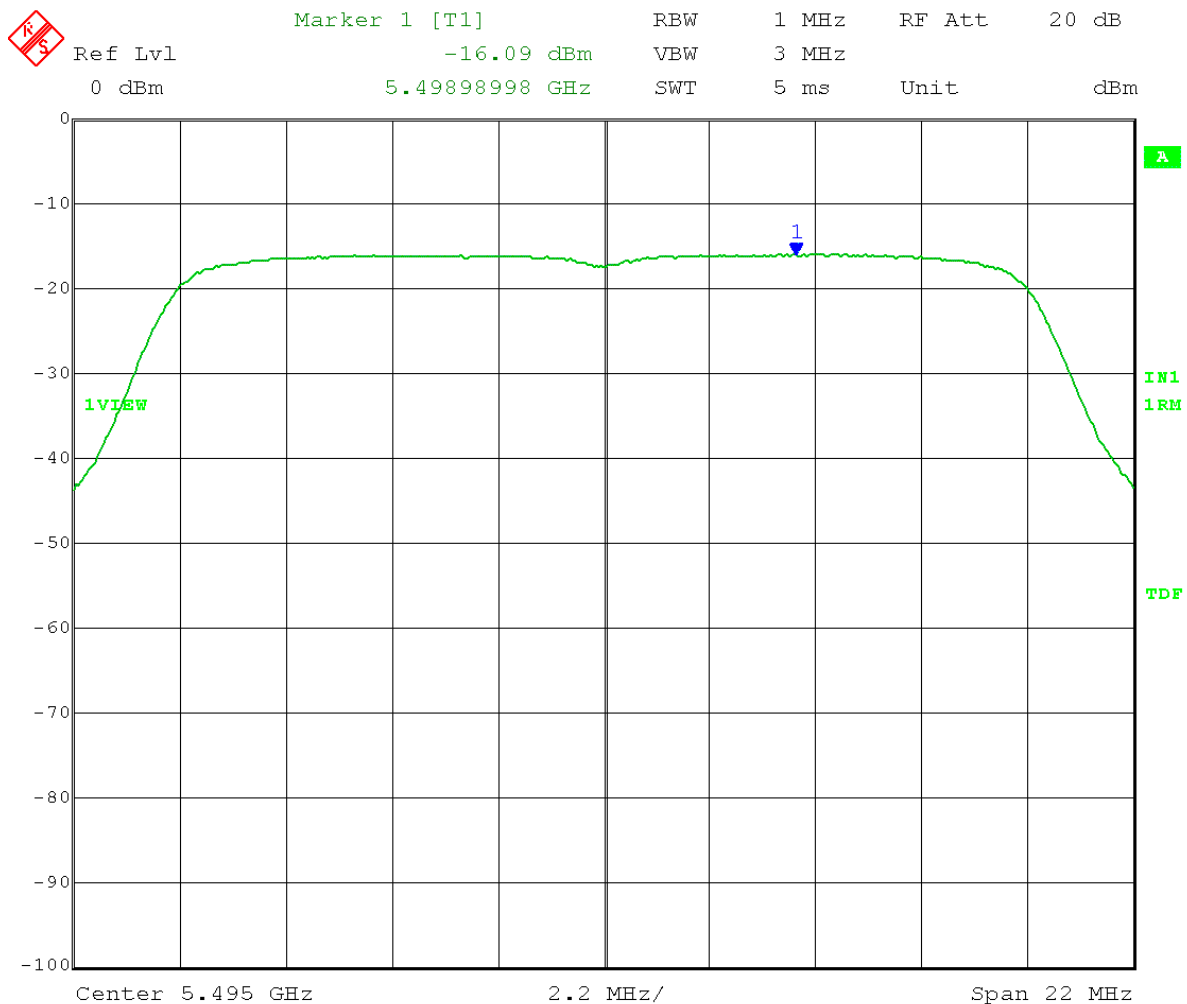


Date: 2.APR.2014 09:52:01

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig B
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 24 dB (amount antenna gain exceeds 6 dBi) = **-13 dBm/MHz**
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 Low Channel: Transmit = 5.495 GHz 20MHz BW
 Output power setting: 20.0
 *Software cal table was modified so that power setting 24.0 = 0.0

Port 1:

$$\text{PPSD} = -16.09 \text{ dBm/MHz} + 3 \text{ dB (MIMO)} = -13.09 \text{ dBm/MHz}$$

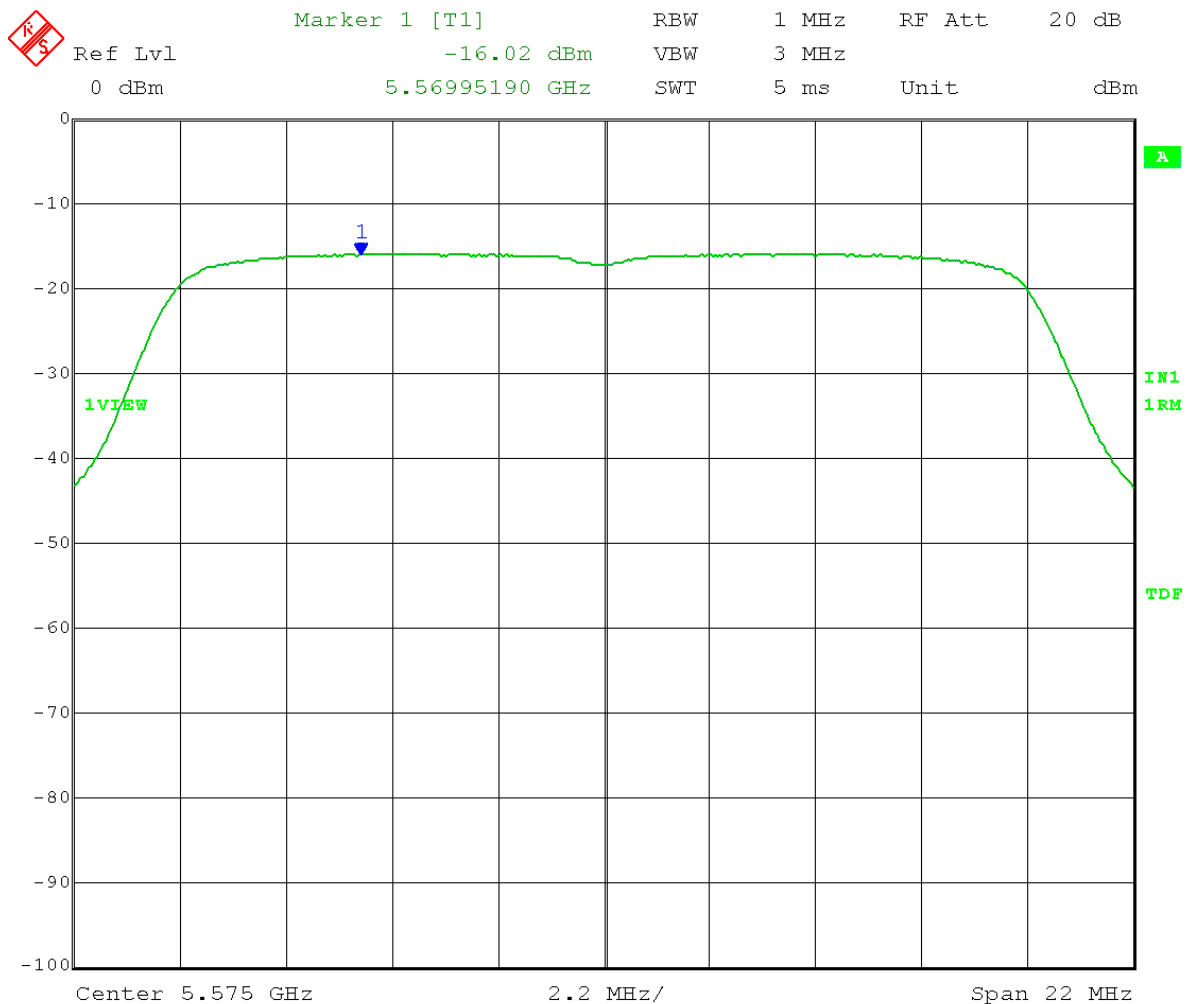


Date: 2.APR.2014 13:54:30

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig B
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 24 dB (amount antenna gain exceeds 6 dBi) = **-13 dBm/MHz**
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 Mid Channel: Transmit = 5.575 GHz 20MHz BW
 Output power setting: 20.5*
 *Software cal table was modified so that power setting 24.0 = 0.0

Port 1:

$$\text{PPSD} = -16.02 \text{ dBm/MHz} + 3 \text{ dB (MIMO)} = -13.02 \text{ dBm/MHz}$$

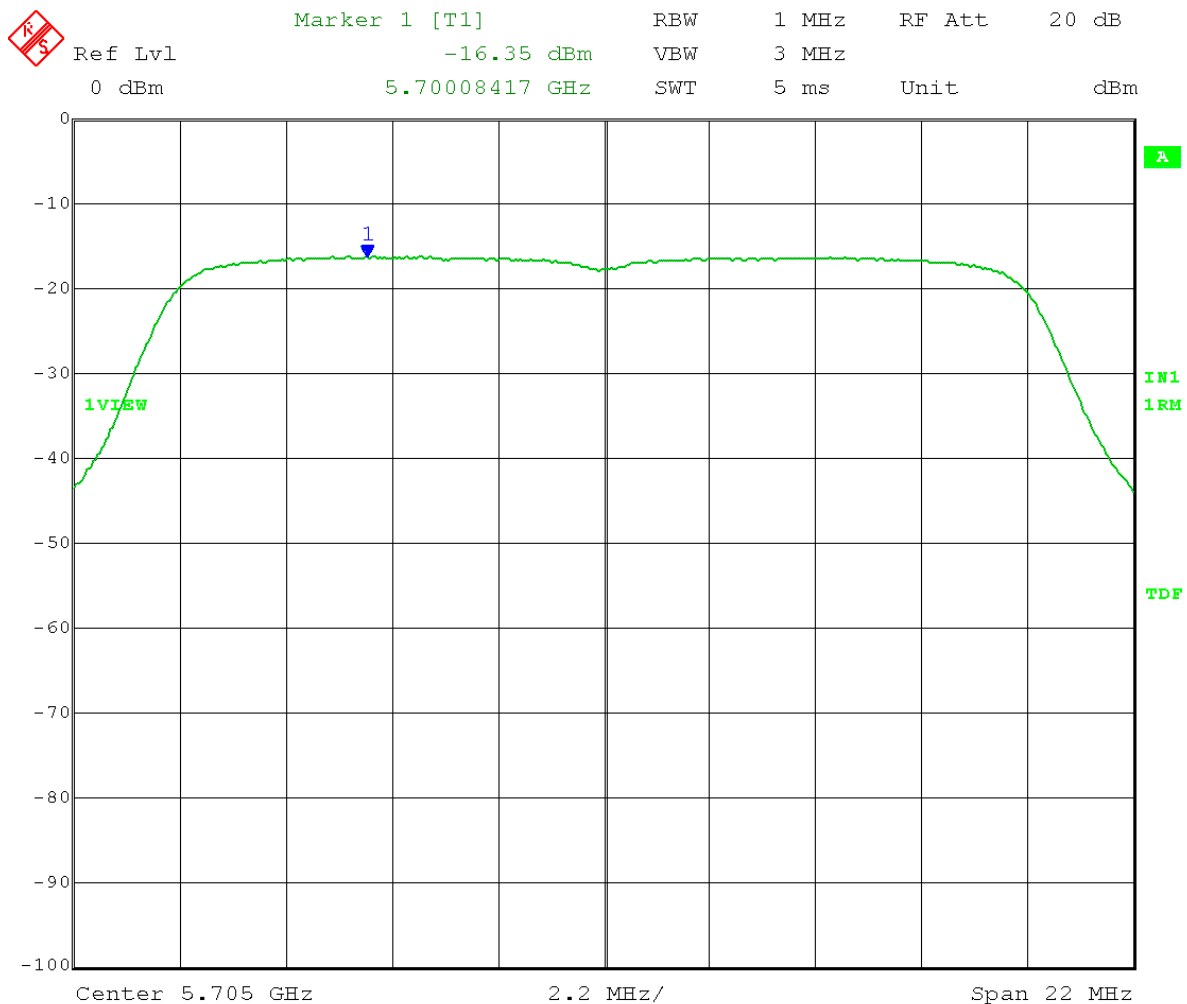


Date: 2.APR.2014 13:52:09

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig B
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 24 dB (amount antenna gain exceeds 6 dBi) = **-13 dBm/MHz**
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 High Channel: Transmit = 5.705 GHz 20MHz BW
 Output power setting: 21.5*
 *Software cal table was modified so that power setting 24.0 = 0.0

Port 1:

$$\text{PPSD} = -16.35 \text{ dBm/MHz} + 3 \text{ dB (MIMO)} = -13.35 \text{ dBm/MHz}$$

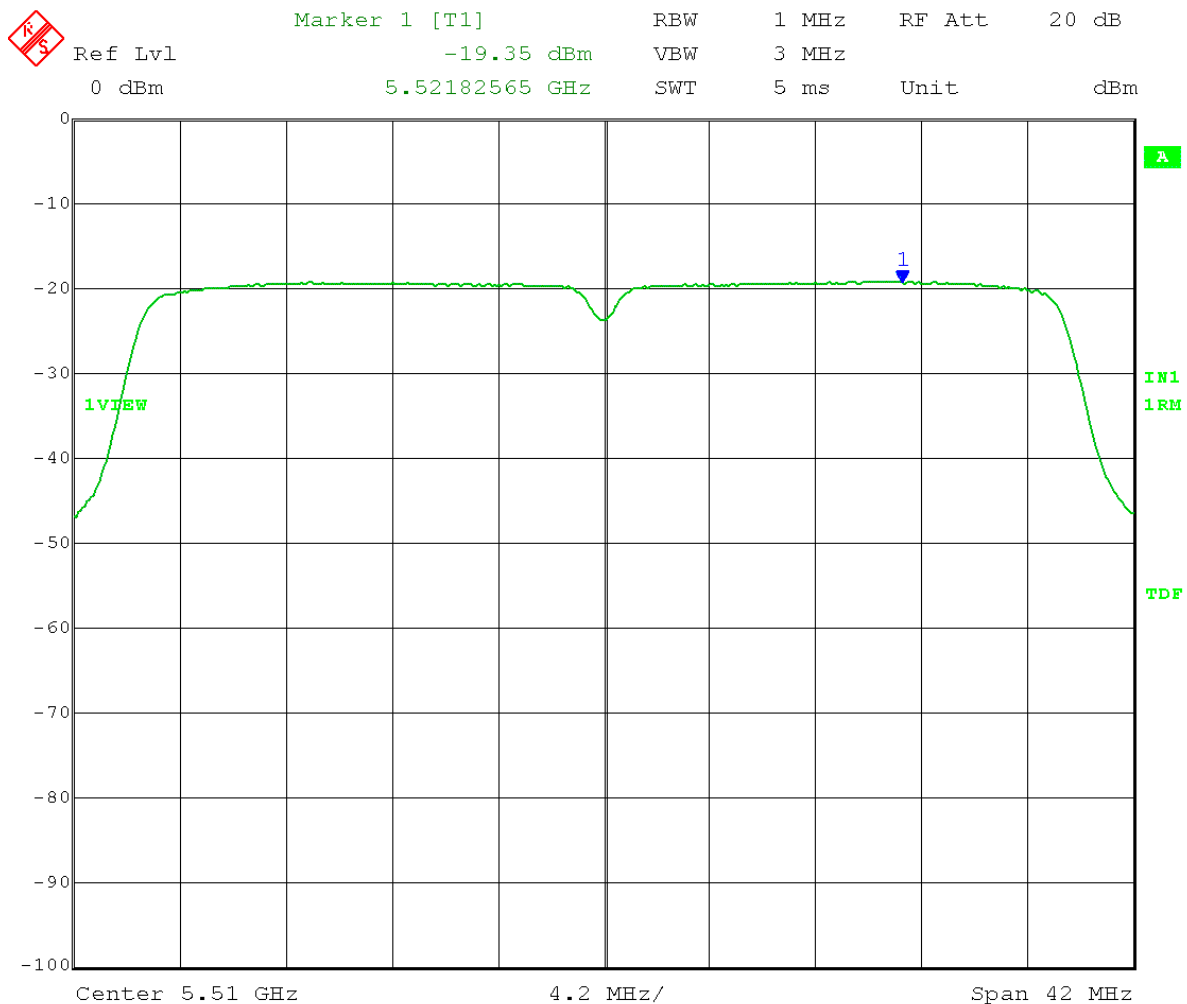


Date: 2.APR.2014 13:56:51

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig B
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 24 dB (amount antenna gain exceeds 6 dBi) = -13 dBm/MHz
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 Low Channel: Transmit = 5.510 GHz 40MHz BW
 Output power setting: 20.0
 *Software cal table was modified so that power setting 24.0 = 0.0

Port 1:

$$\text{PPSD} = -19.35 \text{ dBm/MHz} + 3 \text{ dB (MIMO)} = -16.35 \text{ dBm/MHz}$$

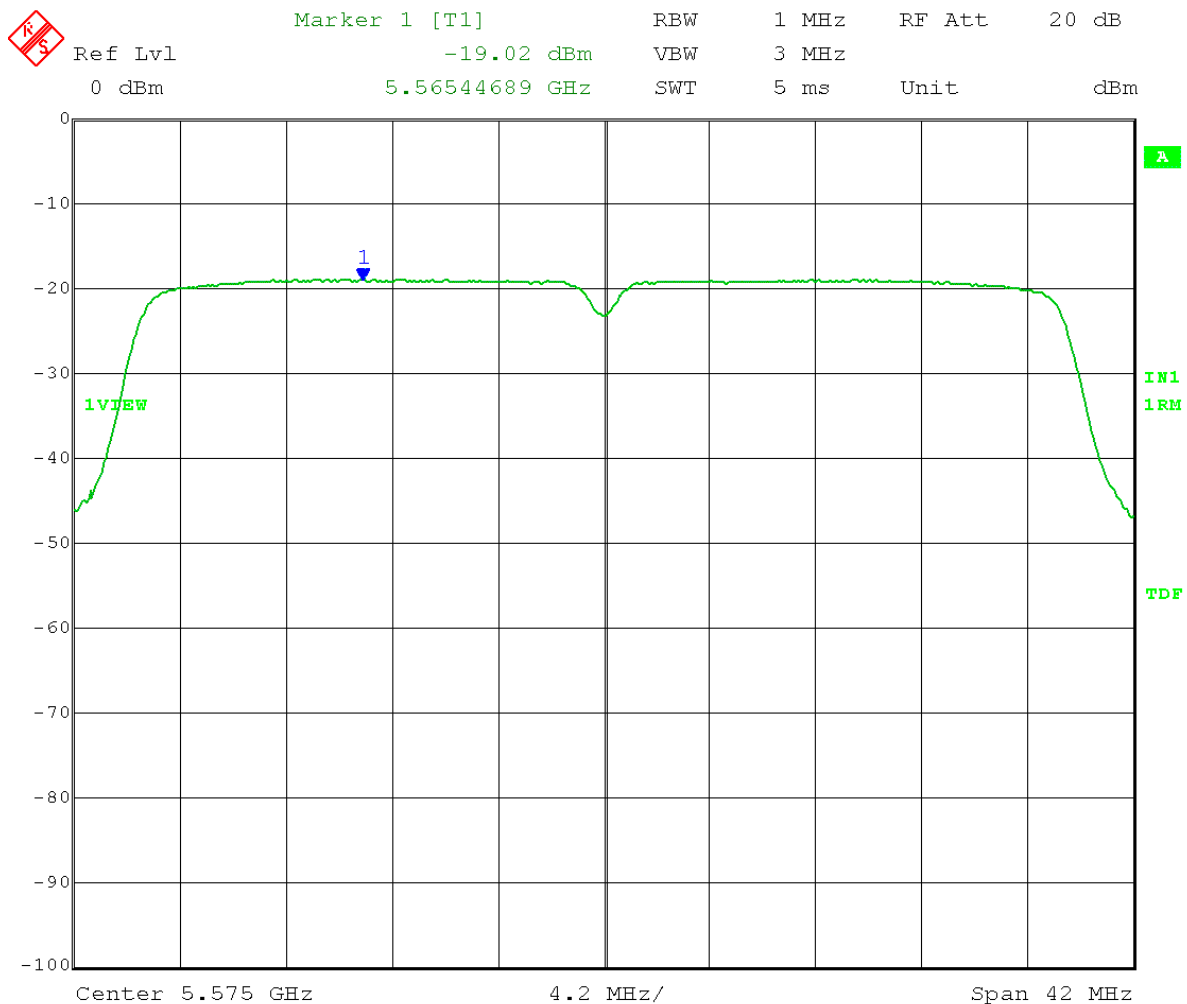


Date: 2.APR.2014 14:01:44

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig B
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 24 dB (amount antenna gain exceeds 6 dBi) = **-13 dBm/MHz**
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 Mid Channel: Transmit = 5.575 GHz 40MHz BW
 Output power setting: 21.0*
 *Software cal table was modified so that power setting 24.0 = 0.0

Port 1:

$$\text{PPSD} = -19.02 \text{ dBm/MHz} + 3 \text{ dB (MIMO)} = -16.02 \text{ dBm/MHz}$$

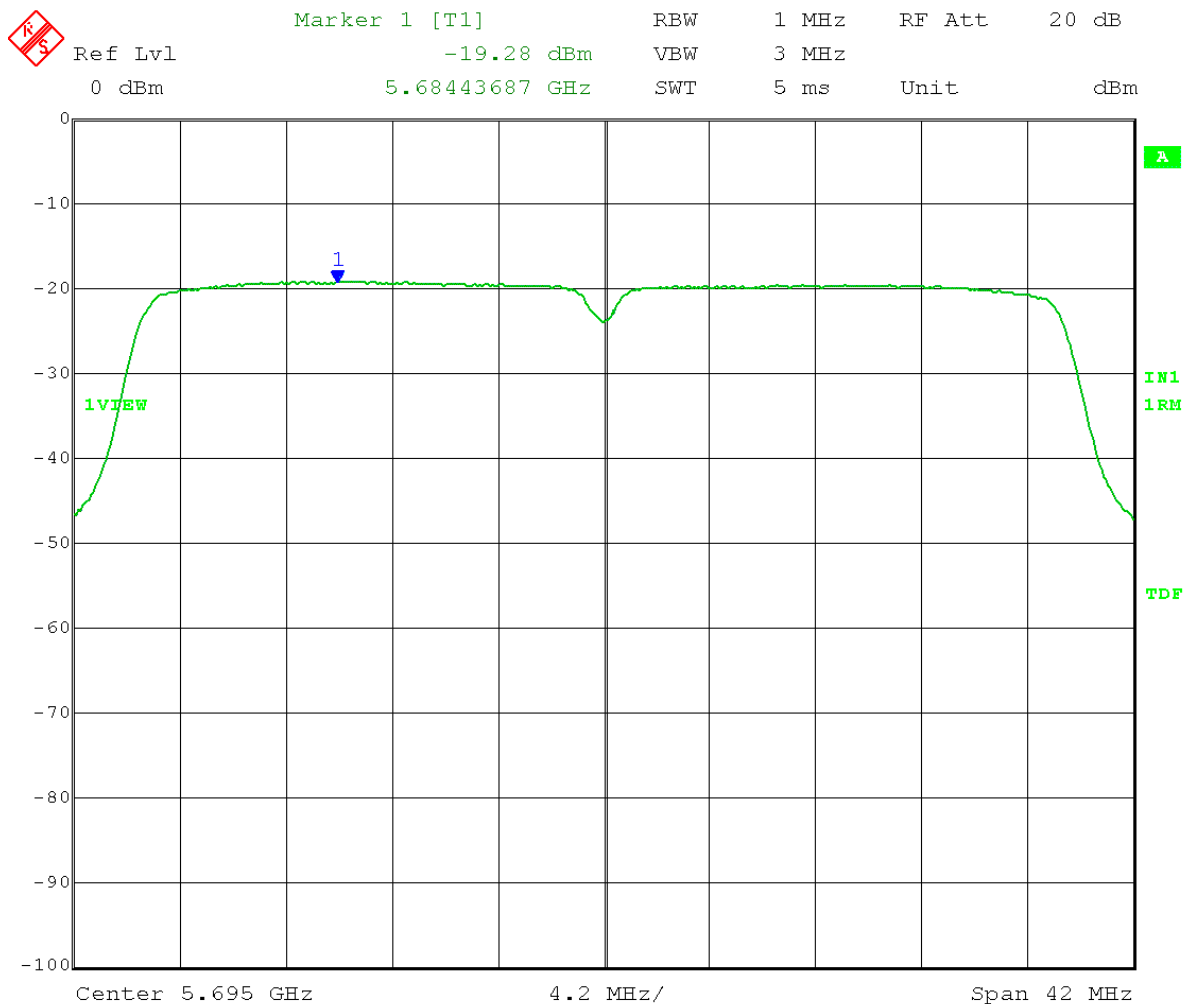


Date: 2.APR.2014 14:03:34

Test Date: 04-02-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Peak Power Spectral Density - Conducted
 Operator: Craig B
 Comment: FCC UNII operating under 15.407
 F) PPSD – using E)2 method SA-1
 Limit:[15.407(a)(2)]: 11 dBm/MHz
 11 – 24 dB (amount antenna gain exceeds 6 dBi) = **-13 dBm/MHz**
 RBW = 1 MHz VBW = 3 MHz
 Detector = RMS Trace = average 200 traces
 Sweep Time = Auto
 High Channel: Transmit = 5.695 GHz 40MHz BW
 Output power setting: 20.5*
 *Software cal table was modified so that power setting 24.0 = 0.0

Port 1:

$$\text{PPSD} = -19.28 \text{ dBm/MHz} + 3 \text{ dB (MIMO)} = -16.28 \text{ dBm/MHz}$$



Date: 2.APR.2014 14:05:03



166 South Carter, Genoa City, WI 53128

Company:	Cambium Networks
Models Tested:	C058900P122A
Report Number:	19894
DLS Project:	6493

Appendix B – Measurement Data

B3.0 Unwanted Emission Levels – Radiated Band-Edge with antenna connected

Rule Section: Sections 15.407(b)(3) and 15.407(b)(5)

Test Procedure: FCC KDB 789033 D01 General UNII Test Procedures v01r03 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*

Section H – Unwanted emission levels

Section H(1) – Unwanted emissions in the restricted bands

Section H(2) – Unwanted emissions that fall outside of the restricted bands

Section H(3) – General Requirements for Unwanted Emissions Measurements

Description: Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.”

Measure the band-edge emission level using the following settings

PEAK measurements:

RBW = 1 MHz

VBW $\geq$ 3 MHz

Detector = peak

Sweep time = auto

Trace mode = max hold

AVERAGE measurements:

RBW = 1 MHz

VBW $\geq$ 3 MHz

Detector = AVERAGE

Sweep time = auto

Trace mode = max hold

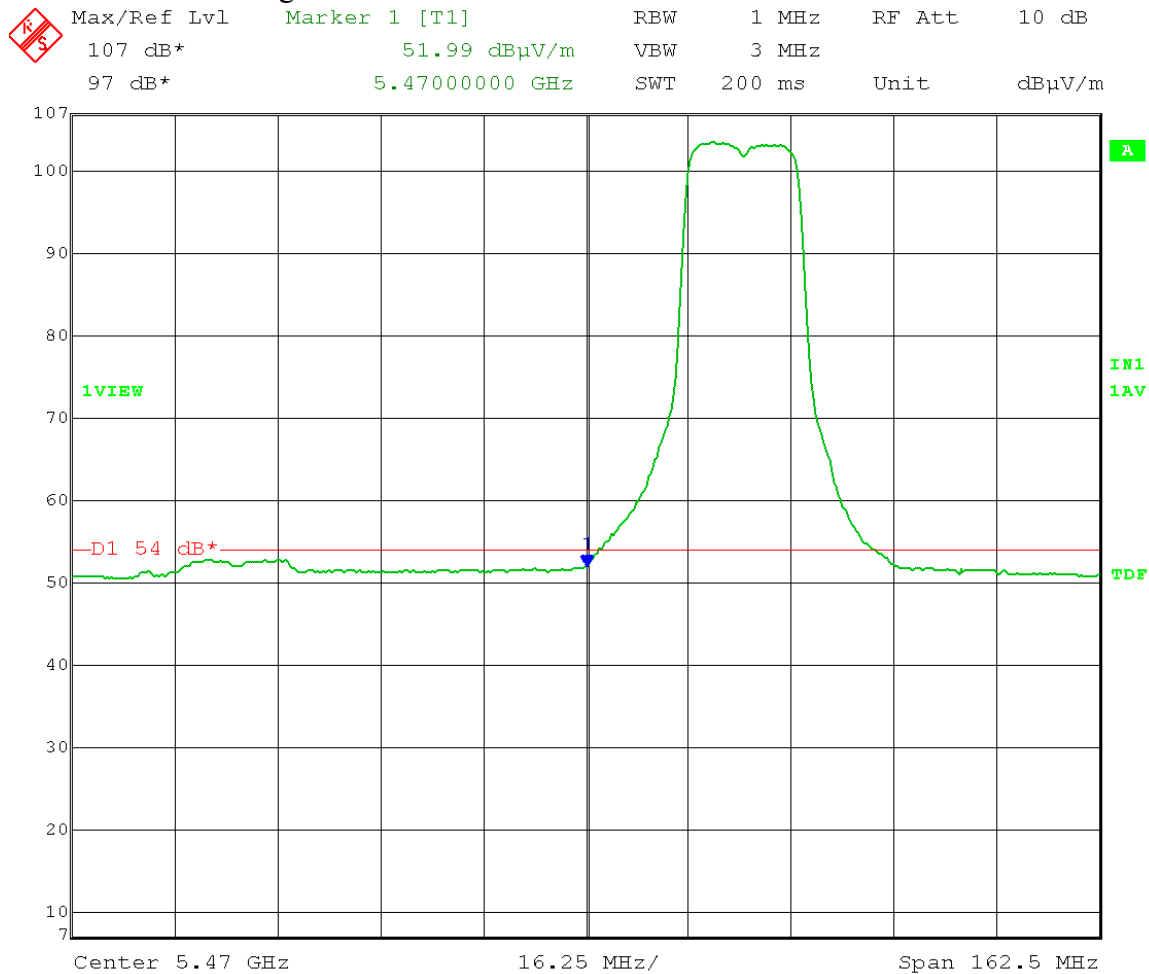
Limit: Peak and Average limits of 15.209 were used instead of the -27 dBm/MHz limit of FCC Part 15.407(b)(3).

Results: Passed

Notes: Measurements were taken for MCS15 OFDM modulation at the lowest and highest channels of operation. EUT was set to transmit continuously with 100% duty cycle. Both transmit chains were active.

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 8.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 54 dB μ V/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

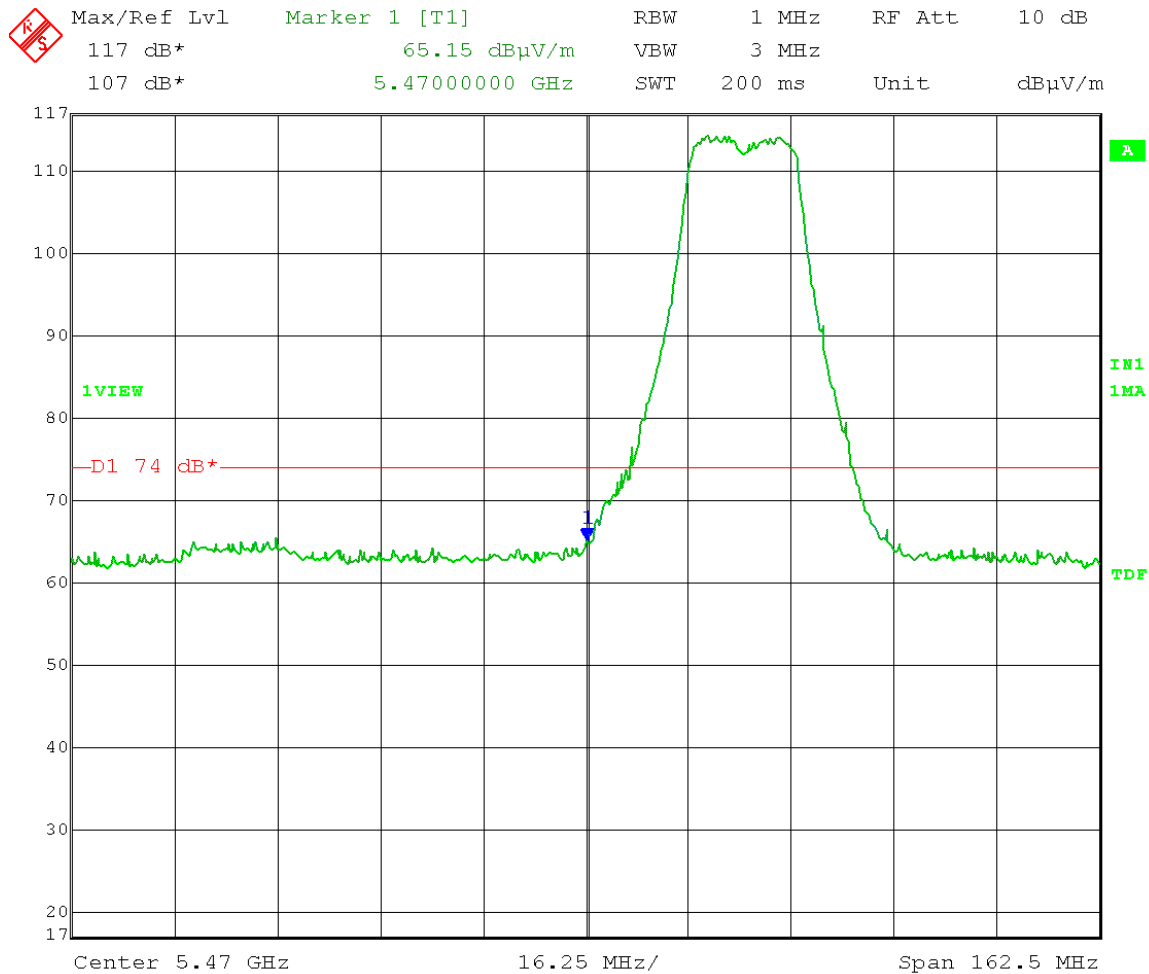
Horizontal: Average:



Date: 11.APR.2014 10:35:03

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 8.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

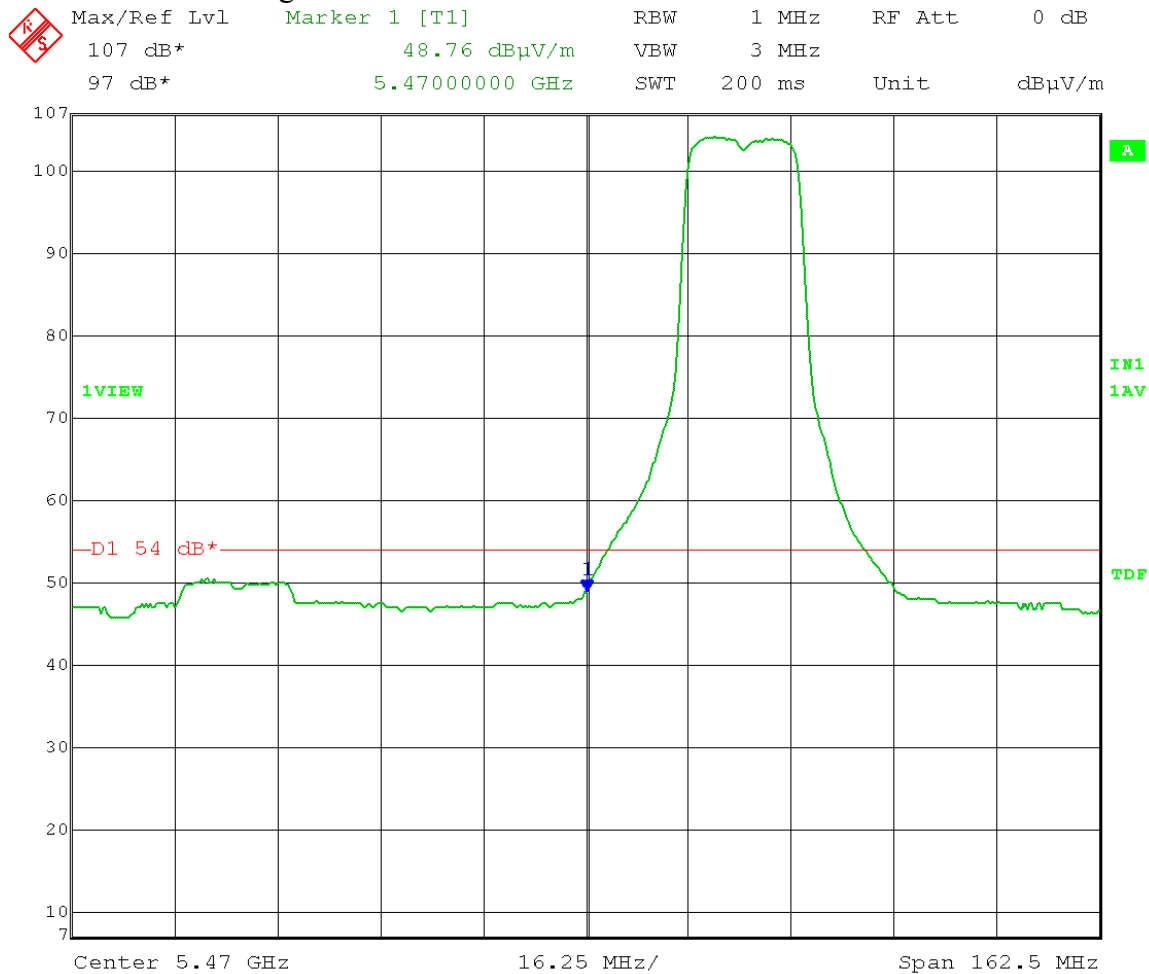
Horizontal: Peak:



Date: 11.APR.2014 10:36:07

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 8.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 54 dB μ V/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

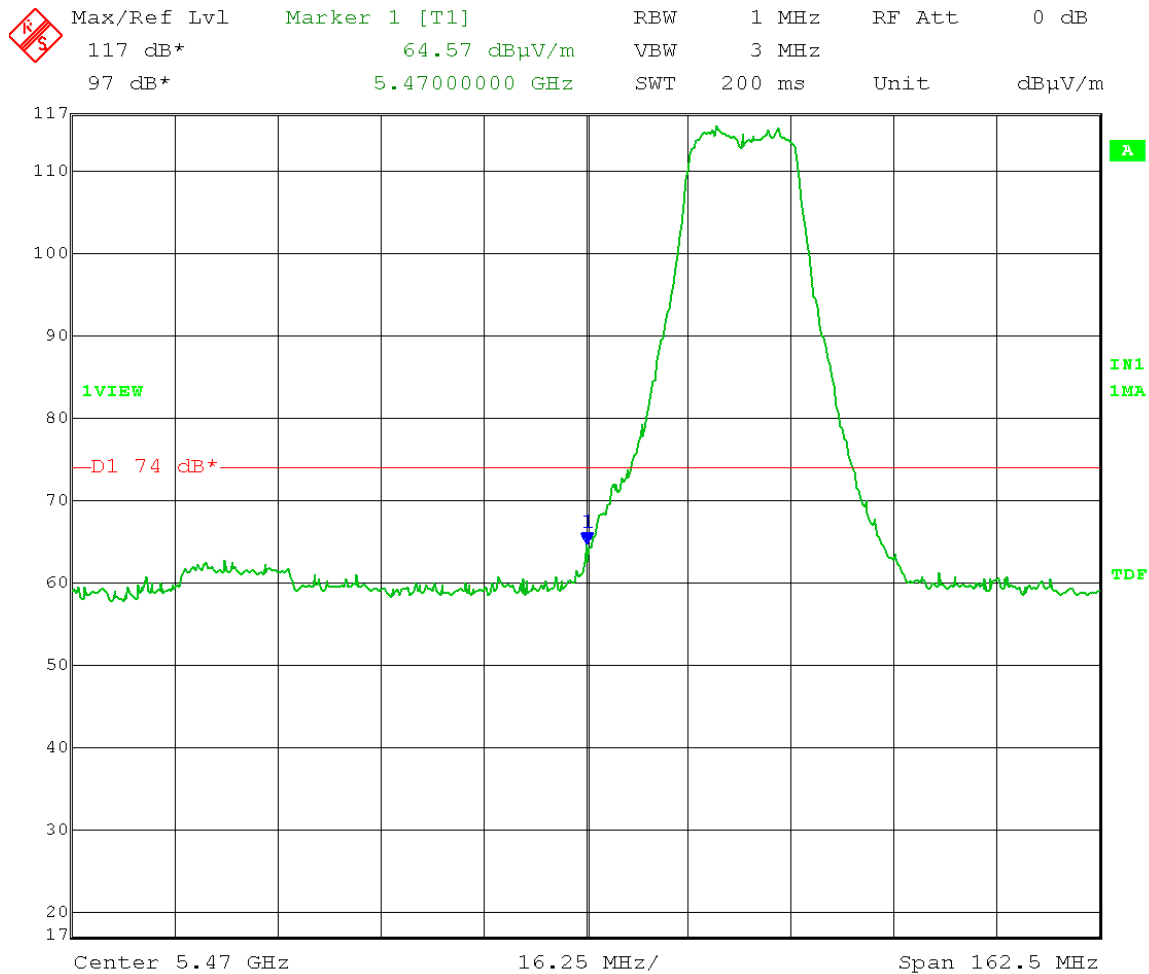
Vertical: Average:



Date: 11.APR.2014 11:30:26

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 8.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

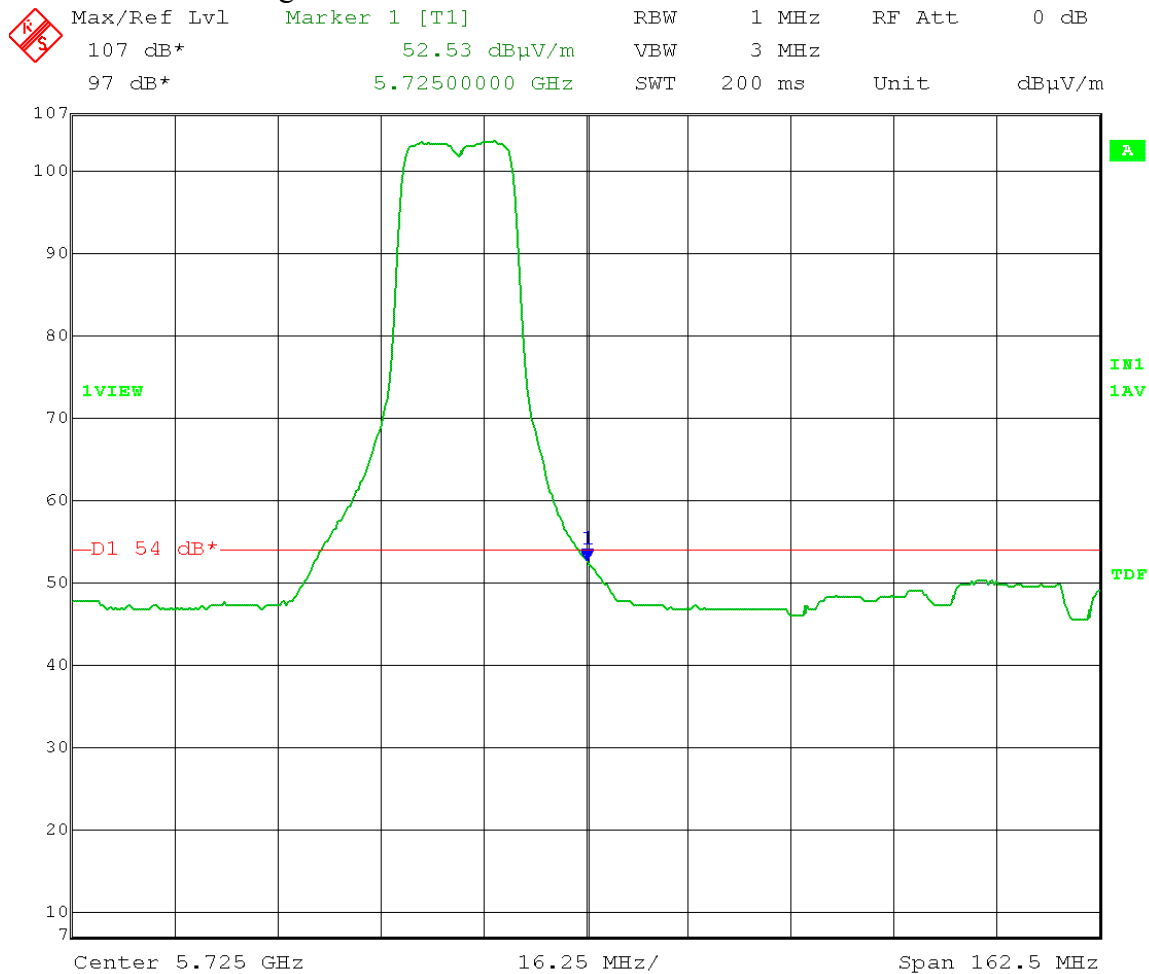
Vertical: Peak:



Date: 11.APR.2014 11:31:03

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 9.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 54 dBμV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

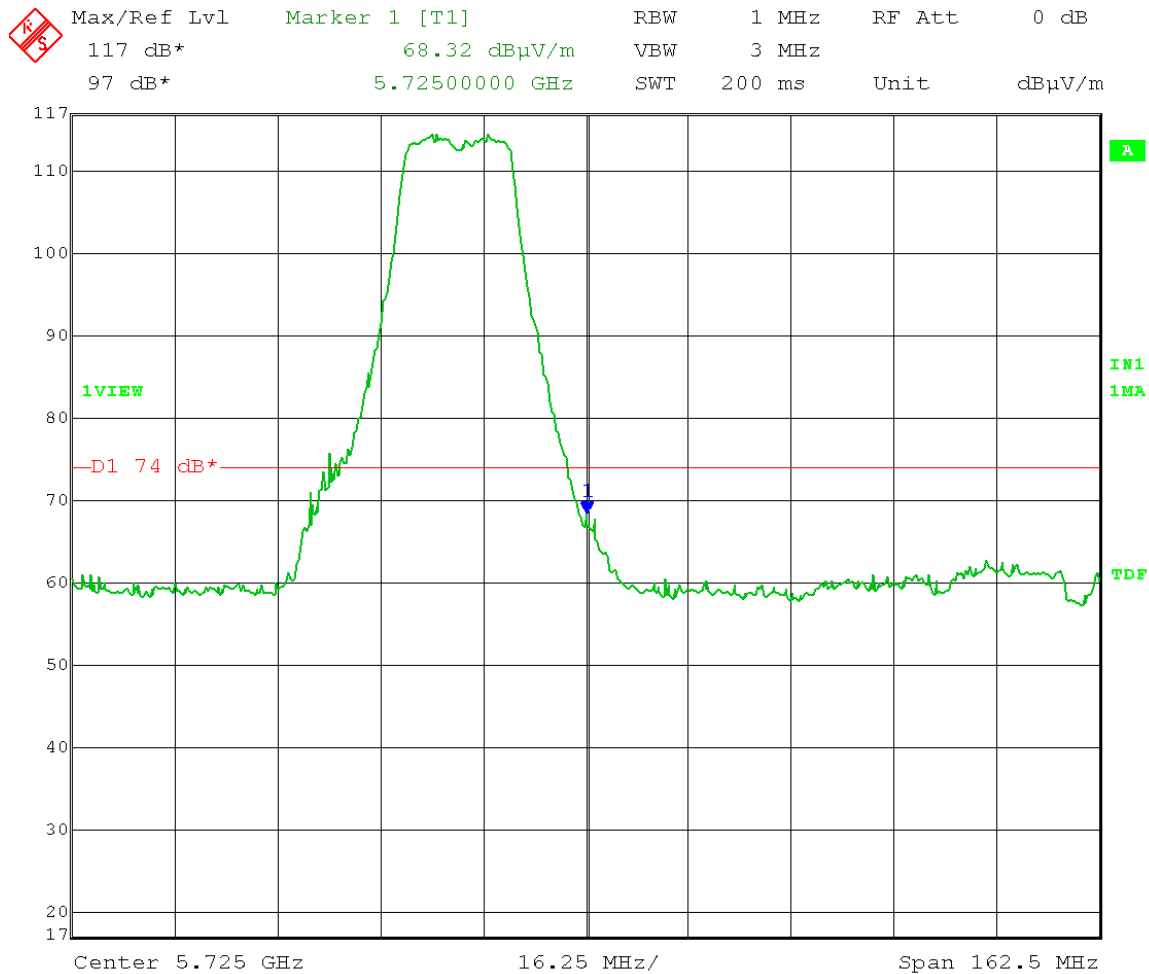
Horizontal: Average:



Date: 11.APR.2014 10:47:52

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 9.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 74 dB μ V/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

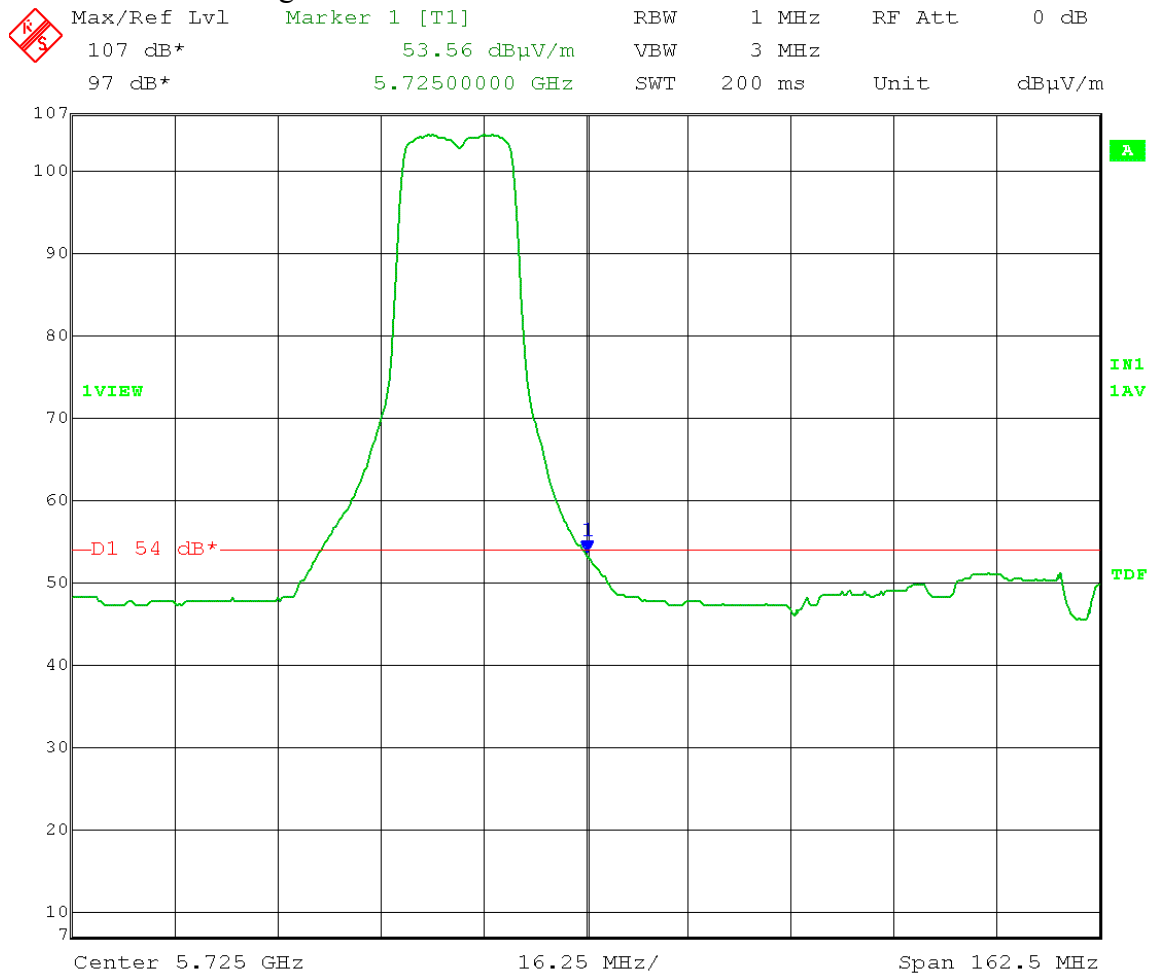
Horizontal: Peak:



Date: 11.APR.2014 10:48:55

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 9.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 54 dB μ V/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

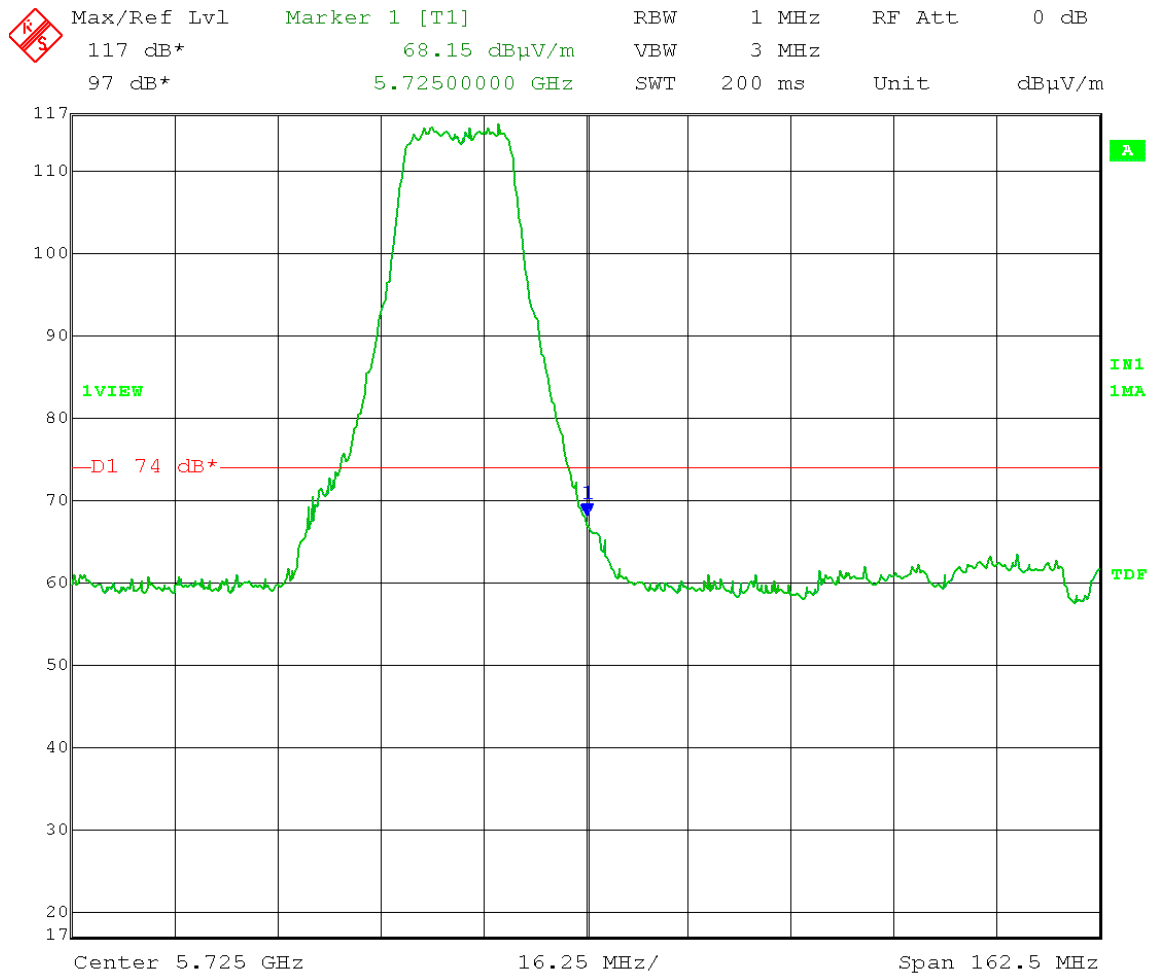
Vertical: Average:



Date: 11.APR.2014 11:19:34

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 9.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 74 dB μ V/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

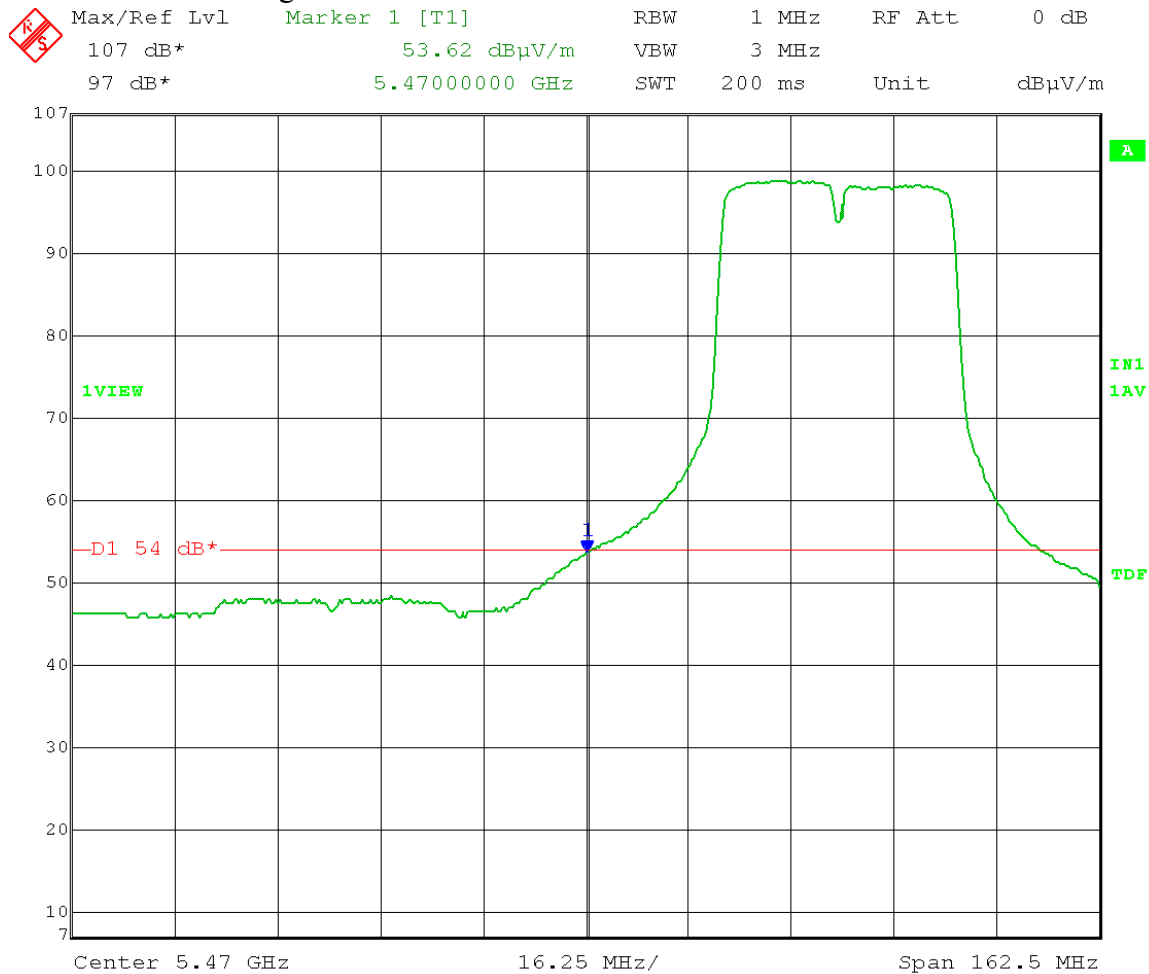
Vertical: Peak:



Date: 11.APR.2014 11:20:10

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 6.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 54 dB μ V/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

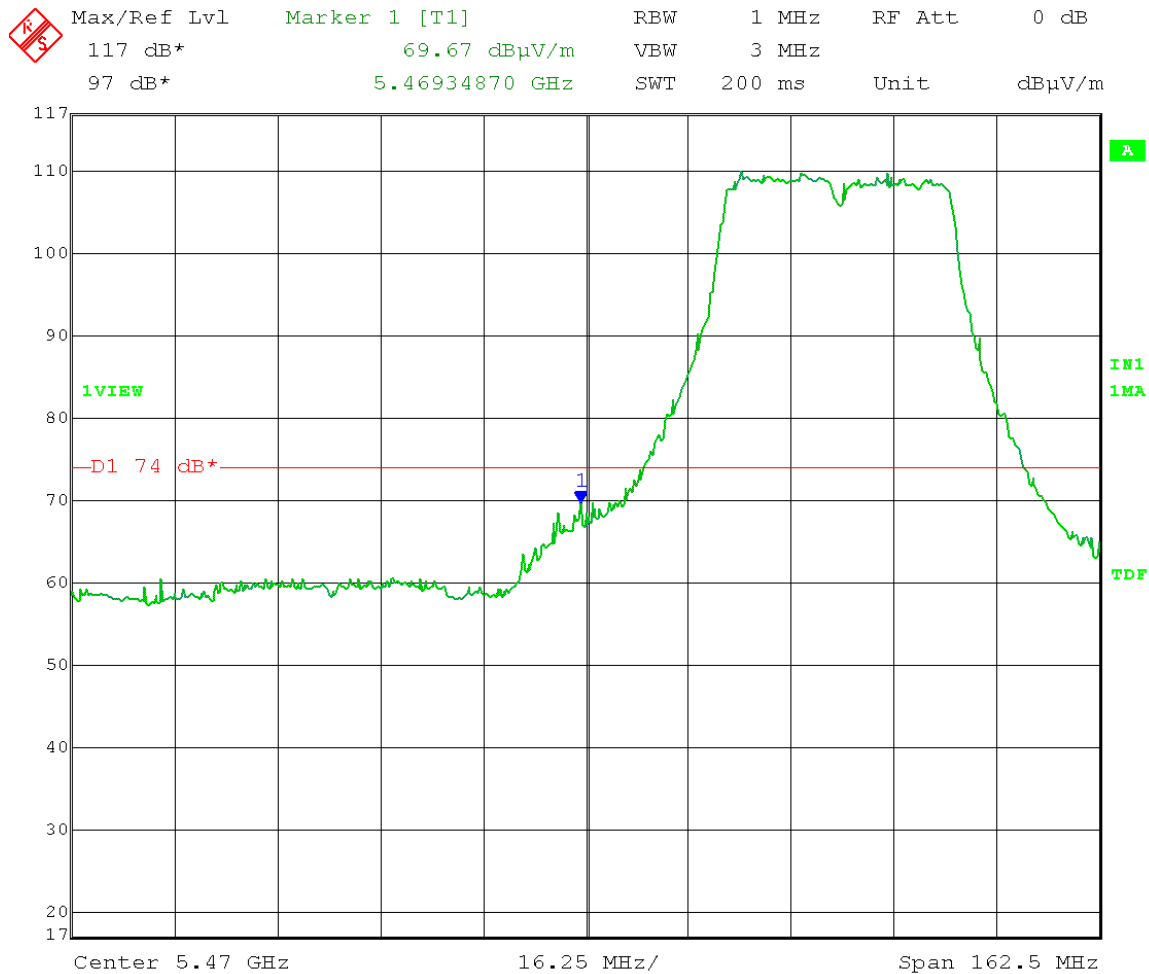
Horizontal: Average:



Date: 11.APR.2014 10:52:02

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 6.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

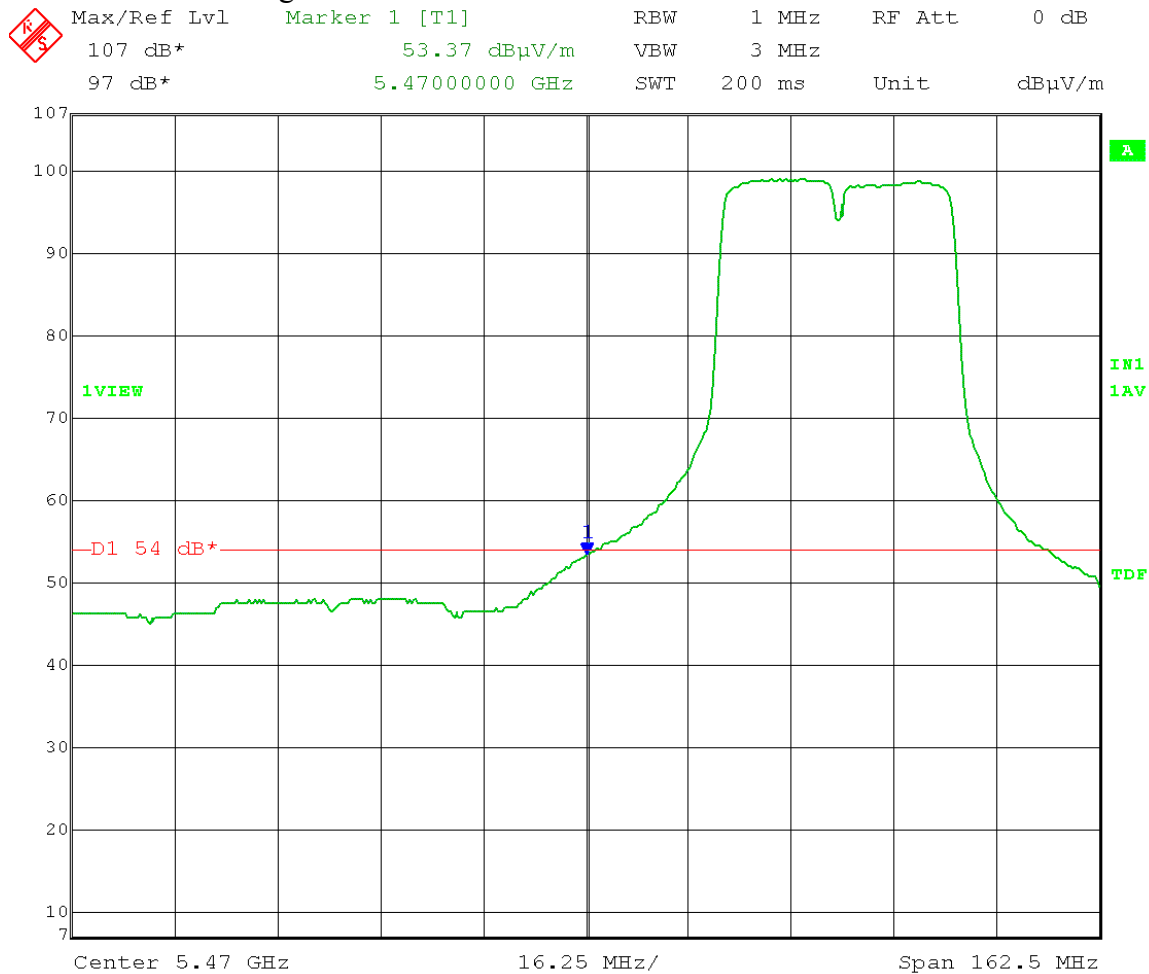
Horizontal: Peak:



Date: 11.APR.2014 10:52:57

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 6.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 54 dB μ V/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

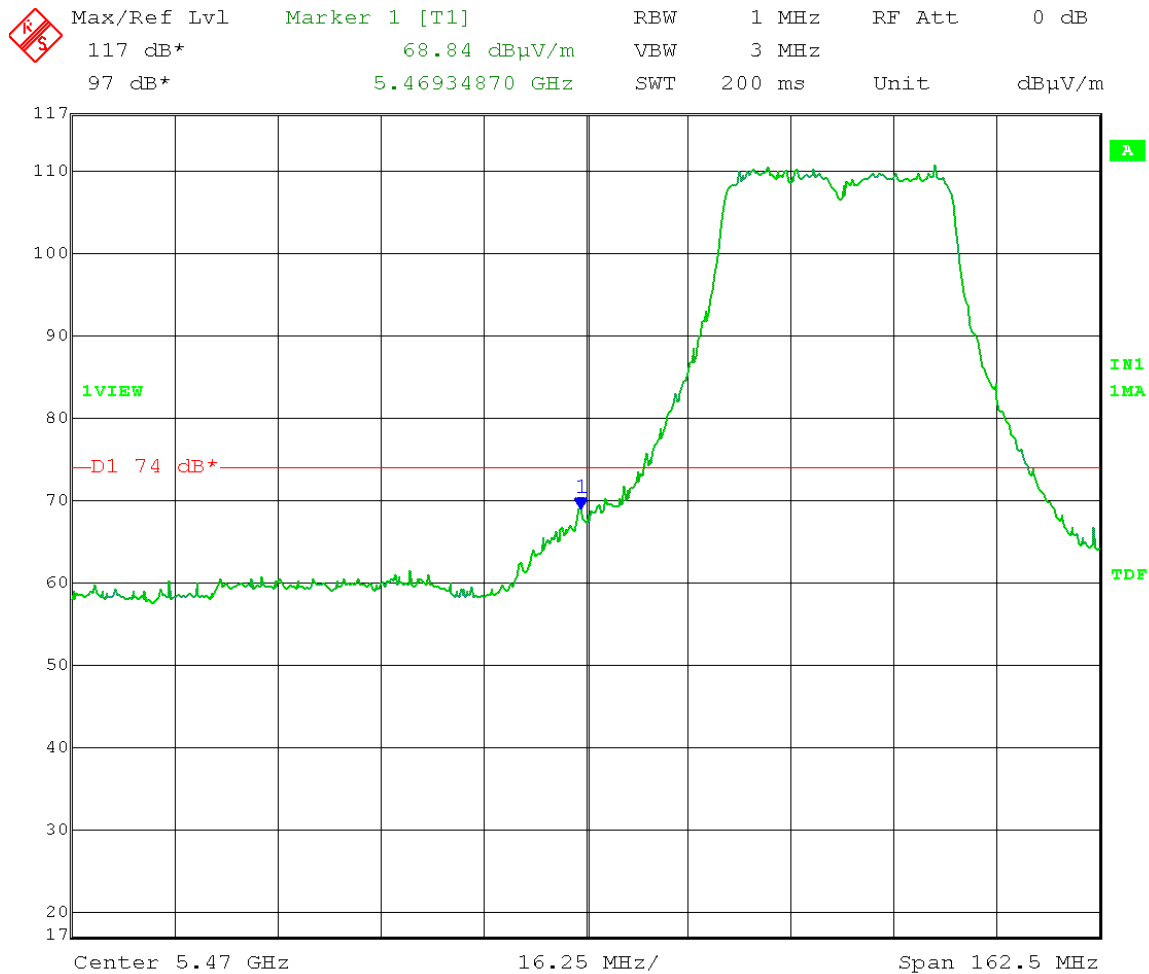
Vertical: Average:



Date: 11.APR.2014 11:28:27

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 6.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 74 dB μ V/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

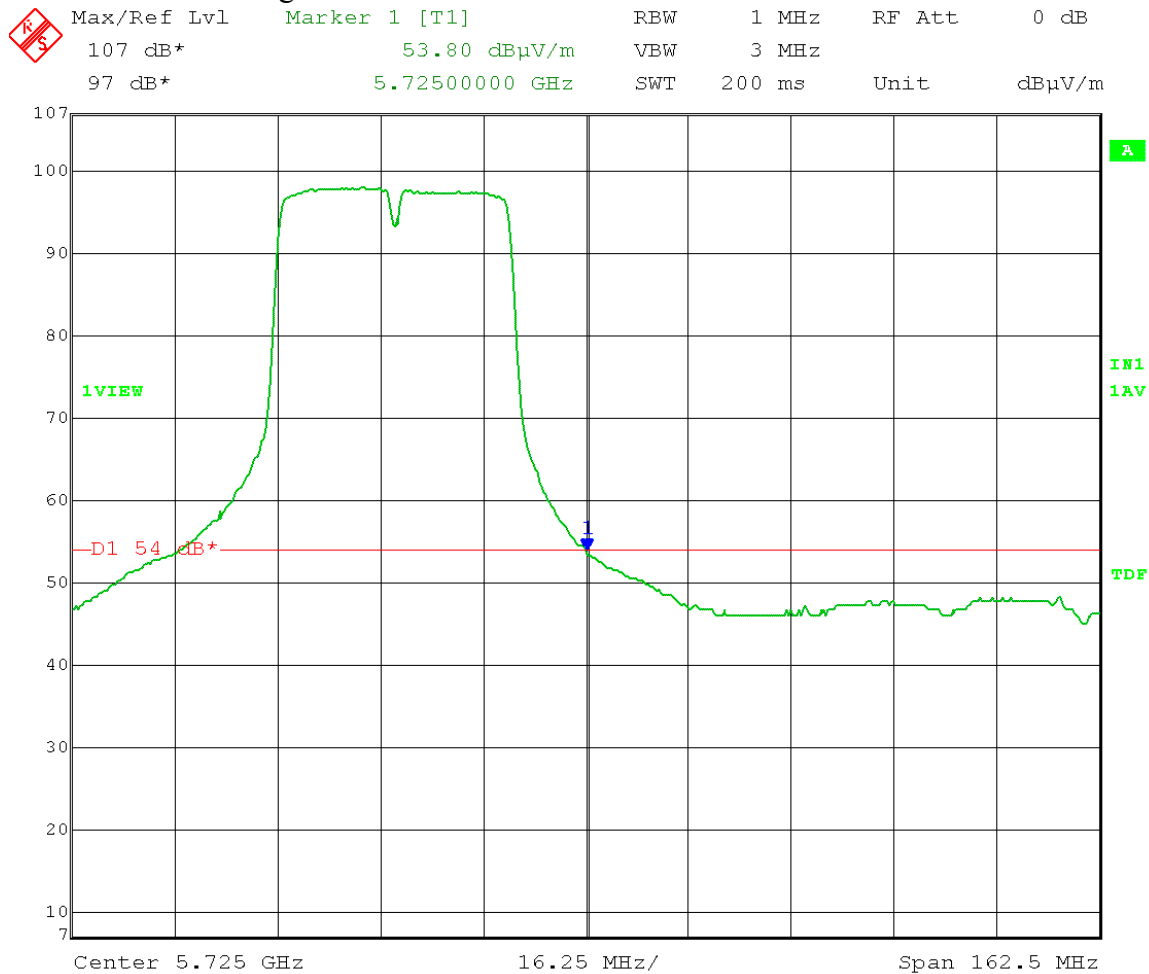
Vertical: Peak:



Date: 11.APR.2014 11:27:51

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 5.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 54 dB μ V/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

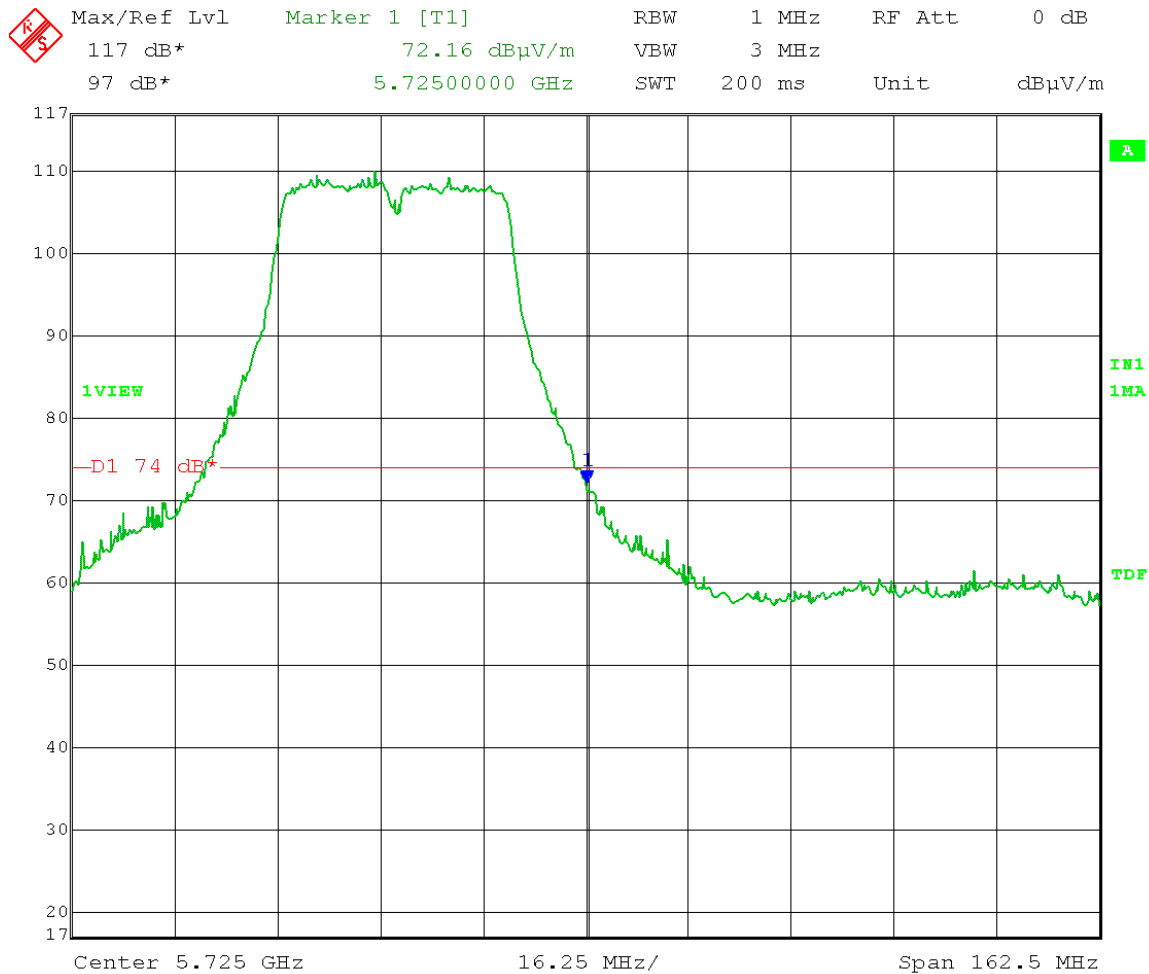
Horizontal: Average:



Date: 11.APR.2014 10:44:22

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 5.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

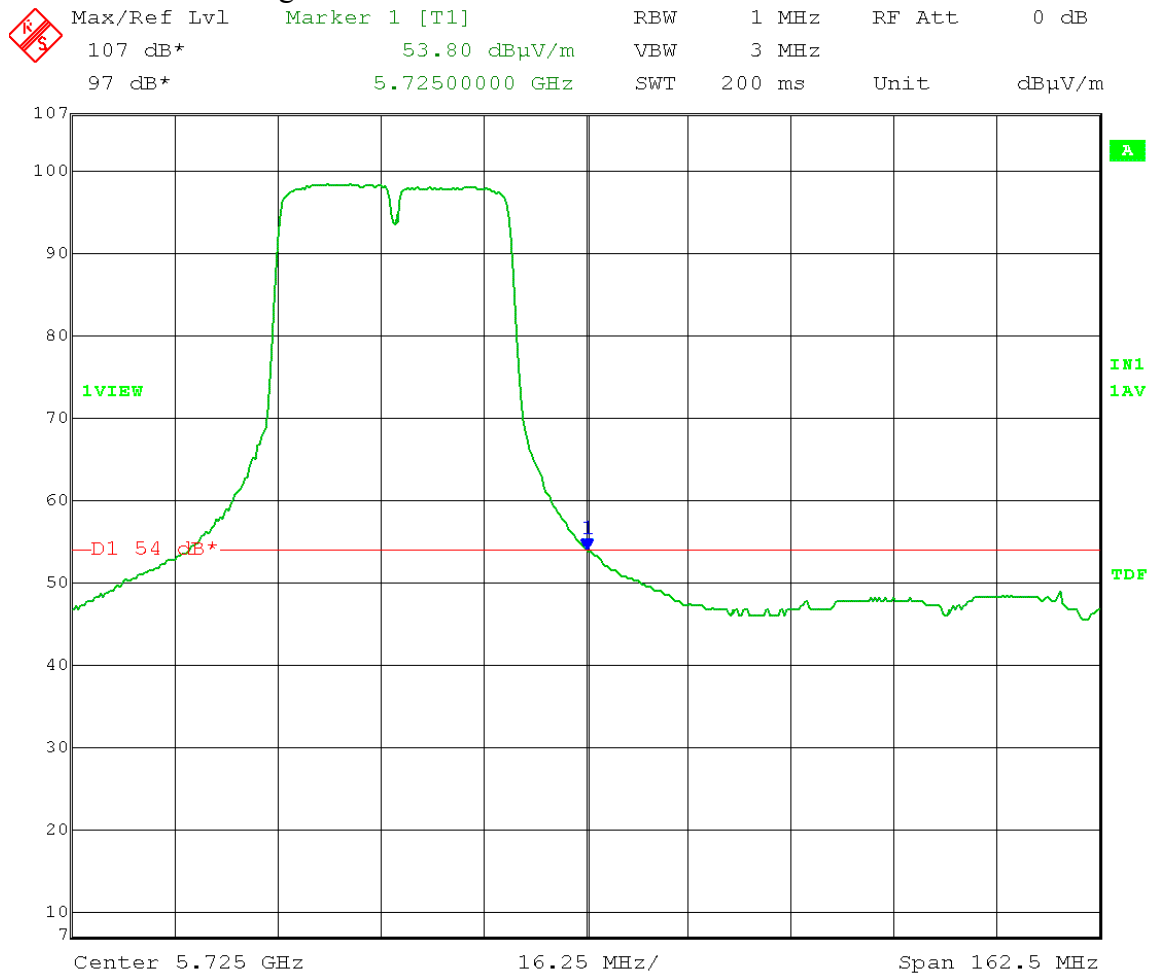
Horizontal: Peak:



Date: 11.APR.2014 10:45:35

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 5.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 54 dB μ V/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

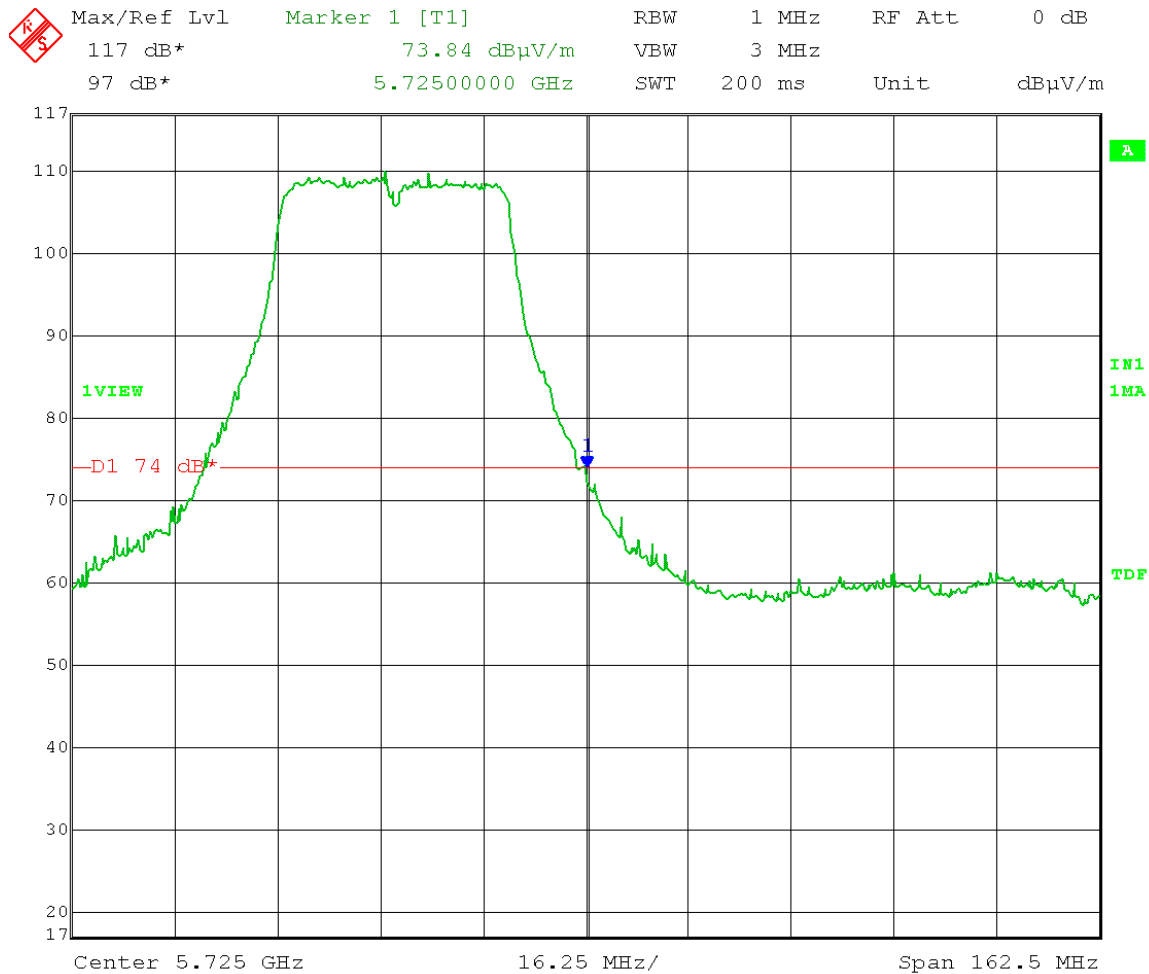
Vertical: Average:



Date: 11.APR.2014 11:23:50

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 23 dBi Panel antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 5.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i):
 “an out-of-band emission that complies with both the average and peak
 limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17
 dBm/MHz peak emission limit.”

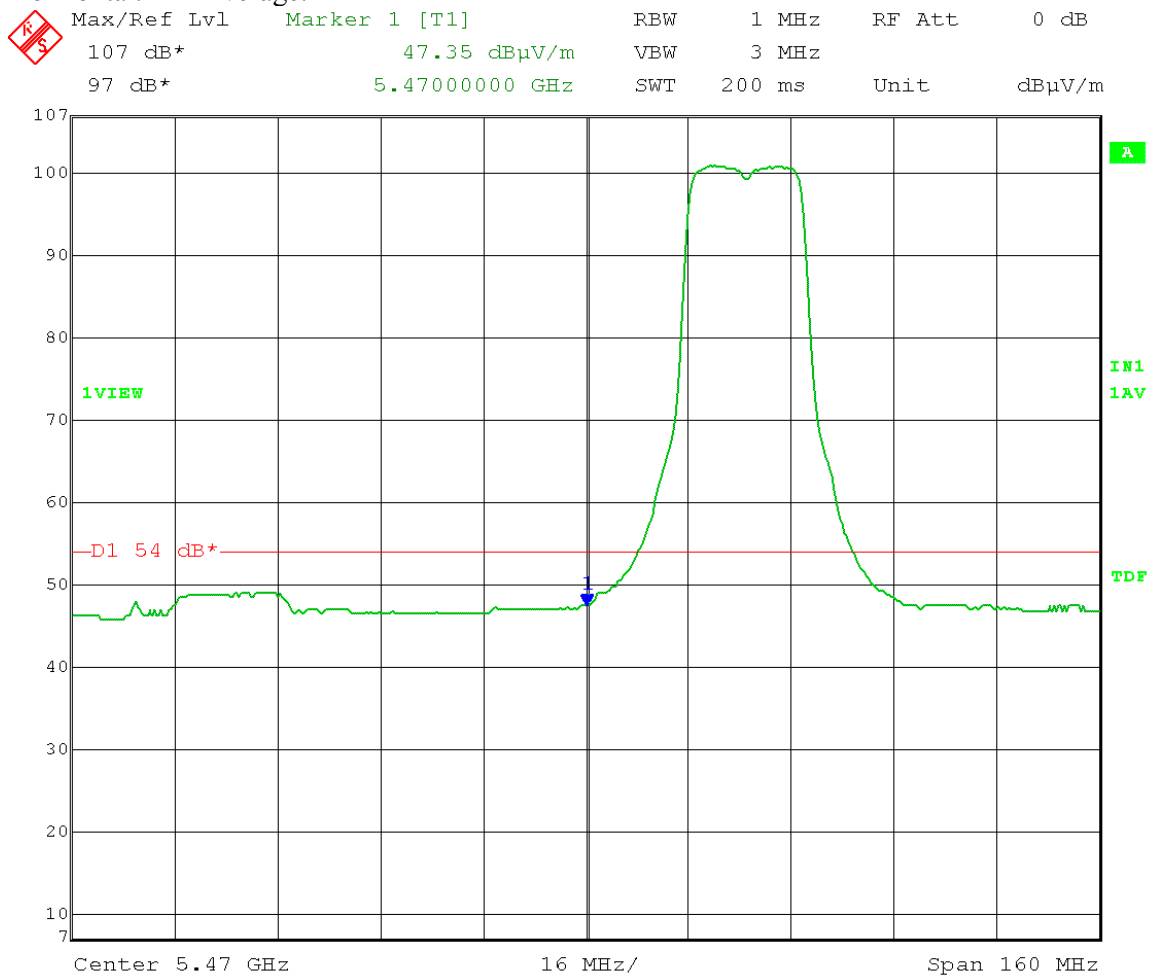
Vertical: Peak:



Date: 11.APR.2014 11:25:10

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 54 dBμV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

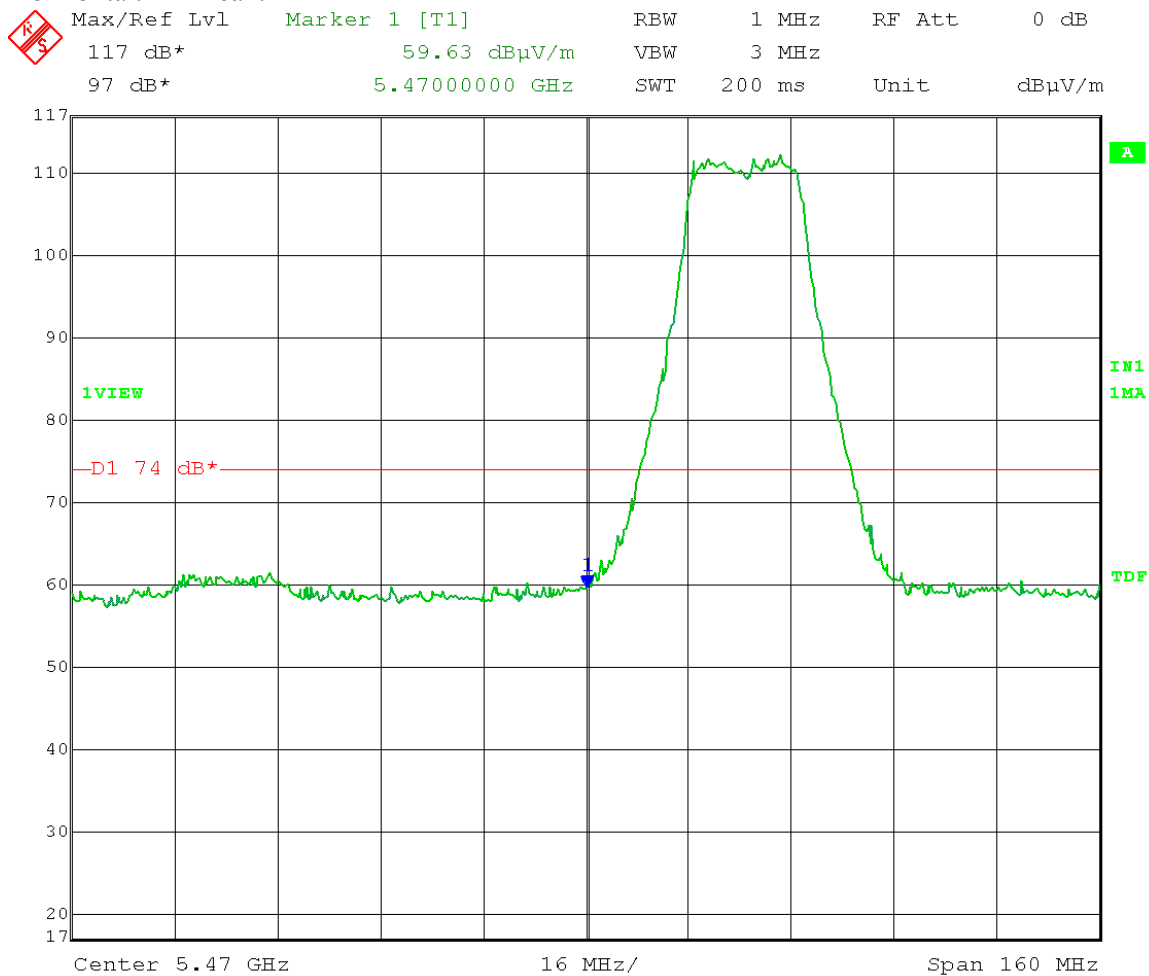
Horizontal: Average:



Date: 14.APR.2014 10:58:41

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

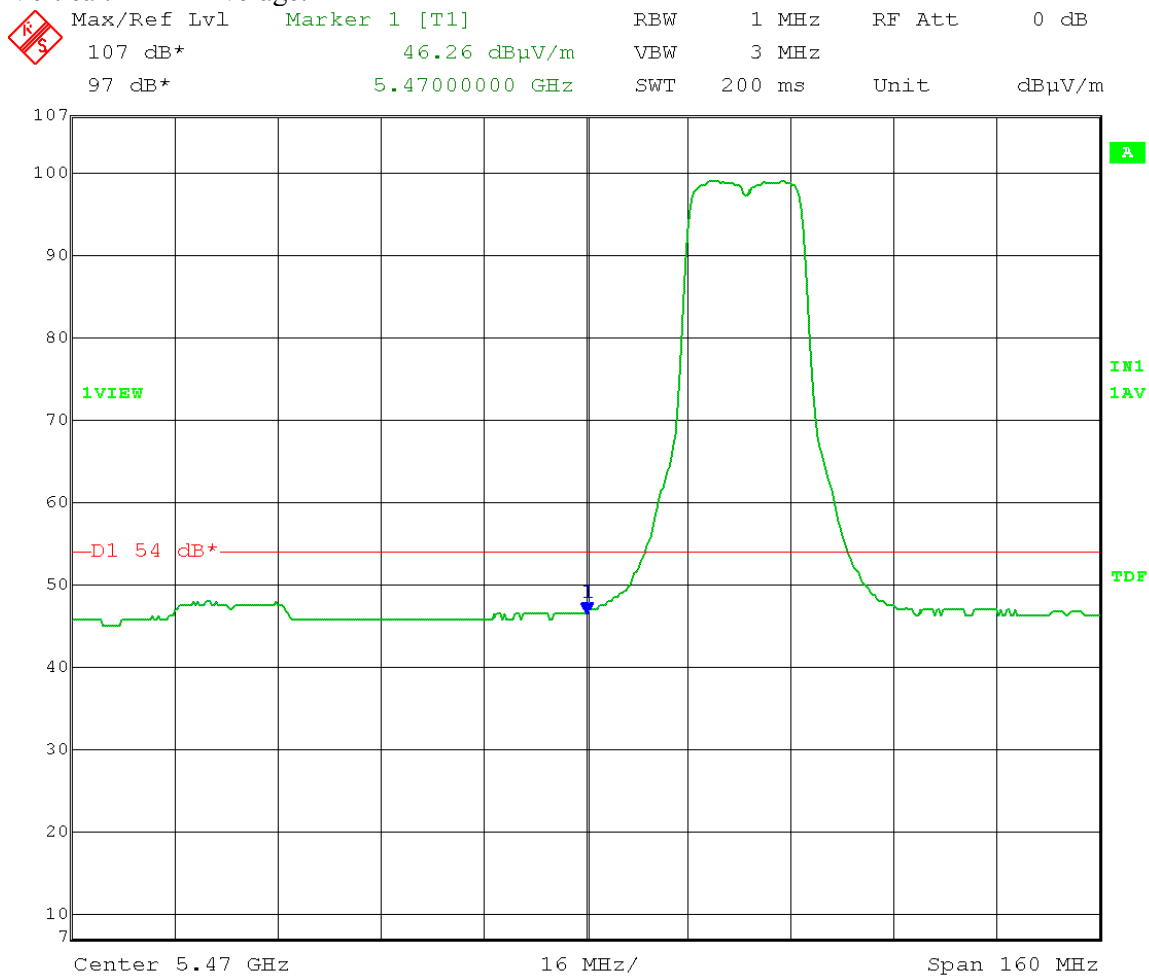
Horizontal: Peak:



Date: 14.APR.2014 10:59:51

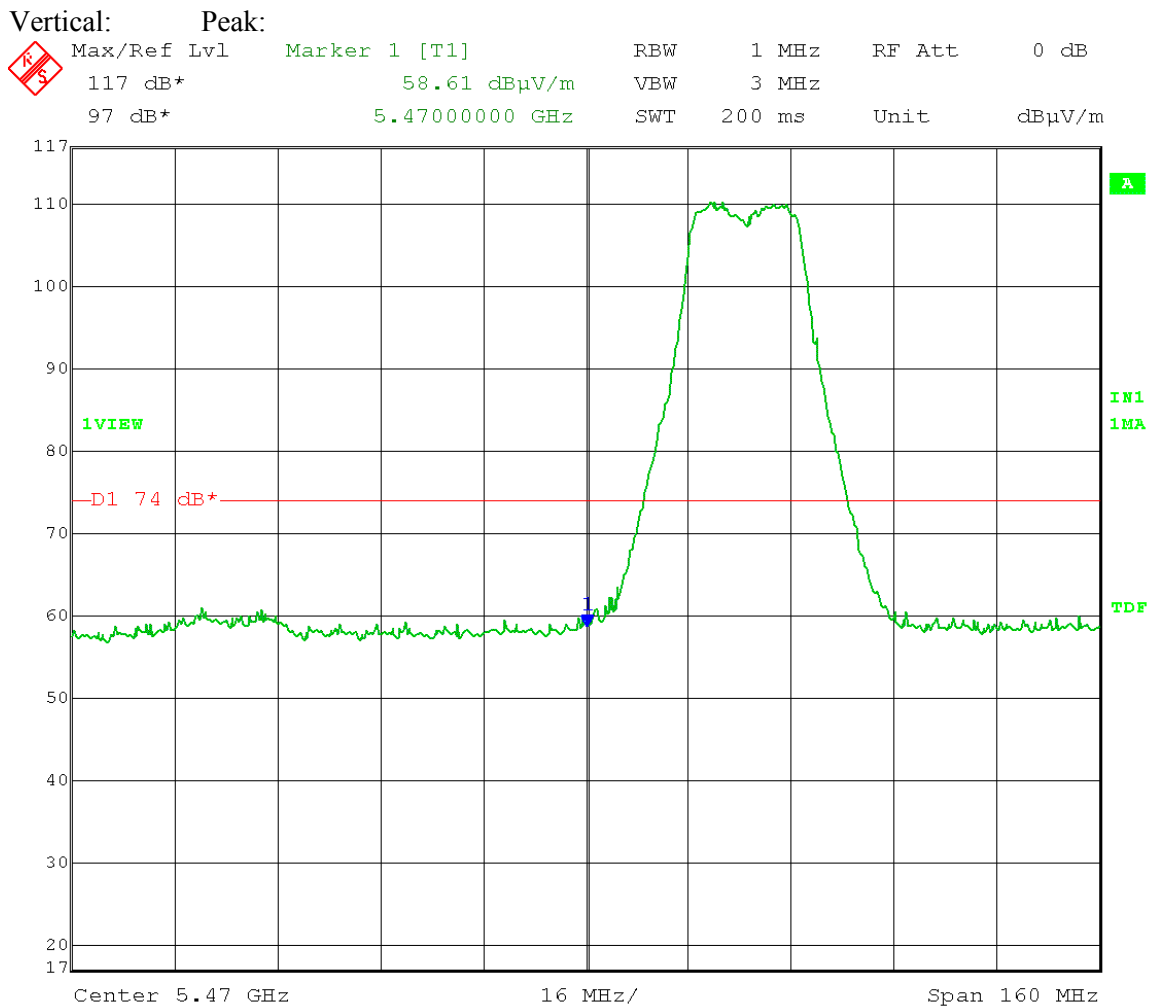
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 54 dBμV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

Vertical: Average:



Date: 14.APR.2014 13:17:43

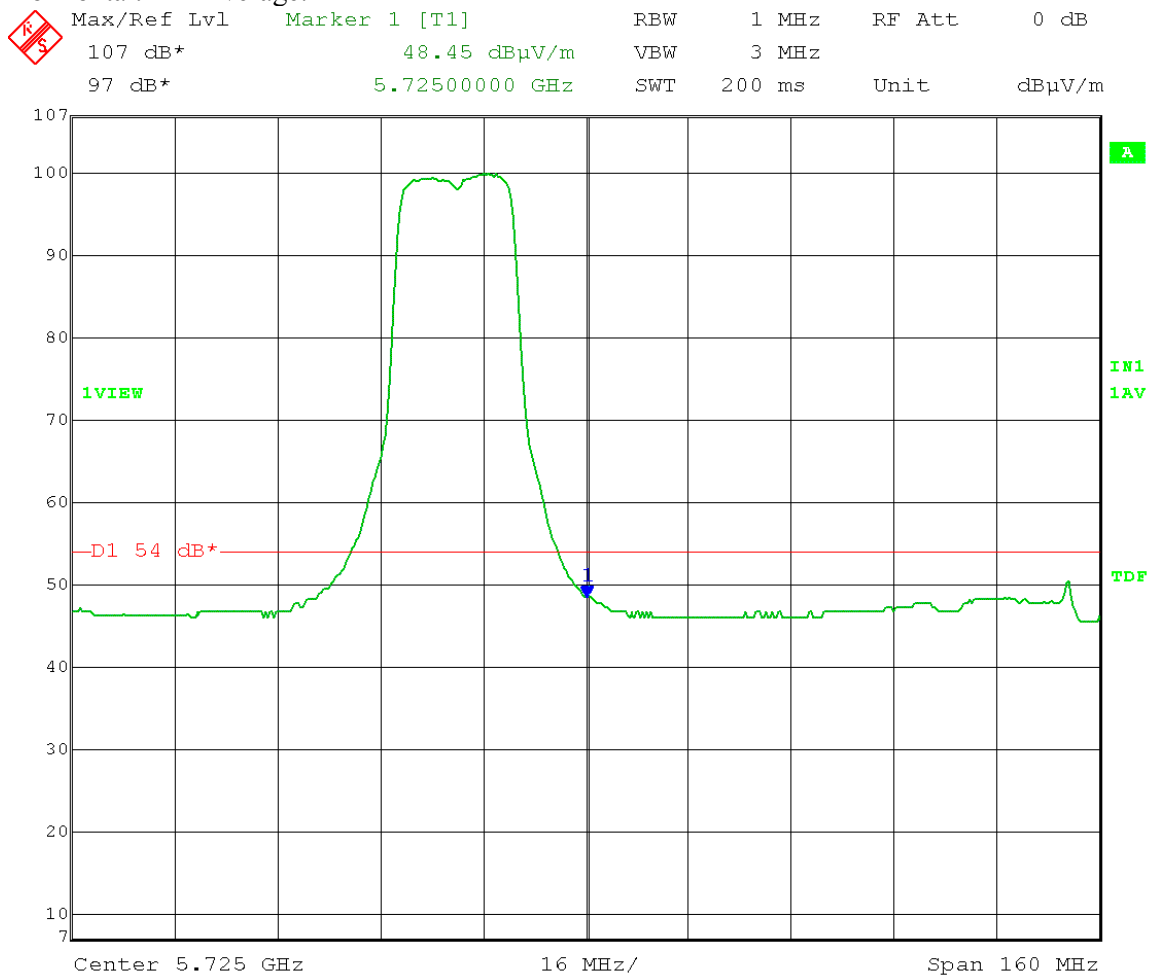
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”



Date: 14.APR.2014 13:18:25

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 54 dBμV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

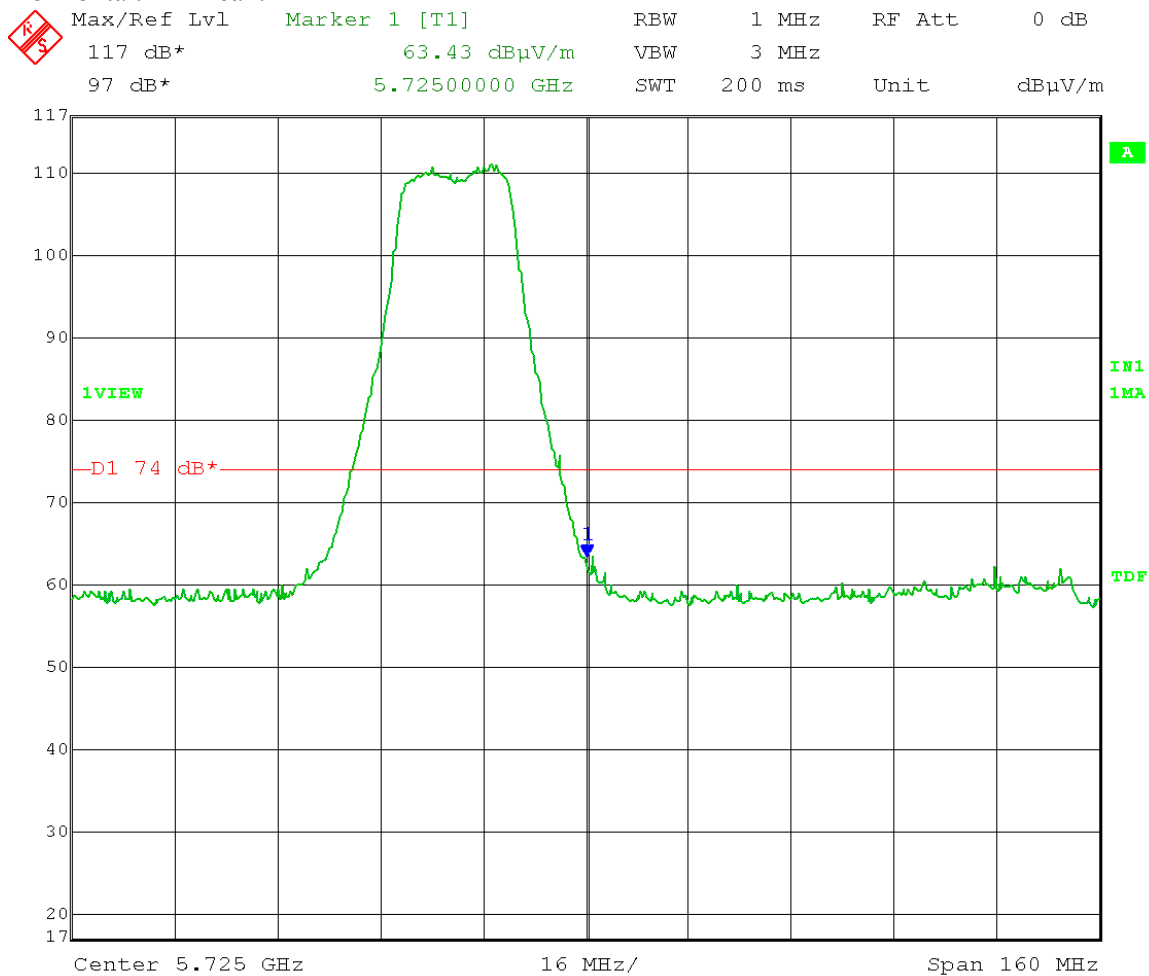
Horizontal: Average:



Date: 14.APR.2014 12:44:05

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

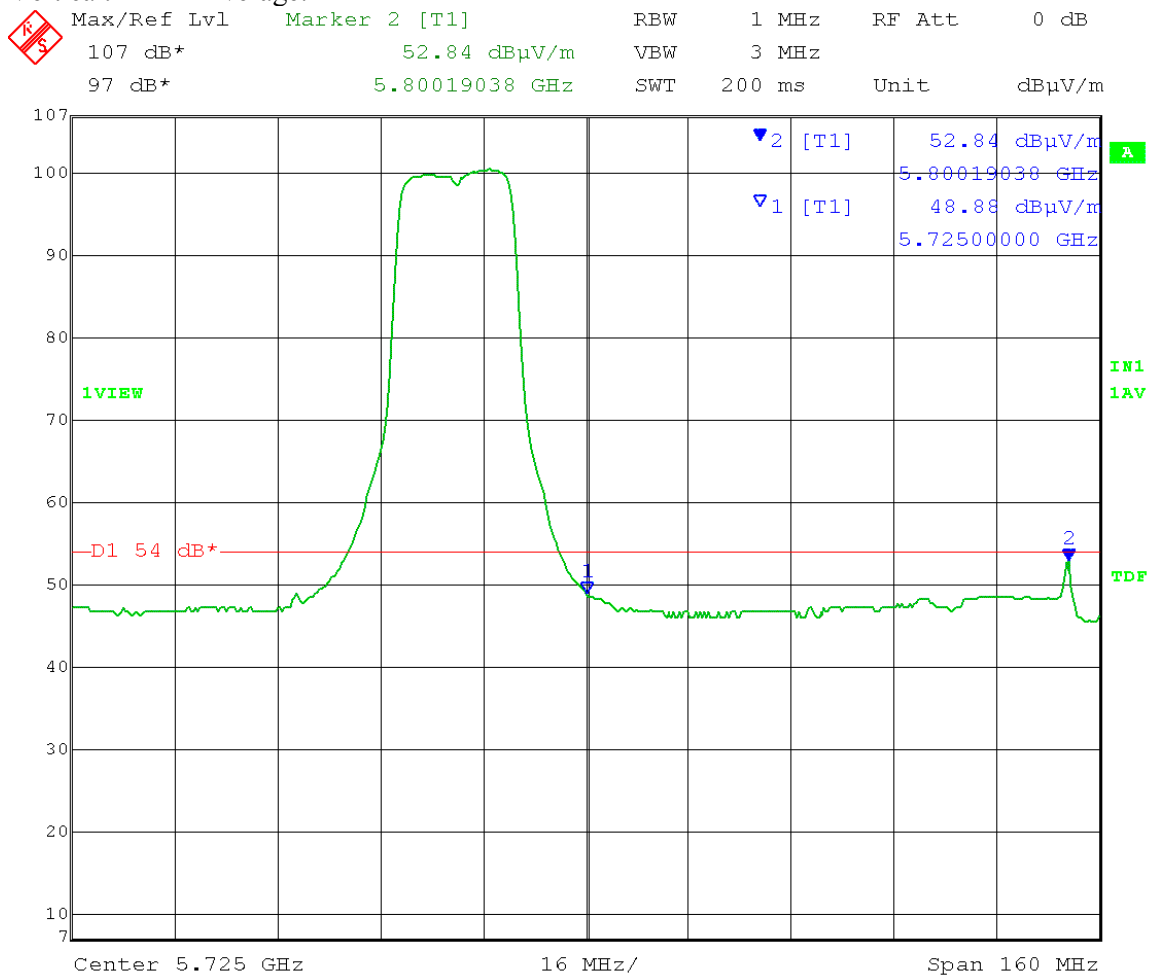
Horizontal: Peak:



Date: 14.APR.2014 12:44:48

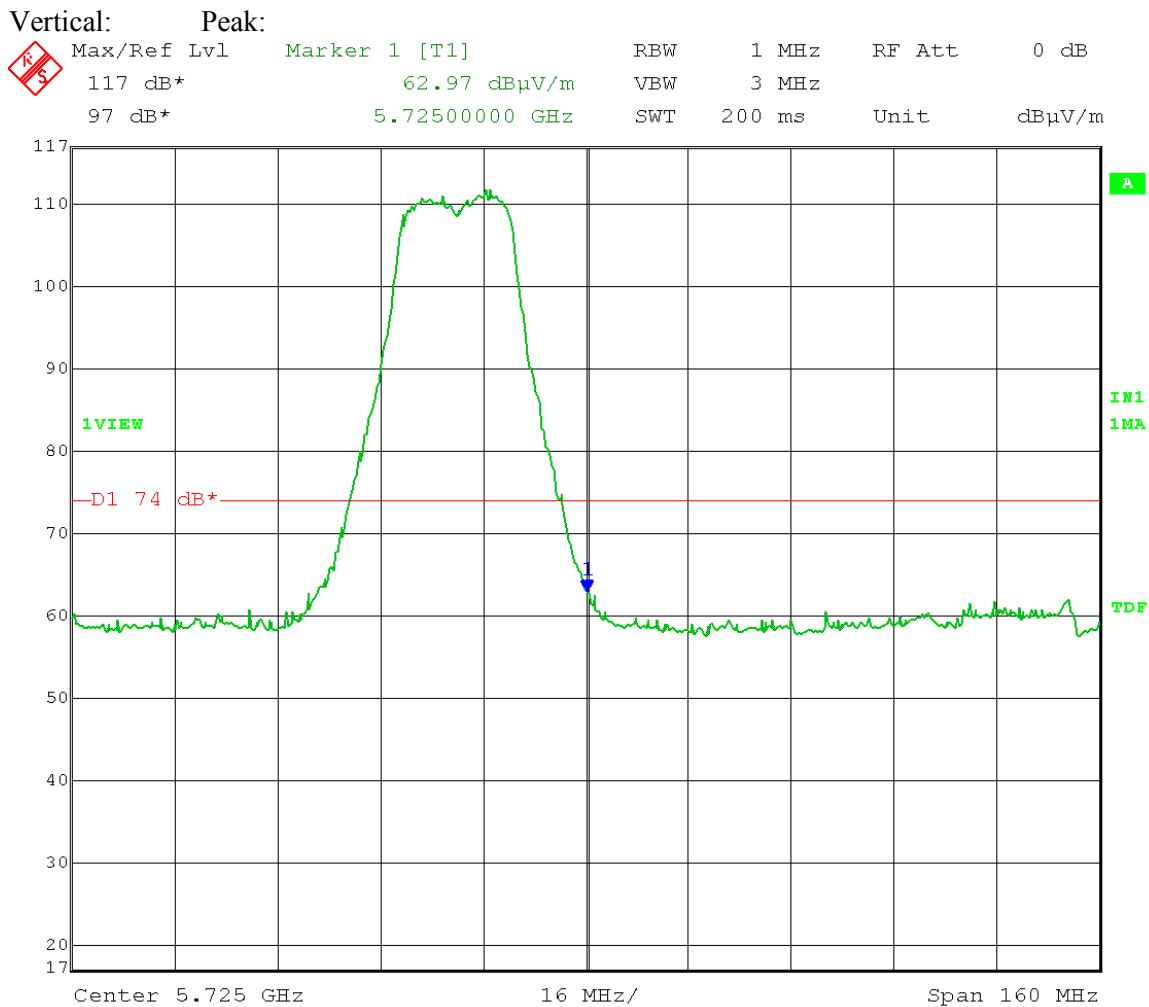
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 54 dBμV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

Vertical: Average:



Date: 14.APR.2014 12:57:24

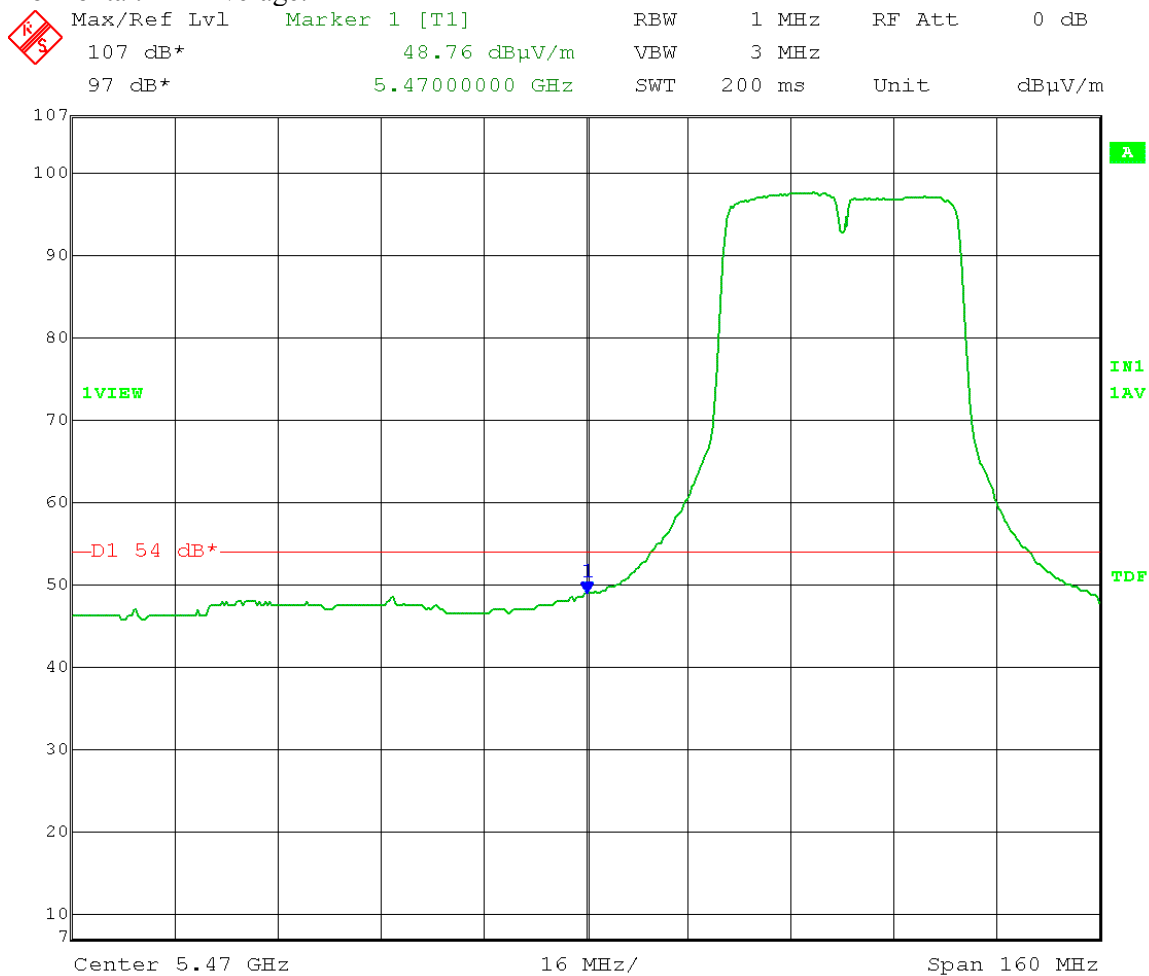
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”



Date: 14.APR.2014 12:58:14

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 54 dBμV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

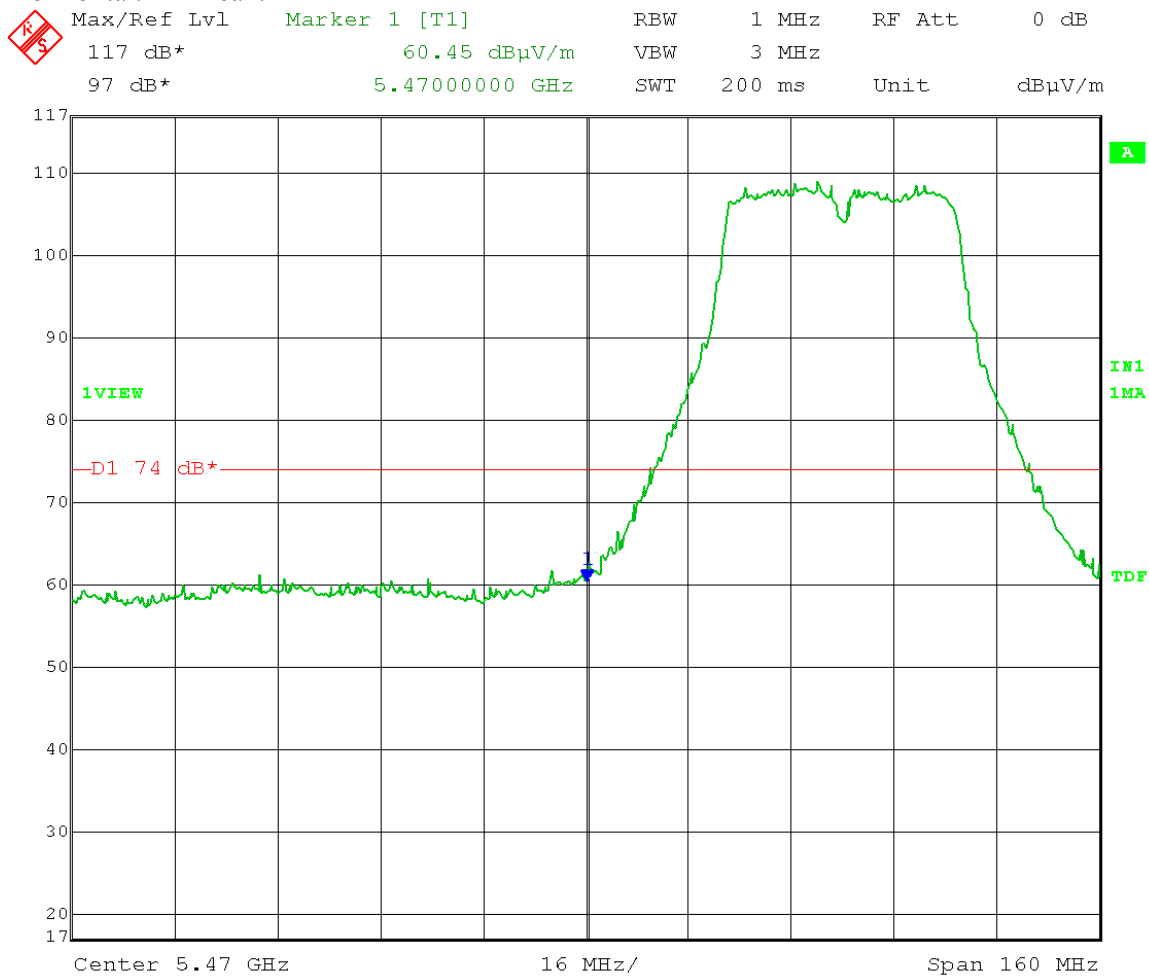
Horizontal: Average:



Date: 14.APR.2014 11:03:01

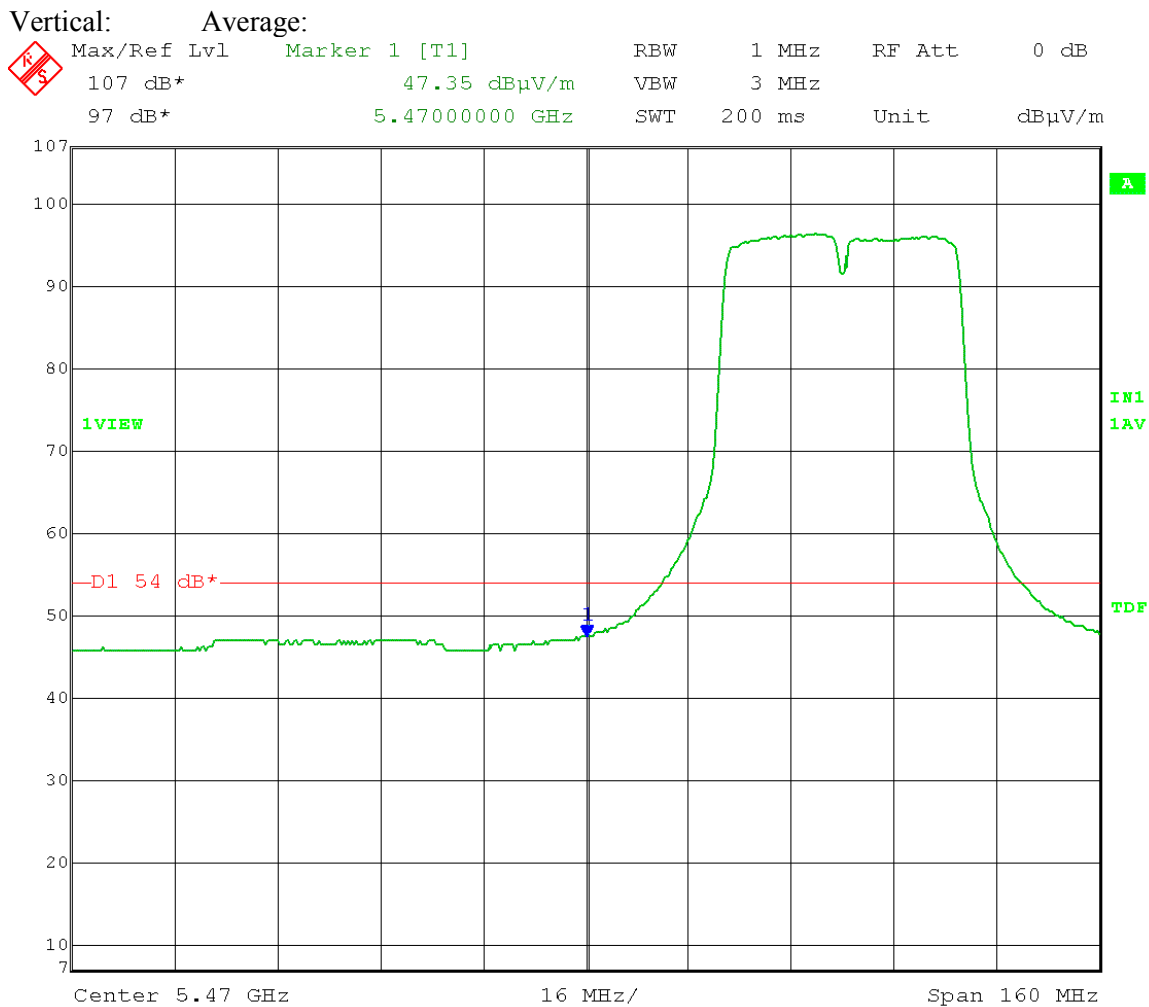
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

Horizontal: Peak:



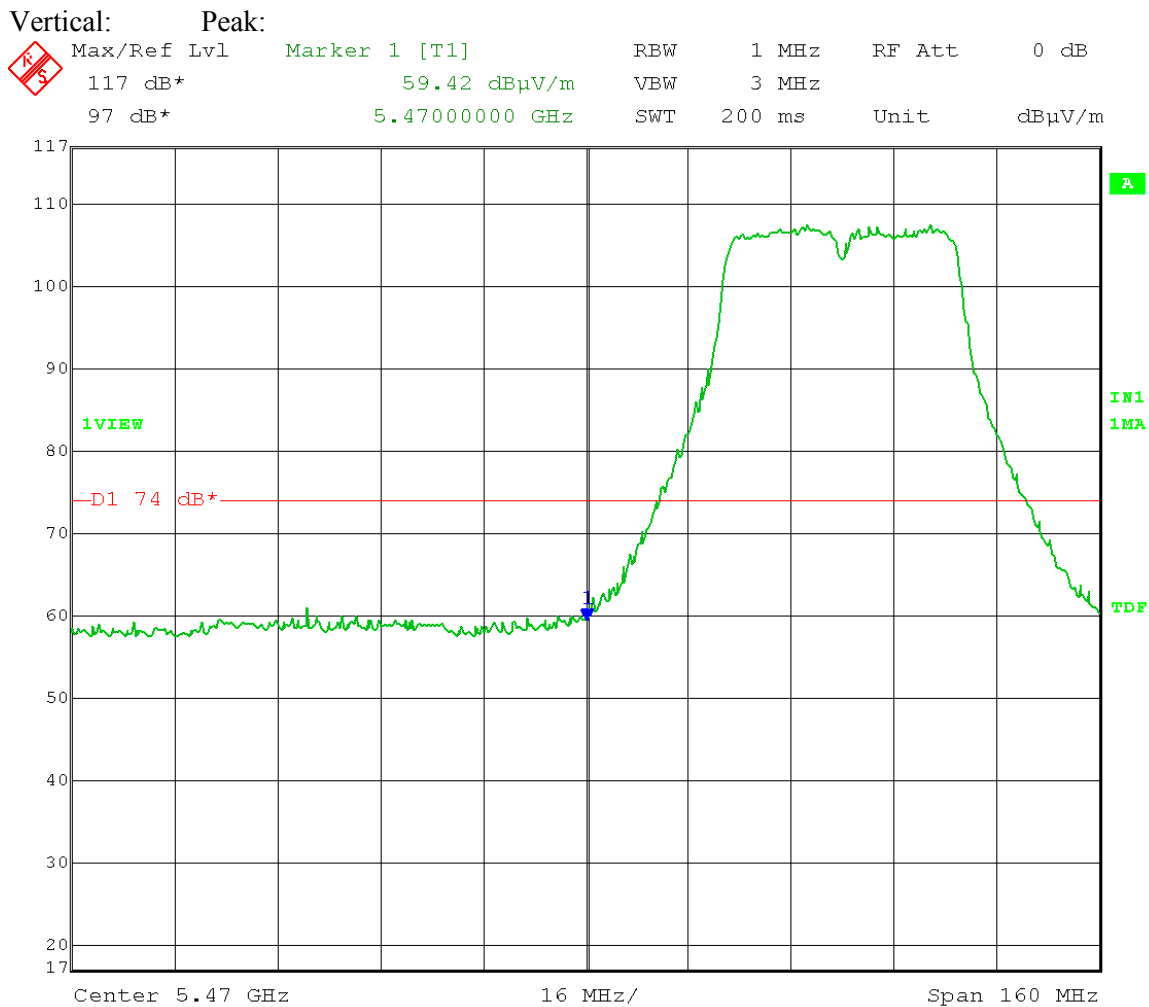
Date: 14.APR.2014 11:03:41

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 54 dBµV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”



Date: 14.APR.2014 13:21:09

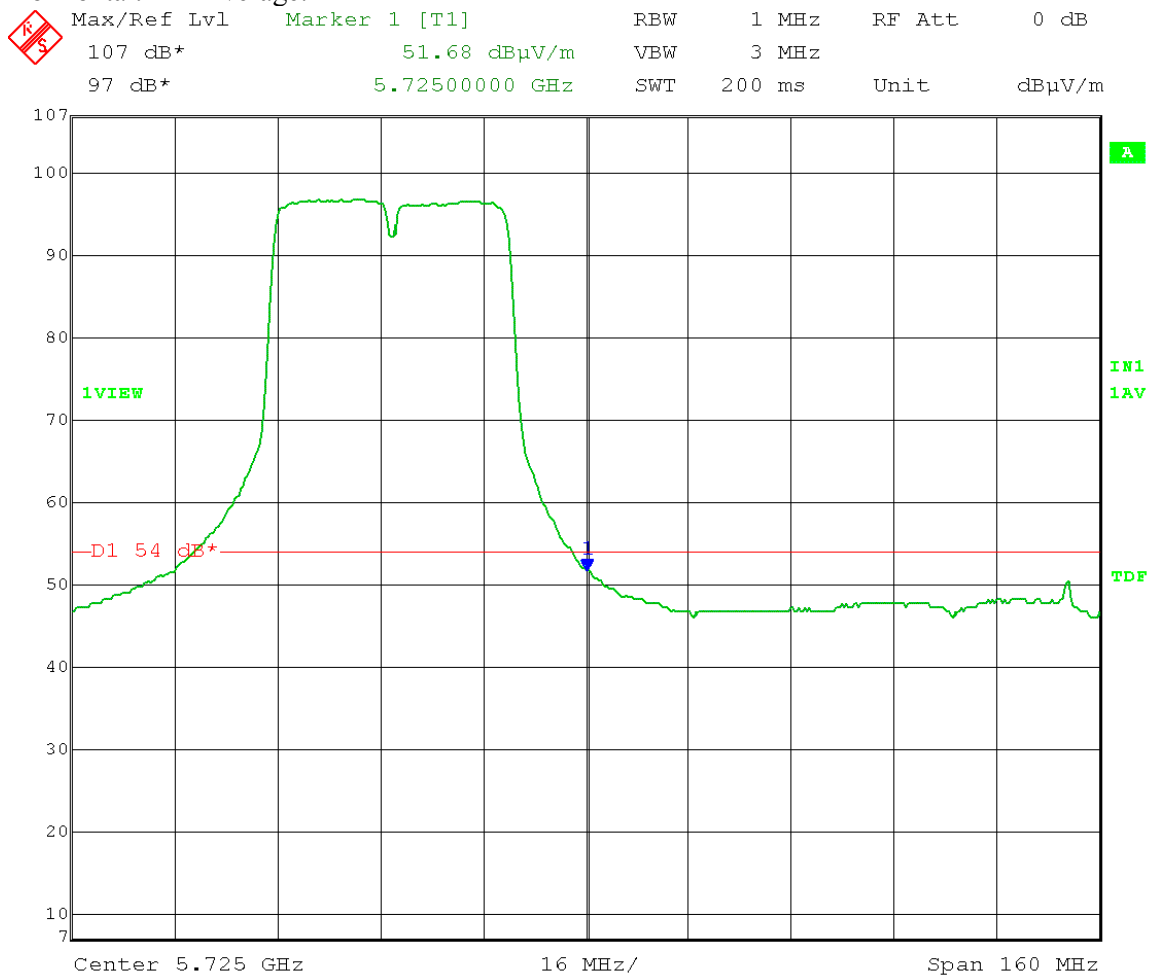
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Lower Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.47 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”



Date: 14.APR.2014 13:21:54

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 54 dBμV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

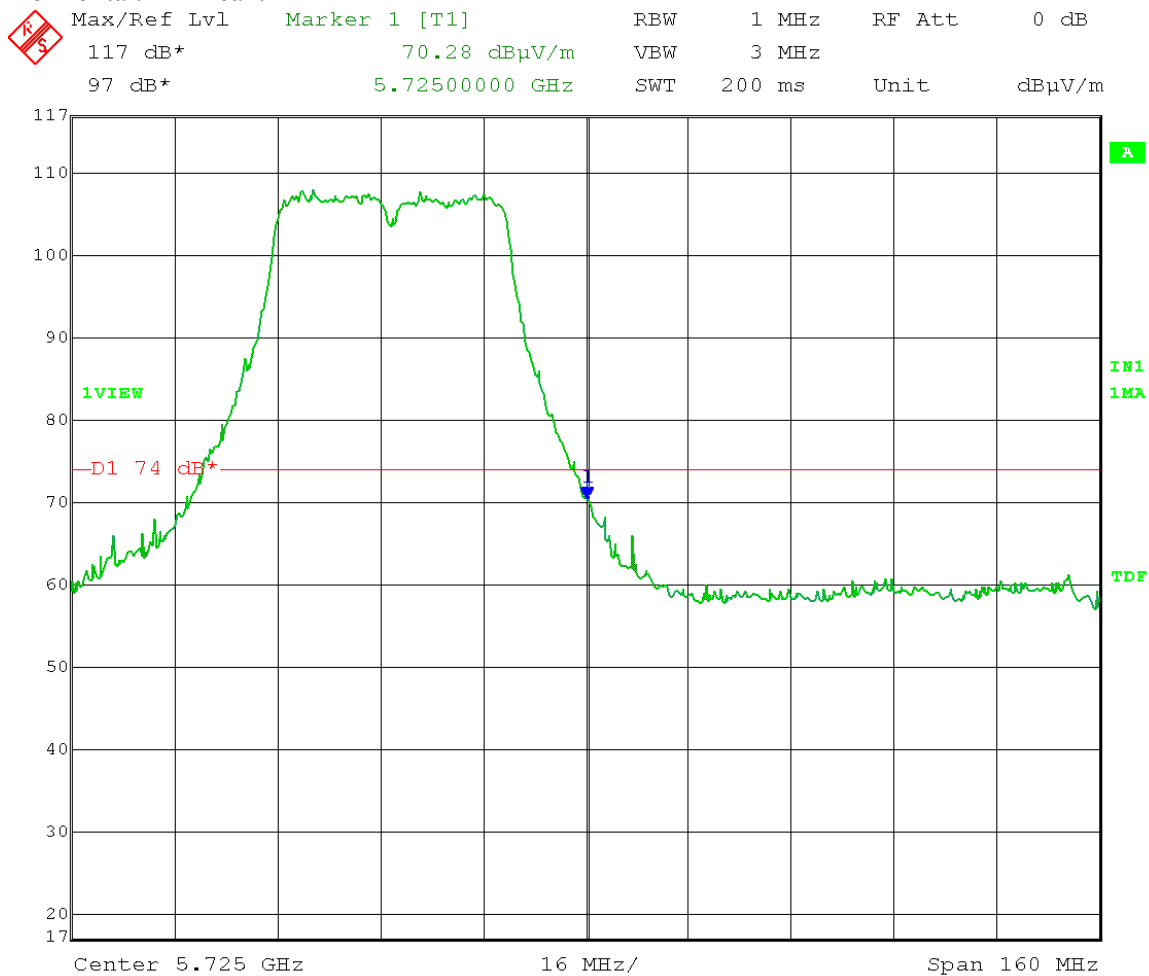
Horizontal: Average:



Date: 14.APR.2014 12:47:32

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

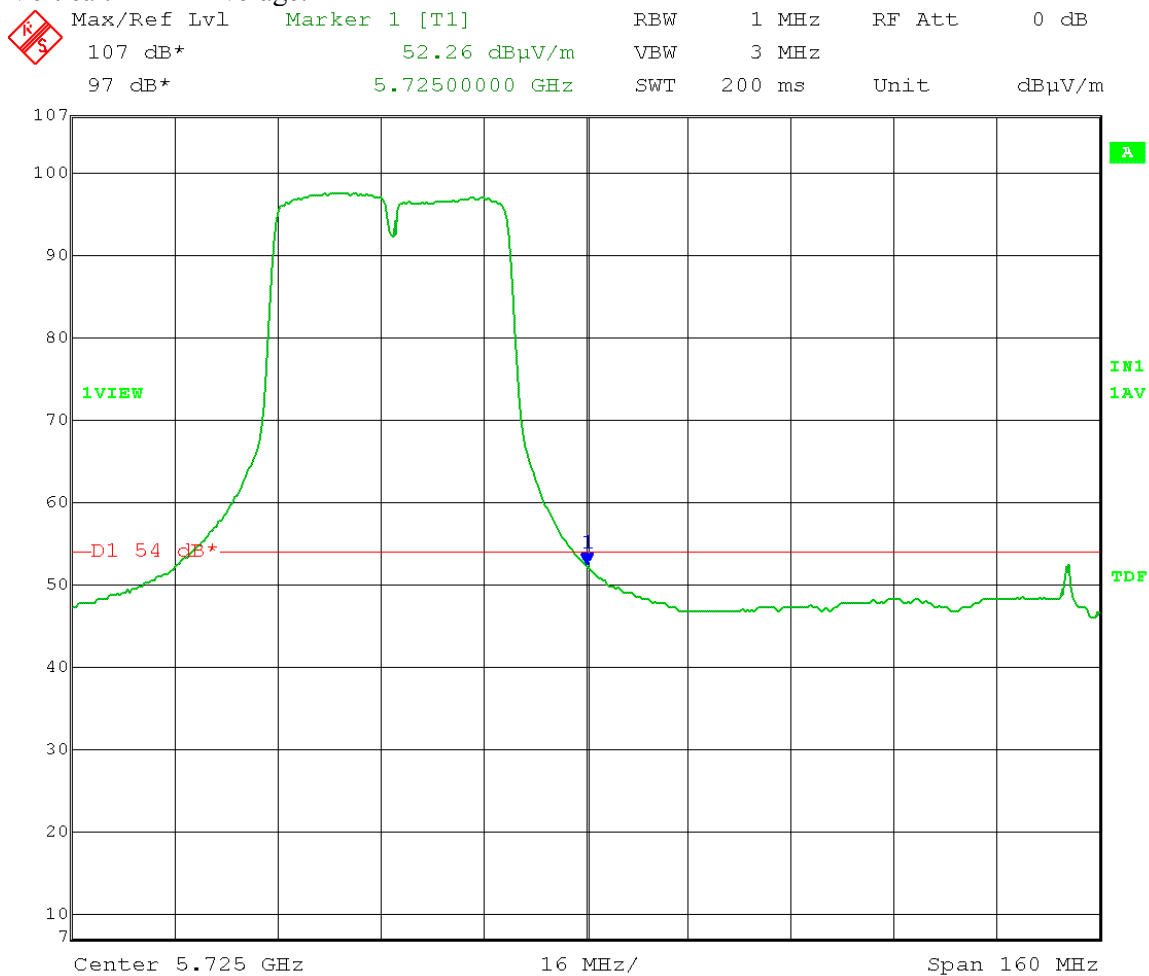
Horizontal: Peak:



Date: 14.APR.2014 12:48:11

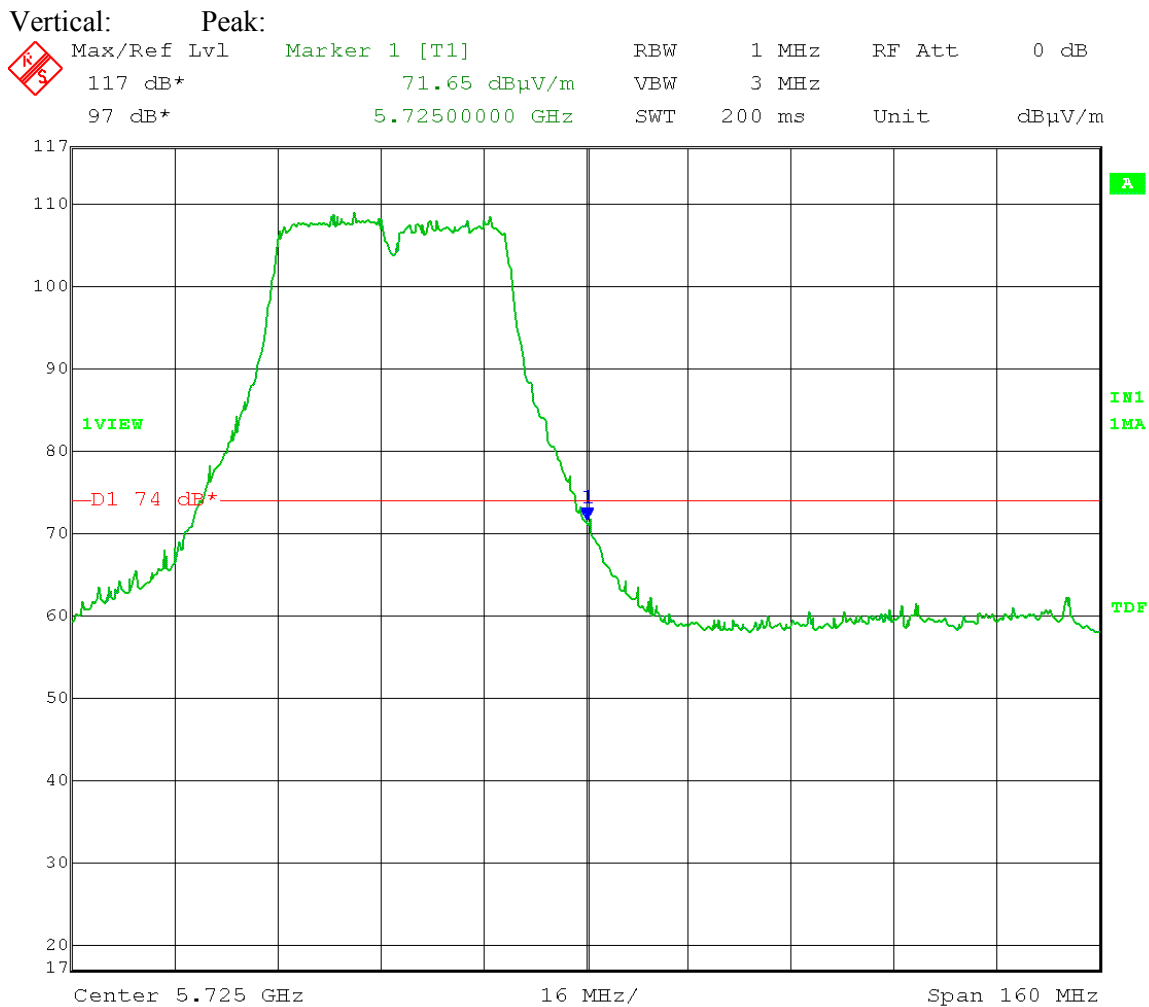
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 54 dBμV/m AVERAGE at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”

Vertical: Average:



Date: 14.APR.2014 12:53:06

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Upper Operating Band-Edge Compliance - Radiated
 (FCC 15.407(b)(3) - With 30 dBi Dish antenna)
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Operating Band-Edge Frequency: 5.725 GHz
 Part 15.209 limit: 74 dBμV/m PEAK at 3 meters
 Per 789033 D01 General UNII Test Procedures v01r03, section H(2)(c)(i): “an
 out-of-band emission that complies with both the average and peak limits of
 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak
 emission limit.”



Date: 14.APR.2014 12:54:22



166 South Carter, Genoa City, WI 53128

Company:	Cambium Networks
Models Tested:	C058900P122A
Report Number:	19894
DLS Project:	6493

Appendix B – Measurement Data

B4.0 Unwanted Emission Levels – Radiated with antenna connected

Rule Section: Sections 15.407(b)(3) and 15.407(b)(6)

Test Procedure: FCC KDB 789033 D01 General UNII Test Procedures v01r03 – *Guidance for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E*

Section H(1) – Unwanted emissions in the restricted bands
Section H(2) – Unwanted emissions that fall outside of the restricted bands
Section H(3) – General Requirements for Unwanted Emissions Measurements

Below 1000 MHz

Detector = quasi-peak

Peak measurements above 1000 MHz

RBW = 1 MHz

VBW $\geq$ 3 MHz

Detector = peak

Sweep time = auto

Trace mode = max hold

Average measurements above 1000 MHz

RBW = 1 MHz

VBW $\geq$ 3 MHz

Detector = AVERAGE

Sweep time = auto

Trace mode = max hold

Limits: Outside restricted bands: Peak EIRP shall not exceed -27 dBm/MHz
Inside restricted bands: Peak and Average limits of FCC Part 15.209

Per Section H(2)(c)(i): “an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.”

Results: Passed

Notes: Both transmit chains active during test.

Measurements were taken for MCS15 OFDM modulation at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously with 100% duty cycle.

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.2, 5.4, 5.7 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 32% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Restricted Band emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 28.5; with 30 dBi Dish & 23 dBi Panel antennas
Date: 03-31-2014

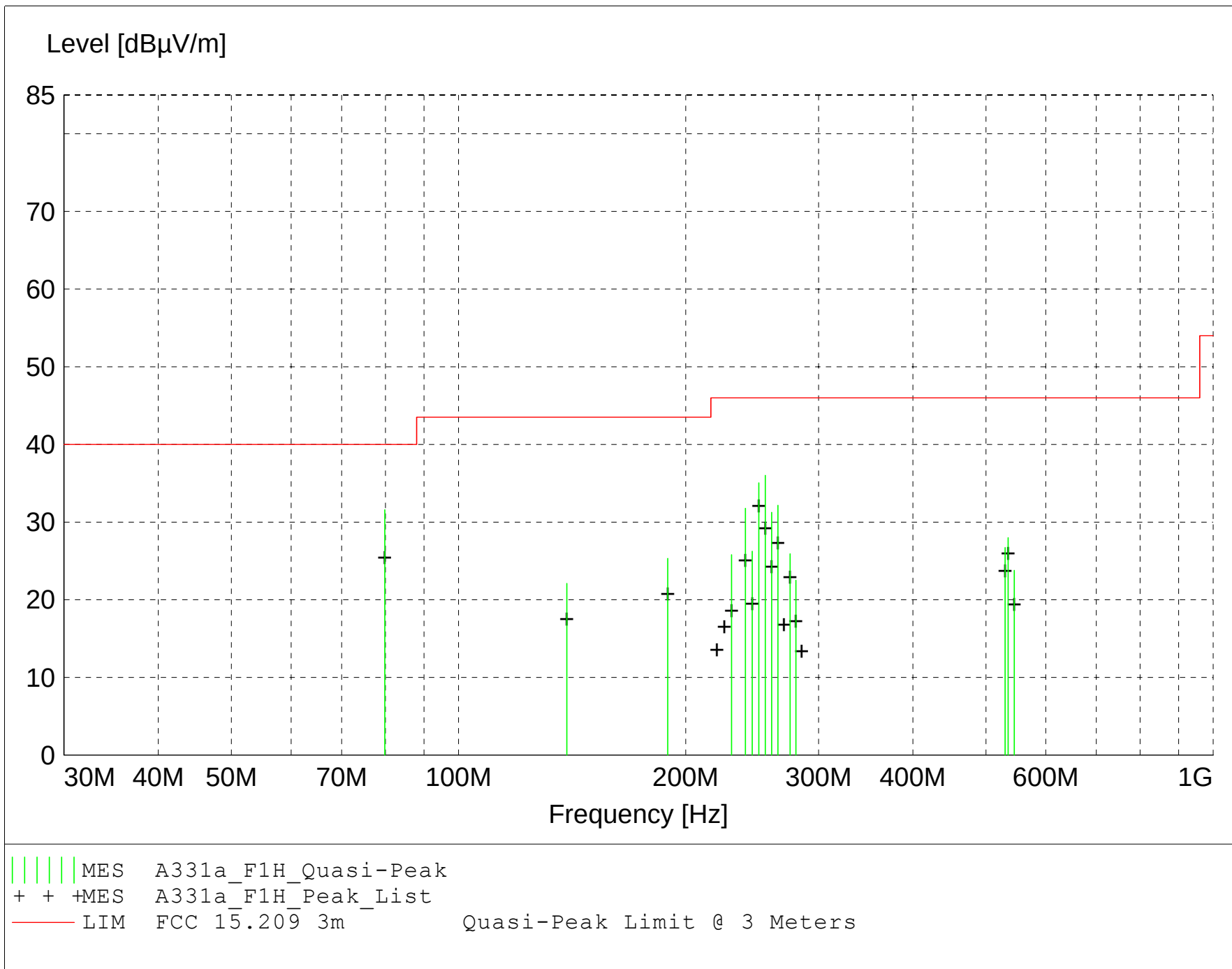
TEXT: "Horz 3 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization

Equations: $\text{Total Level (dB}\mu\text{V/m)} = \text{Level (dB}\mu\text{V)} + \text{System Loss (dB)} + \text{Antenna Factor (dB}\mu\text{V/m)}$
 $\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Total Level (dB}\mu\text{V/m)}$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



MEASUREMENT RESULT: "A331a_F1H_Final"

3/31/2014 11:23AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
79.850000	48.80	6.07	-23.3	31.6	40.0	8.4	2.70	90	QUASI-PEAK	None
254.970000	45.05	12.70	-21.7	36.0	46.0	10.0	3.20	170	QUASI-PEAK	None
249.980000	44.41	12.40	-21.8	35.1	46.0	10.9	1.20	315	QUASI-PEAK	None
264.970000	40.52	13.20	-21.6	32.2	46.0	13.8	2.50	160	QUASI-PEAK	None
239.980000	41.53	12.00	-21.7	31.8	46.0	14.2	3.00	270	QUASI-PEAK	None
259.970000	39.98	13.00	-21.7	31.3	46.0	14.7	2.60	170	QUASI-PEAK	None
534.970000	29.27	18.40	-19.7	28.0	46.0	18.0	1.00	260	QUASI-PEAK	None
189.325000	30.25	17.33	-22.3	25.3	43.5	18.2	3.20	225	QUASI-PEAK	None
529.970000	28.13	18.40	-19.8	26.7	46.0	19.3	1.00	270	QUASI-PEAK	None
244.970000	35.80	12.20	-21.7	26.3	46.0	19.7	3.00	270	QUASI-PEAK	None
274.970000	34.09	13.40	-21.6	25.9	46.0	20.1	2.00	160	QUASI-PEAK	None
229.970000	36.28	11.40	-21.9	25.8	46.0	20.2	3.10	90	QUASI-PEAK	None
139.165000	32.55	12.28	-22.7	22.1	43.5	21.4	1.90	270	QUASI-PEAK	None
544.970000	25.34	18.20	-19.8	23.8	46.0	22.2	1.10	265	QUASI-PEAK	None
279.970000	30.54	13.50	-21.5	22.5	46.0	23.5	2.00	170	QUASI-PEAK	None

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.2, 5.4, 5.7 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 32% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Restricted Band emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 28.5; with 30 dBi Dish & 23 dBi Panel antennas
Date: 03-31-2014

TEXT: "Vert 3 meters"

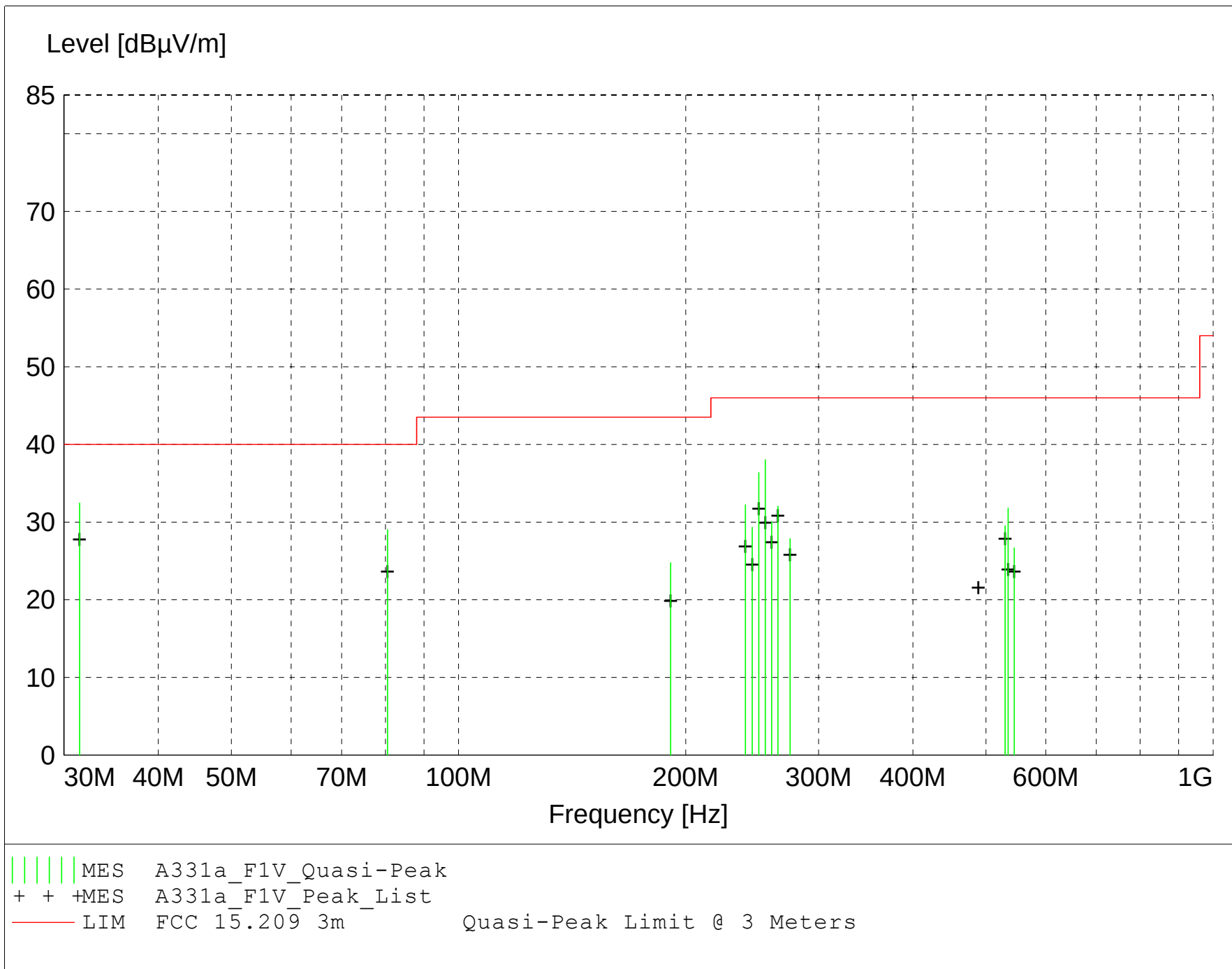
Short Description: Test Set-up

Test Set-up: EUT Measured at 3 Meters with VERTICAL Antenna Polarization

Sample Equations:
$$\begin{array}{rclclcl} \text{Total Level (dB}\mu\text{V/m)} & = & \text{Level (dB}\mu\text{V)} & + & \text{System Loss (dB)} & + & \text{Antenna Factor (dB}\mu\text{V/m)} \\ 24.6 & & = 35.51 & & + (-22.1) & & + 11.20 \end{array}$$

$$\begin{array}{rclcl} \text{Margin (dB)} & = & \text{Limit (dB}\mu\text{V/m)} & - & \text{Total Level (dB}\mu\text{V/m)} \\ 15.4 & = & 40 & - & 24.6 \end{array}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
 | Final maximized level using Quasi-Peak detector
 X Final maximized level using Average detector
 # Final maximized level using Peak detector



MEASUREMENT RESULT: "A331a_F1V_Final"

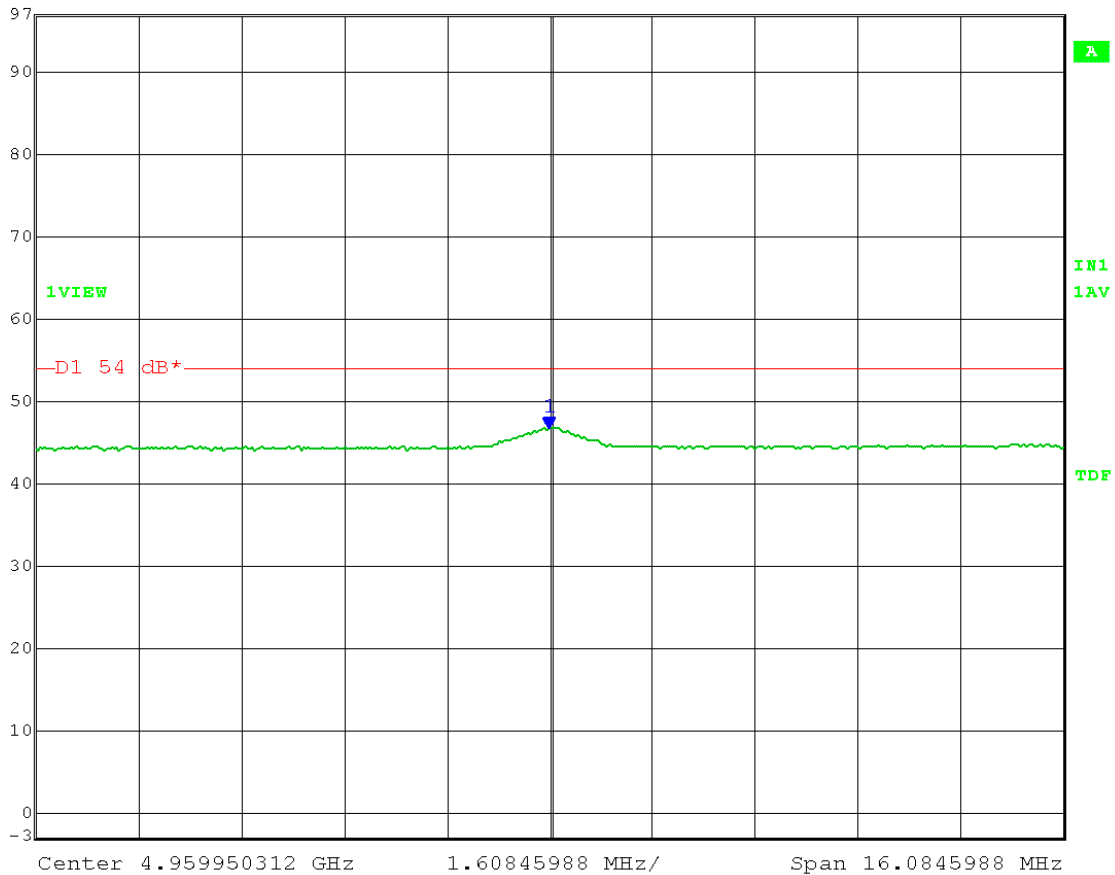
3/31/2014 11:12AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
31.470000	45.34	11.25	-24.1	32.4	40.0	7.6	1.00	350	QUASI-PEAK	None
254.980000	47.06	12.70	-21.7	38.0	46.0	8.0	1.50	180	QUASI-PEAK	None
249.980000	45.74	12.40	-21.8	36.4	46.0	9.6	1.60	340	QUASI-PEAK	None
80.525000	46.15	6.15	-23.3	29.0	40.0	11.0	1.00	315	QUASI-PEAK	None
239.970000	41.97	12.00	-21.7	32.2	46.0	13.8	1.60	330	QUASI-PEAK	None
264.970000	40.39	13.20	-21.6	32.0	46.0	14.0	1.30	180	QUASI-PEAK	None
534.970000	33.09	18.40	-19.7	31.8	46.0	14.2	1.30	225	QUASI-PEAK	None
259.980000	38.79	13.00	-21.7	30.1	46.0	15.9	1.50	180	QUASI-PEAK	None
529.970000	30.92	18.40	-19.8	29.5	46.0	16.5	2.00	225	QUASI-PEAK	None
244.970000	38.87	12.20	-21.7	29.3	46.0	16.7	1.60	340	QUASI-PEAK	None
274.970000	36.05	13.40	-21.6	27.9	46.0	18.1	1.30	180	QUASI-PEAK	None
191.025000	29.72	17.30	-22.2	24.8	43.5	18.7	1.00	170	QUASI-PEAK	None
544.970000	28.24	18.20	-19.8	26.7	46.0	19.3	1.90	225	QUASI-PEAK	None

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5495 MHz
Output power setting: 8.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	46.68 dB μ V/m	VBW	3 MHz		
	87 dB*	4.95993419 GHz	SWT	200 ms	Unit	dB μ V/m

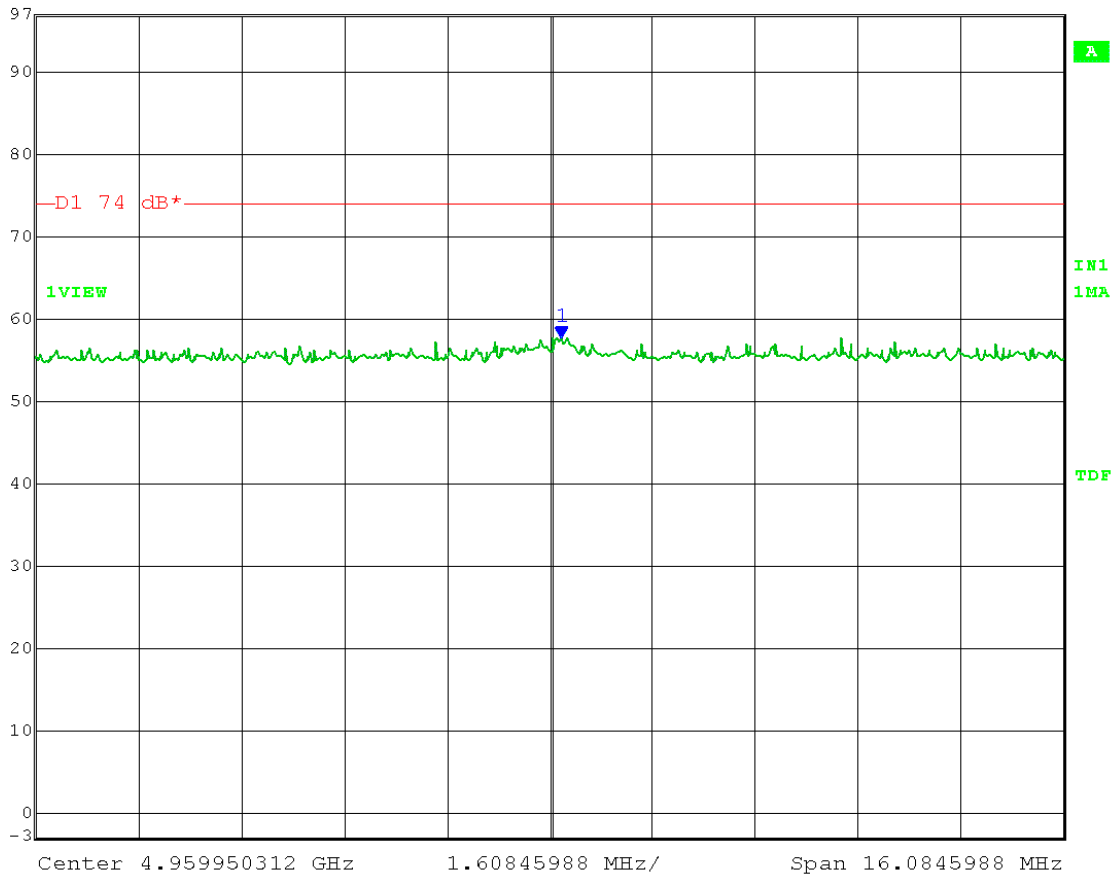


Date: 11.APR.2014 09:16:01

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5495 MHz
Output power setting: 8.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Horizontal: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
		97 dB*	57.72 dB μ V/m	VBW	3 MHz		
		87 dB*	4.96012760 GHz	SWT	200 ms	Unit	dB μ V/m

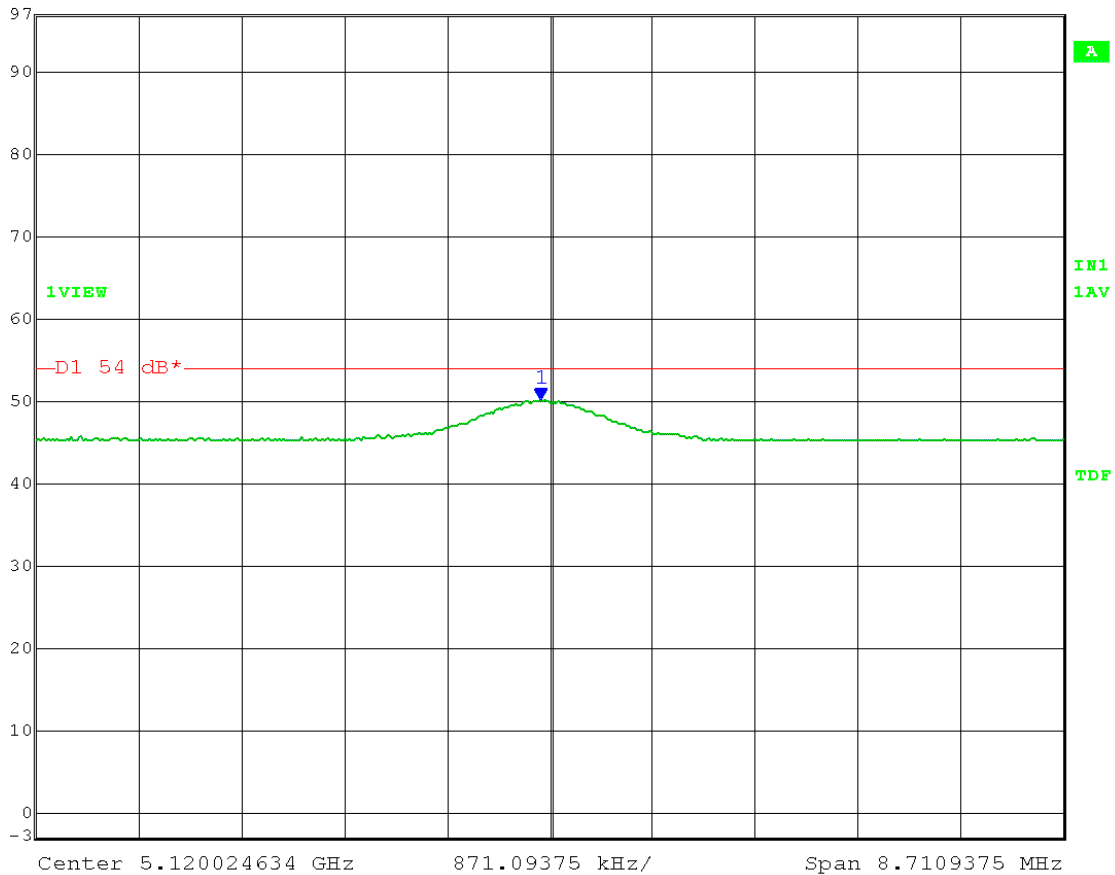


Date: 11.APR.2014 09:16:26

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 8.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	50.23 dB μ V/m	VBW	3 MHz		
	87 dB*	5.11994608 GHz	SWT	200 ms	Unit	dB μ V/m

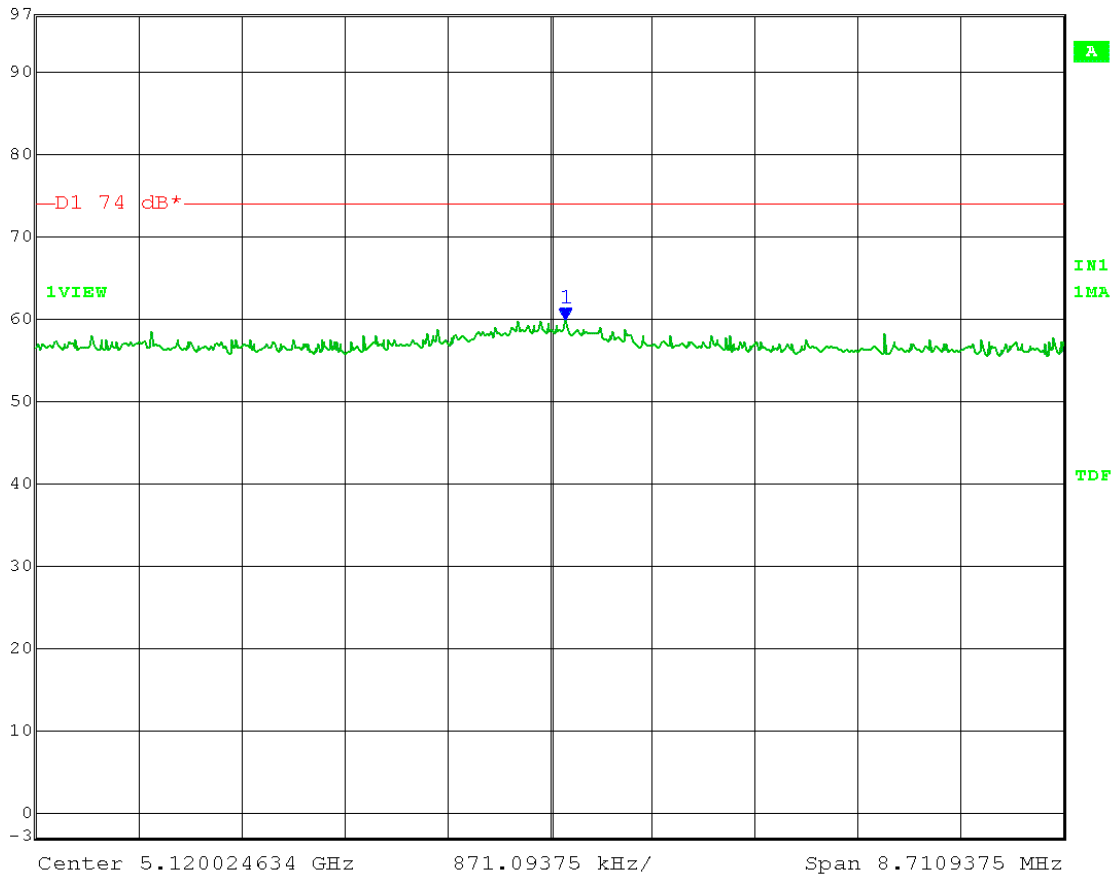


Date: 11.APR.2014 08:32:04

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5495 MHz
Output power setting: 8.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Vertical: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		59.87 dB μ V/m	VBW	3 MHz		
	87 dB*		5.12015556 GHz	SWT	200 ms	Unit	dB μ V/m

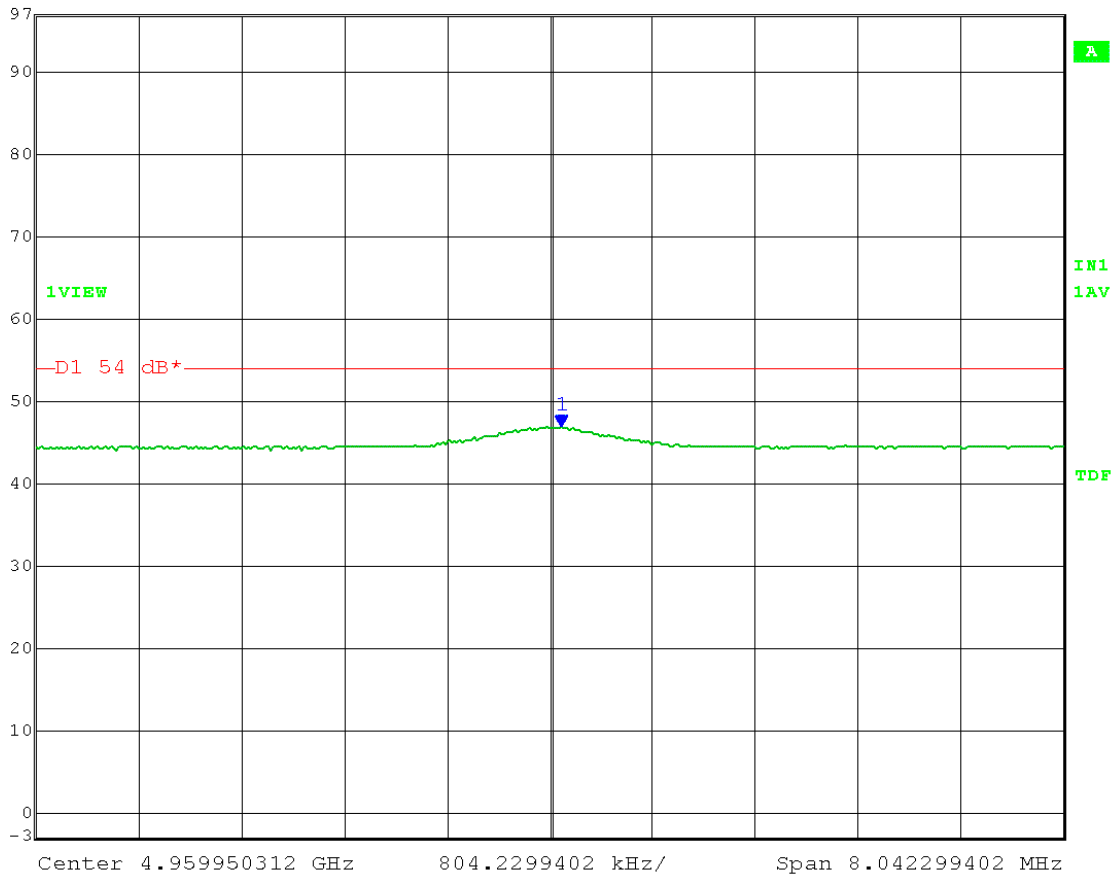


Date: 11.APR.2014 08:32:40

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Mid Channel: Frequency – 5575 MHz
Output power setting: 9.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	46.83 dB μ V/m	VBW	3 MHz		
	87 dB*	4.96003895 GHz	SWT	200 ms	Unit	dB μ V/m

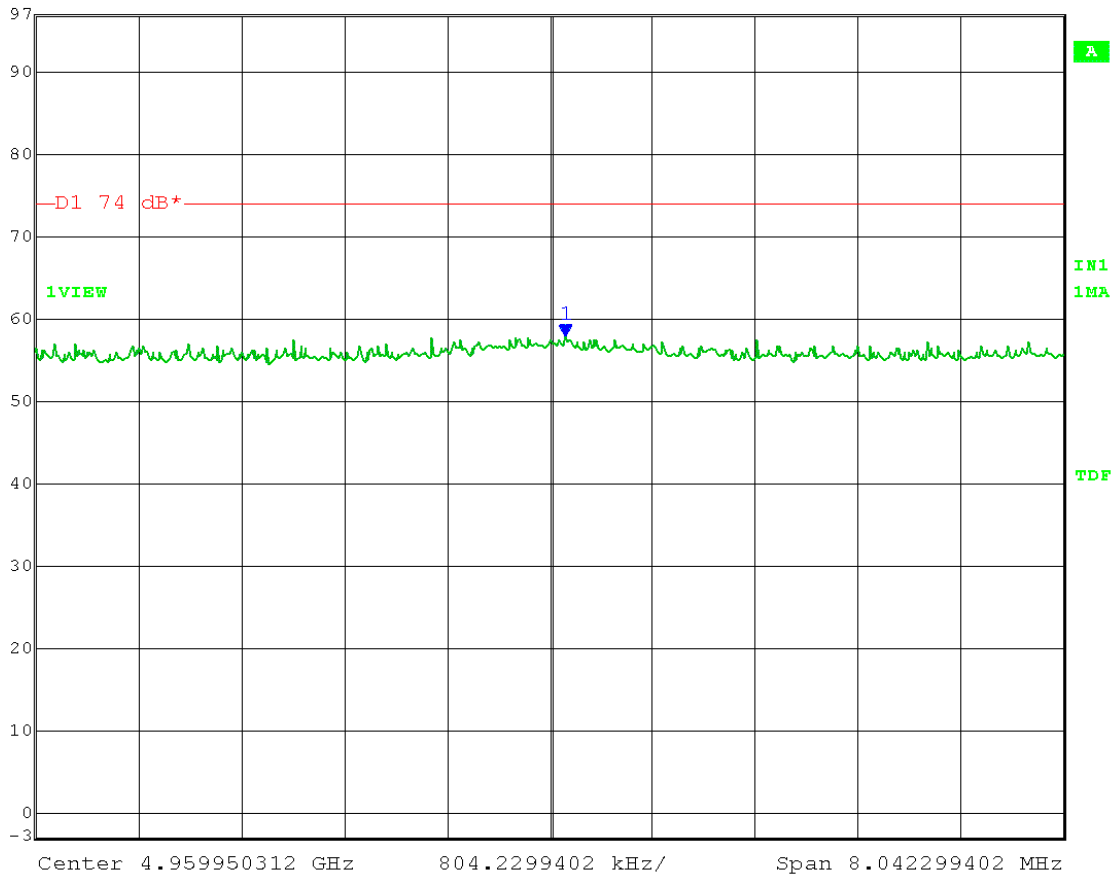


Date: 11.APR.2014 09:18:10

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Mid Channel: Frequency – 5575 MHz
Output power setting: 9.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Horizontal: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		57.84 dB μ V/m	VBW	3 MHz		
	87 dB*		4.96007119 GHz	SWT	200 ms	Unit	dB μ V/m

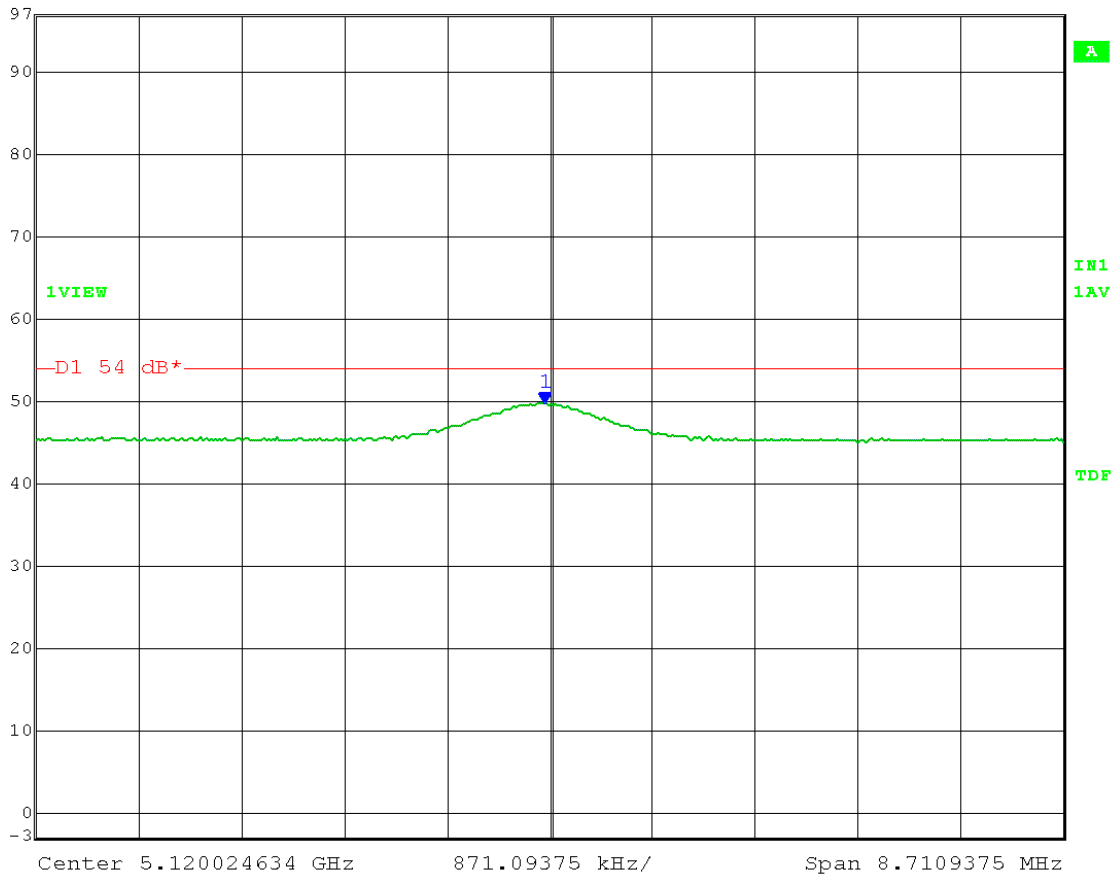


Date: 11.APR.2014 09:18:33

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 9.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	49.57 dB μ V/m	VBW	3 MHz		
	87 dB*	5.11998099 GHz	SWT	200 ms	Unit	dB μ V/m

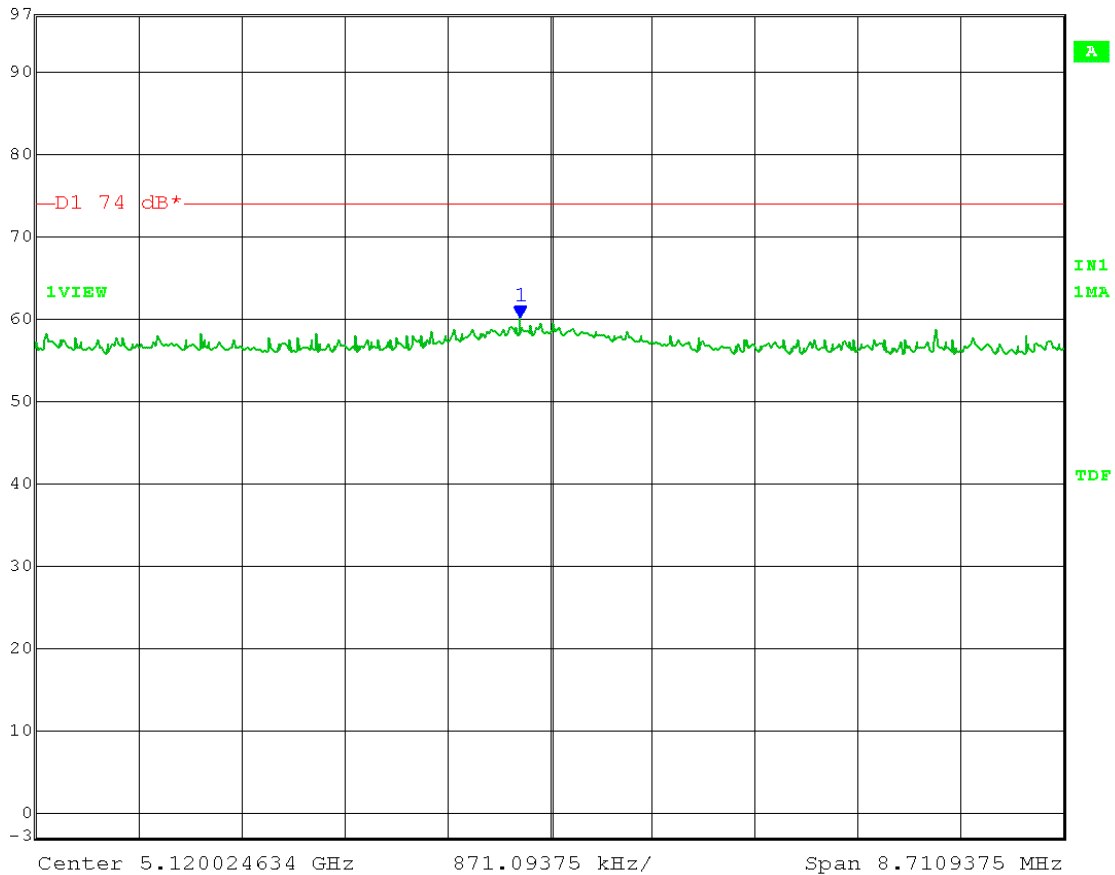


Date: 11.APR.2014 08:29:49

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 9.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Vertical: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	60.03 dB μ V/m	VBW	3 MHz		
	87 dB*	5.11977151 GHz	SWT	200 ms	Unit	dB μ V/m

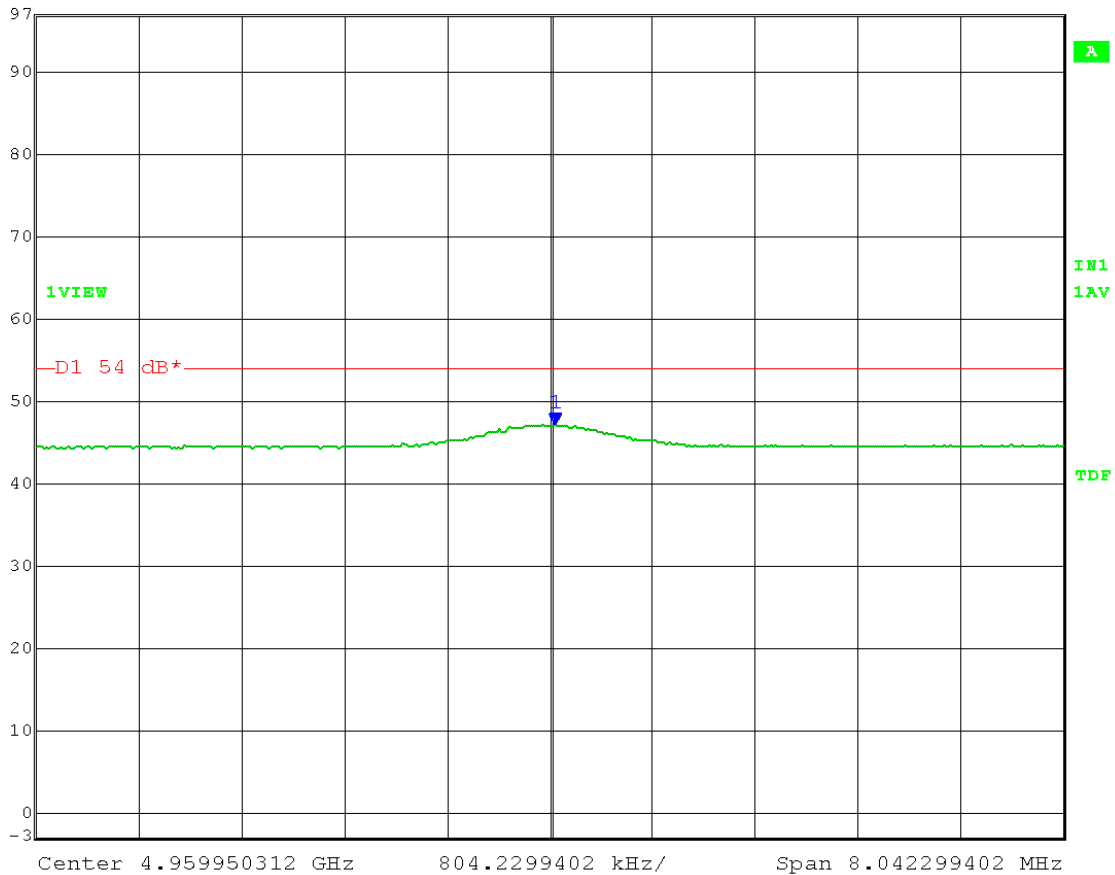


Date: 11.APR.2014 08:30:26

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: High Channel: Frequency – 5705 MHz
Output power setting: 9.5 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	47.12 dB μ V/m	VBW	3 MHz		
	87 dB*	4.95999060 GHz	SWT	200 ms	Unit	dB μ V/m

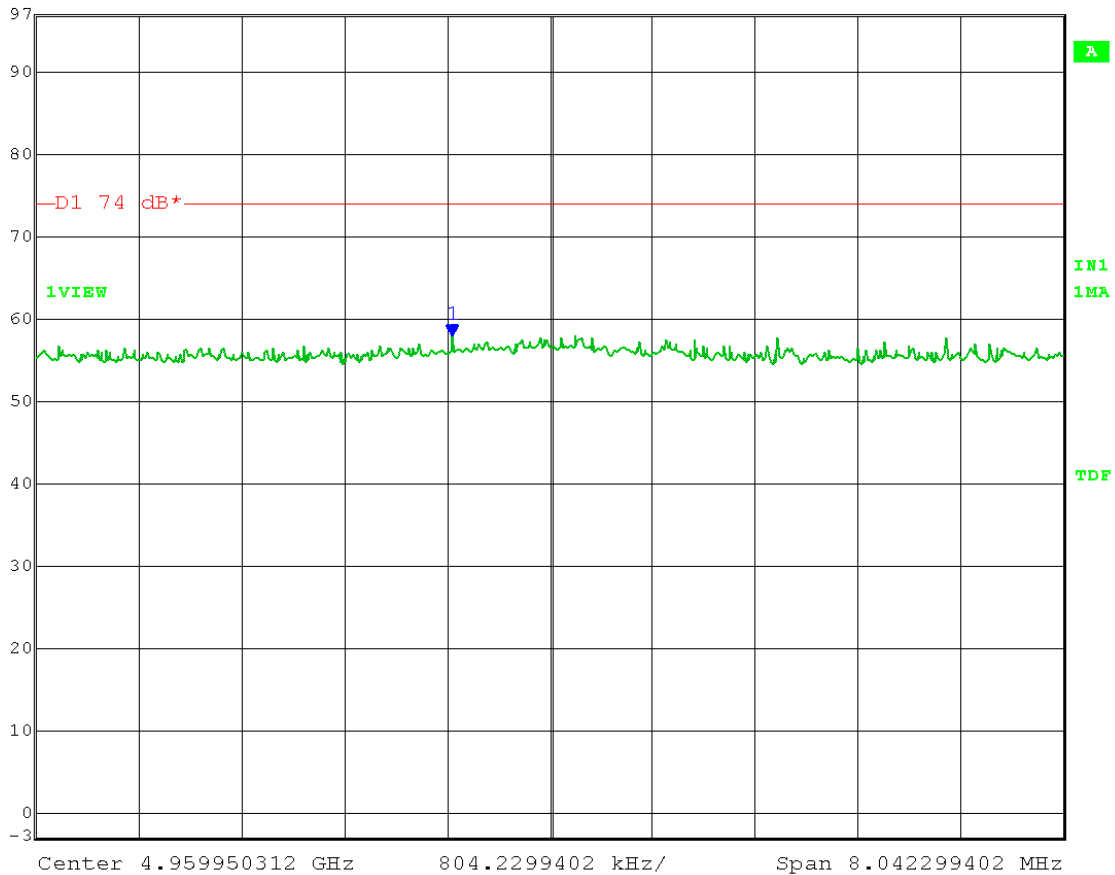


Date: 11.APR.2014 09:13:46

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: High Channel: Frequency – 5705 MHz
Output power setting: 9.5 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Horizontal: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		57.92 dB μ V/m	VBW	3 MHz		
	87 dB*		4.95918476 GHz	SWT	200 ms	Unit	dB μ V/m

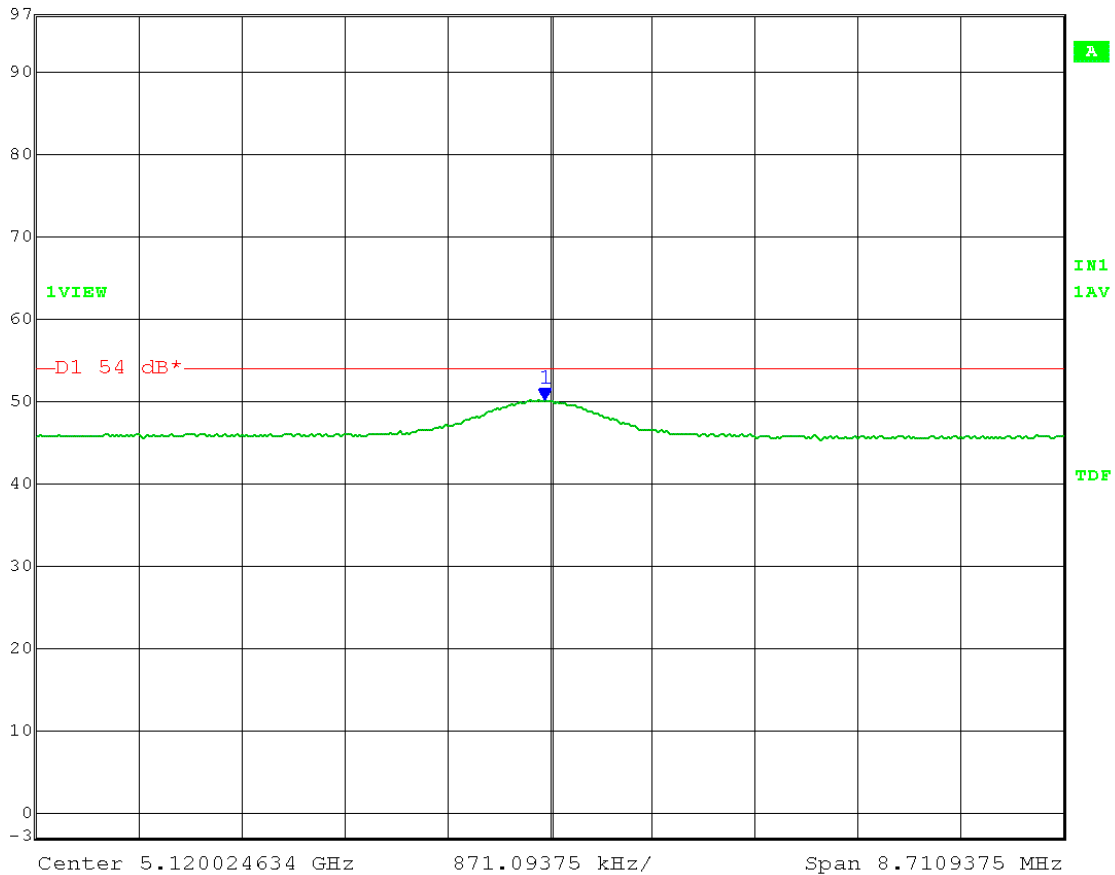


Date: 11.APR.2014 09:14:11

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: High Channel: Frequency – 5705 MHz
Output power setting: 9.5 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	50.02 dB μ V/m	VBW	3 MHz		
	87 dB*	5.11998099 GHz	SWT	200 ms	Unit	dB μ V/m

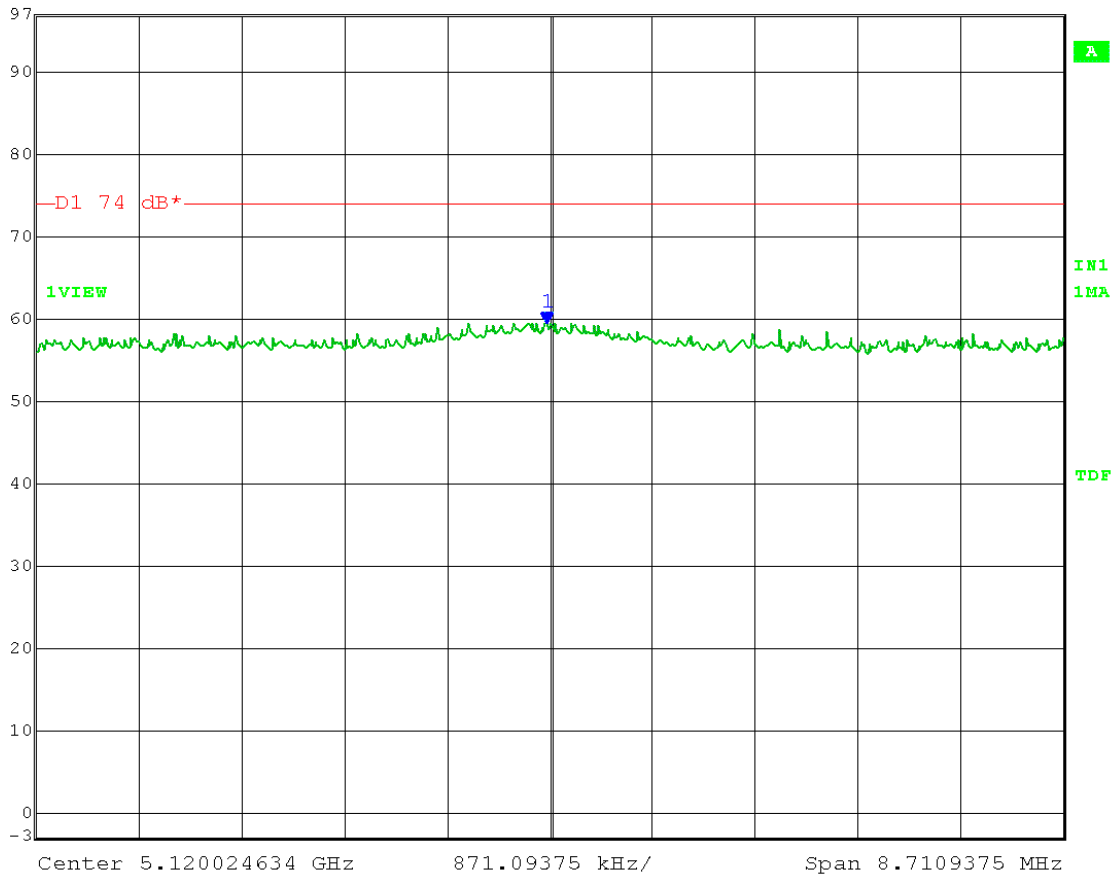


Date: 11.APR.2014 08:34:30

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 9.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Vertical: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
		97 dB*	59.49 dB μ V/m	VBW	3 MHz		
		87 dB*	5.11999845 GHz	SWT	200 ms	Unit	dB μ V/m

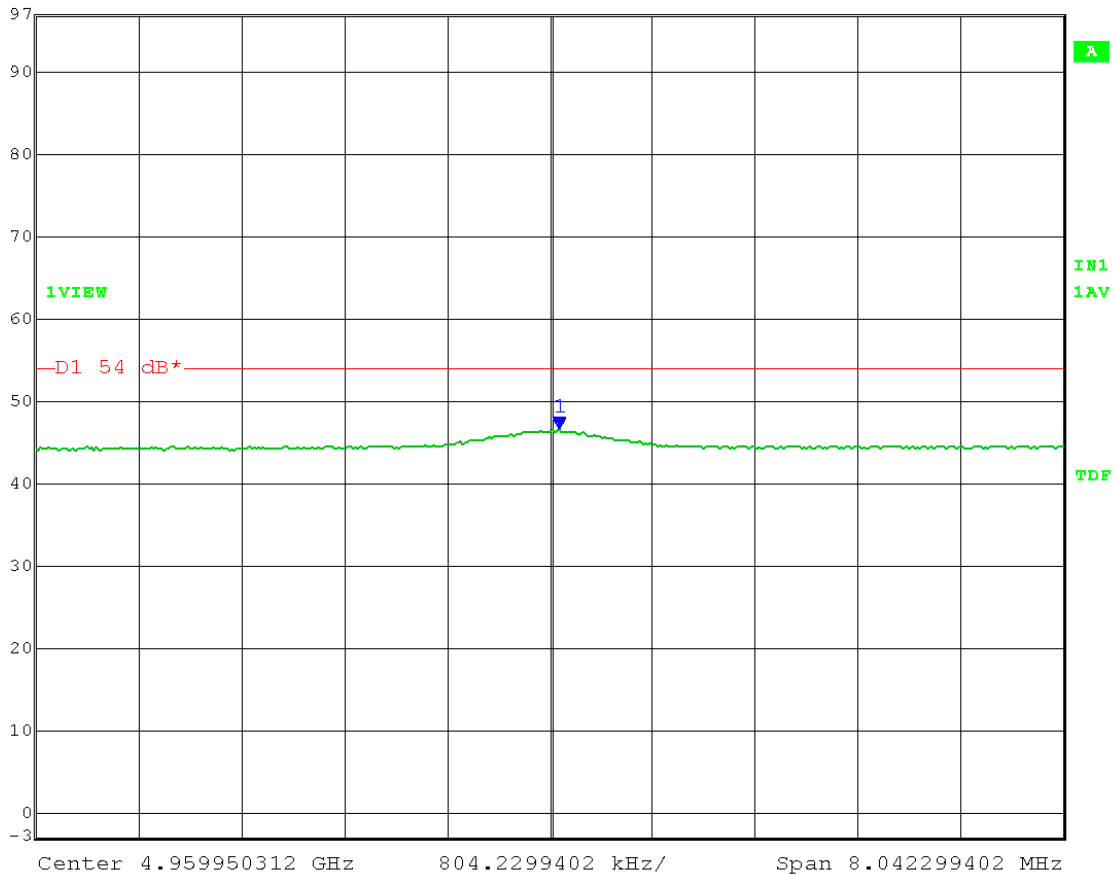


Date: 11.APR.2014 08:34:55

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5510 MHz
Output power setting: 7.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	46.53 dB μ V/m	VBW	3 MHz		
	87 dB*	4.96002284 GHz	SWT	200 ms	Unit	dB μ V/m

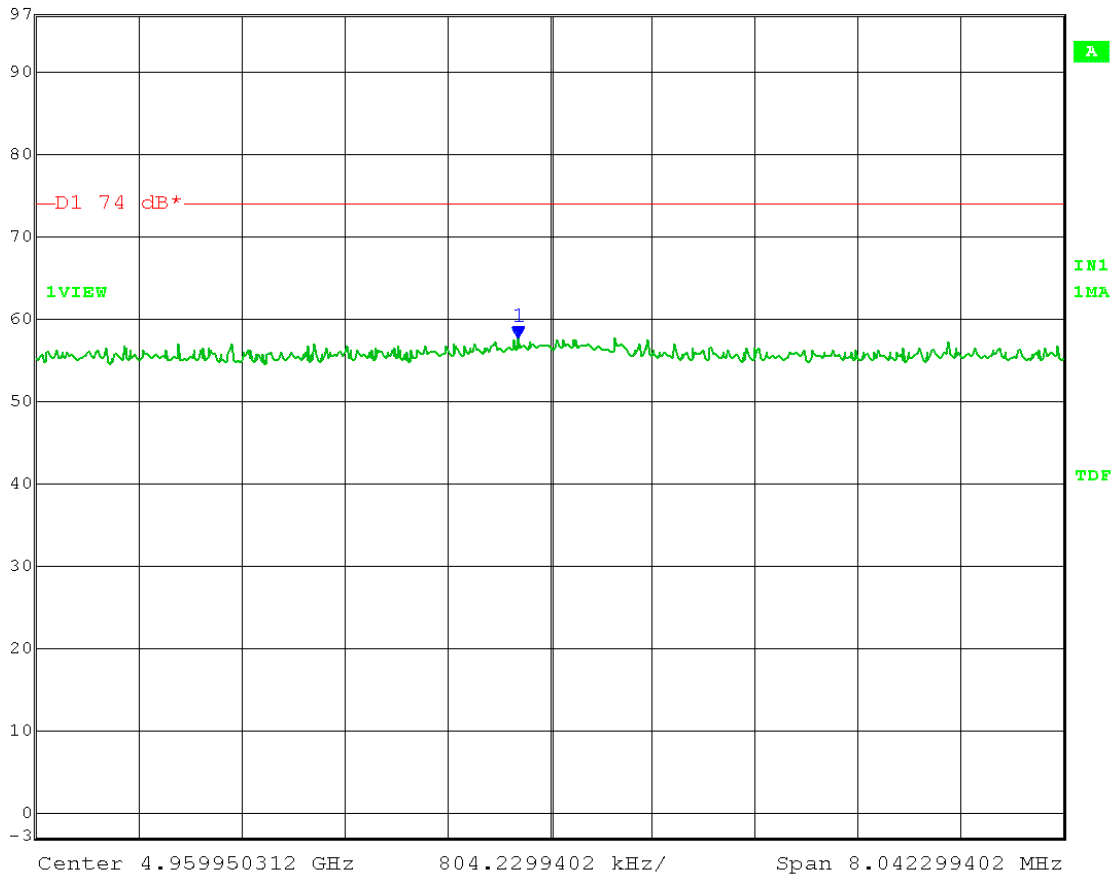


Date: 11.APR.2014 09:22:29

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 7.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Horizontal: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
		97 dB*	57.57 dB μ V/m	VBW	3 MHz		
	87 dB*	4.95970050 GHz	SWT	200 ms	Unit	dB μ V/m	

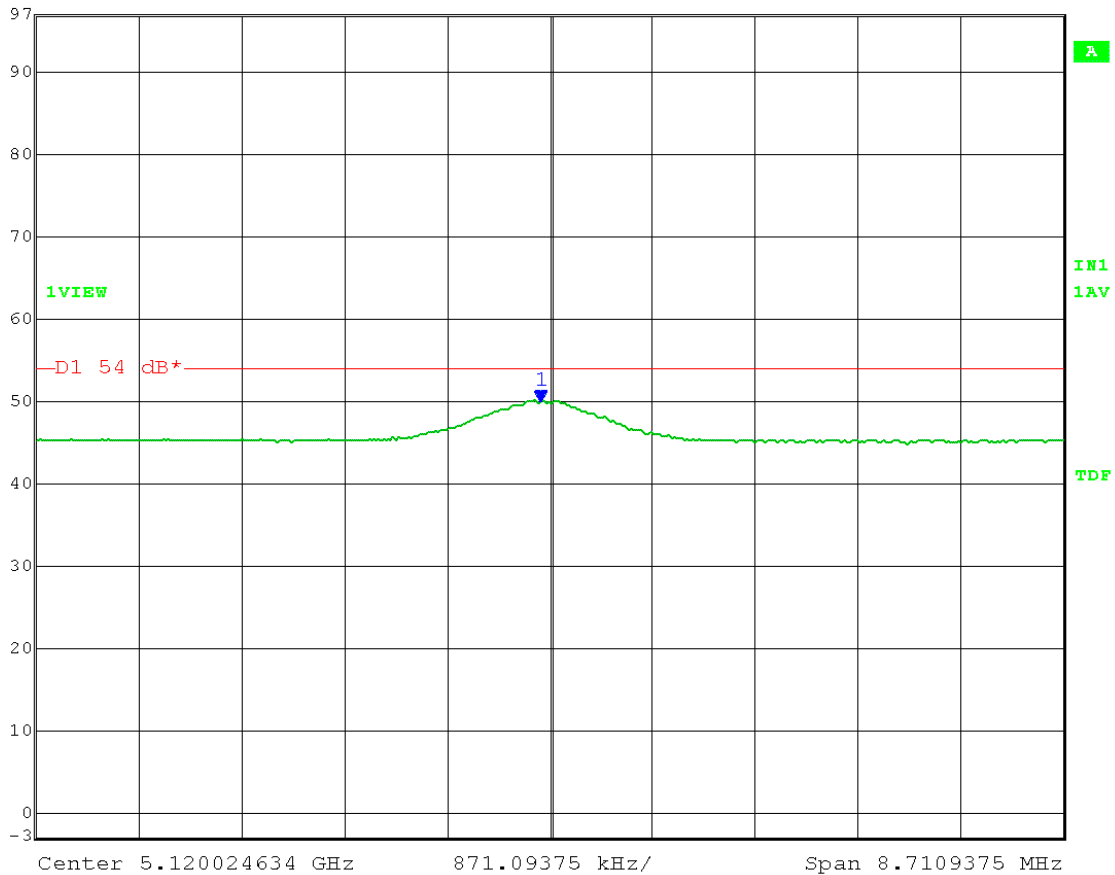


Date: 11.APR.2014 09:22:51

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5510 MHz
Output power setting: 7.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	49.91 dB μ V/m	VBW	3 MHz		
	87 dB*	5.11994608 GHz	SWT	200 ms	Unit	dB μ V/m

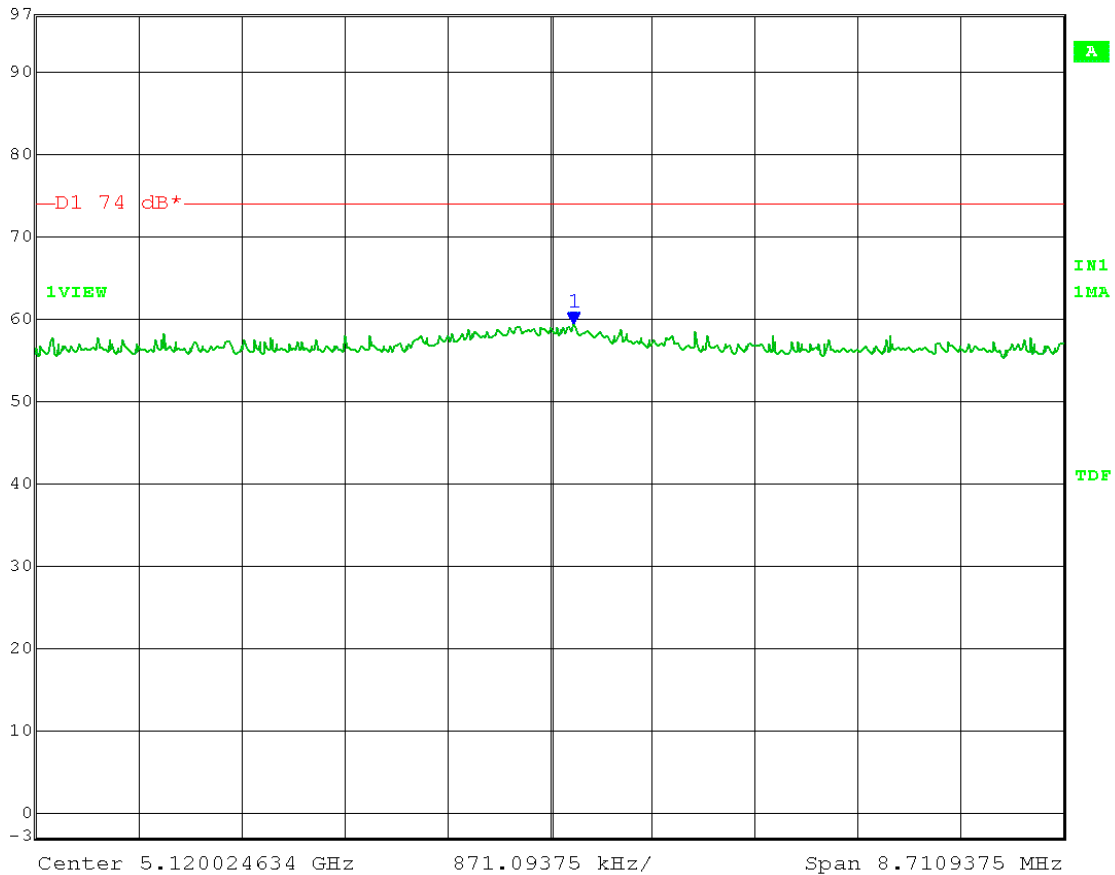


Date: 11.APR.2014 08:39:57

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5510 MHz
Output power setting: 7.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Vertical: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		59.46 dB μ V/m	VBW	3 MHz		
	87 dB*		5.12022539 GHz	SWT	200 ms	Unit	dB μ V/m

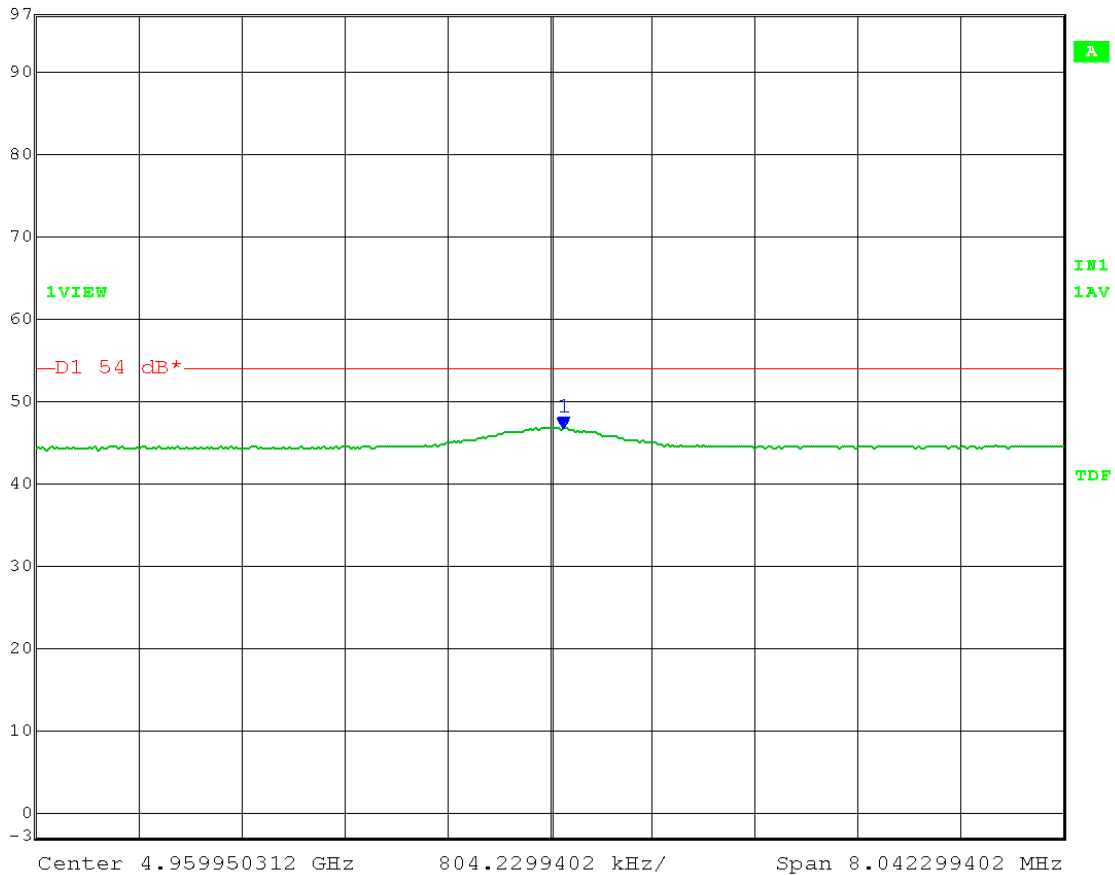


Date: 11.APR.2014 08:40:21

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Mid Channel: Frequency – 5575 MHz
Output power setting: 9.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	46.68 dB μ V/m	VBW	3 MHz		
	87 dB*	4.96005507 GHz	SWT	200 ms	Unit	dB μ V/m

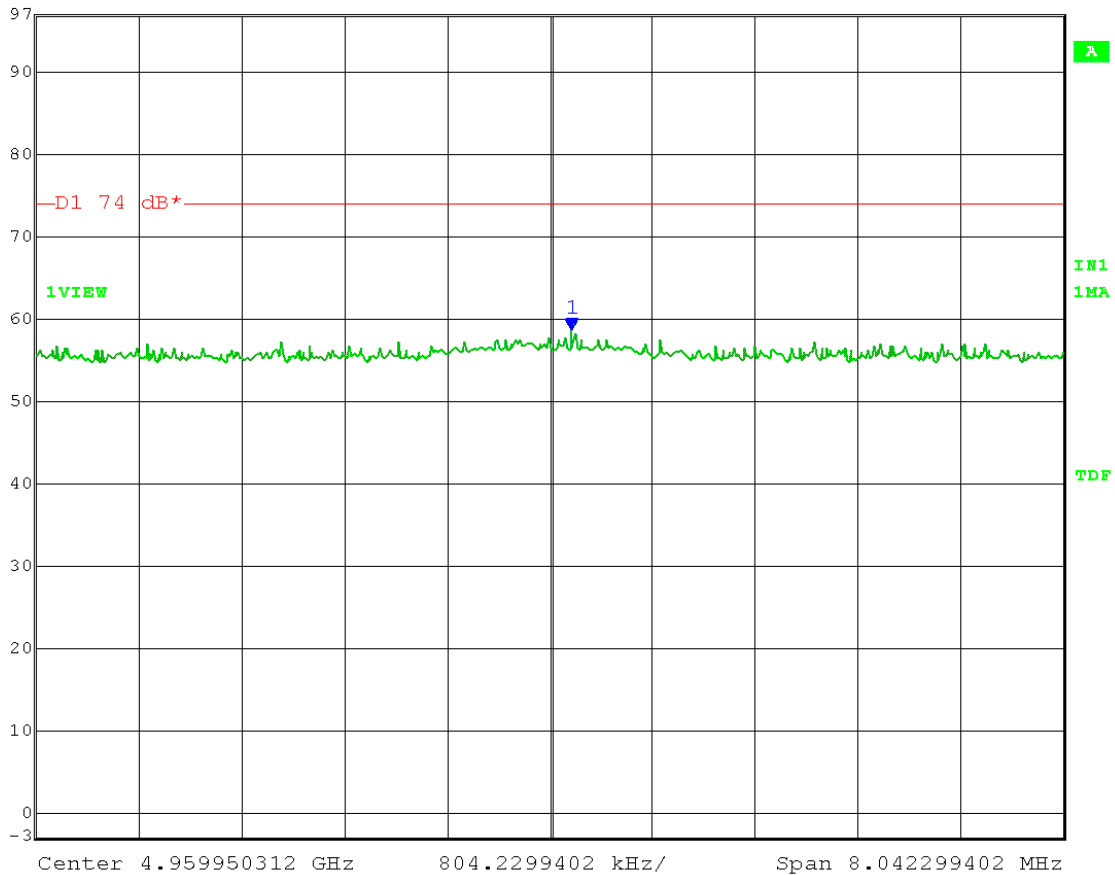


Date: 11.APR.2014 09:25:02

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Mid Channel: Frequency – 5575 MHz
Output power setting: 9.0 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Horizontal: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		58.60 dB μ V/m	VBW	3 MHz		
	87 dB*		4.96011954 GHz	SWT	200 ms	Unit	dB μ V/m

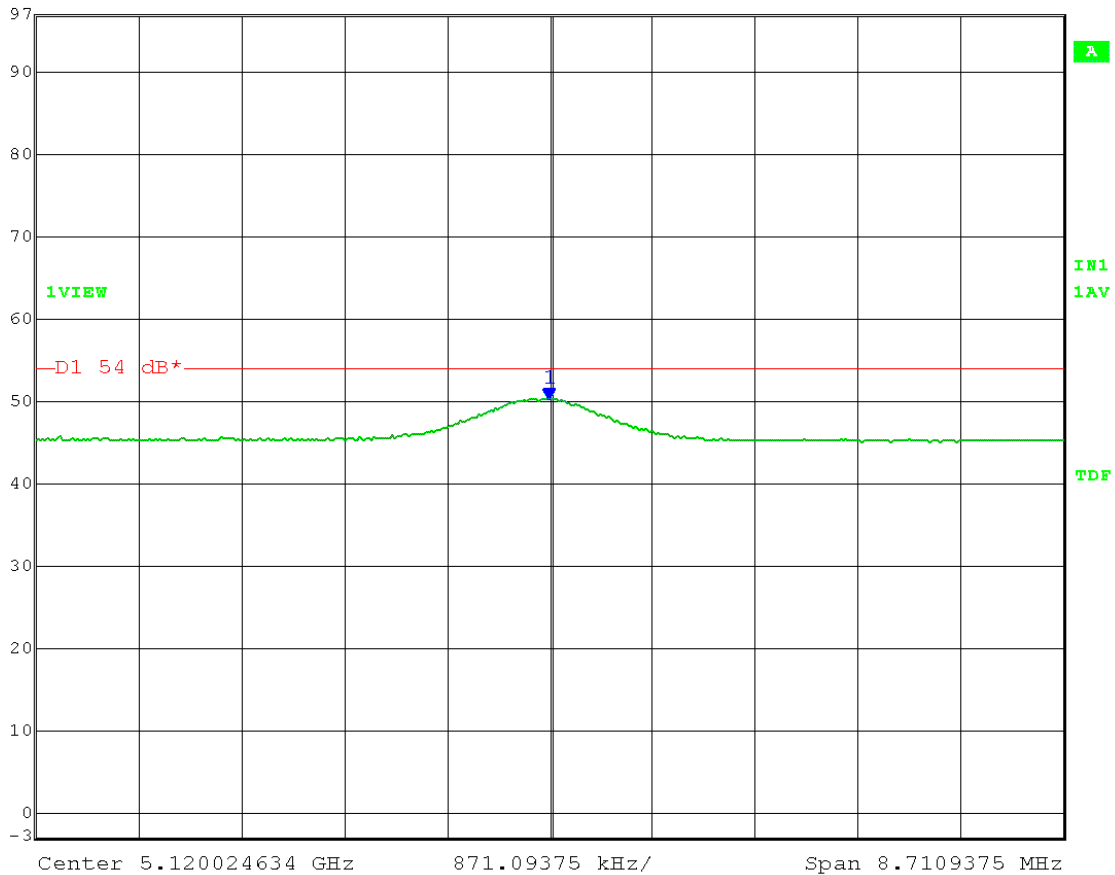


Date: 11.APR.2014 09:25:29

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 9.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	50.23 dB μ V/m	VBW	3 MHz		
	87 dB*	5.12001591 GHz	SWT	200 ms	Unit	dB μ V/m

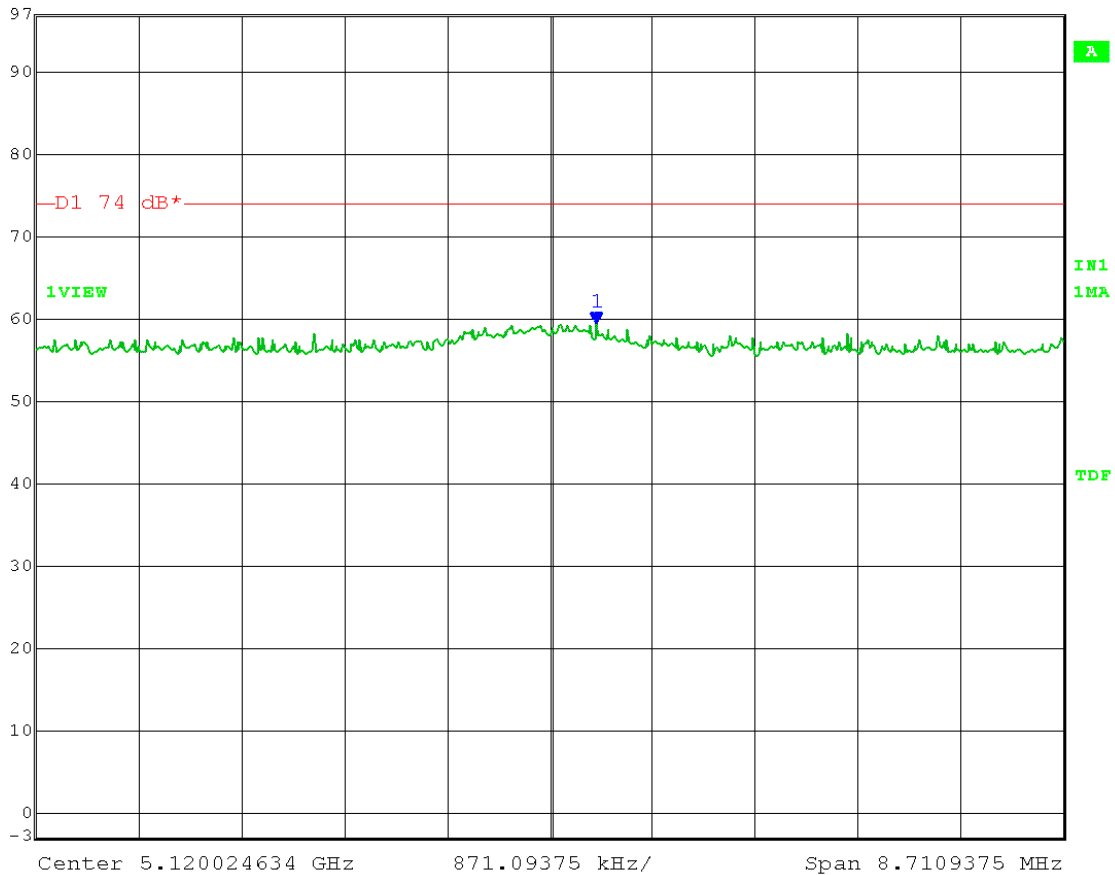


Date: 11.APR.2014 08:42:23

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 9.0 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Vertical: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	59.43 dB μ V/m	VBW	3 MHz		
	87 dB*	5.12041741 GHz	SWT	200 ms	Unit	dB μ V/m

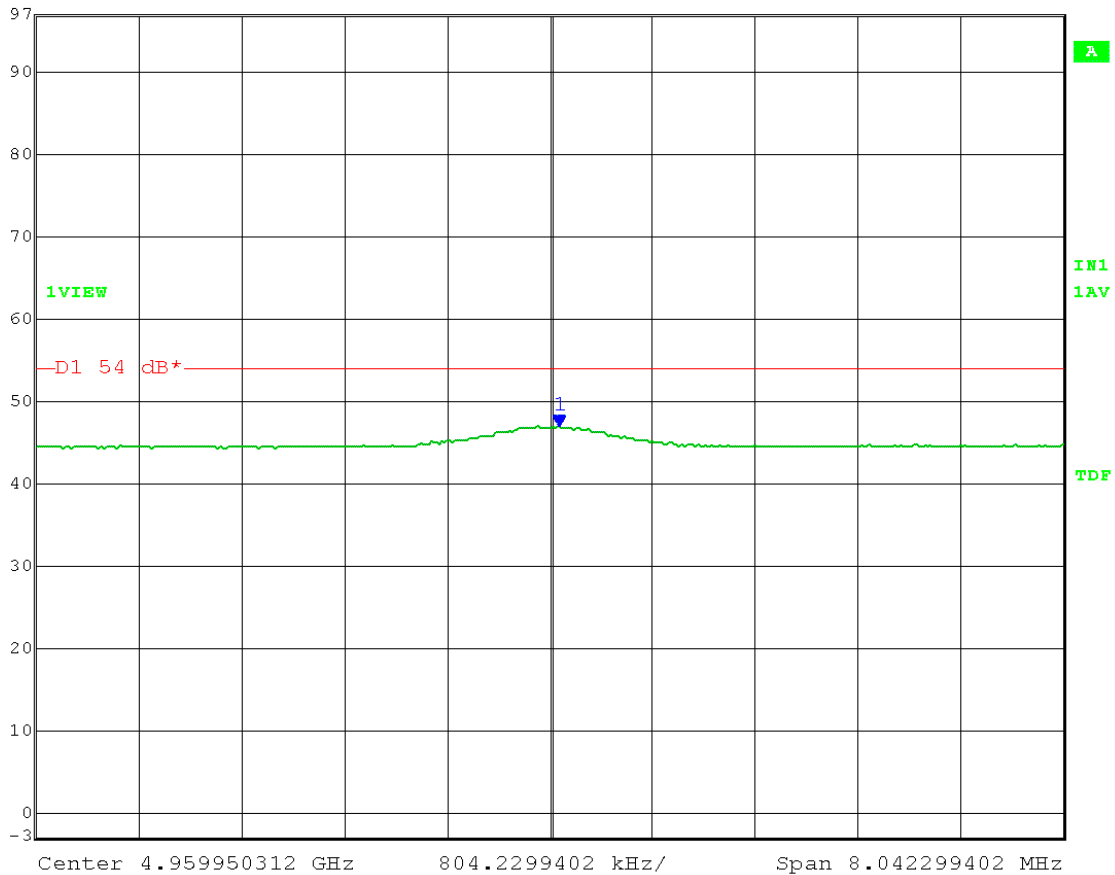


Date: 11.APR.2014 08:42:51

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: High Channel: Frequency – 5695 MHz
Output power setting: 7.5 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	46.83 dB μ V/m	VBW	3 MHz		
	87 dB*	4.96002284 GHz	SWT	200 ms	Unit	dB μ V/m

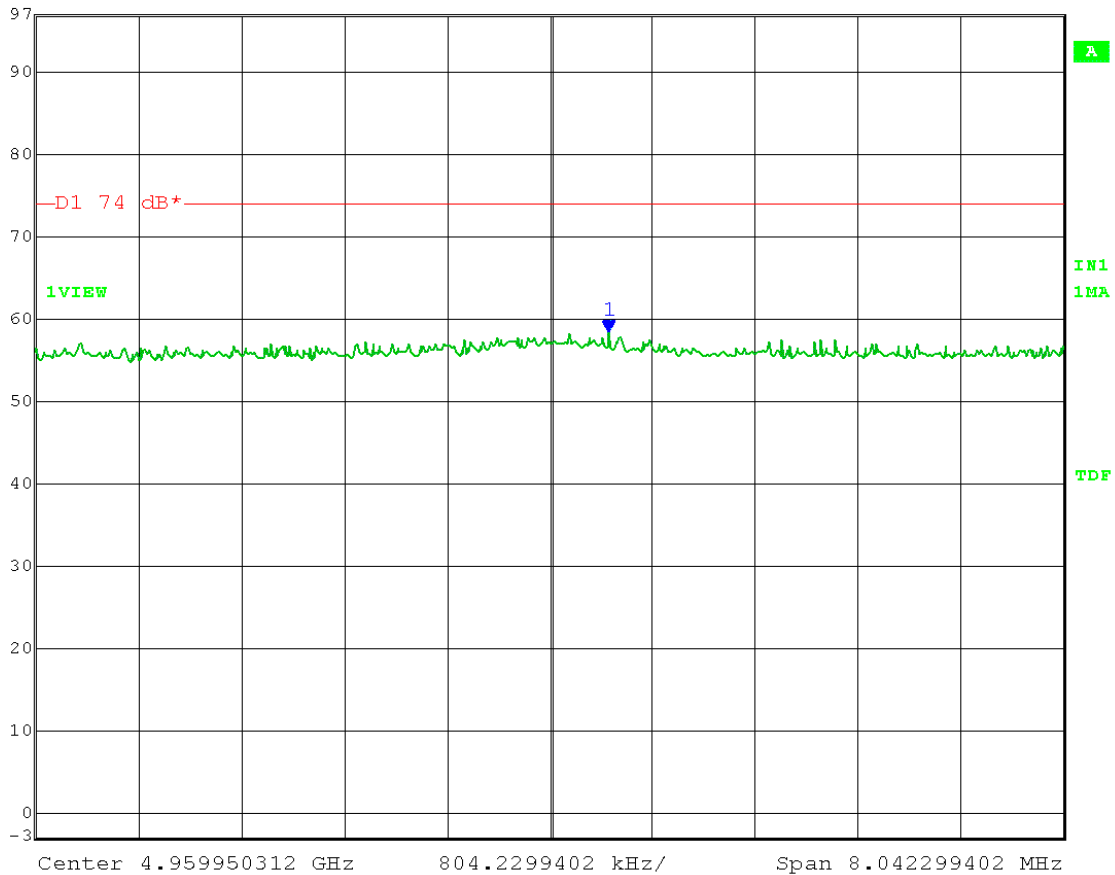


Date: 11.APR.2014 09:20:56

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: High Channel: Frequency – 5695 MHz
Output power setting: 7.5 on both chains
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Horizontal: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		58.33 dB μ V/m	VBW	3 MHz		
	87 dB*		4.96040964 GHz	SWT	200 ms	Unit	dB μ V/m

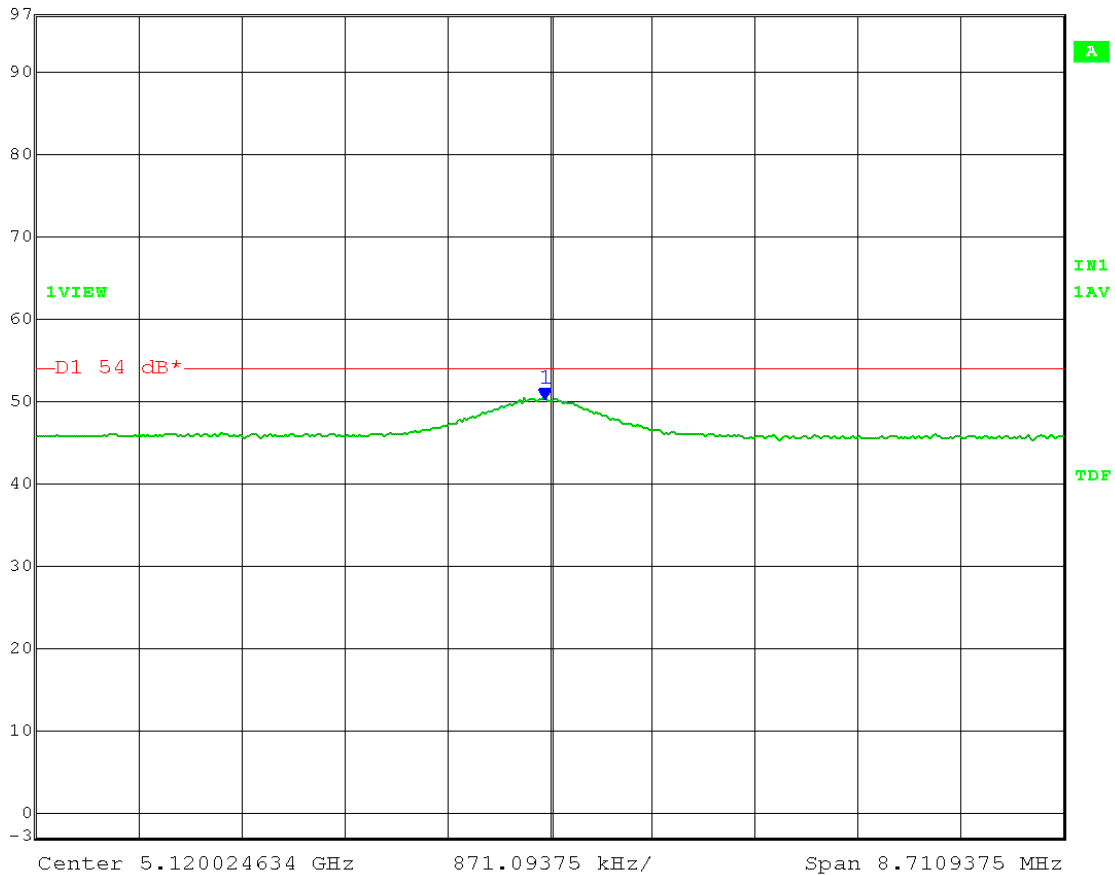


Date: 11.APR.2014 09:21:20

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 7.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	50.02 dB μ V/m	VBW	3 MHz		
	87 dB*	5.11998099 GHz	SWT	200 ms	Unit	dB μ V/m

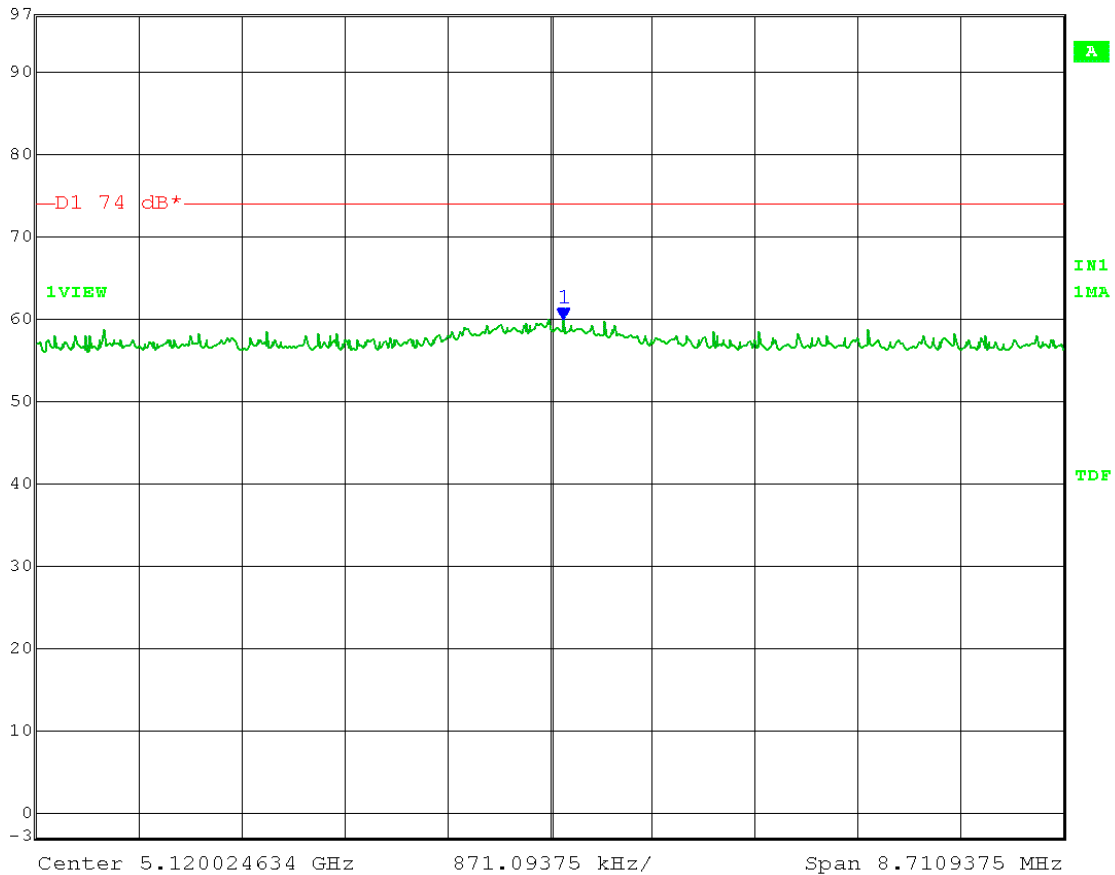


Date: 11.APR.2014 08:37:27

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 7.5 on both chains
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Vertical: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	59.94 dB μ V/m	VBW	3 MHz		
	87 dB*	5.12013810 GHz	SWT	200 ms	Unit	dB μ V/m

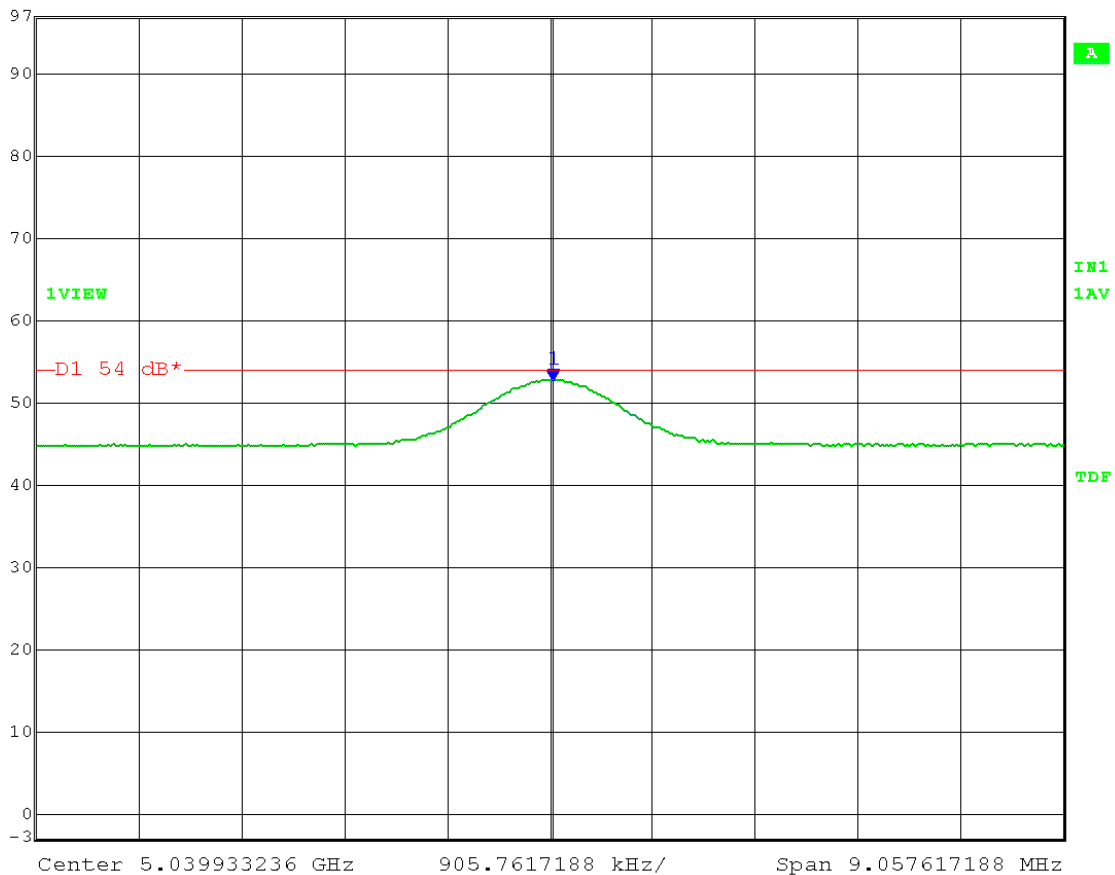


Date: 11.APR.2014 08:37:56

Test Date: 04-11-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 30 dBi Dish antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5495 MHz
Output power setting: 26.0* on both chains
*Software cal table was modified so that power setting 24.0 = 0.0
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

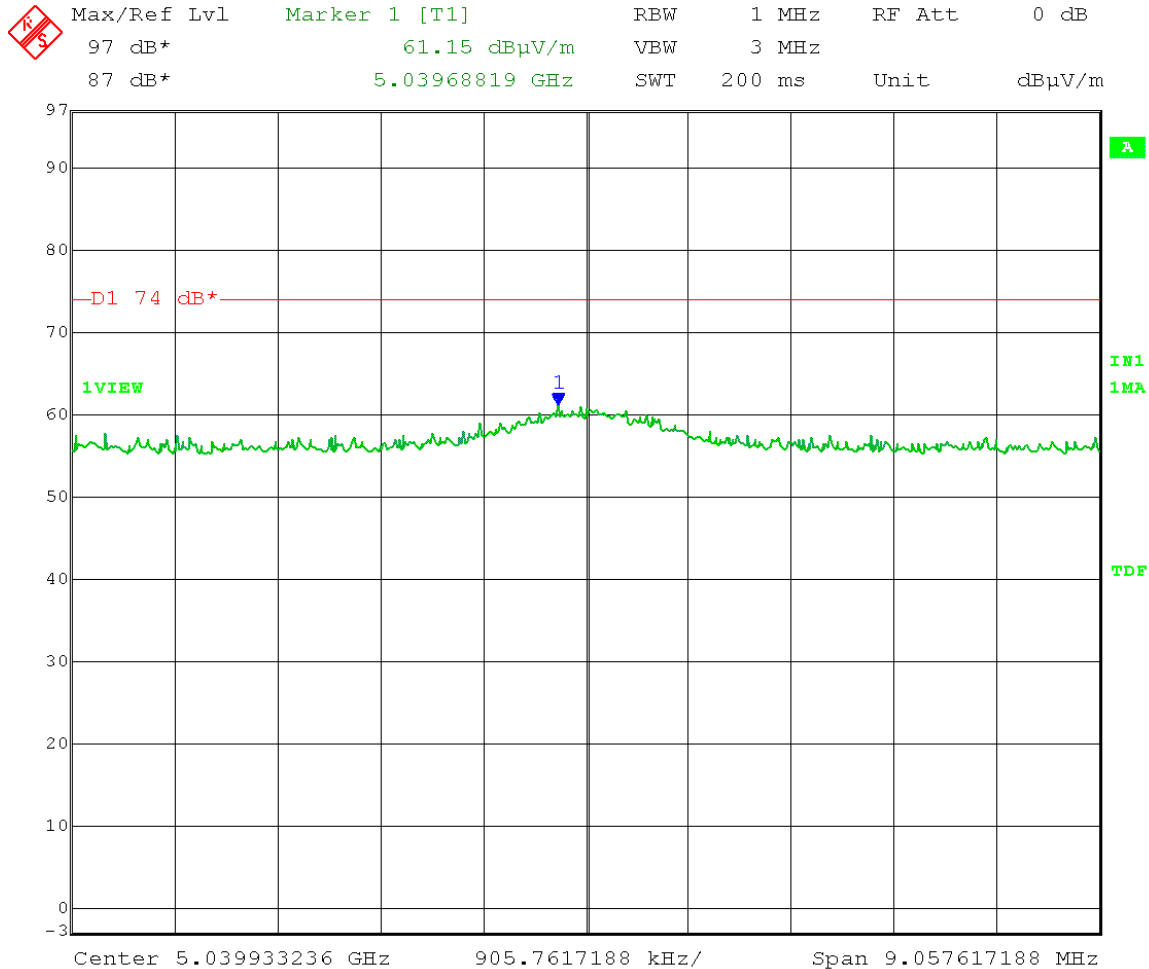
	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	52.60 dB μ V/m	VBW	3 MHz		
	87 dB*	5.03996046 GHz	SWT	200 ms	Unit	dB μ V/m



Date: 11.APR.2014 15:41:47

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 74 dBμV/m PEAK at 3 meters

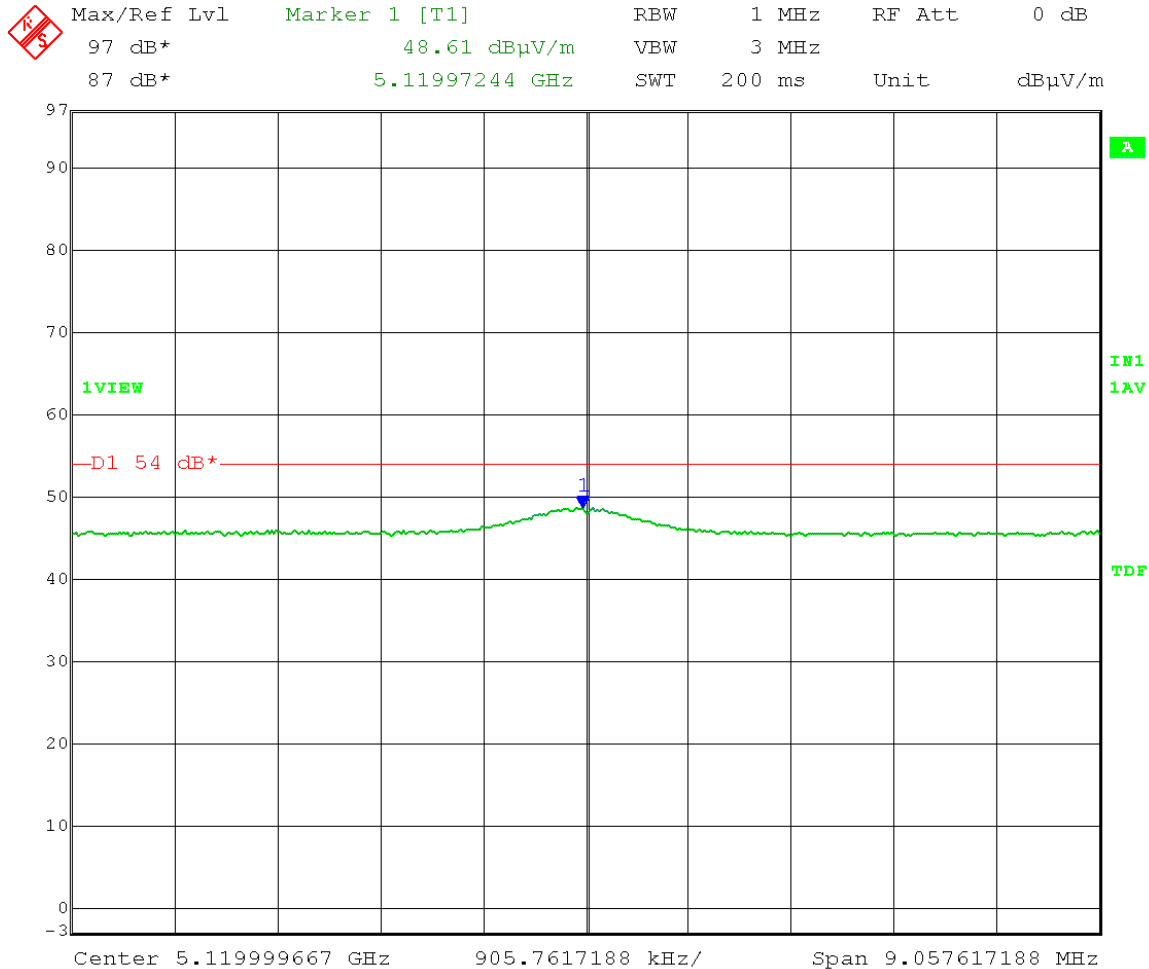
Horizontal: Peak:



Date: 11.APR.2014 15:42:21

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

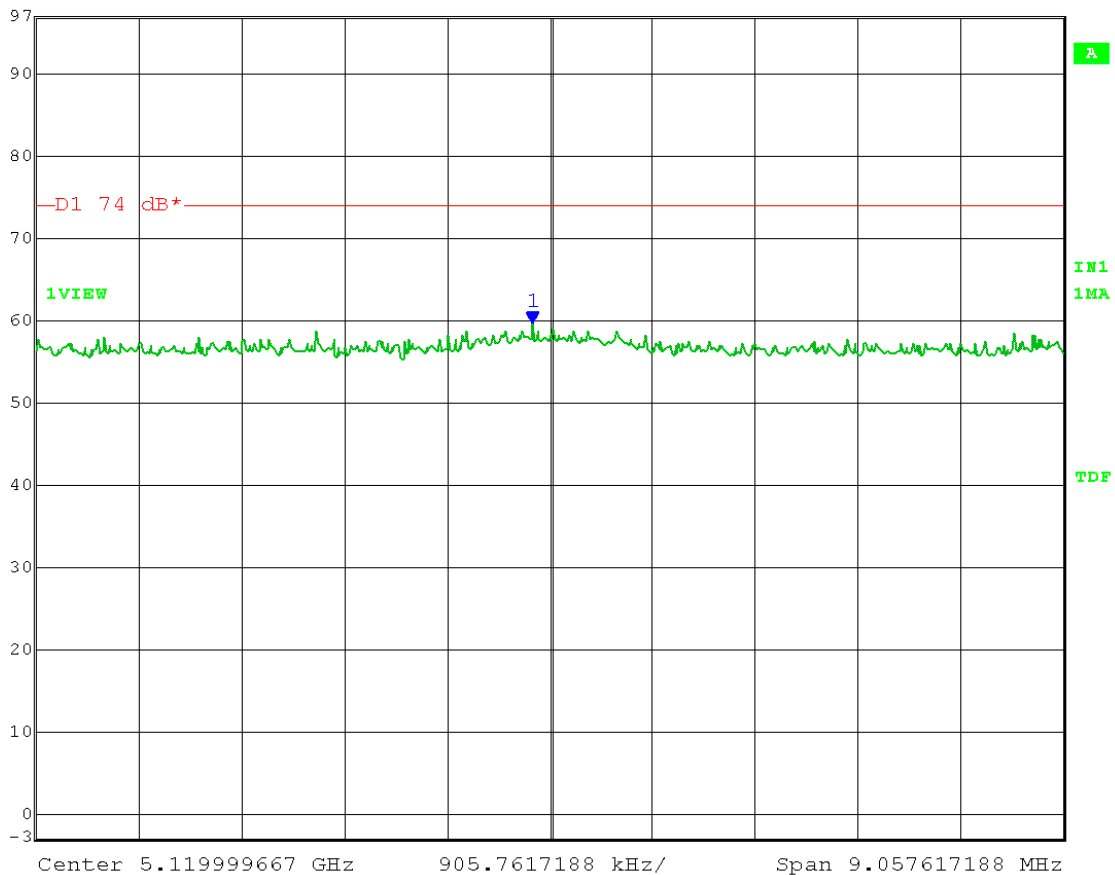


Date: 14.APR.2014 08:51:31

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dBμV/m PEAK at 3 meters

Vertical: Peak:

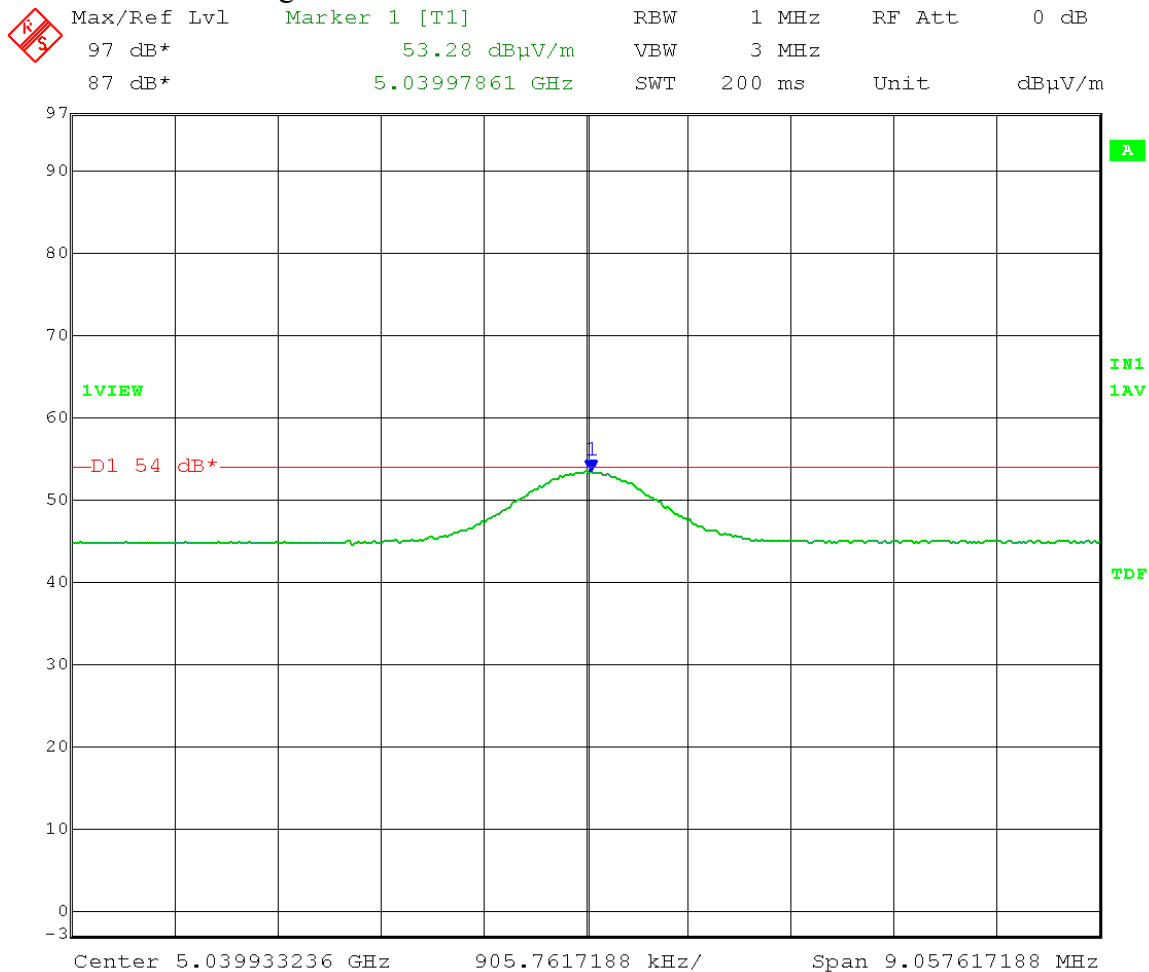
	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		59.55 dBμV/m	VBW	3 MHz		
	87 dB*		5.11984538 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 08:51:54

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 54 dBμV/m AVERAGE at 3 meters

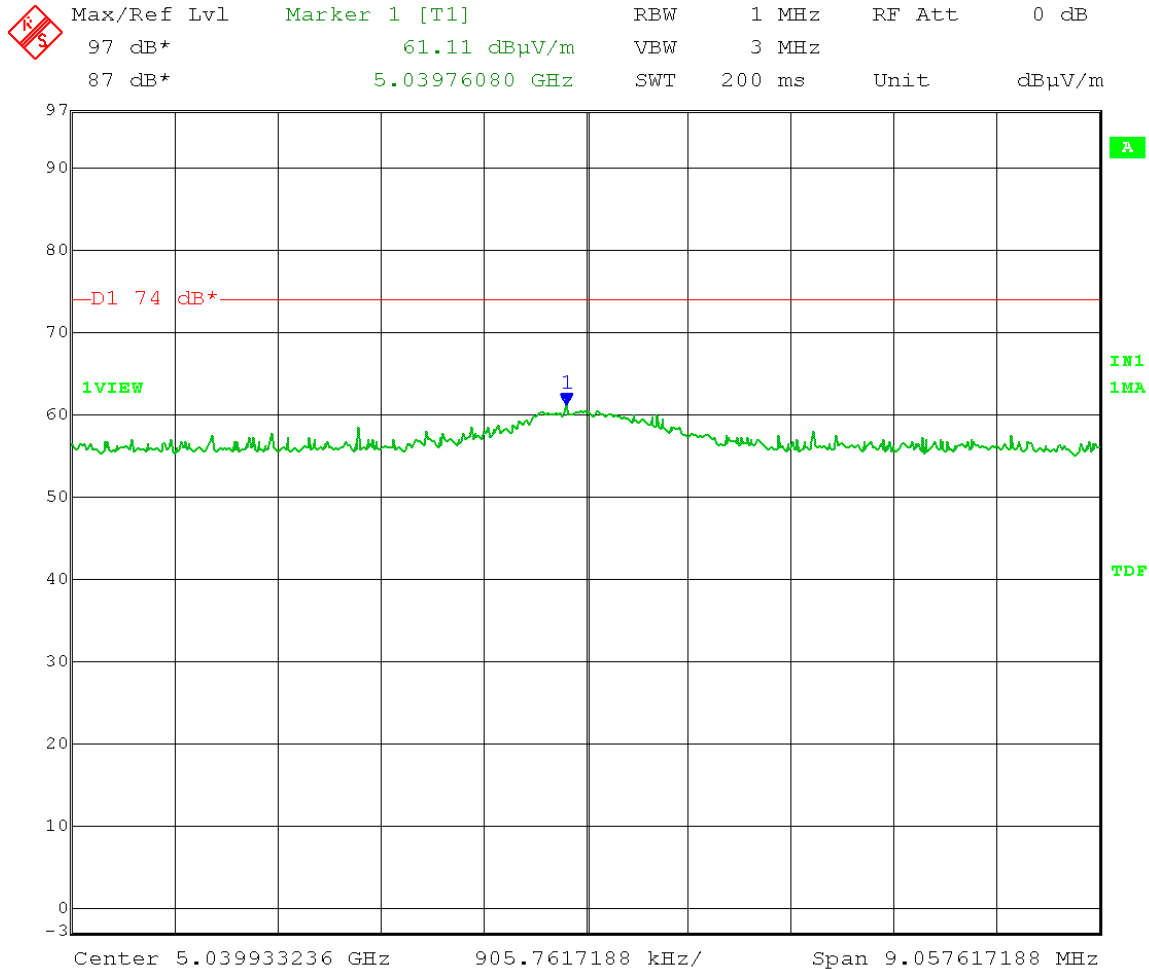
Horizontal: Average:



Date: 11.APR.2014 15:48:41

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

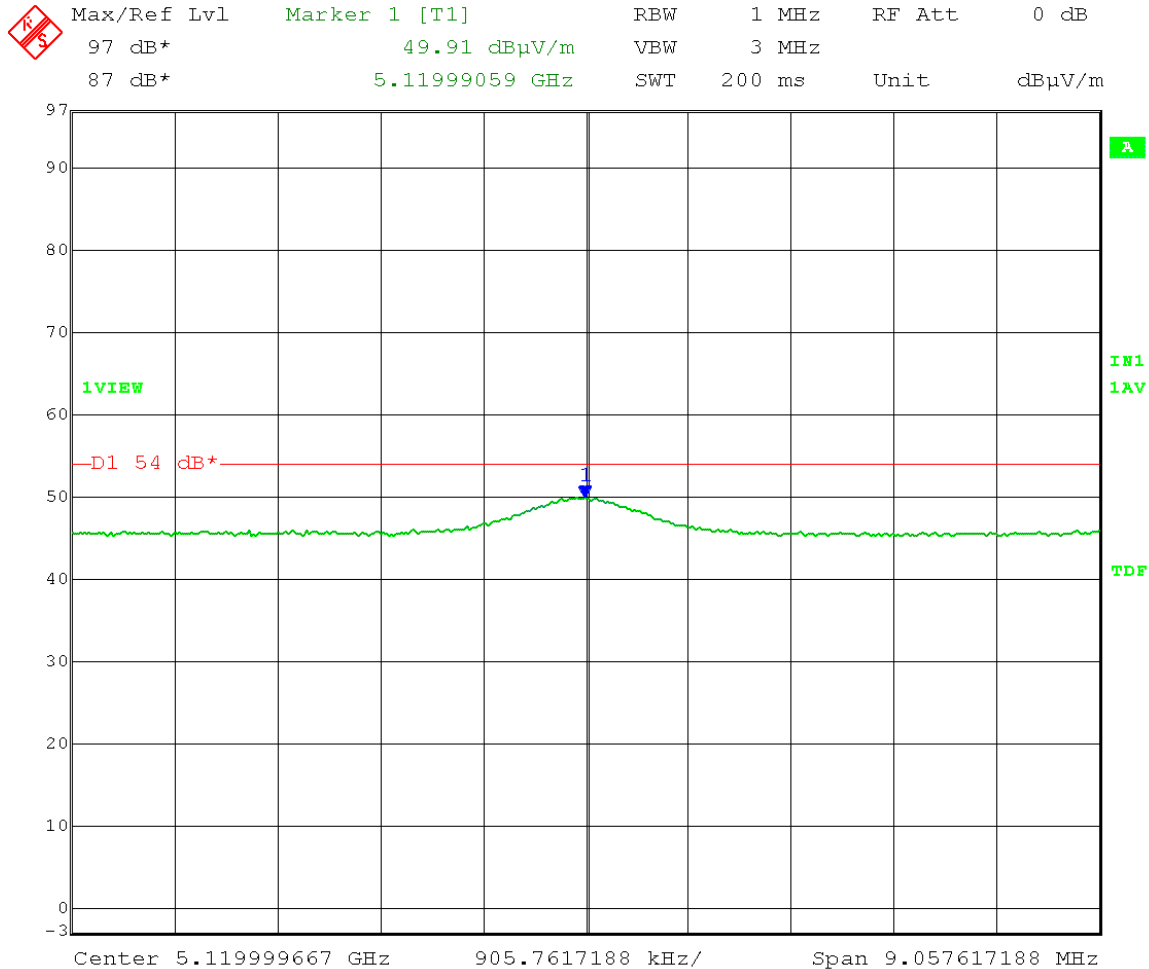
Horizontal: Peak:



Date: 11.APR.2014 15:49:09

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

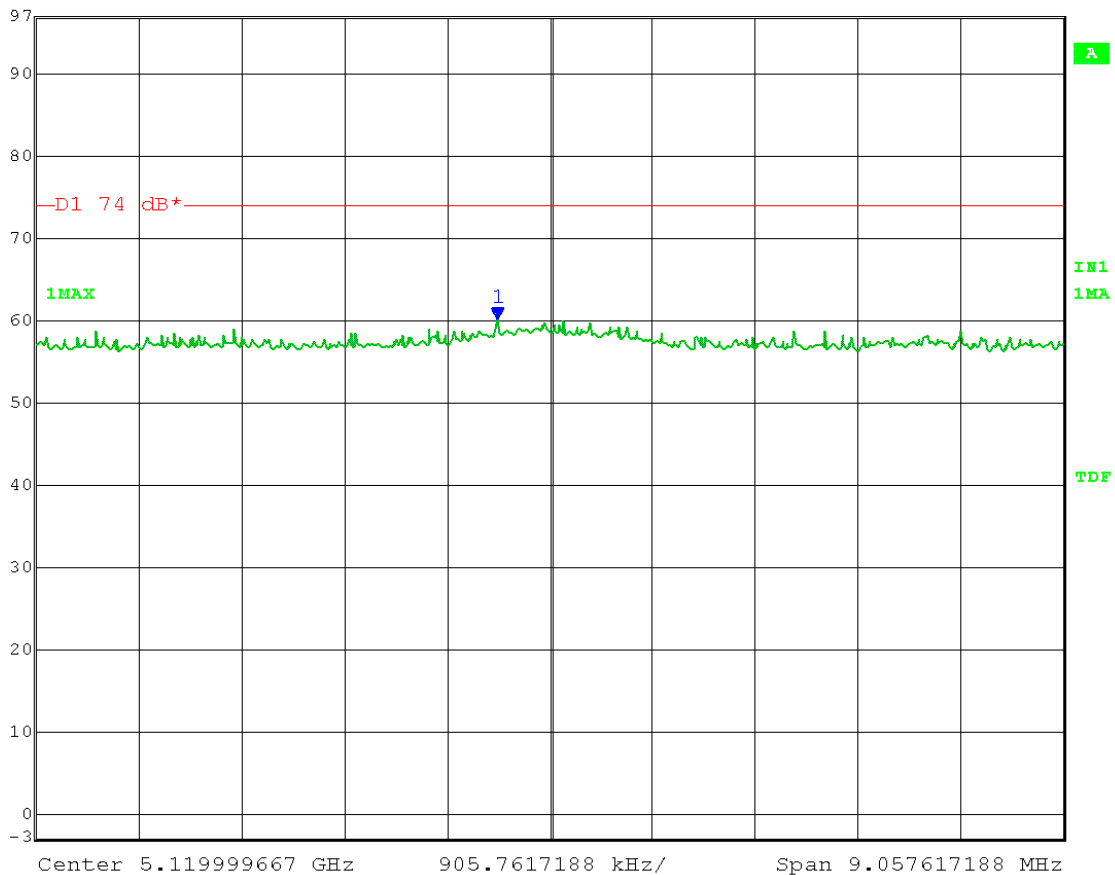


Date: 14.APR.2014 08:47:42

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Vertical: Peak:

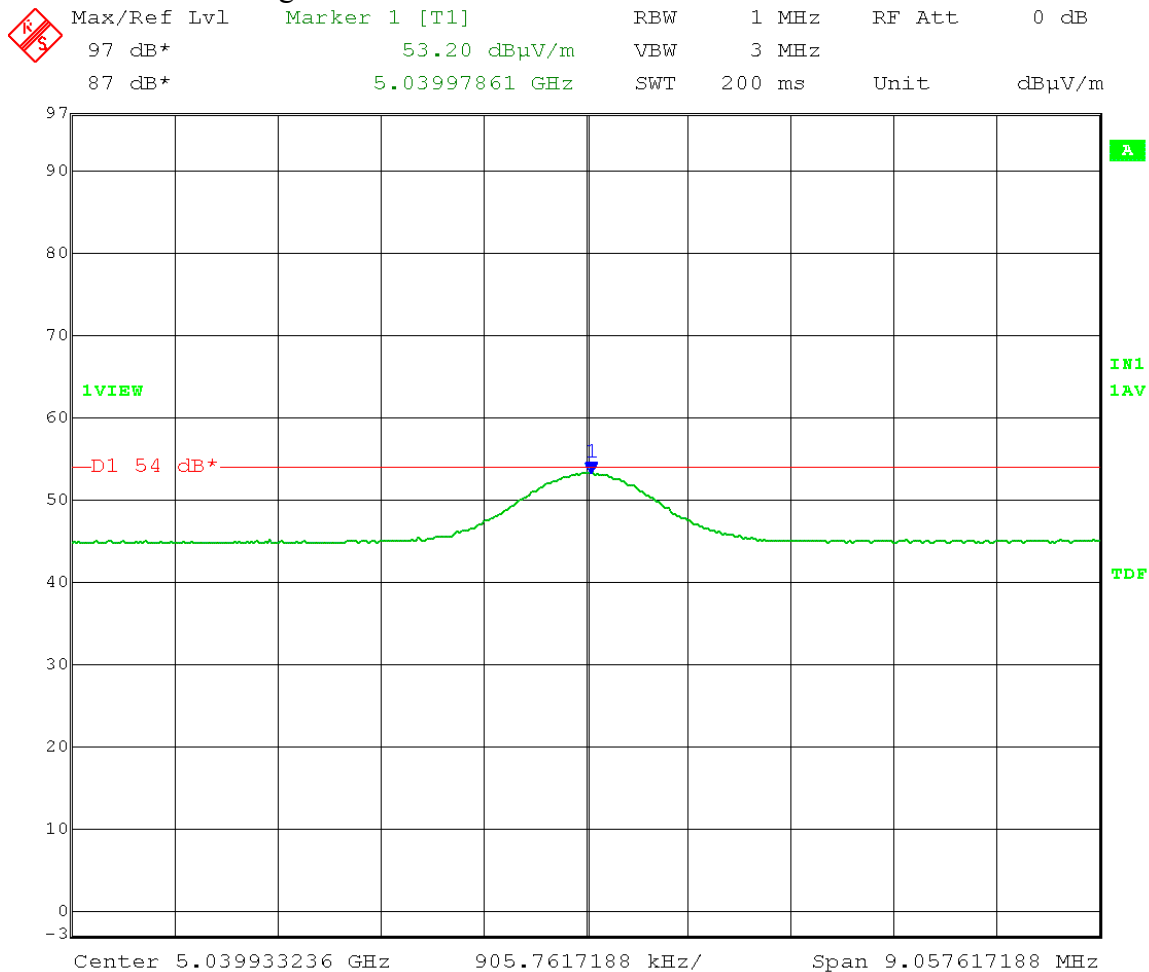
	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		60.14 dB μ V/m	VBW	3 MHz		
	87 dB*		5.11953680 GHz	SWT	200 ms	Unit	dB μ V/m



Date: 14.APR.2014 08:48:11

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

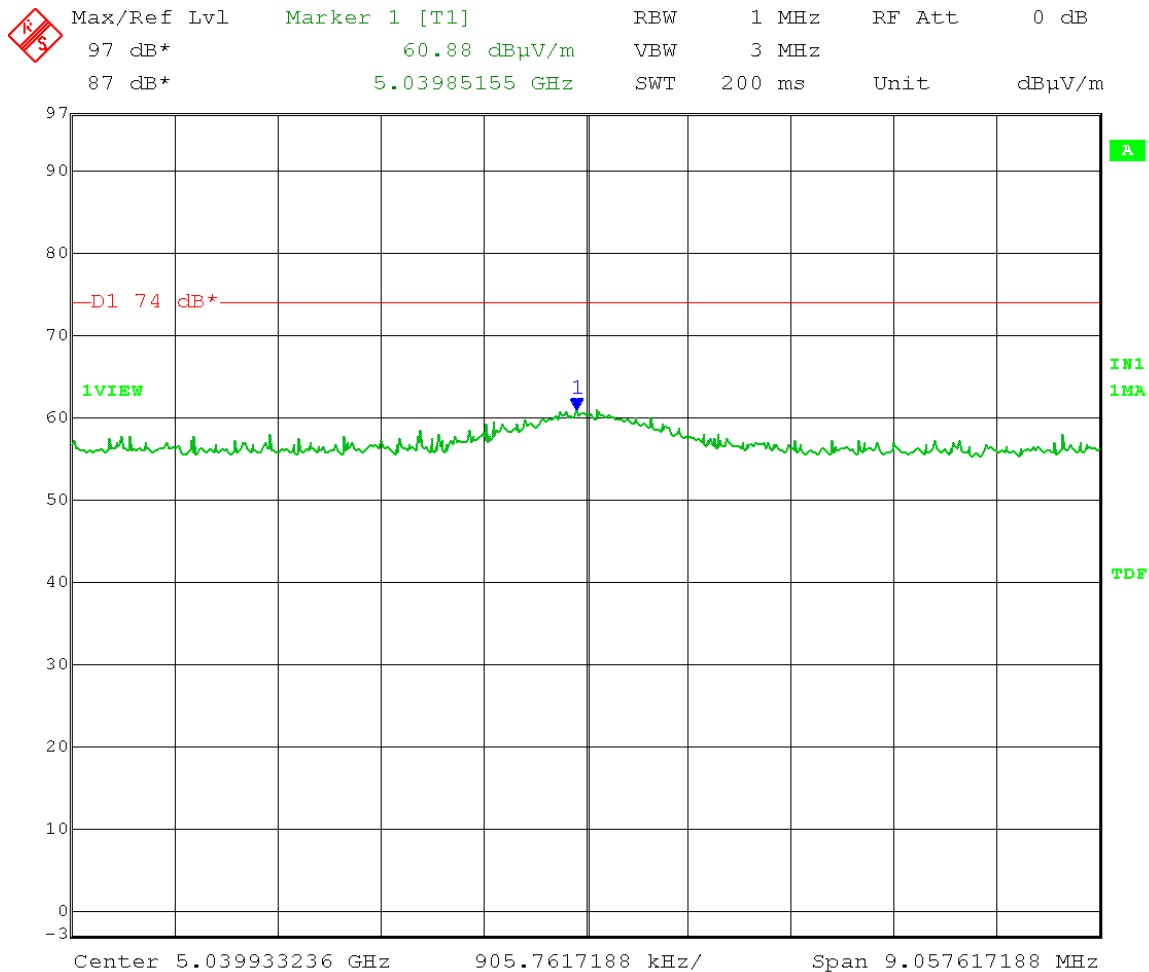
Horizontal: Average:



Date: 11.APR.2014 15:45:44

Test Date: 04-11-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 74 dBμV/m PEAK at 3 meters

Horizontal: Peak:

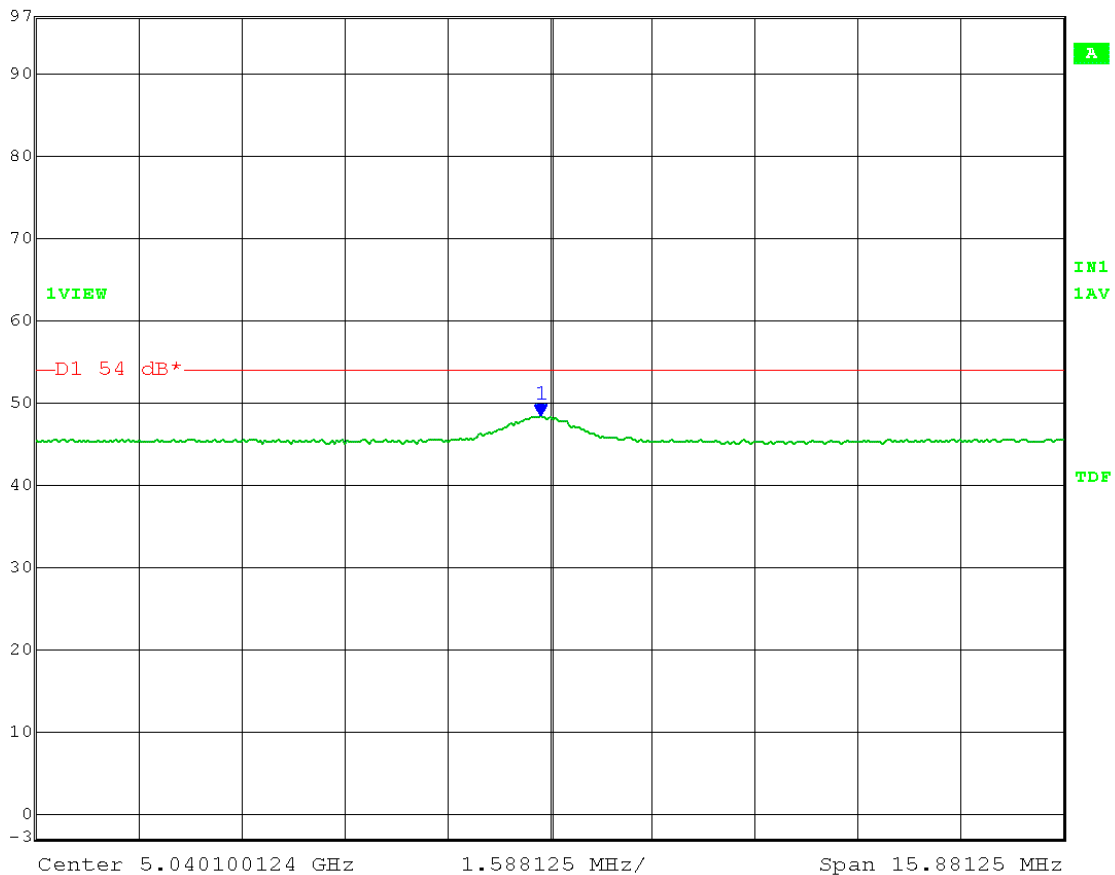


Date: 11.APR.2014 15:46:14

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	48.34 dB μ V/m	VBW	3 MHz		
	87 dB*	5.03995691 GHz	SWT	200 ms	Unit	dB μ V/m

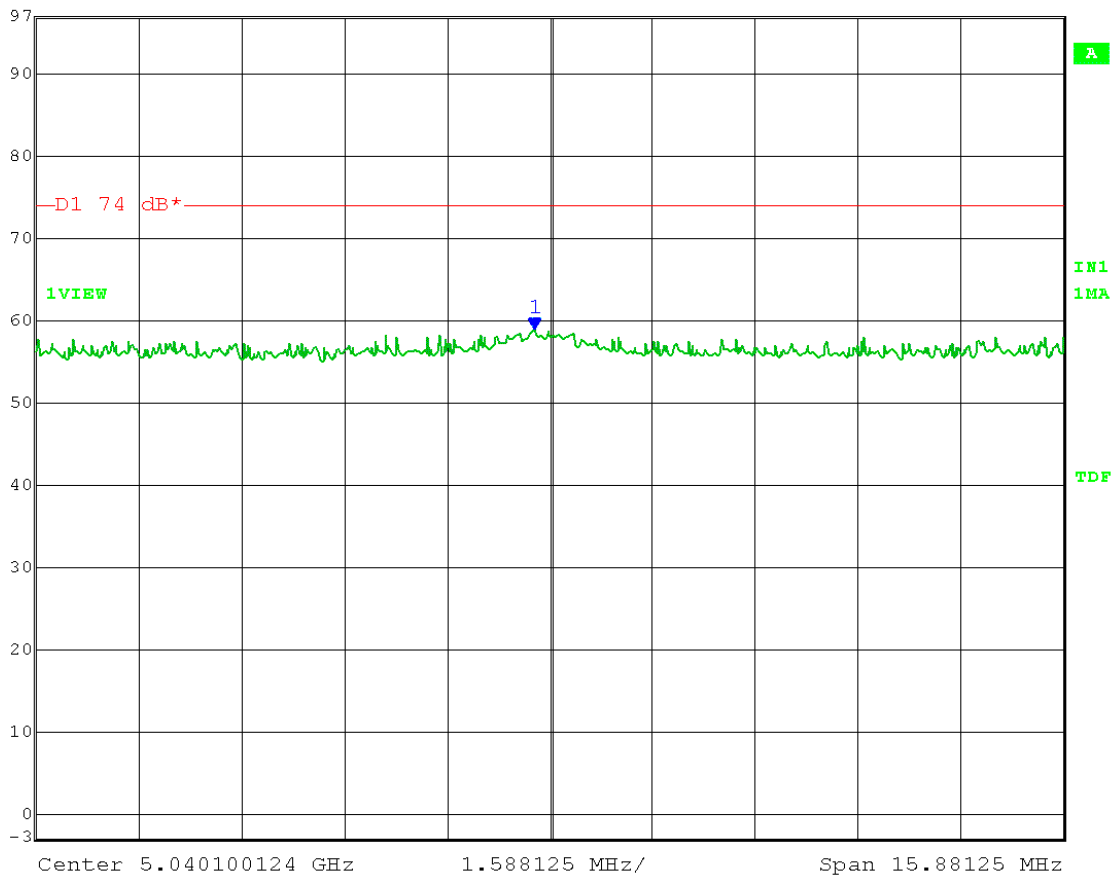


Date: 14.APR.2014 08:56:55

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dBμV/m PEAK at 3 meters

Vertical: Peak:

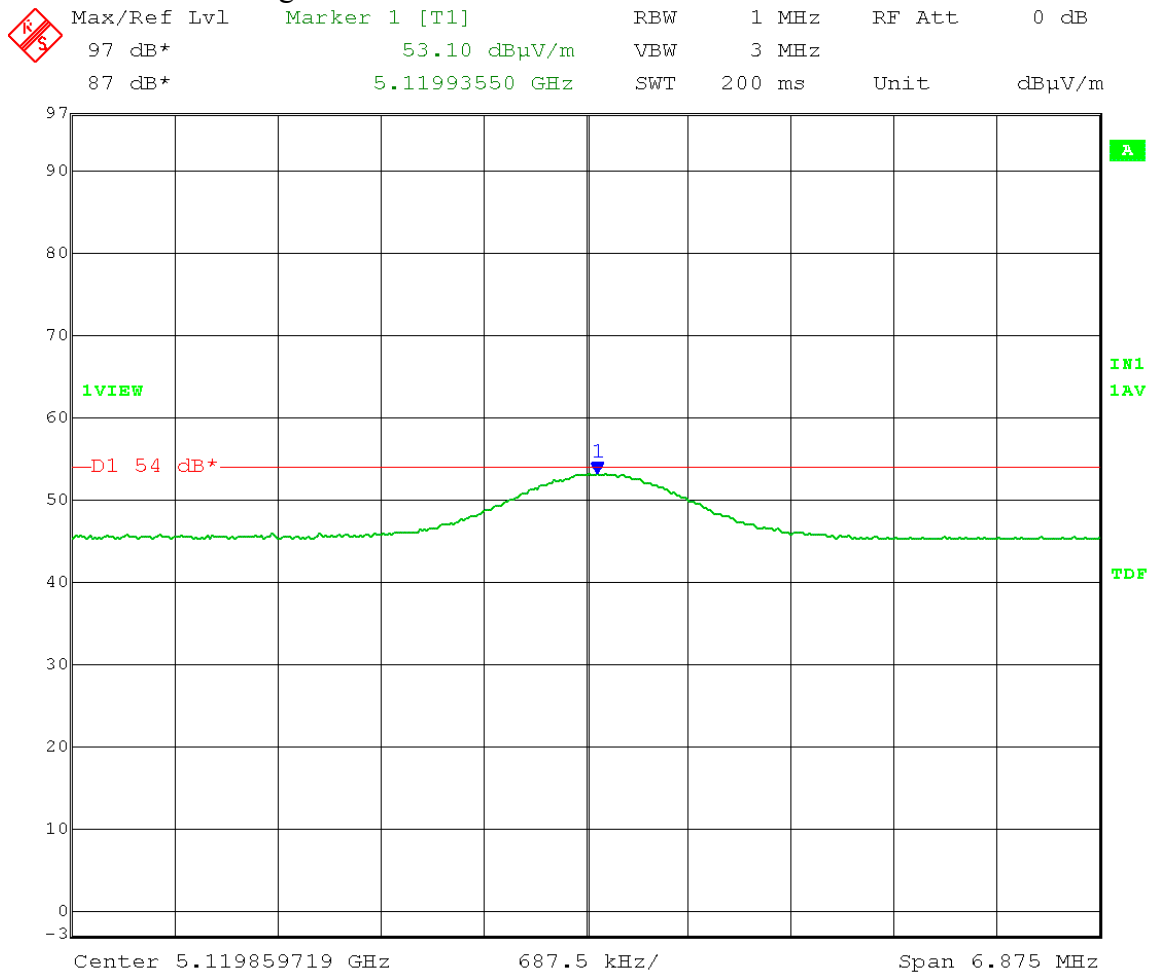
	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
		97 dB*	58.96 dBμV/m	VBW	3 MHz		
		87 dB*	5.03986143 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 08:57:18

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

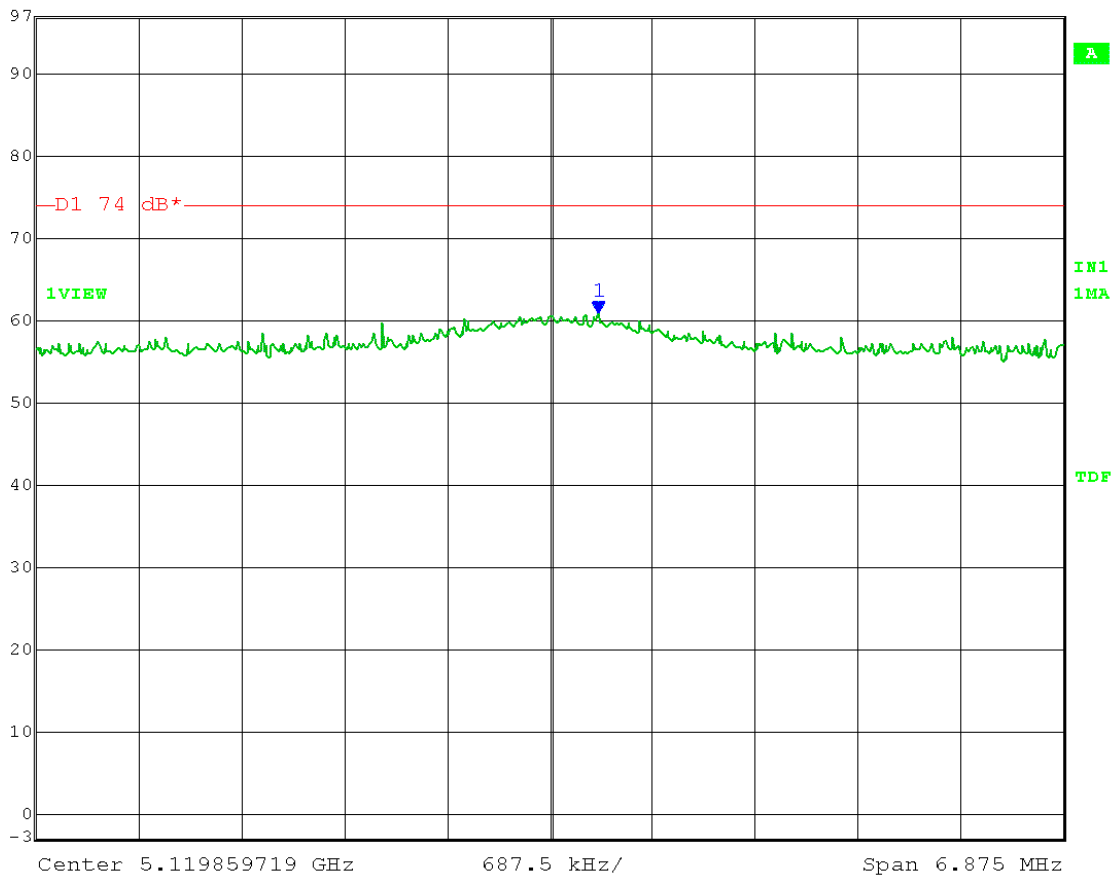


Date: 14.APR.2014 09:11:22

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Horizontal: Peak:

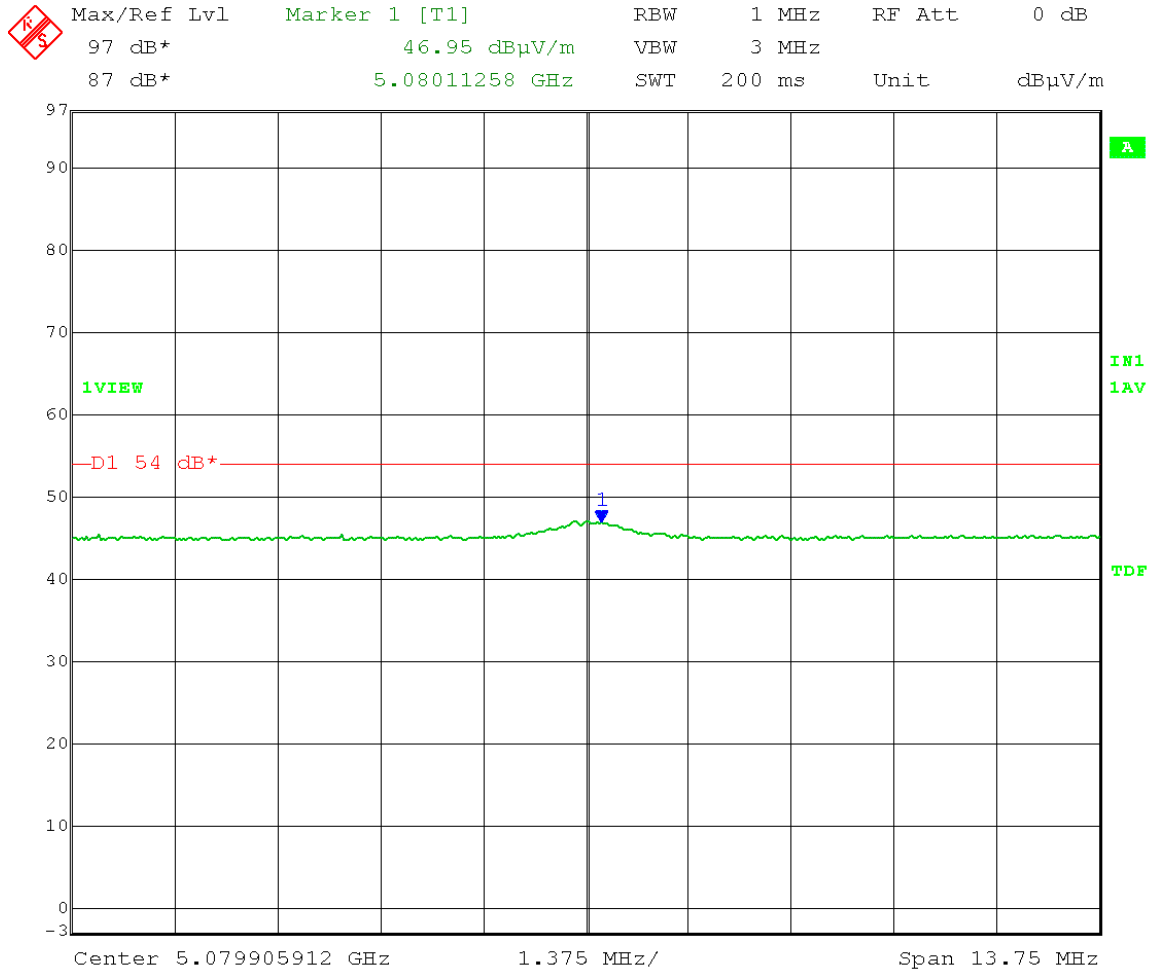
	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		60.83 dB μ V/m	VBW	3 MHz		
	87 dB*		5.12018349 GHz	SWT	200 ms	Unit	dB μ V/m



Date: 14.APR.2014 09:11:48

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

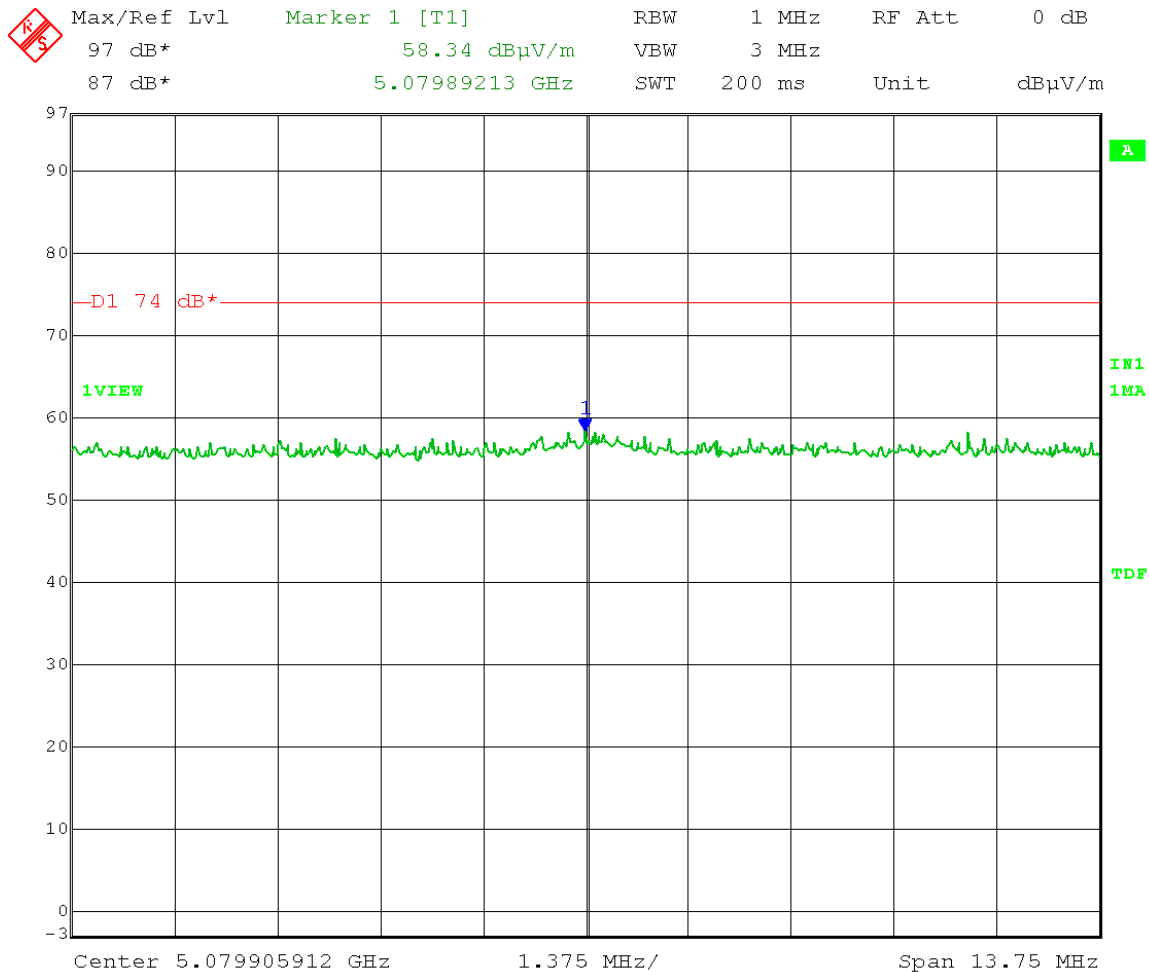
Vertical: Average:



Date: 14.APR.2014 10:24:35

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5510 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dBμV/m PEAK at 3 meters

Vertical: Peak:

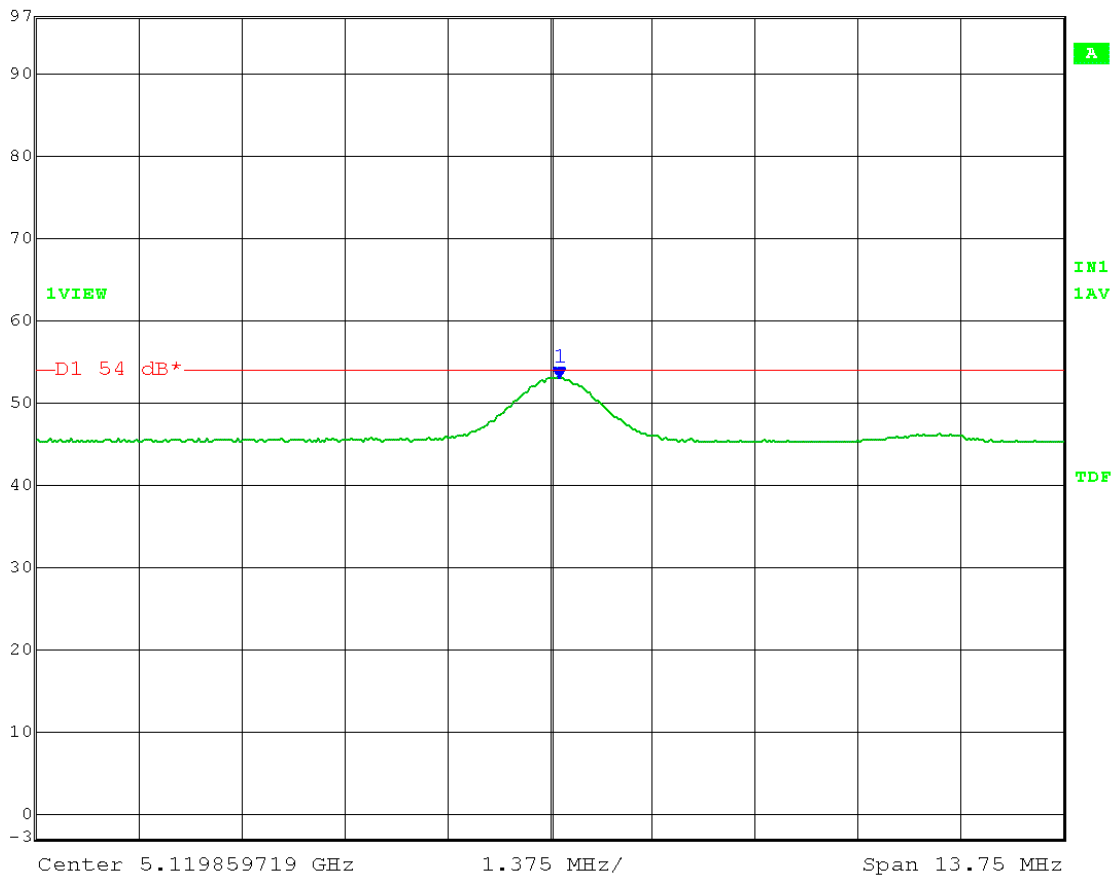


Date: 14.APR.2014 10:25:07

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 27.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

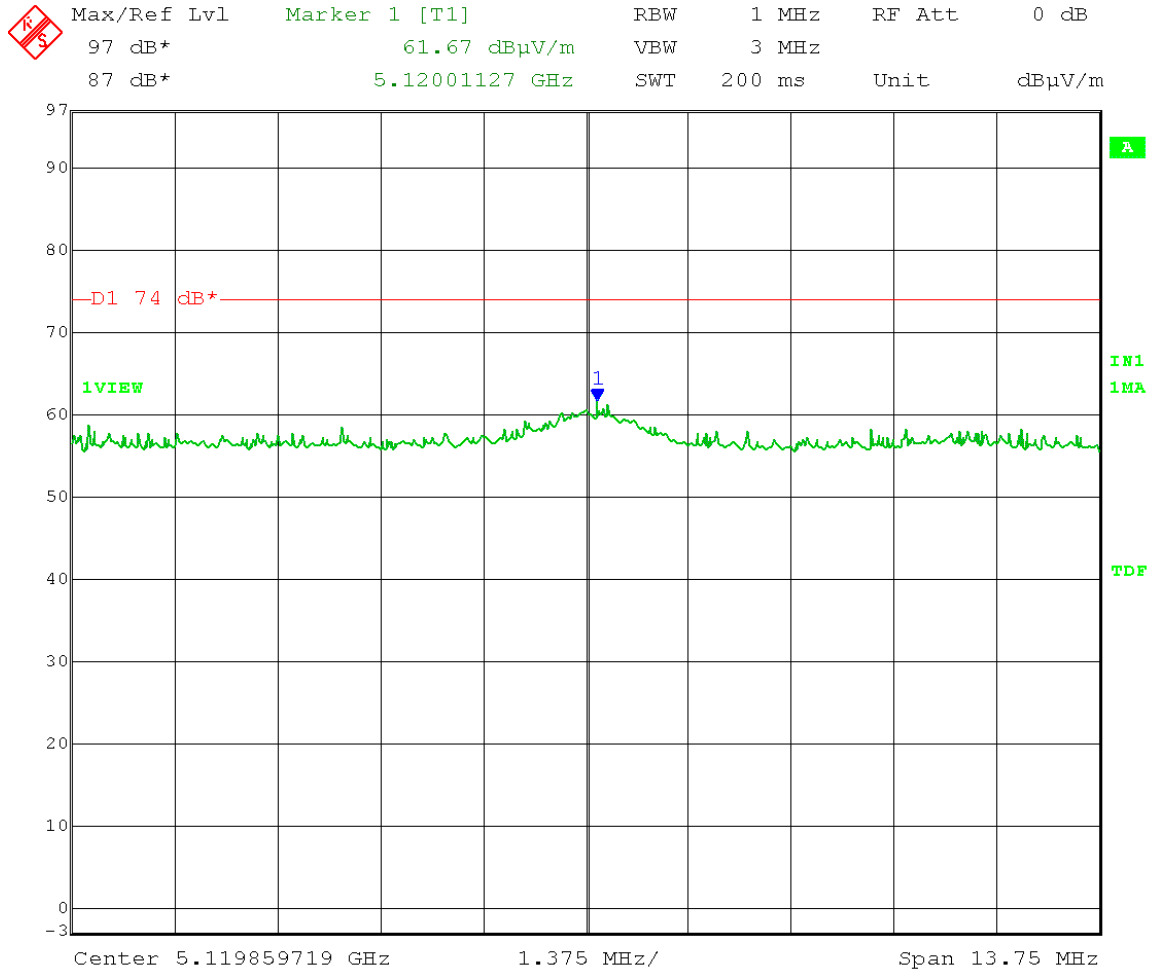
	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		52.94 dB μ V/m	VBW	3 MHz		
	87 dB*		5.11998372 GHz	SWT	200 ms	Unit	dB μ V/m



Date: 14.APR.2014 09:07:44

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 27.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

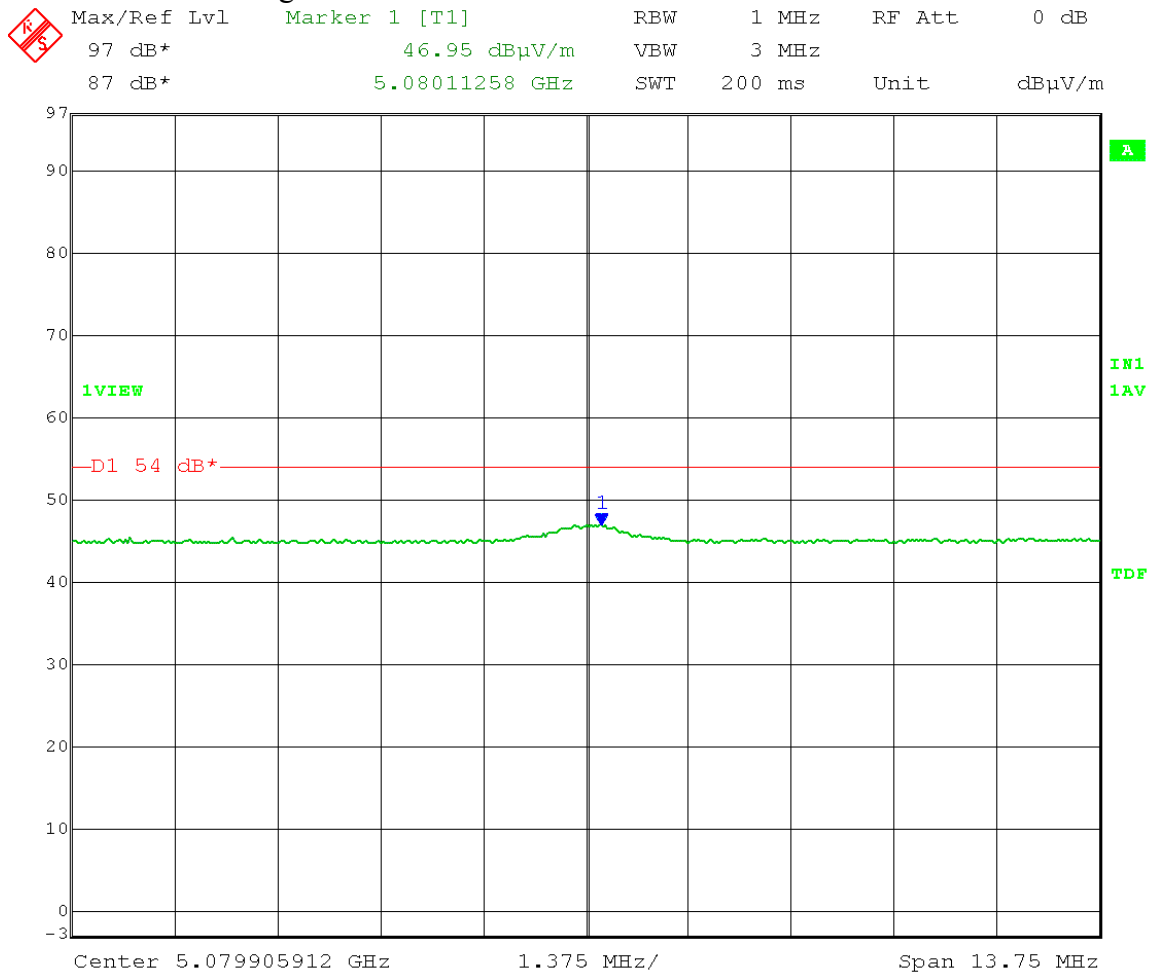
Horizontal: Peak:



Date: 14.APR.2014 09:08:11

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 27.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Vertical: Average:

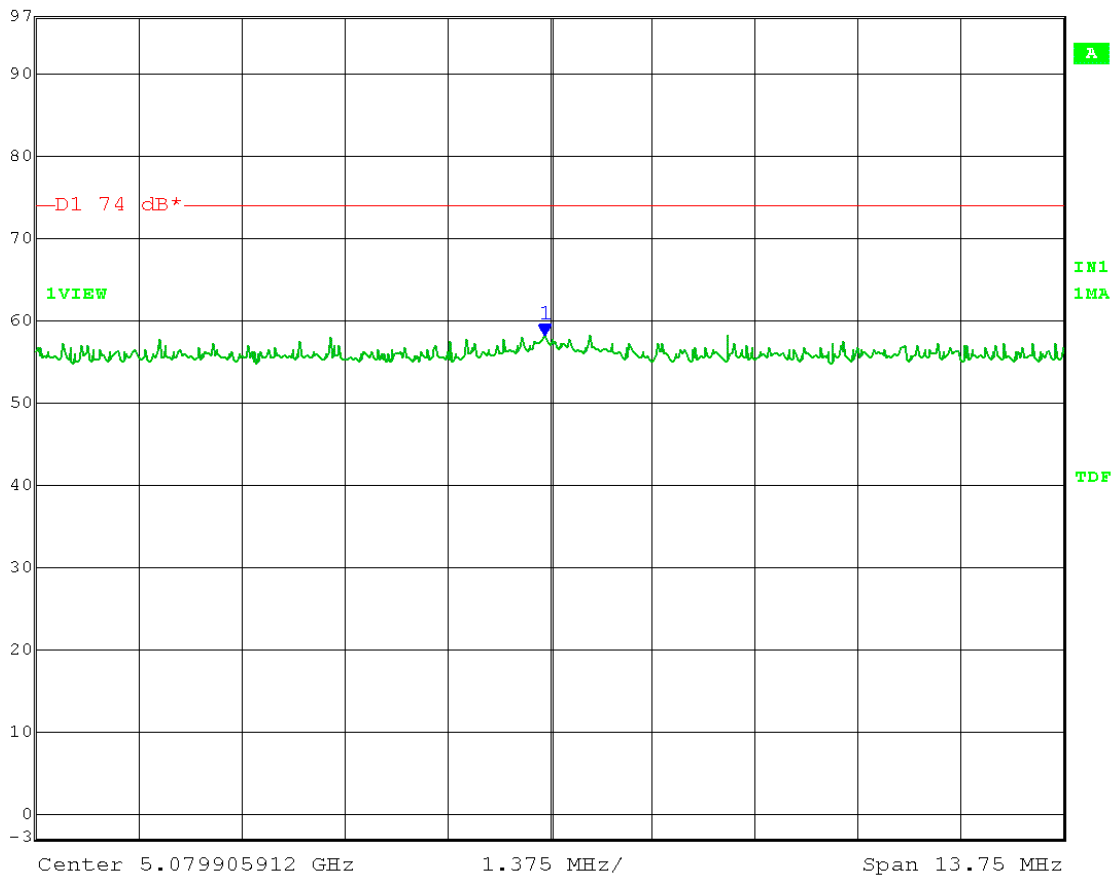


Date: 14.APR.2014 10:21:59

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 27.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Vertical: Peak:

	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*		58.21 dB μ V/m	VBW	3 MHz		
	87 dB*		5.07983702 GHz	SWT	200 ms	Unit	dB μ V/m

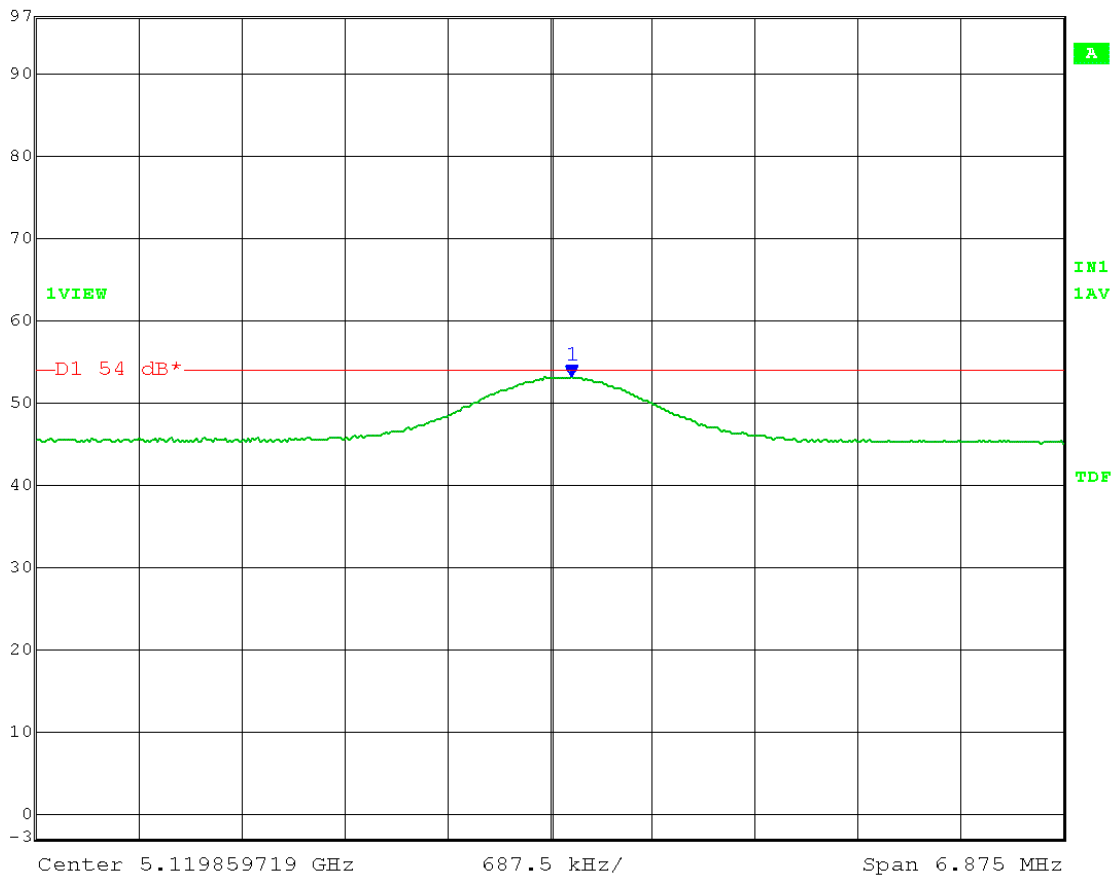


Date: 14.APR.2014 10:22:20

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

Horizontal: Average:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	97 dB*	53.02 dB μ V/m	VBW	3 MHz		
	87 dB*	5.12000438 GHz	SWT	200 ms	Unit	dB μ V/m

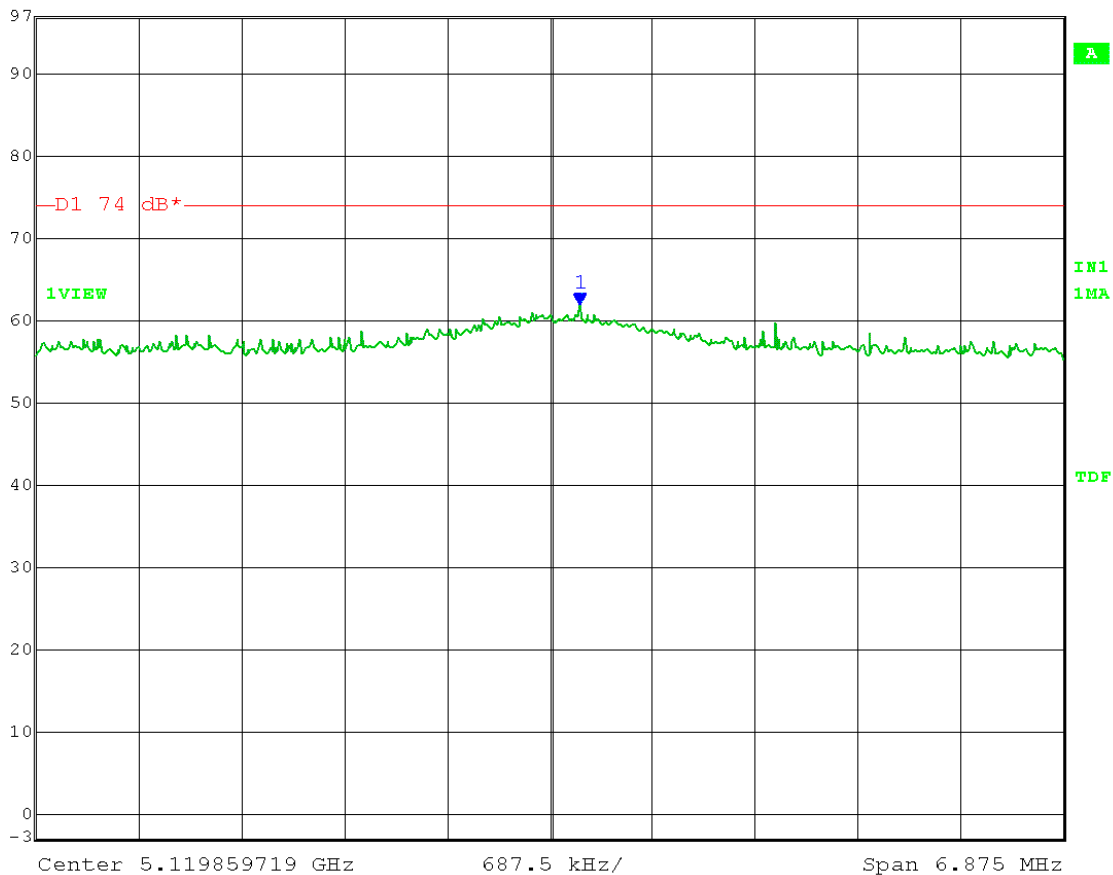


Date: 14.APR.2014 09:14:20

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Horizontal: Peak:

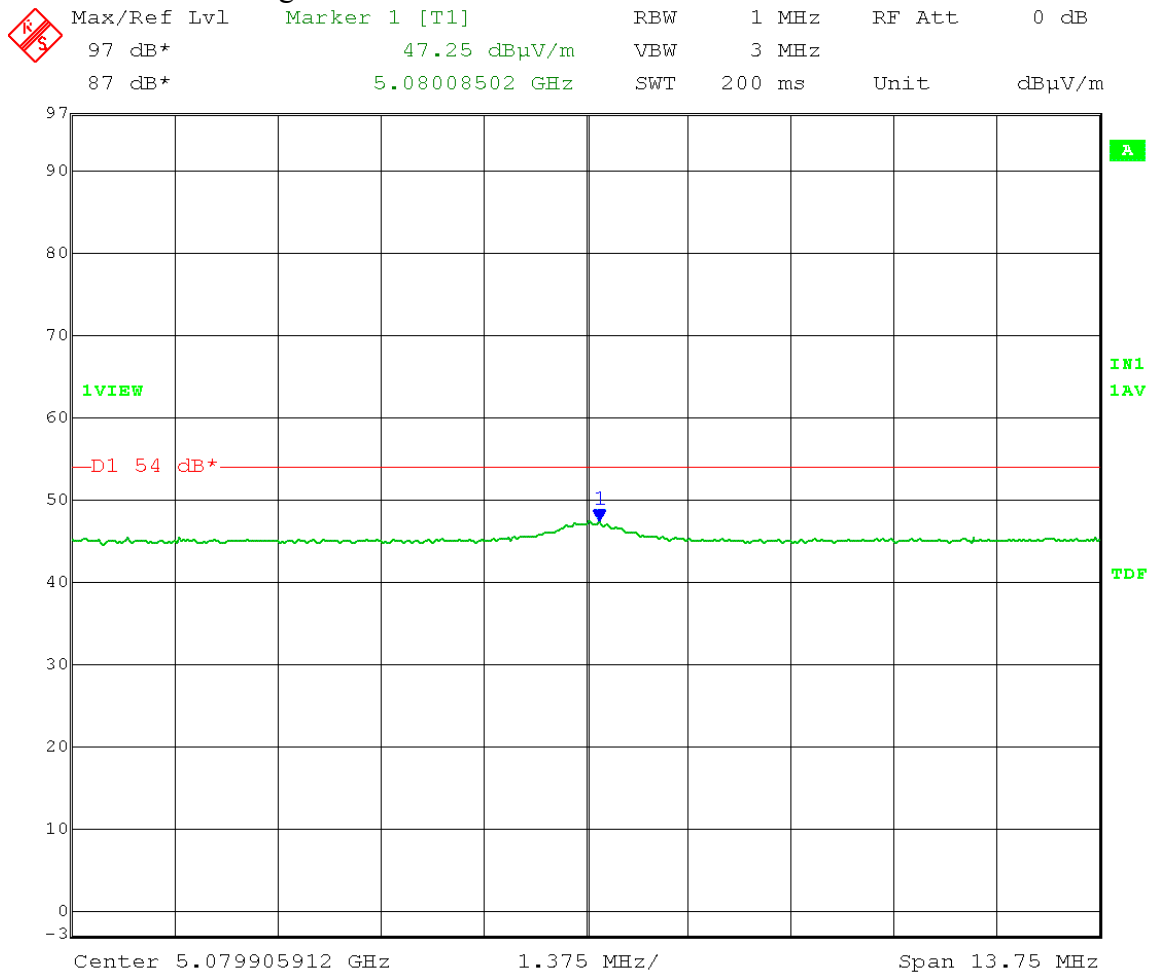
	Max/Ref	Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
		97 dB*	61.91 dB μ V/m	VBW	3 MHz		
		87 dB*	5.12005949 GHz	SWT	200 ms	Unit	dB μ V/m



Date: 14.APR.2014 09:14:45

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters

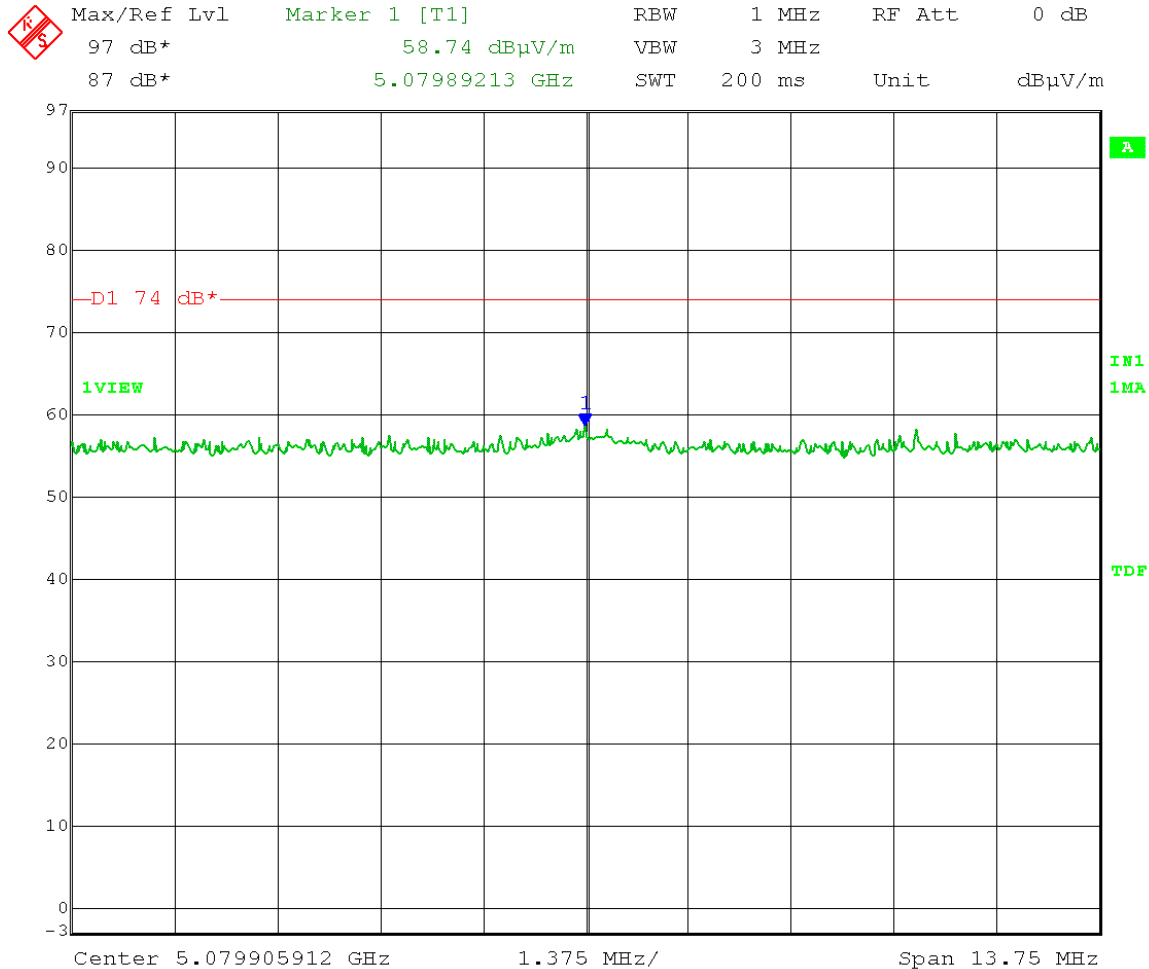
Vertical: Average:



Date: 14.APR.2014 10:27:19

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Restricted Band Limit: 74 dBμV/m PEAK at 3 meters

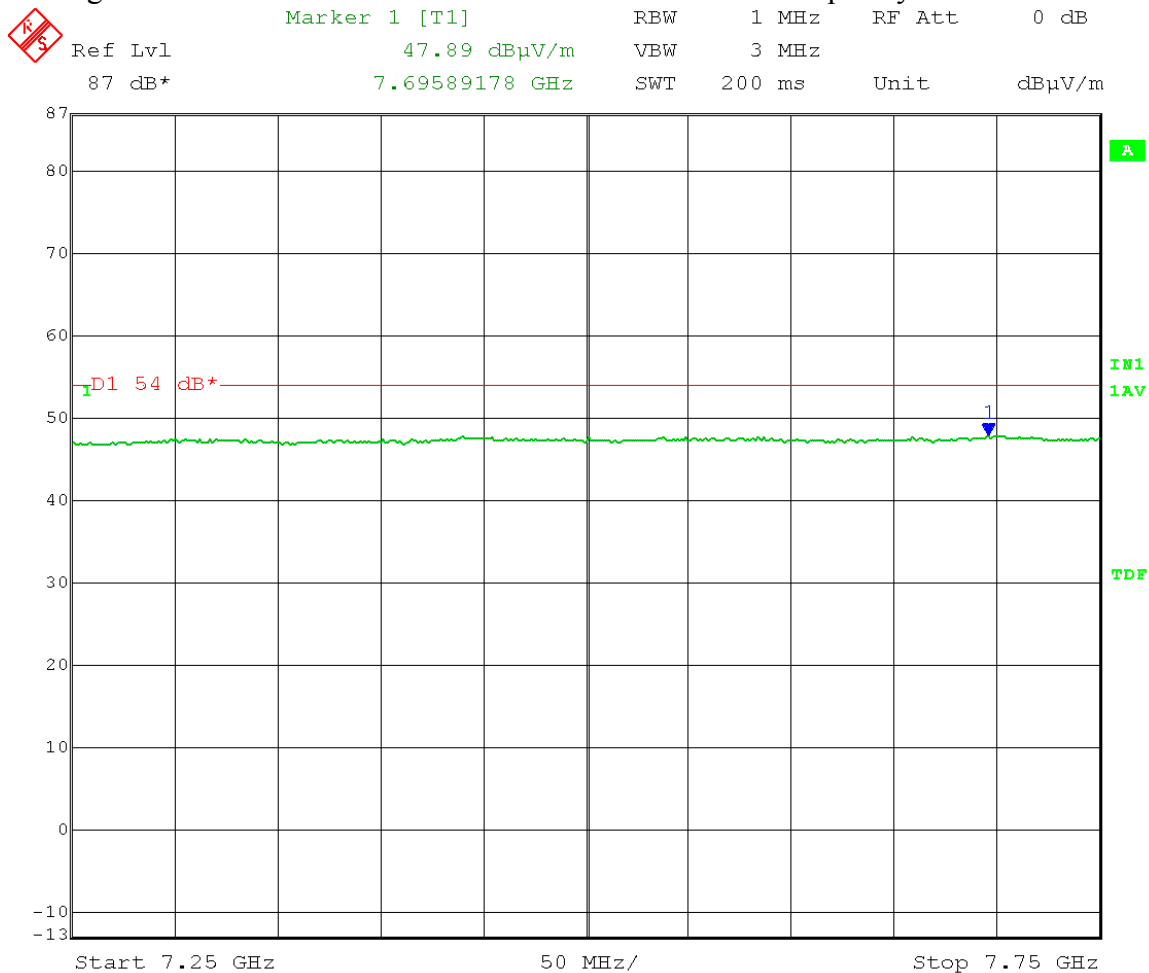
Vertical: Peak:



Date: 14.APR.2014 10:27:41

Test Date: 04-09-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in the restricted bands - Radiated
(FCC 15.407(b)(7)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low, Mid, and High channels
Output power setting: 8.5 on both chains with 5 dB pad on antenna
Channel bandwidth: 20 MHz and 40 MHz
Modulation: OFDM; MCS15
Polarization: Vertical and Horizontal

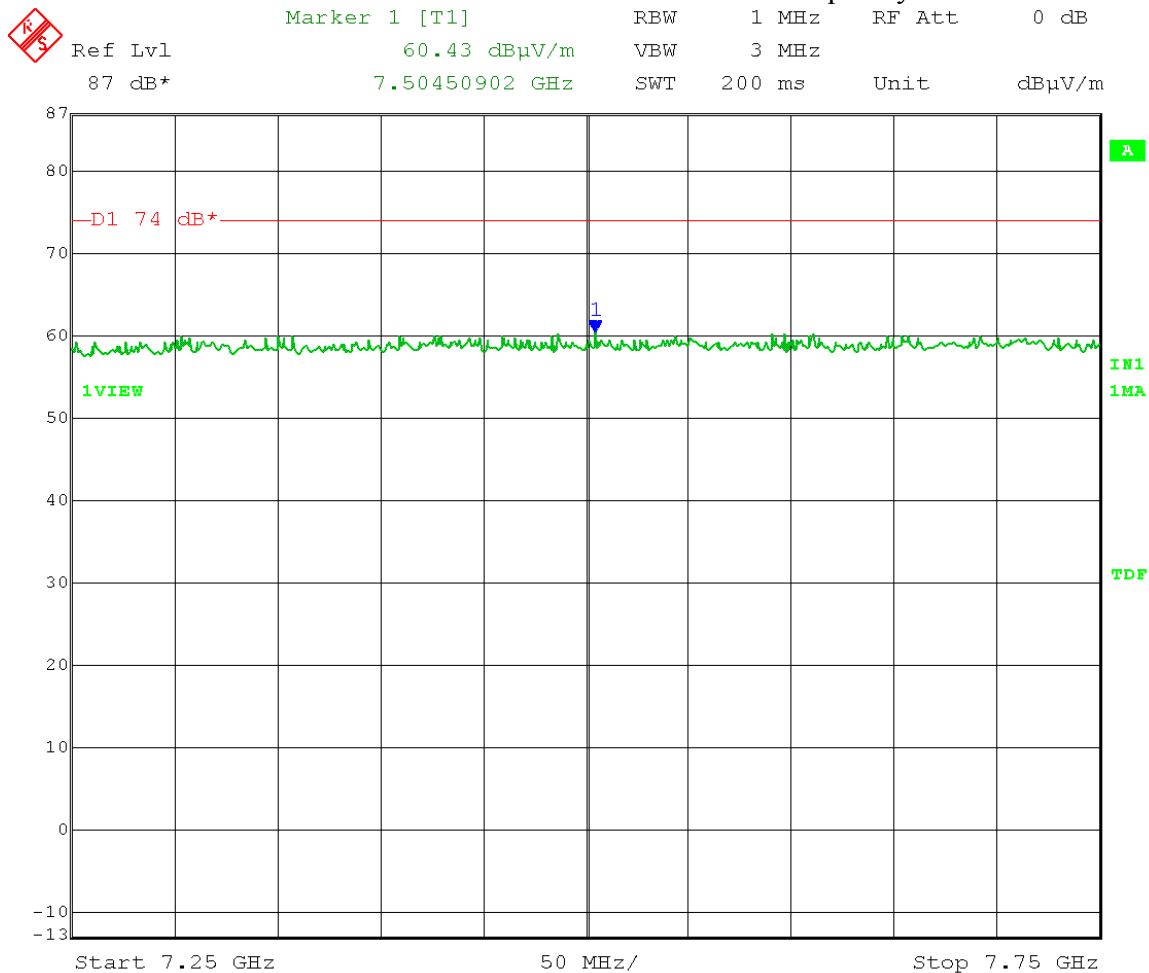
Average: Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters
Note: No emissions found in the 7.25 – 7.75 frequency band



Date: 9.APR.2014 16:01:43

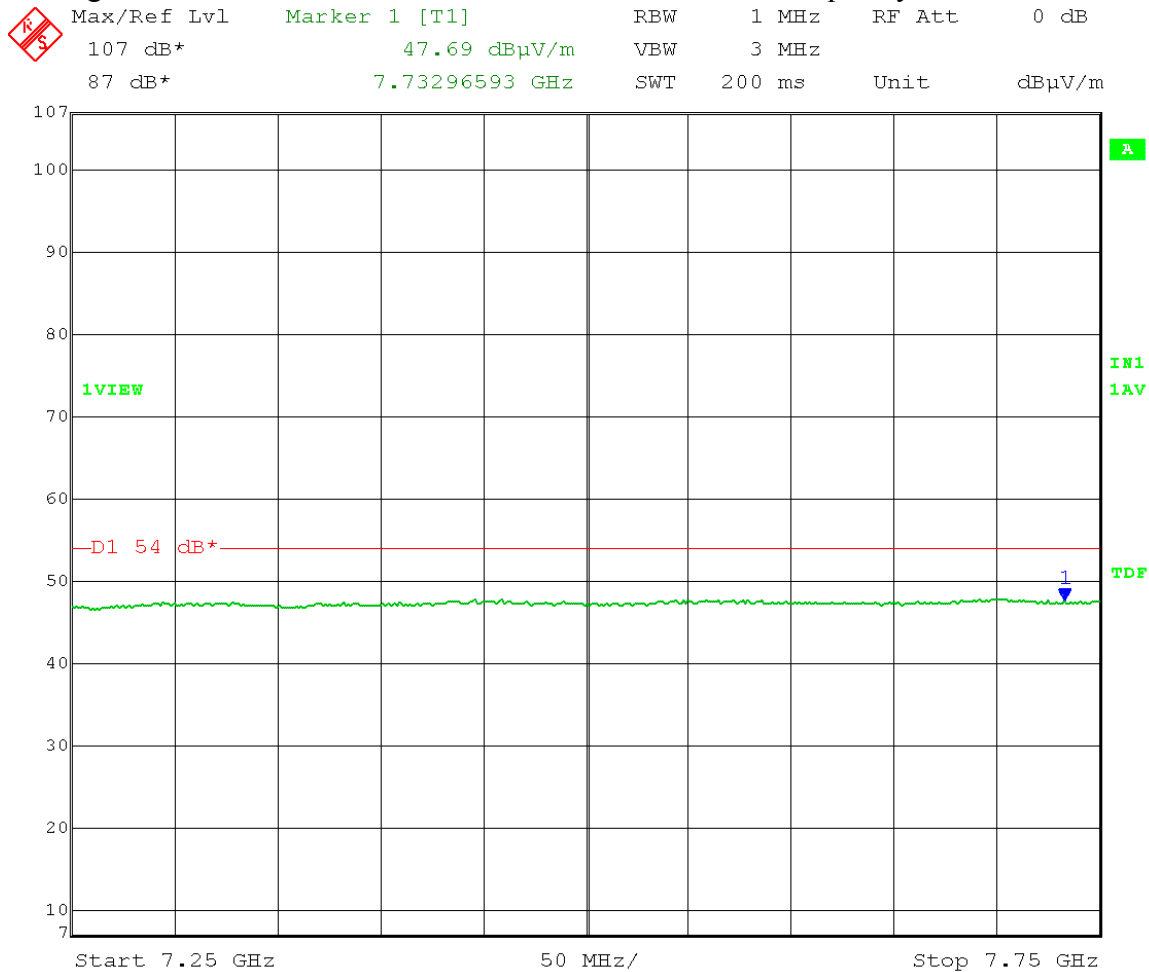
Test Date: 04-09-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 23 dBi Panel antenna
 Operator: Craig B
 Comment: Low, Mid, and High channels
 Output power setting: 8.5 on both chains with 5 dB pad on antenna
 Channel bandwidth: 20 MHz and 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical and Horizontal
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters

Peak: Note: No emissions found in the 7.25 – 7.75 frequency band



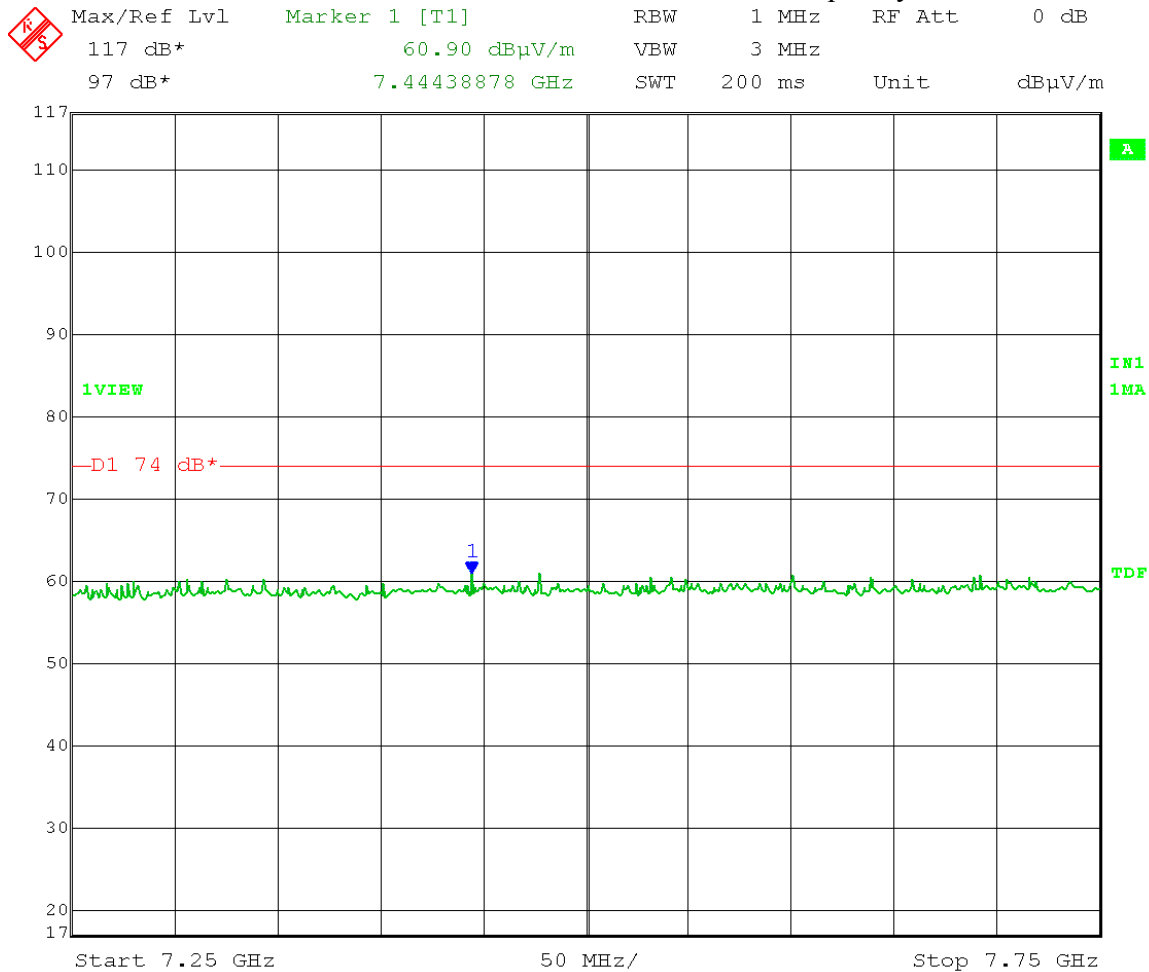
Date: 9.APR.2014 16:02:26

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low, Mid, and High channels
 Output power setting: 27.5* on both chains
 * Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz and 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical and Horizontal
 Restricted Band Limit: 54 dB μ V/m AVERAGE at 3 meters
 Average: Note: No emissions found in the 7.25 – 7.75 frequency band



Date: 14.APR.2014 14:02:05

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in the restricted bands - Radiated
 (FCC 15.407(b)(7)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low, Mid, and High channels
 Output power setting: 27.5* on both chains
 * Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz and 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical and Horizontal
 Restricted Band Limit: 74 dB μ V/m PEAK at 3 meters
 Peak: Note: No emissions found in the 7.25 – 7.75 frequency band



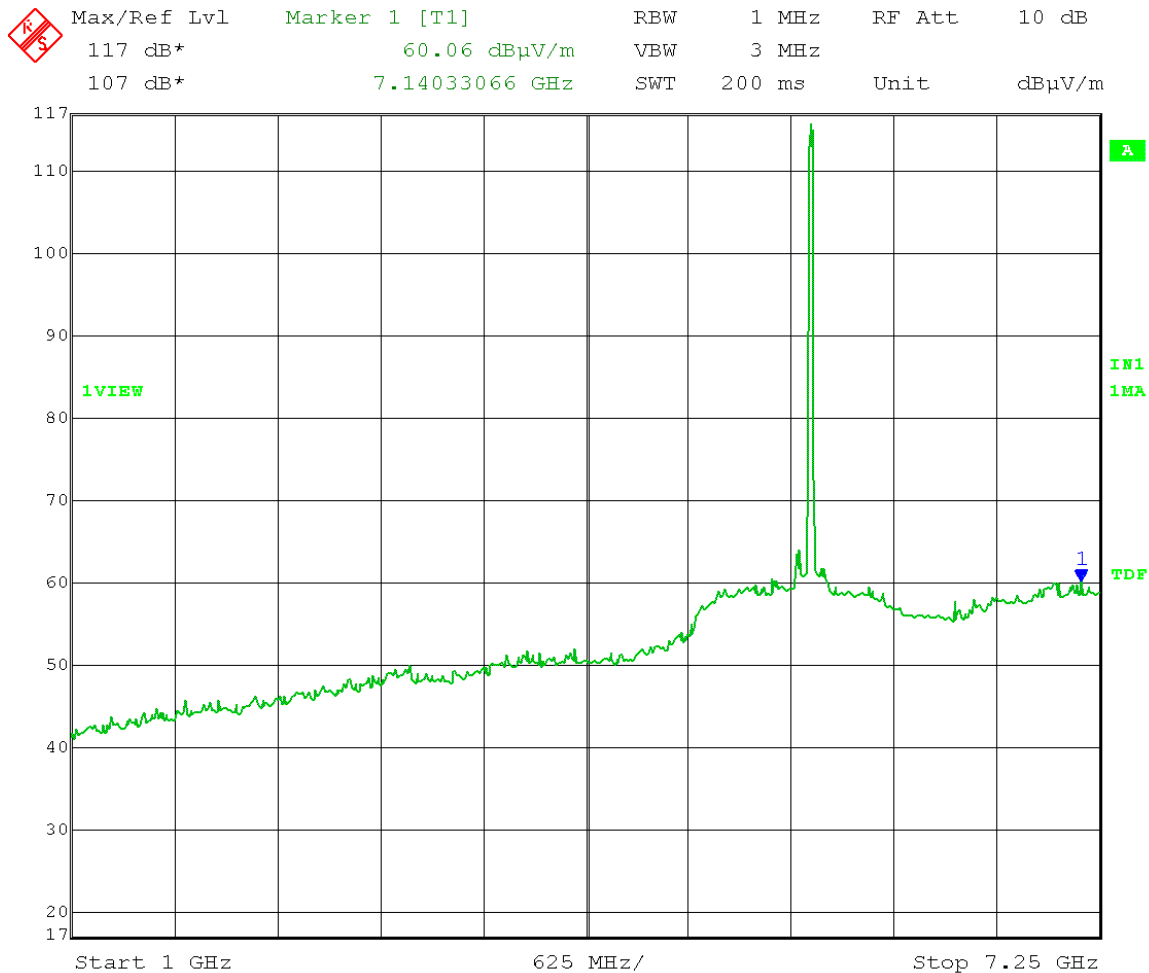
Date: 14.APR.2014 14:01:28

Test Date: 04-03-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5495 MHz
Output power setting: 2.0 on both chains
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $\text{EIRP}[\text{dBm}] = \text{E}[\text{dB}\mu\text{V/m}] - 95.2$
 $\text{EIRP} = 60.06 \text{ dB}\mu\text{V/m} - 95.2 = -35.14 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical: Peak:



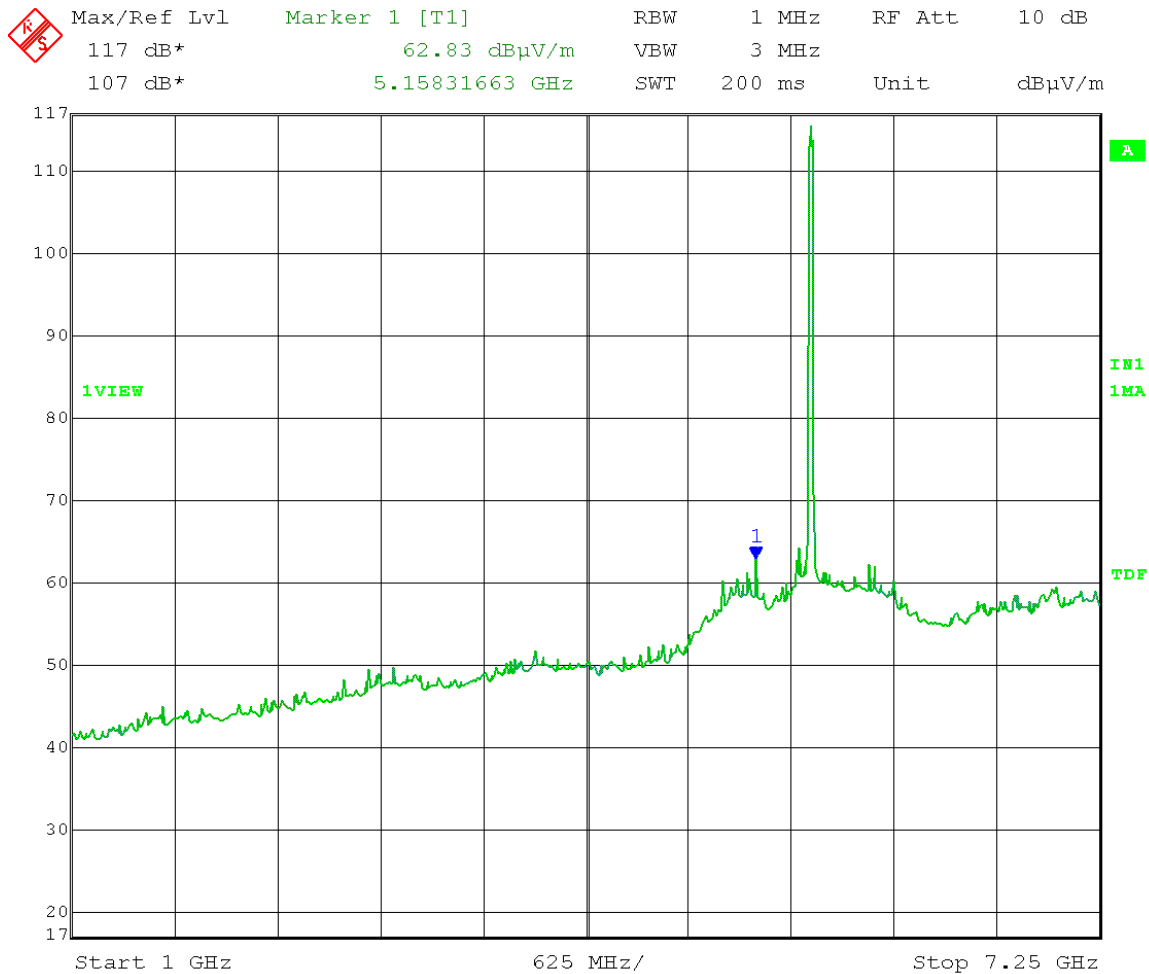
Date: 3.APR.2014 11:27:25

Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5495 MHz
Output power setting: 2.0 on both chains
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $\text{EIRP[dBm]} = \text{E[dB}\mu\text{V/m]} - 95.2$
 $\text{EIRP} = 62.83 \text{ dB}\mu\text{V/m} - 95.2 = -32.37 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:



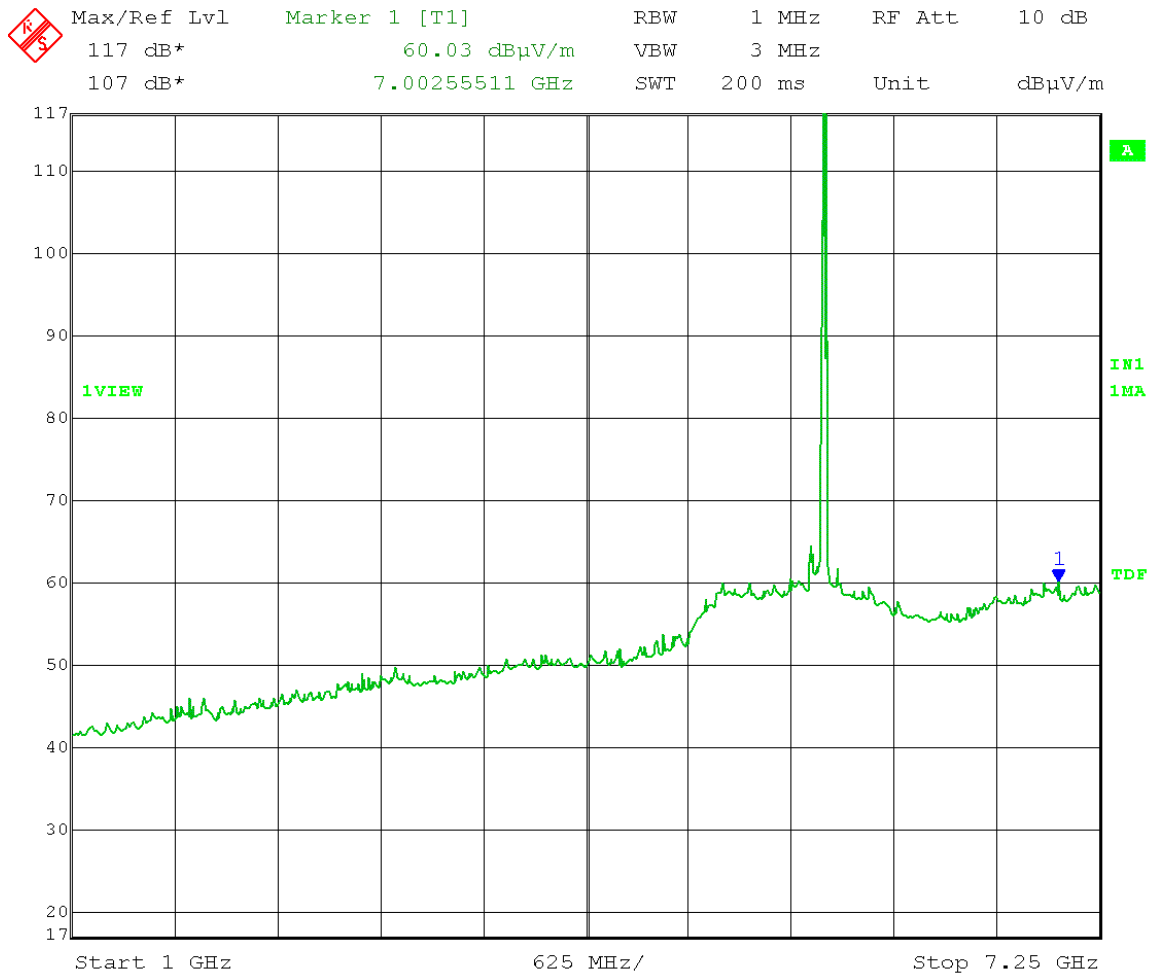
Date: 3.APR.2014 12:19:52

Test Date: 04-03-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Mid Channel: Frequency – 5575 MHz
Output power setting: 3.0 on both chains
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $\text{EIRP}[\text{dBm}] = \text{E}[\text{dB}\mu\text{V/m}] - 95.2$
 $\text{EIRP} = 60.03 \text{ dB}\mu\text{V/m} - 95.2 = -35.17 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical: Peak:



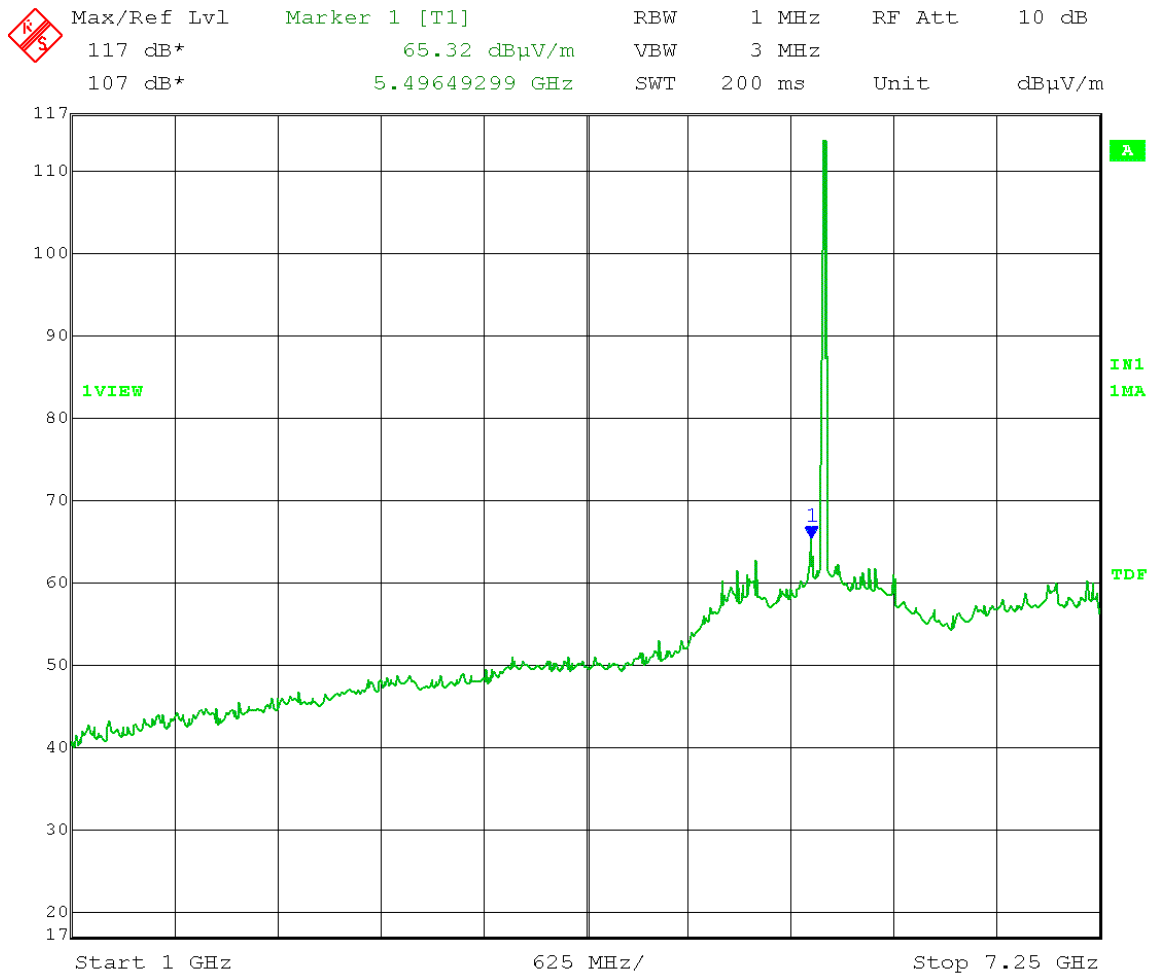
Date: 3.APR.2014 11:38:15

Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Mid Channel: Frequency – 5575 MHz
Output power setting: 3.0 on both chains
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 65.32 \text{ dB}\mu V/m - 95.2 = -29.88 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:



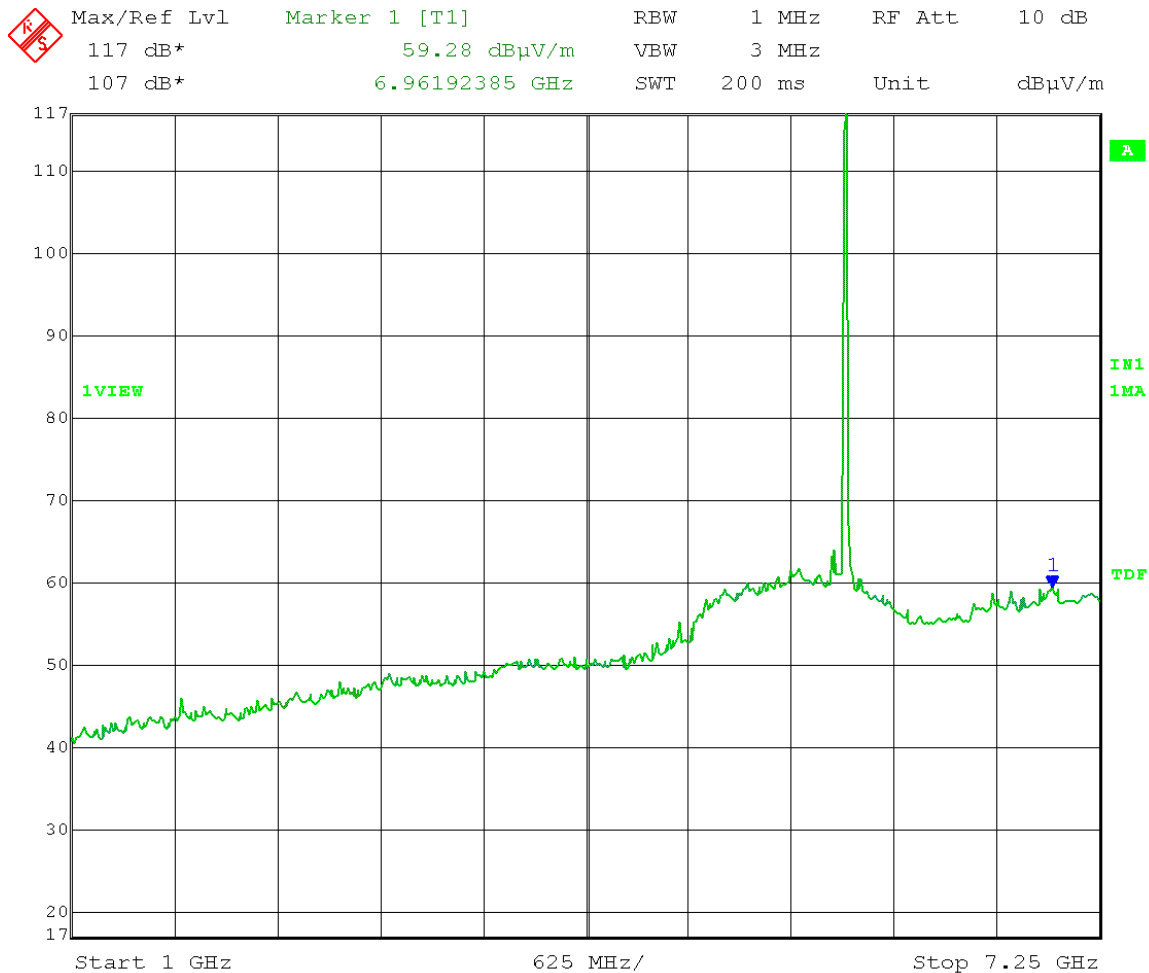
Date: 3.APR.2014 12:16:44

Test Date: 04-03-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: High Channel: Frequency – 5705 MHz
Output power setting: 3.5 on both chains
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $\text{EIRP}[\text{dBm}] = \text{E}[\text{dB}\mu\text{V/m}] - 95.2$
 $\text{EIRP} = 59.28 \text{ dB}\mu\text{V/m} - 95.2 = -35.92 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical: Peak:



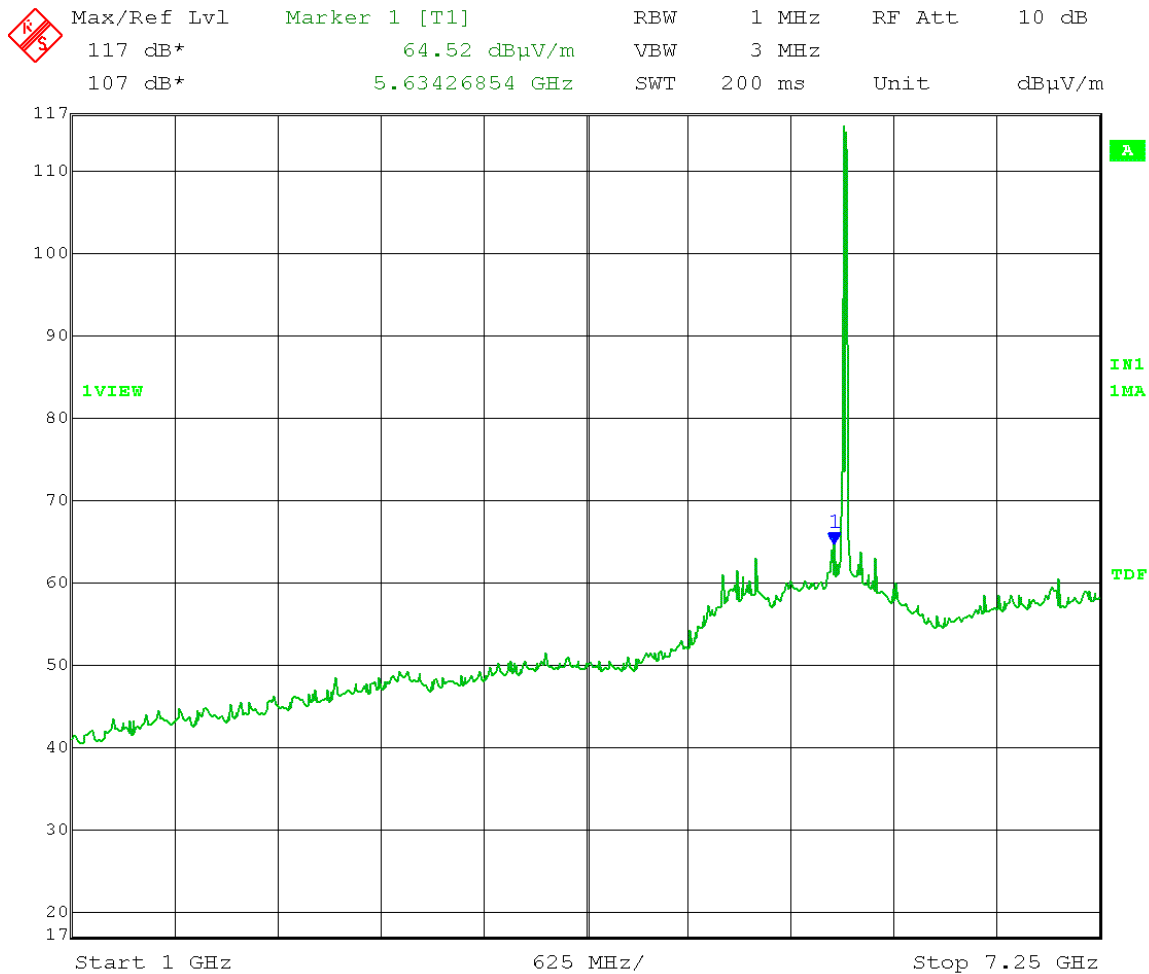
Date: 3.APR.2014 11:47:01

Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: High Channel: Frequency – 5705 MHz
Output power setting: 3.5 on both chains
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 64.52 \text{ dB}\mu V/m - 95.2 = -30.68 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:



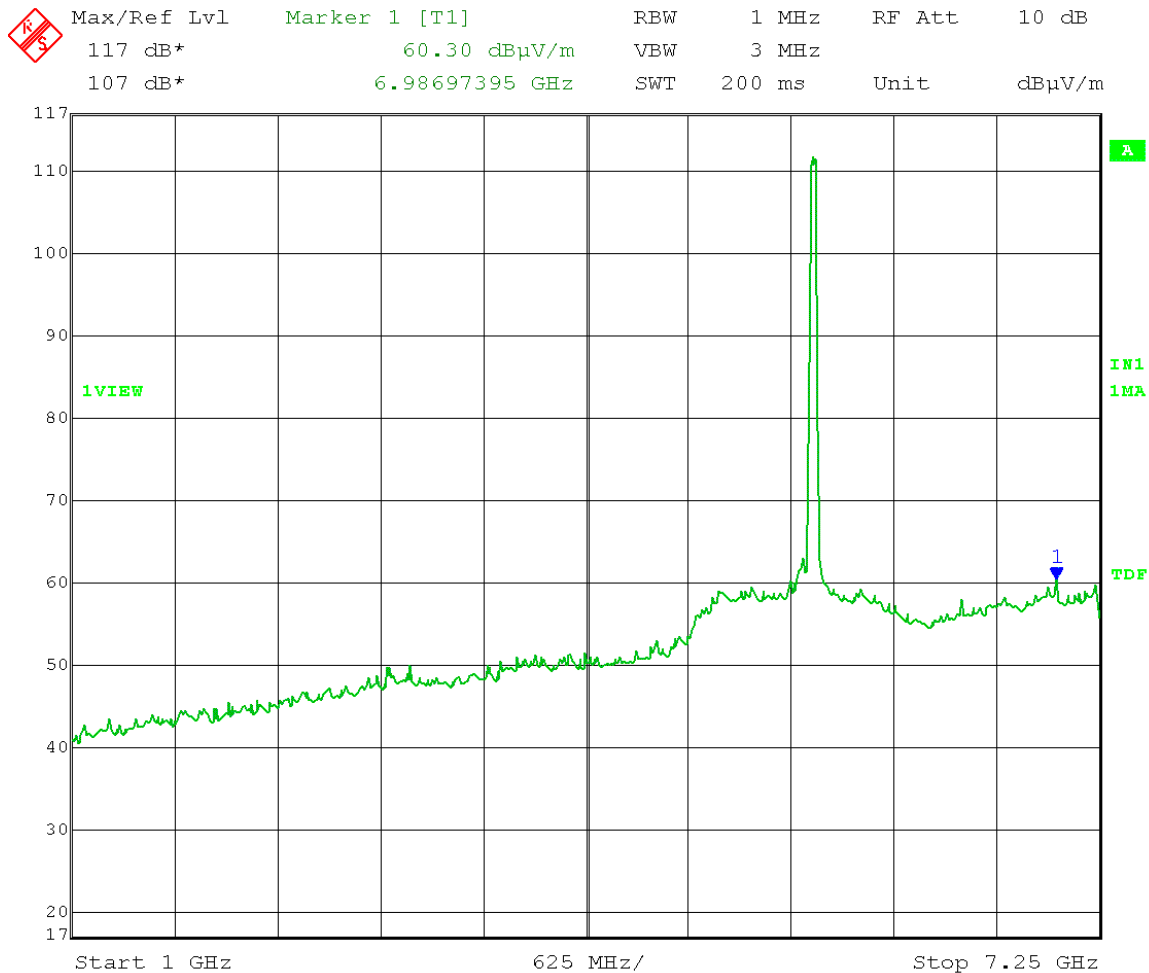
Date: 3.APR.2014 12:22:52

Test Date: 04-03-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5510 MHz
Output power setting: 2.0 on both chains
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $\text{EIRP}[\text{dBm}] = \text{E}[\text{dB}\mu\text{V/m}] - 95.2$
 $\text{EIRP} = 60.30 \text{ dB}\mu\text{V/m} - 95.2 = -34.90 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical: Peak:



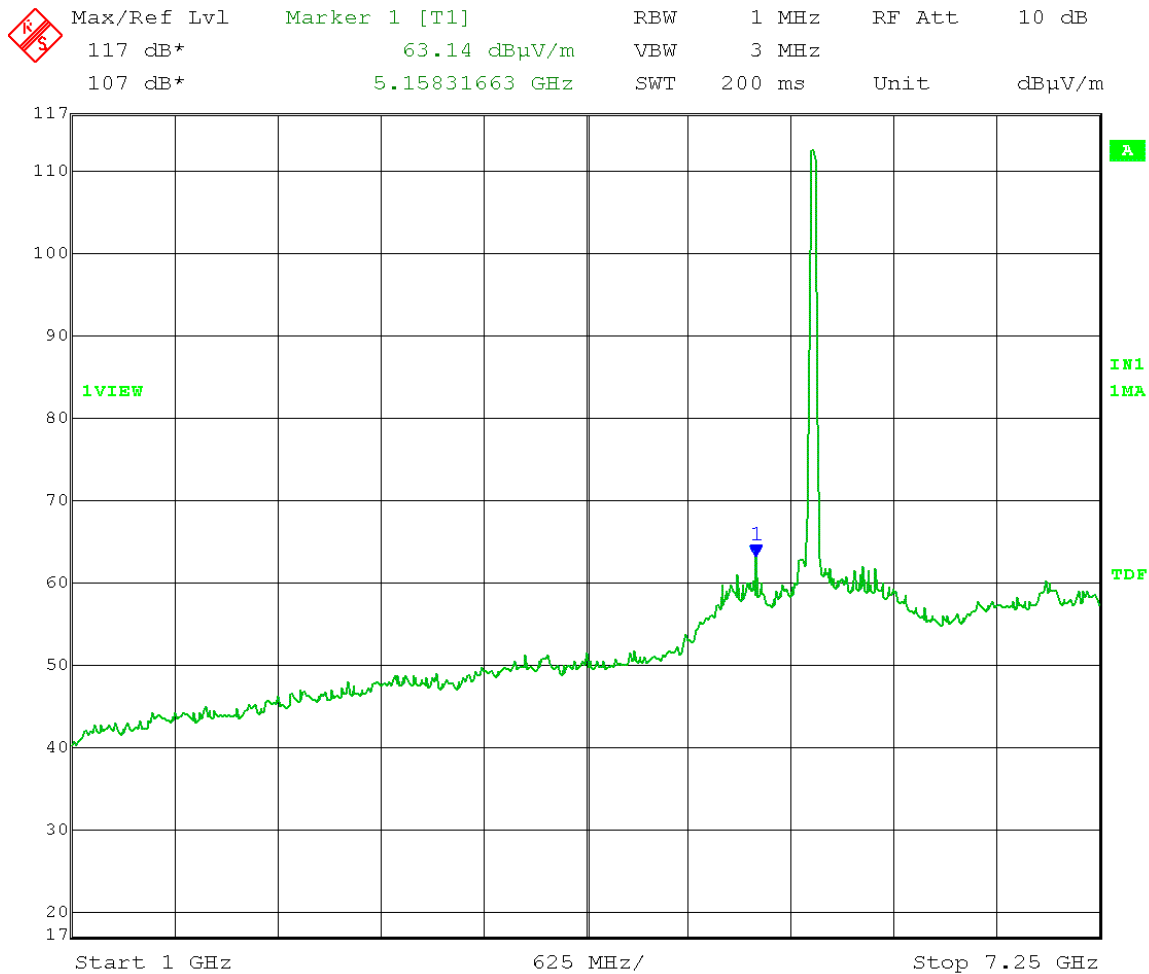
Date: 3.APR.2014 12:01:12

Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5510 MHz
Output power setting: 2.0 on both chains
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $\text{EIRP}[\text{dBm}] = \text{E}[\text{dB}\mu\text{V/m}] - 95.2$
 $\text{EIRP} = 63.14 \text{ dB}\mu\text{V/m} - 95.2 = -32.06 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:



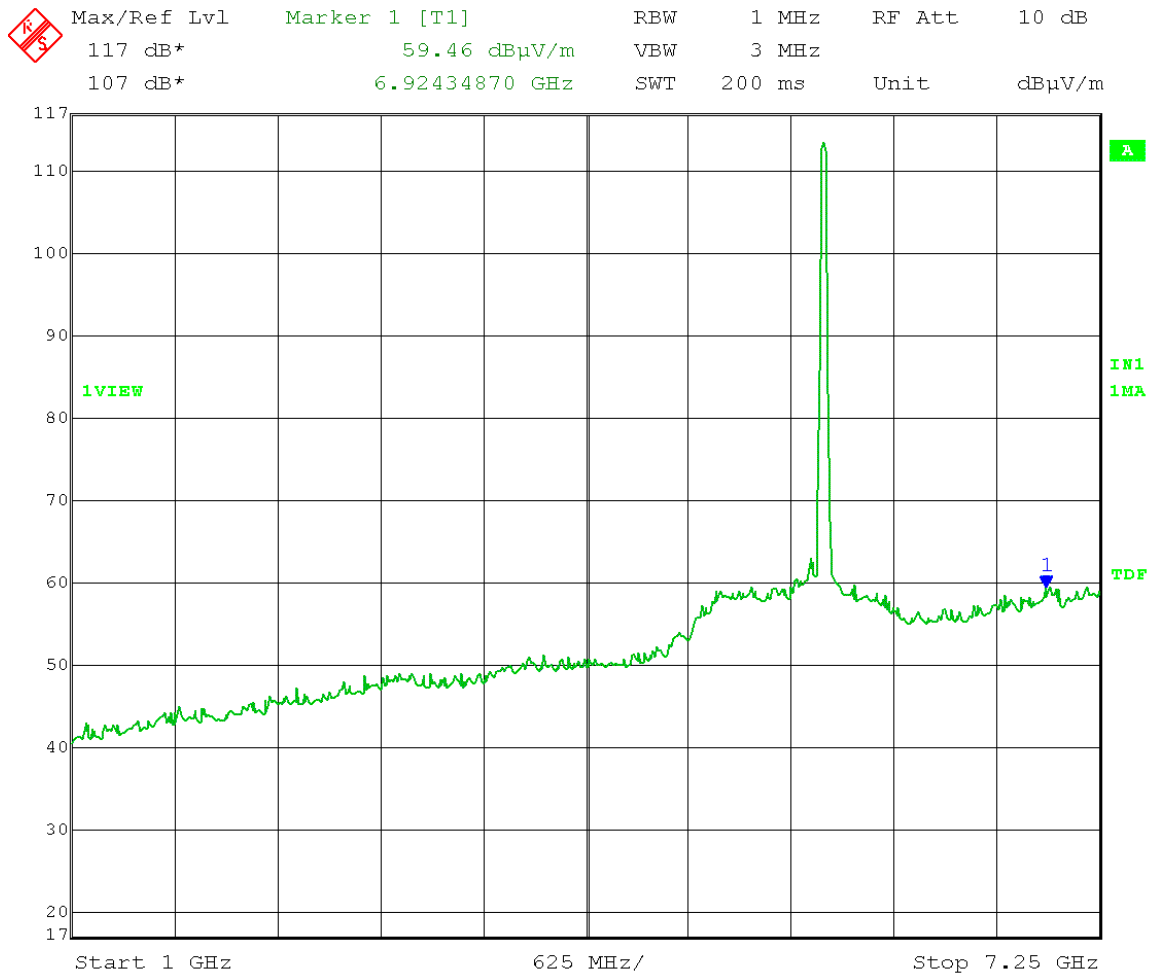
Date: 3.APR.2014 12:14:29

Test Date: 04-03-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: Mid Channel: Frequency – 5575 MHz
Output power setting: 3.0 on both chains
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 59.46 dB\mu V/m - 95.2 = -35.74 dBm/MHz$

Frequency Range: 1 – 7.25 GHz

Vertical: Peak:



Date: 3.APR.2014 11:50:00

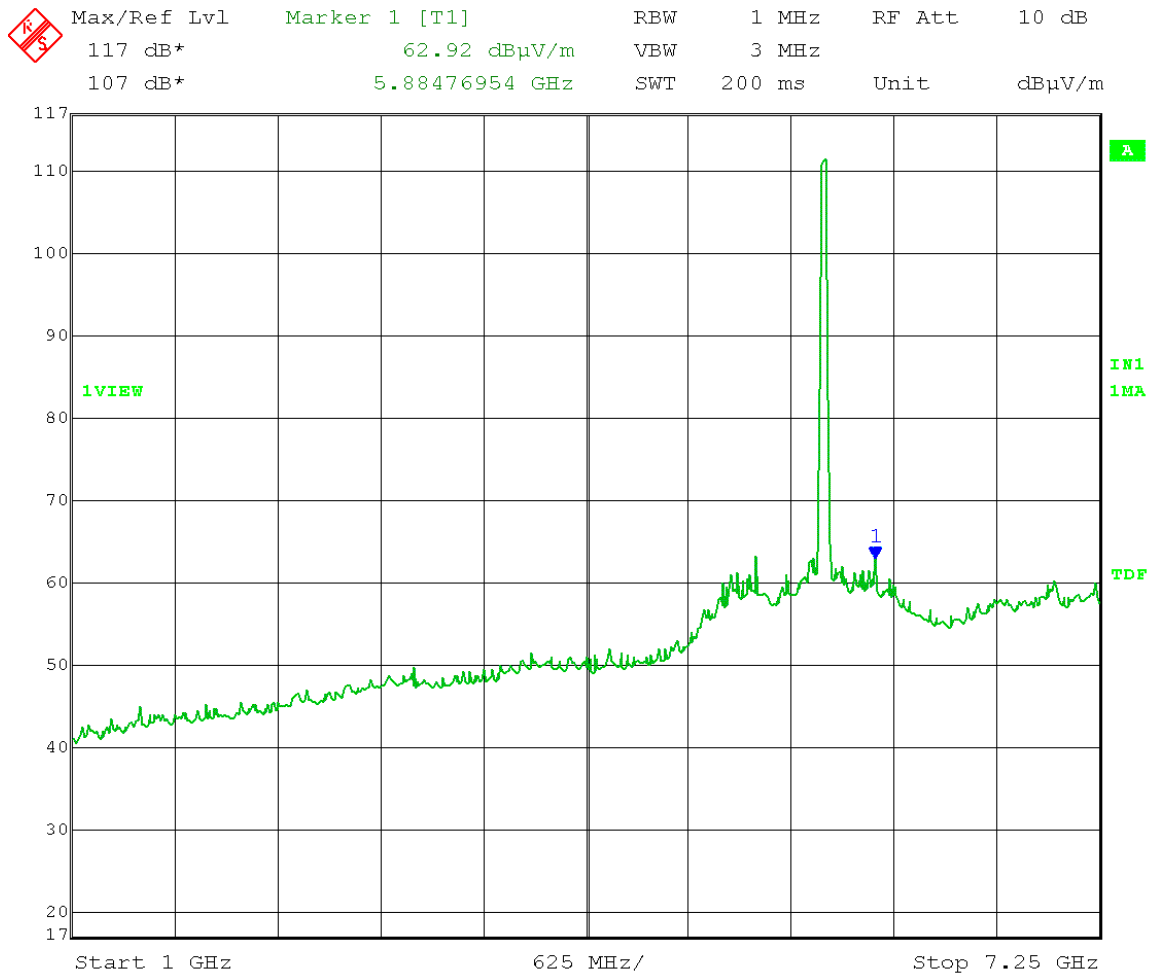
Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna

Operator: Craig B
Comment: Mid Channel: Frequency – 5575 MHz
Output power setting: 3.0 on both chains
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $\text{EIRP}[\text{dBm}] = \text{E}[\text{dB}\mu\text{V/m}] - 95.2$
 $\text{EIRP} = 62.92 \text{ dB}\mu\text{V/m} - 95.2 = -32.28 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:



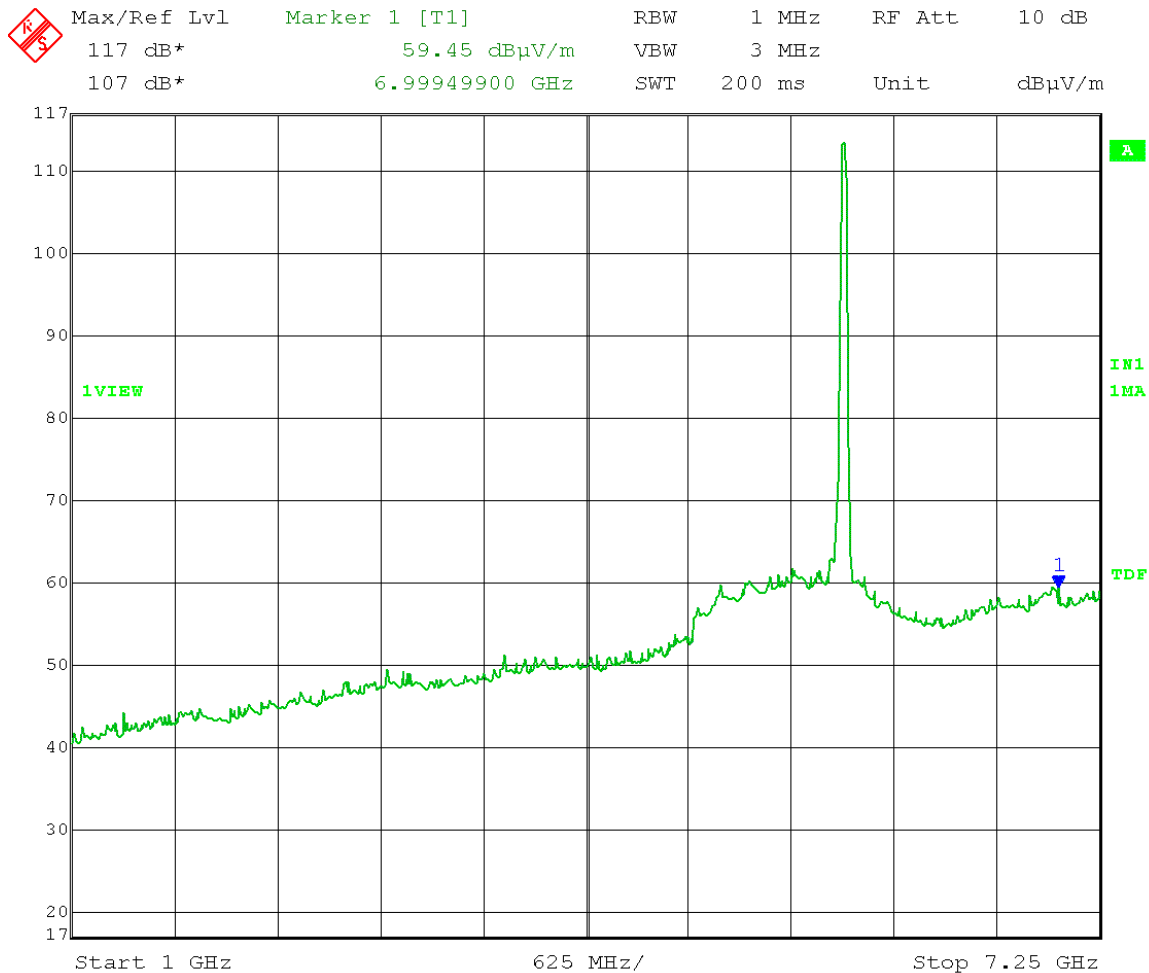
Date: 3.APR.2014 12:10:32

Test Date: 04-03-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna
Operator: Craig B
Comment: High Channel: Frequency – 5695 MHz
Output power setting: 3.0 on both chains
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Vertical
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $\text{EIRP}[\text{dBm}] = \text{E}[\text{dB}\mu\text{V/m}] - 95.2$
 $\text{EIRP} = 59.46 \text{ dB}\mu\text{V/m} - 95.2 = -35.74 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical: Peak:



Date: 3.APR.2014 12:04:59

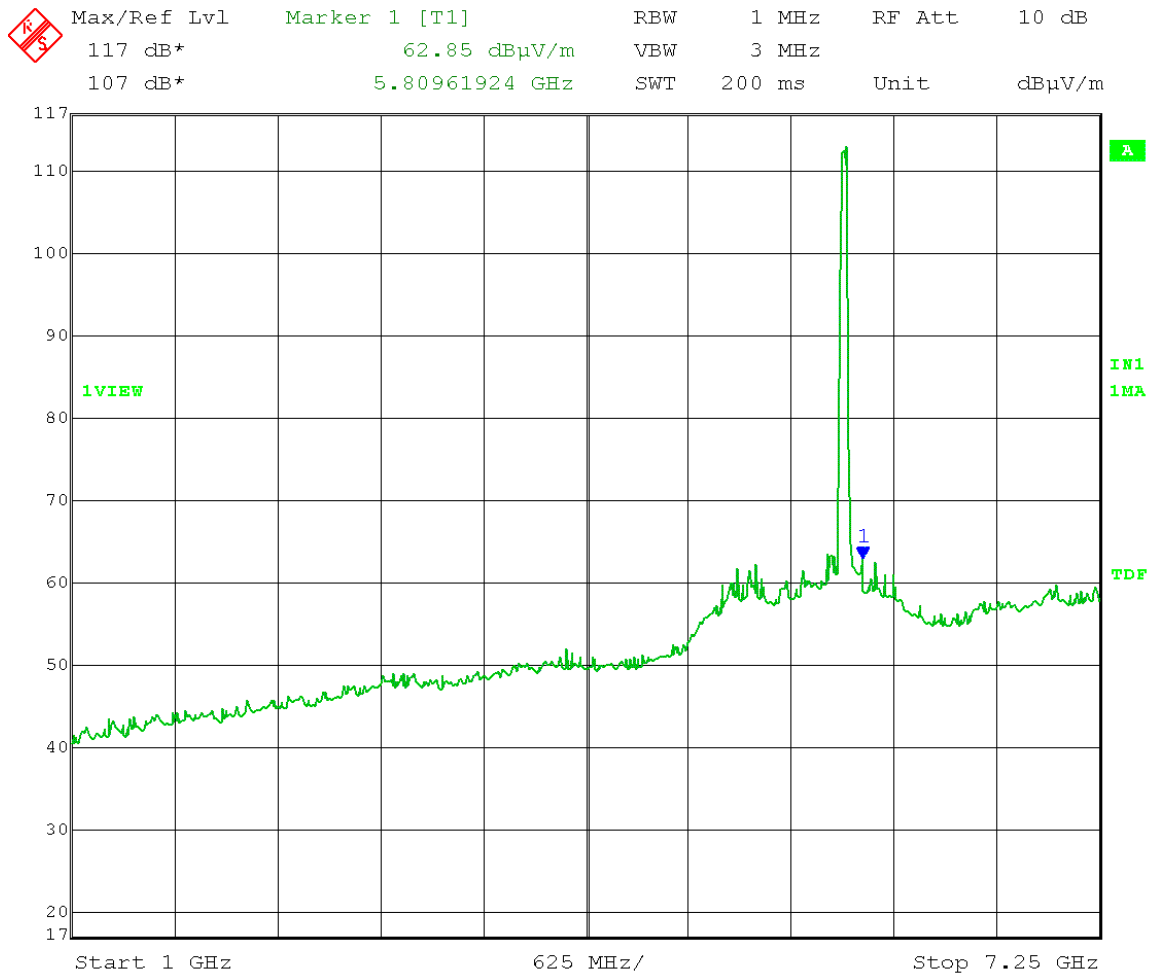
Test Date: 04-02-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 23 dBi Panel antenna

Operator: Craig B
Comment: High Channel: Frequency – 5695 MHz
Output power setting: 3.0 on both chains
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 62.85 dB\mu V/m - 95.2 = -32.35 dBm/MHz$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:



Date: 3.APR.2014 12:08:16

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Limit: -27 dBm/MHz Peak EIRP

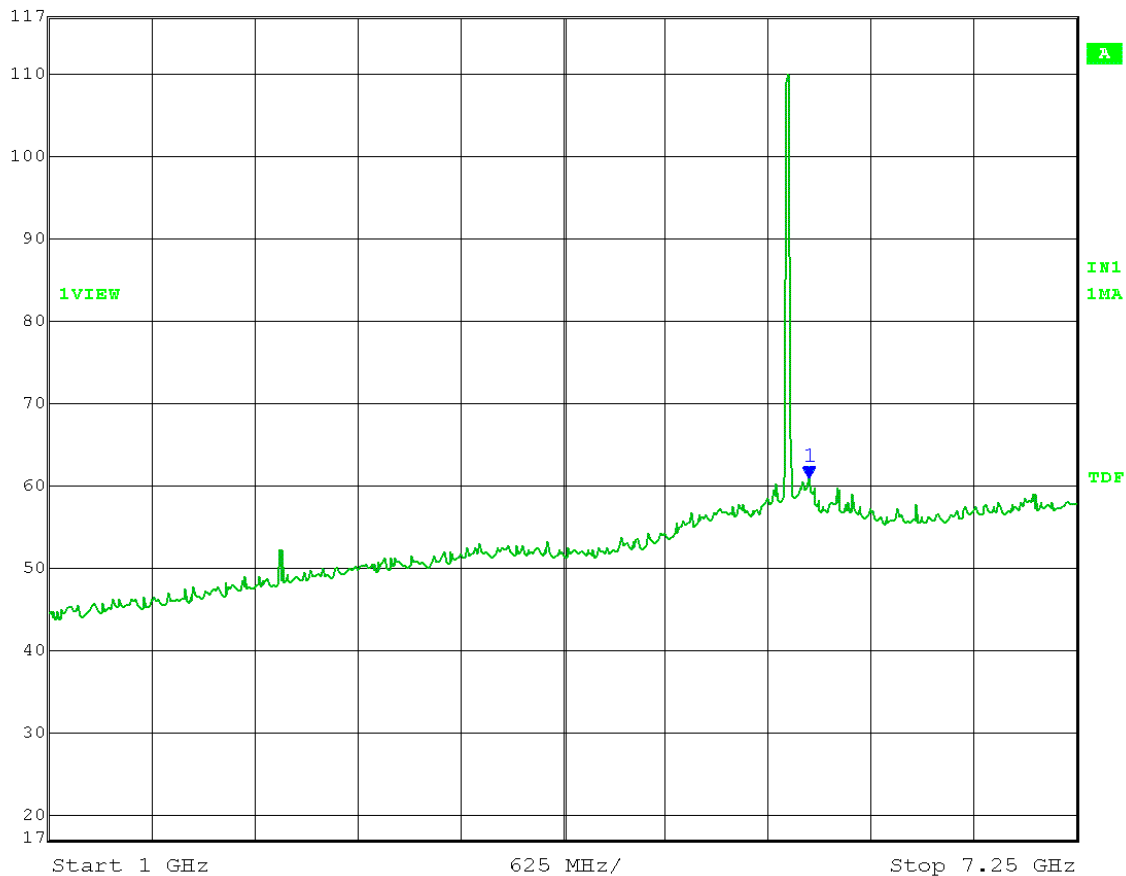
Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 60.75 dB\mu V/m - 95.2 = -34.45 dBm/MHz$

Frequency Range: 1 – 7.25 GHz

Vertical:

Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	60.75 dBμV/m	VBW	3 MHz		
	97 dB*	5.62174349 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 15:41:18

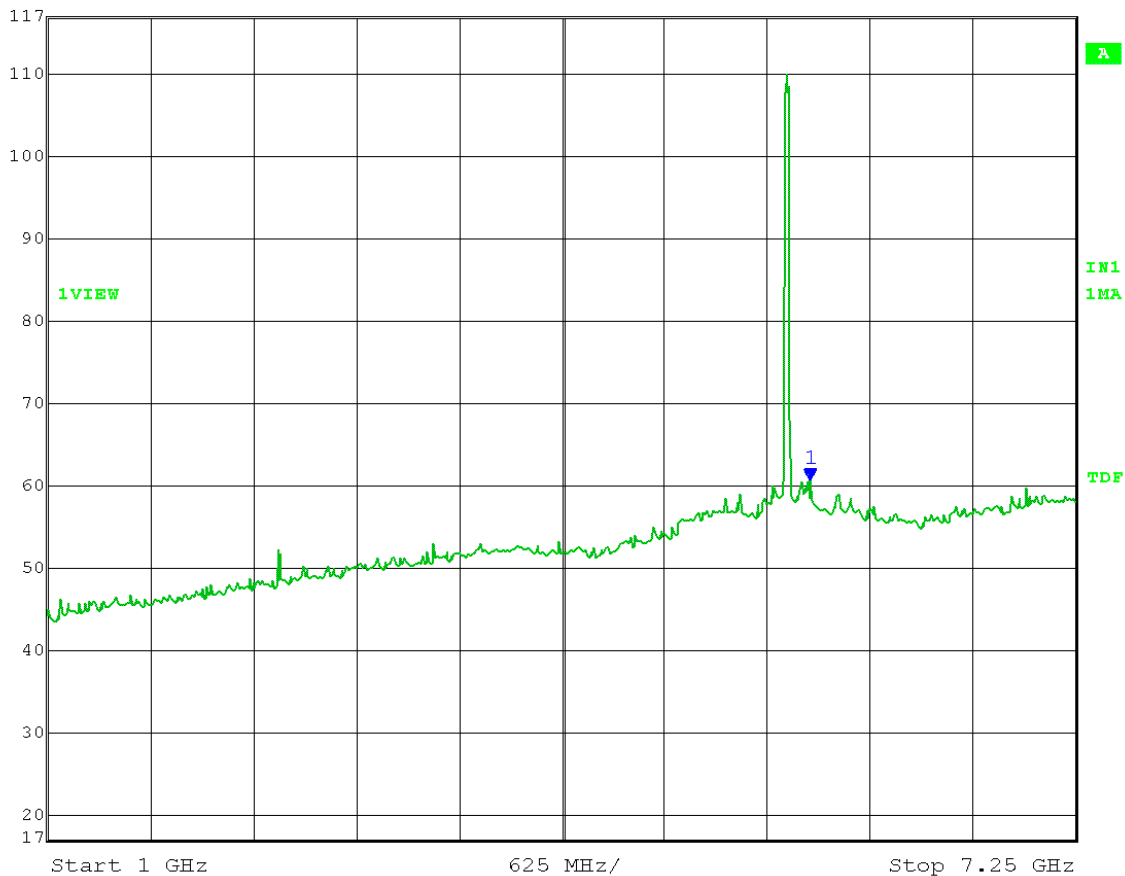
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Low Channel: Frequency – 5495 MHz
 Output power setting: 26.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 60.66 dB\mu V/m - 95.2 = -34.54 dBm/MHz$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	60.66 dBμV/m	VBW	3 MHz		
	97 dB*	5.63426854 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 14:19:02

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Limit: -27 dBm/MHz Peak EIRP

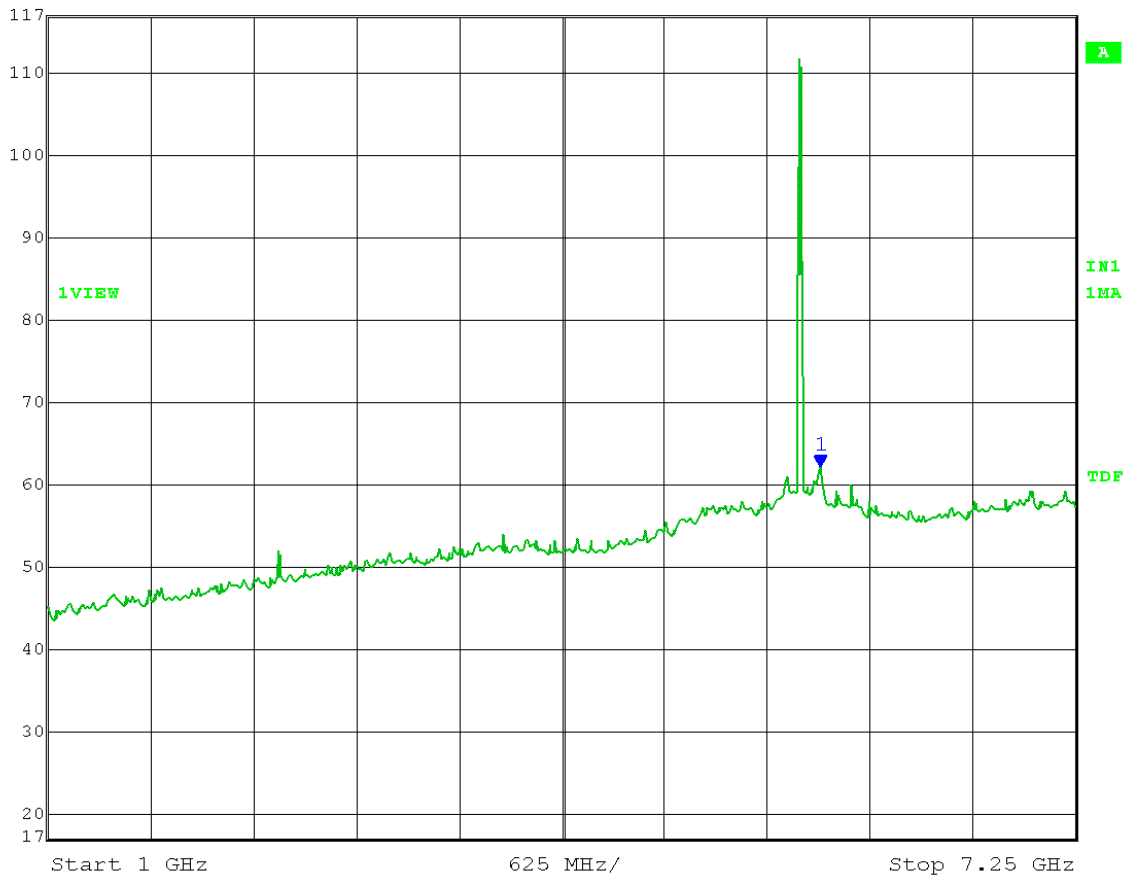
Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 62.11 \text{ dB}\mu V/m - 95.2 = -33.09 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical:

Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	62.11 dBμV/m	VBW	3 MHz		
	97 dB*	5.69689379 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 15:43:35

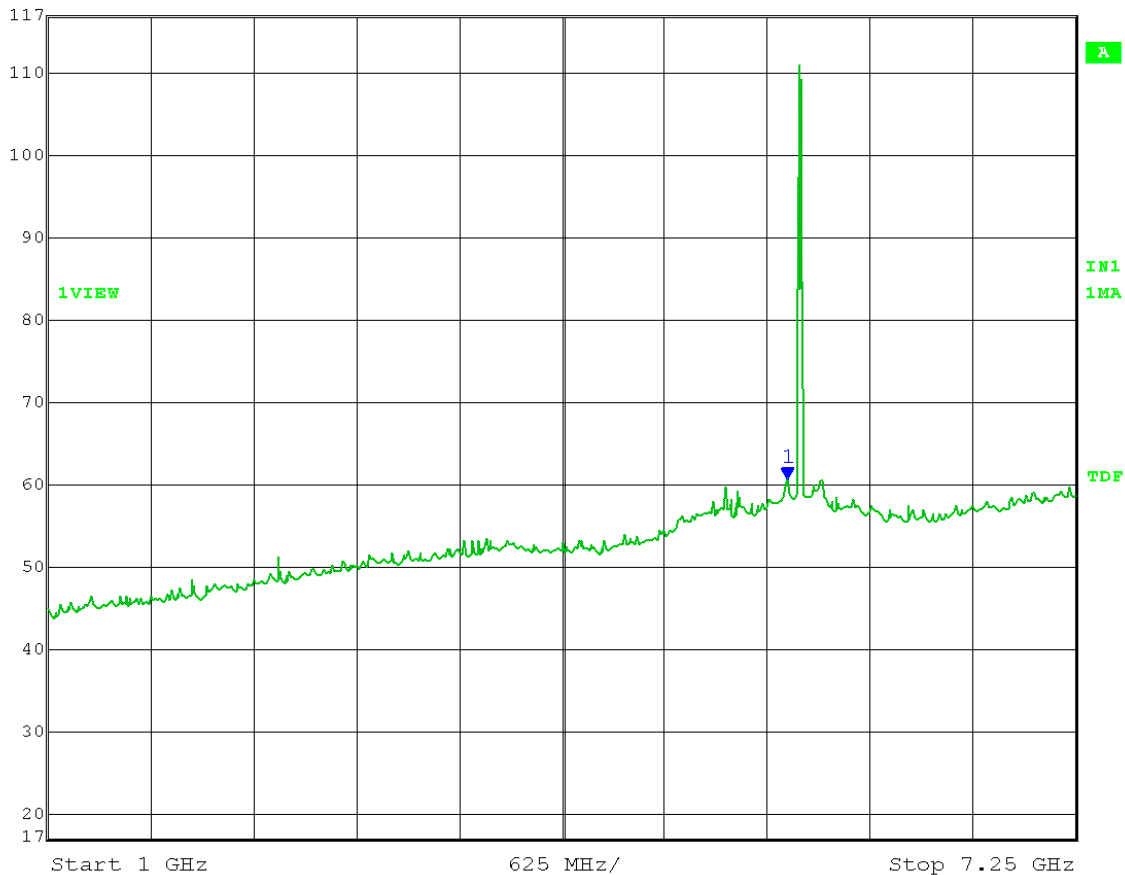
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 60.59 \text{ dB}\mu V/m - 95.2 = -34.61 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	60.59 dBμV/m	VBW	3 MHz		
	97 dB*	5.49649299 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 14:17:16

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5705 MHz
 Output power setting: 27.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 20 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Limit: -27 dBm/MHz Peak EIRP

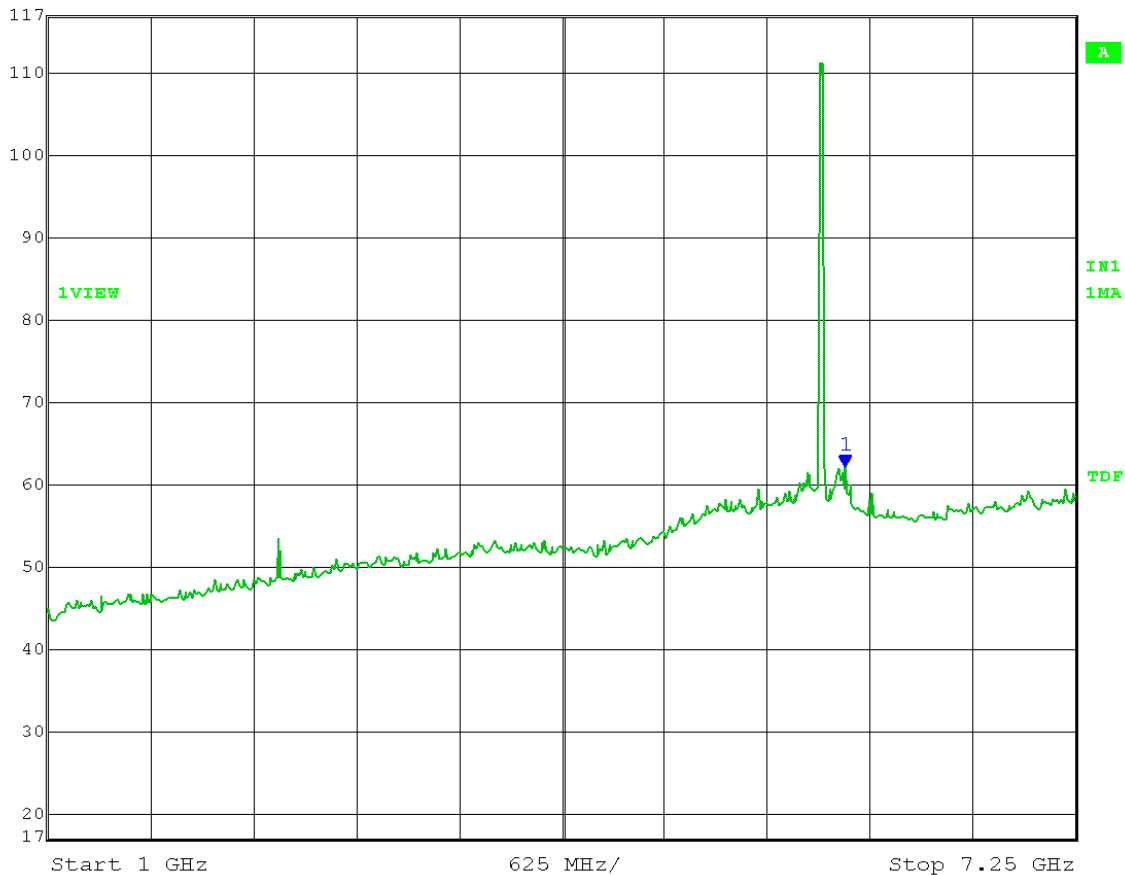
Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 62.21 \text{ dB}\mu V/m - 95.2 = -32.99 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical:

Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	62.21 dBμV/m	VBW	3 MHz		
	97 dB*	5.84719439 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 15:38:59

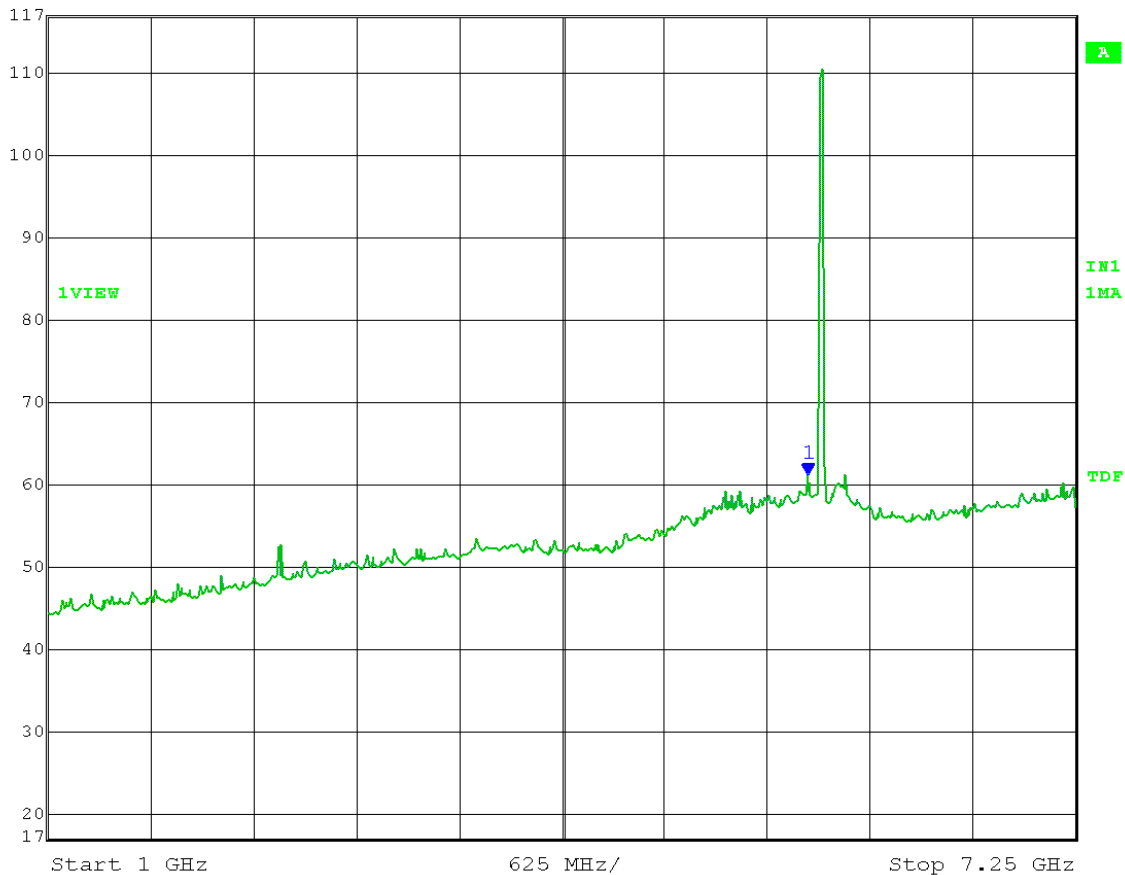
Test Date: 04-14-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 30 dBi Dish antenna
Operator: Craig B
Comment: High Channel: Frequency – 5705 MHz
Output power setting: 27.5* on both chains
*Software cal table was modified so that power setting 24.0 = 0.0
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 20 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 61.12 dB\mu V/m - 95.2 = -34.08 dBm/MHz$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	61.12 dBμV/m	VBW	3 MHz		
	97 dB*	5.62174349 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 14:22:27

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 61.01 \text{ dB}\mu V/m - 95.2 = -34.19 \text{ dBm/MHz}$

Vertical: Peak:  Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB
 117 dB* 61.01 dBμV/m VBW 3 MHz
 97 dB* 5.63426854 GHz SWT 200 ms Unit dBμV/m



Start 1 GHz 625 MHz/ Stop 7.25 GHz

Date: 14.APR.2014 15:28:54

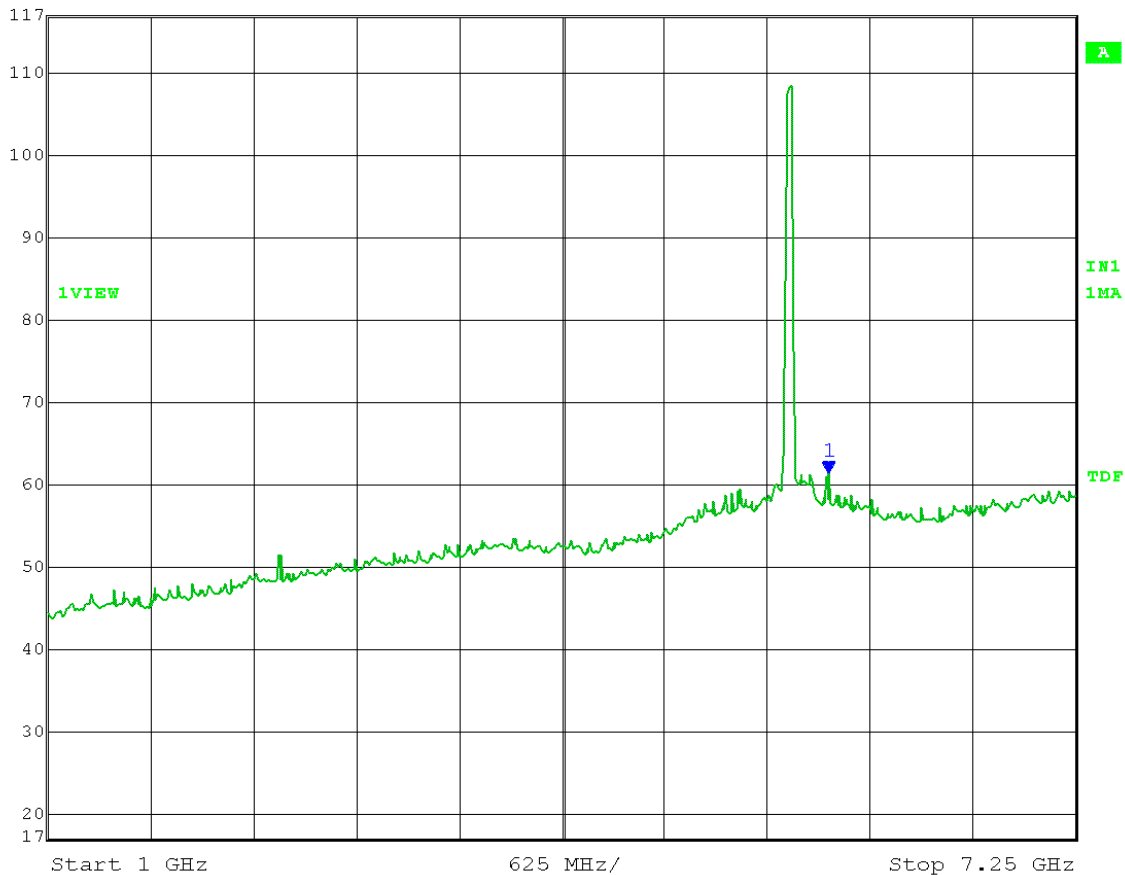
Test Date: 04-14-2014
Company: Cambium Networks
EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Test: Unwanted Emissions in non-restricted bands - Radiated
(FCC 15.407(b)(3)) - With 30 dBi Dish antenna
Operator: Craig B
Comment: Low Channel: Frequency – 5510 MHz
Output power setting: 26.0* on both chains
*Software cal table was modified so that power setting 24.0 = 0.0
with 3 dB attenuator on radio and 3 dB attenuator on antenna
Channel bandwidth: 40 MHz
Modulation: OFDM; MCS15
Polarization: Horizontal
Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 61.37 dB\mu V/m - 95.2 = -33.83 dBm/MHz$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	61.37 dBμV/m	VBW	3 MHz		
	97 dB*	5.74699399 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 14:43:28

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 27.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Limit: -27 dBm/MHz Peak EIRP

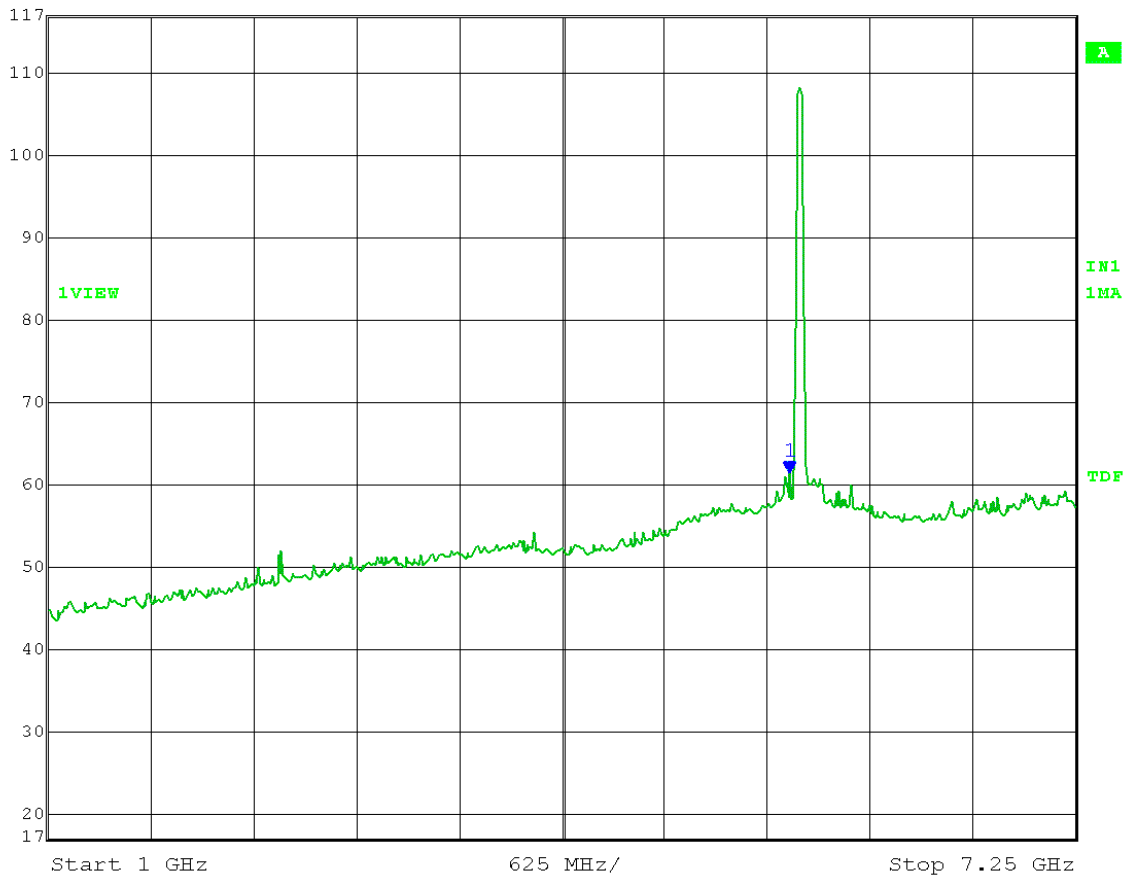
Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 61.28 \text{ dB}\mu V/m - 95.2 = -33.92 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical:

Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	61.28 dBμV/m	VBW	3 MHz		
	97 dB*	5.50901804 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 15:30:59

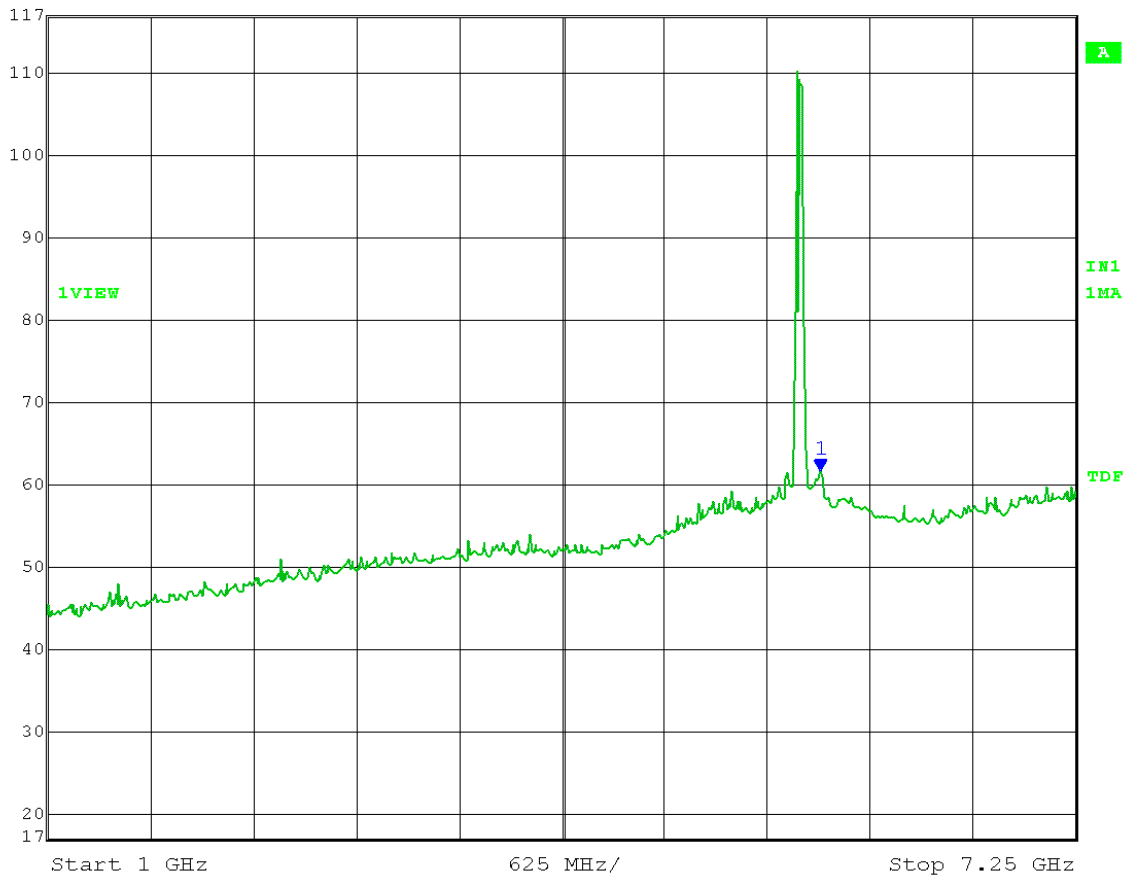
Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: Mid Channel: Frequency – 5575 MHz
 Output power setting: 27.0* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 61.70 \text{ dB}\mu V/m - 95.2 = -33.50 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	61.70 dBμV/m	VBW	3 MHz		
	97 dB*	5.69689379 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 14:40:25

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna
 Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Vertical
 Limit: -27 dBm/MHz Peak EIRP

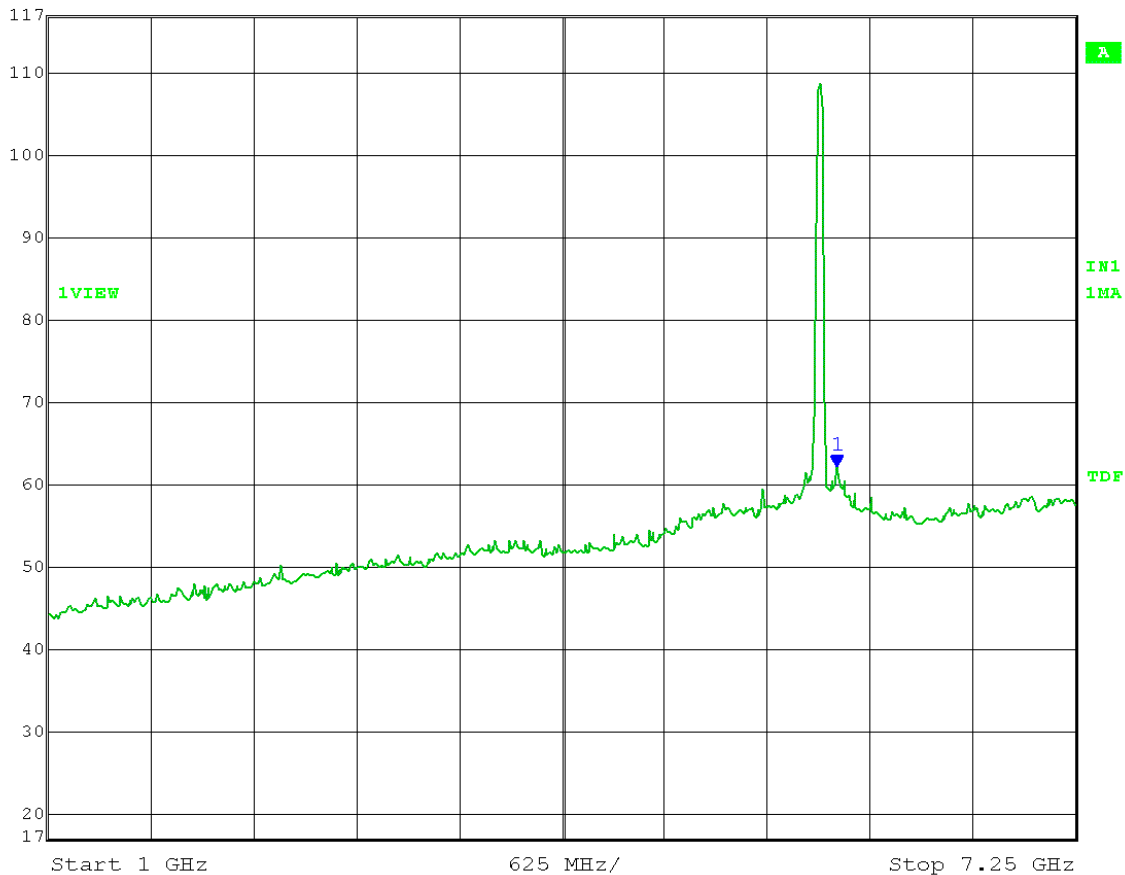
Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 62.22 \text{ dB}\mu V/m - 95.2 = -32.98 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Vertical:

Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	62.22 dBμV/m	VBW	3 MHz		
	97 dB*	5.79709419 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 15:26:52

Test Date: 04-14-2014
 Company: Cambium Networks
 EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
 Test: Unwanted Emissions in non-restricted bands - Radiated
 (FCC 15.407(b)(3)) - With 30 dBi Dish antenna
 Operator: Craig B
 Comment: High Channel: Frequency – 5695 MHz
 Output power setting: 26.5* on both chains
 *Software cal table was modified so that power setting 24.0 = 0.0
 with 3 dB attenuator on radio and 3 dB attenuator on antenna

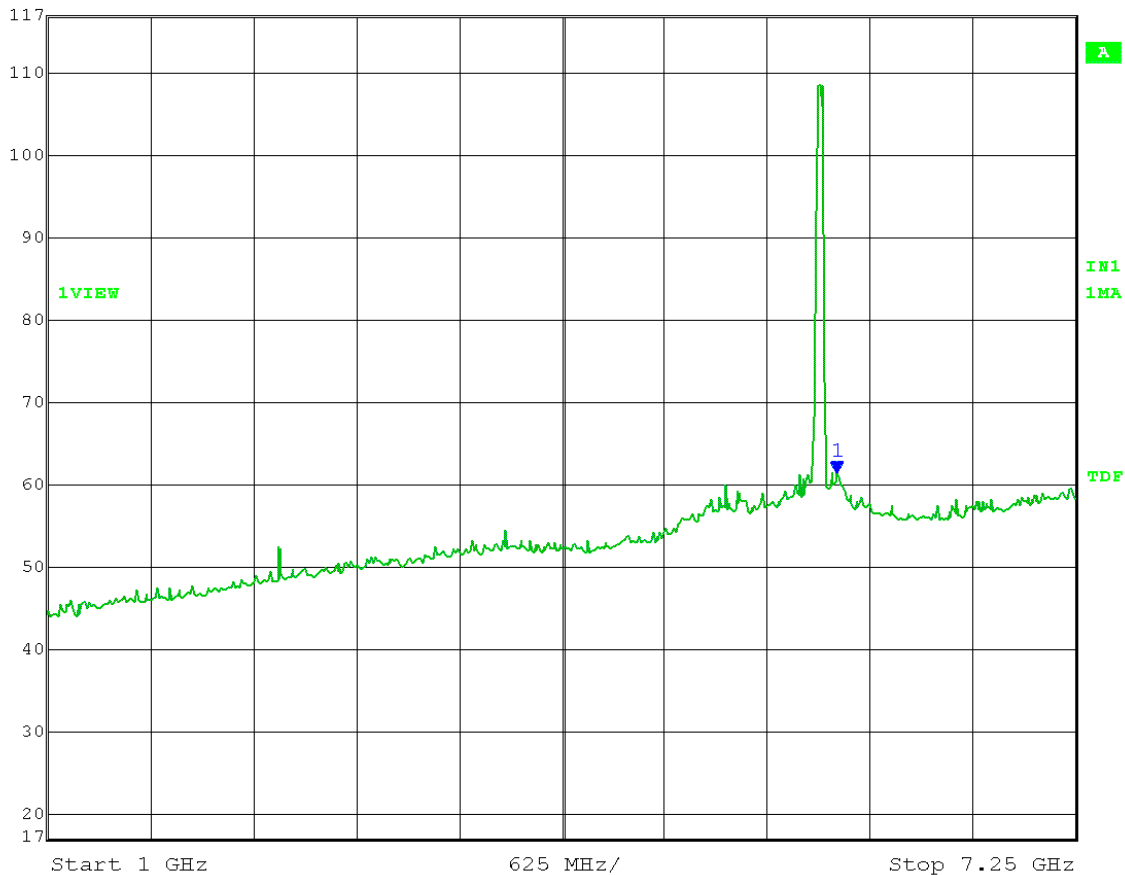
Channel bandwidth: 40 MHz
 Modulation: OFDM; MCS15
 Polarization: Horizontal
 Limit: -27 dBm/MHz Peak EIRP

Test distance 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$
 $EIRP = 61.33 \text{ dB}\mu V/m - 95.2 = -33.87 \text{ dBm/MHz}$

Frequency Range: 1 – 7.25 GHz

Horizontal: Peak:

	Max/Ref Lvl	Marker 1 [T1]	RBW	1 MHz	RF Att	0 dB
	117 dB*	61.33 dBμV/m	VBW	3 MHz		
	97 dB*	5.79709419 GHz	SWT	200 ms	Unit	dBμV/m



Date: 14.APR.2014 14:46:55

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg C 27% R.H.
Test Site: DLS O.F. G1
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 8.5; with 23 dBi Panel antenna and 5 dB pad on EUT Port 1
Date: 04-07-2014

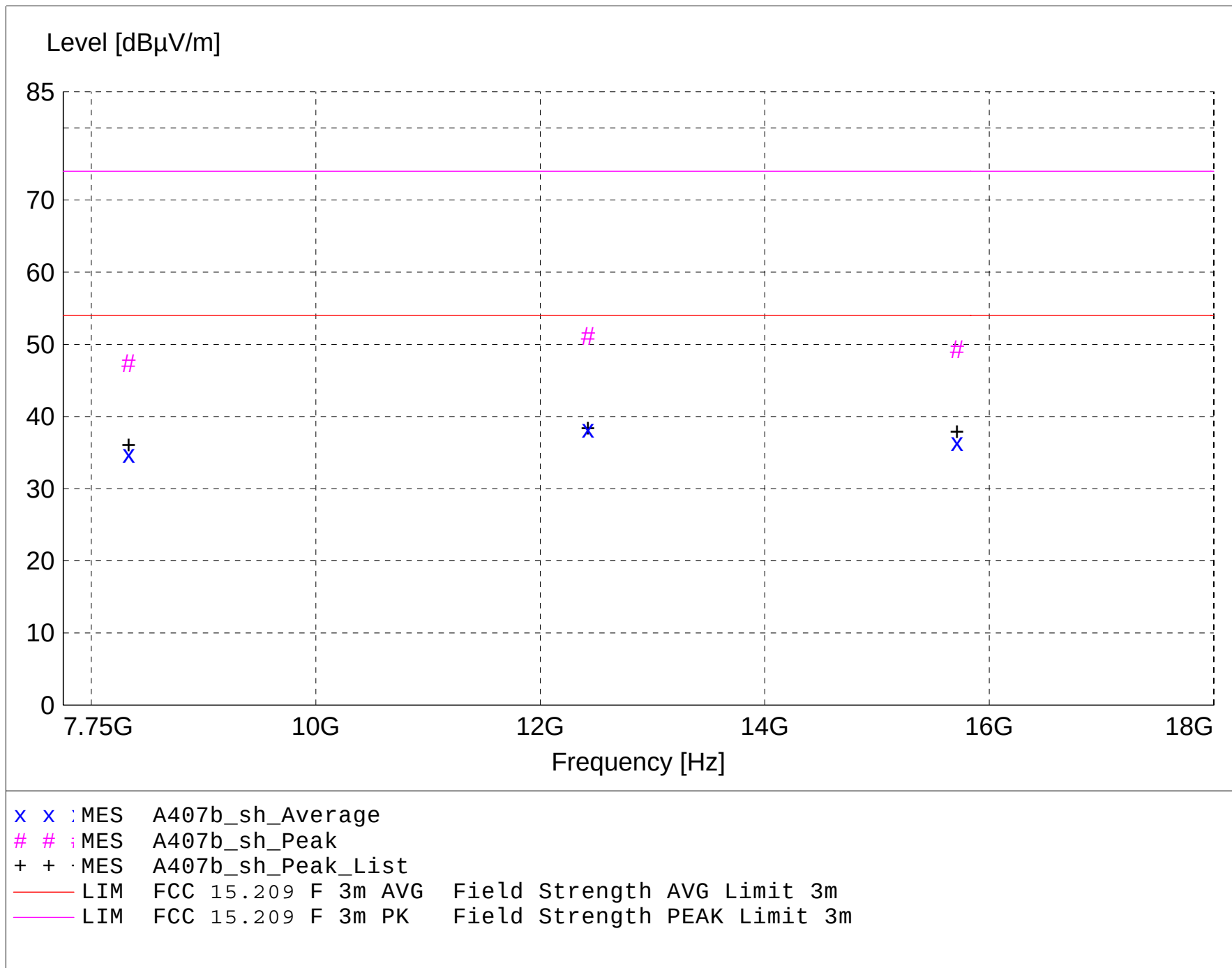
TEXT: "Horz 3 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization

Sample Equations:
$$\begin{array}{rcll} \text{Total Level(dB}\mu\text{V/m)} & = & \text{Level(dB}\mu\text{V)} & + \text{ System Loss(dB)} & + \text{ Antenna Factor(dB}\mu\text{V/m)} \\ 24.6 & & = 35.51 & + (-22.1) & + 11.20 \end{array}$$
$$\begin{array}{rcll} \text{Margin(dB)} & = & \text{Limit(dB}\mu\text{V/m)} & - \text{ Total Level(dB}\mu\text{V/m)} \\ 15.4 & & = 40 & - 24.6 \end{array}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



MEASUREMENT RESULT: "A407b_sh_Final"

4/7/2014 11:03AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
12425.500000	34.96	39.70	-36.4	38.3	54.0	15.7	1.30	0	AVERAGE	noise floor
15713.200000	35.98	38.08	-37.6	36.5	54.0	17.5	1.30	0	AVERAGE	noise floor
8332.600000	33.28	36.93	-35.4	34.8	54.0	19.2	1.30	0	AVERAGE	noise floor
12425.500000	47.79	39.70	-36.4	51.1	74.0	22.9	1.30	0	MAX PEAK	noise floor
15713.200000	48.82	38.08	-37.6	49.3	74.0	24.7	1.30	0	MAX PEAK	noise floor
8332.600000	45.82	36.93	-35.4	47.4	74.0	26.6	1.30	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.4 GHz OFDM ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg C 27% R.H.
Test Site: DLS O.F. G1
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 8.5; with 23 dBi Panel antenna and 5 dB pad on EUT Port 1
Date: 04-07-2014

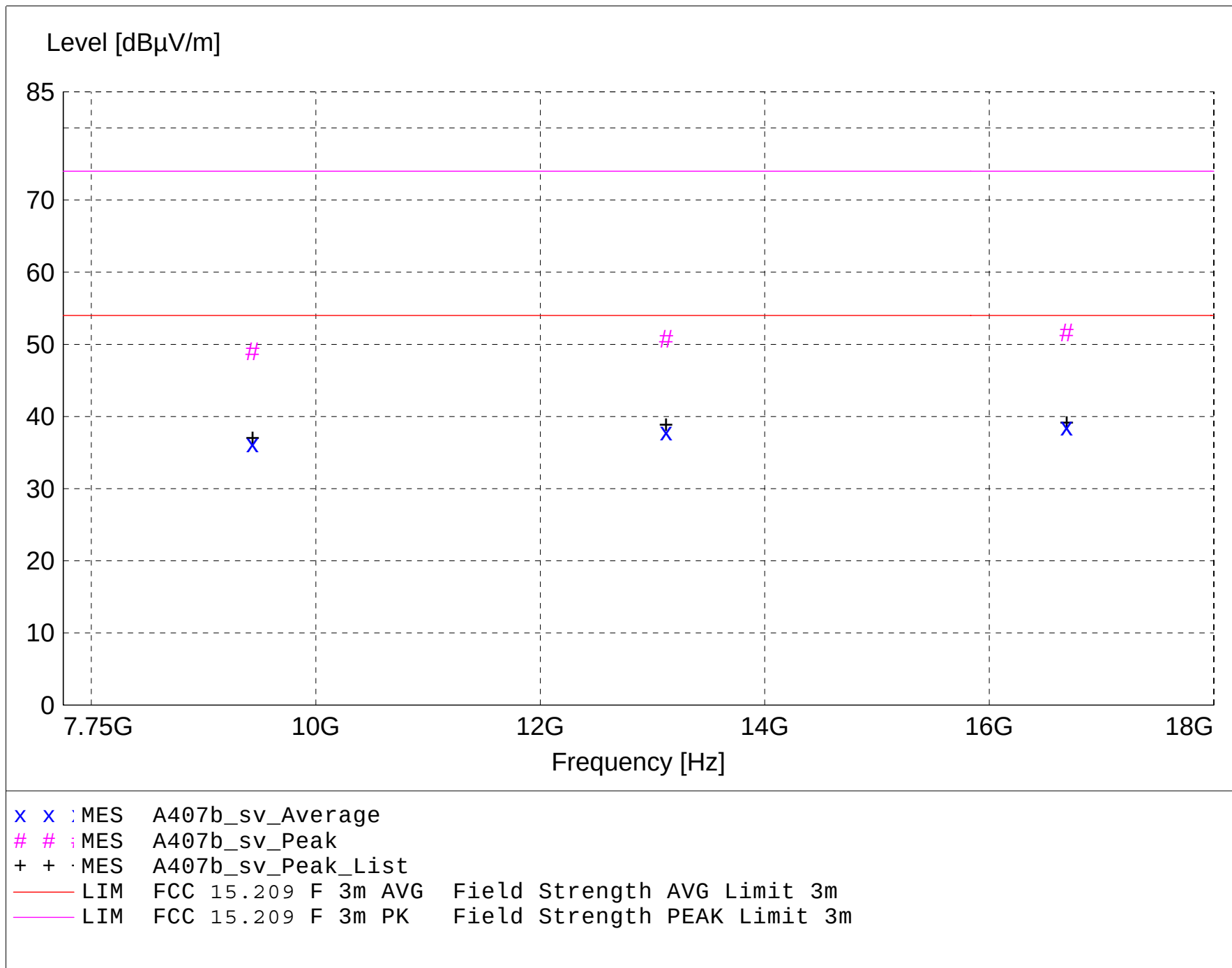
TEXT: "Vert 3 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 3 Meters with VERTICAL Antenna Polarization

Sample Equations:
$$\begin{array}{rcll} \text{Total Level(dB}\mu\text{V/m)} & = & \text{Level(dB}\mu\text{V)} & + \text{ System Loss(dB)} & + \text{ Antenna Factor(dB}\mu\text{V/m)} \\ 24.6 & & = 35.51 & + (-22.1) & + 11.20 \end{array}$$
$$\begin{array}{rcll} \text{Margin(dB)} & = & \text{Limit(dB}\mu\text{V/m)} & - \text{ Total Level(dB}\mu\text{V/m)} \\ 15.4 & & = 40 & - 24.6 \end{array}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



MEASUREMENT RESULT: "A407b_sv_Final"

4/7/2014 10:39AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
16689.400000	37.30	39.06	-37.8	38.6	54.0	15.4	1.12	0	AVERAGE	noise floor
13122.100000	35.32	39.55	-36.9	37.9	54.0	16.1	1.12	0	AVERAGE	noise floor
9436.300000	34.91	37.74	-36.3	36.3	54.0	17.7	1.12	0	AVERAGE	noise floor
16689.400000	50.32	39.06	-37.8	51.6	74.0	22.4	1.12	0	MAX PEAK	noise floor
13122.100000	48.18	39.55	-36.9	50.8	74.0	23.2	1.12	0	MAX PEAK	noise floor
9436.300000	47.66	37.74	-36.3	49.1	74.0	24.9	1.12	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.2 & 5.4 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg. F; 27% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels (both bands)
Comment: Both ports Tx setting 8.5; with 23 dBi Panel antenna and 5 dB pad on EUT Port 1
Date: 04-07-2014

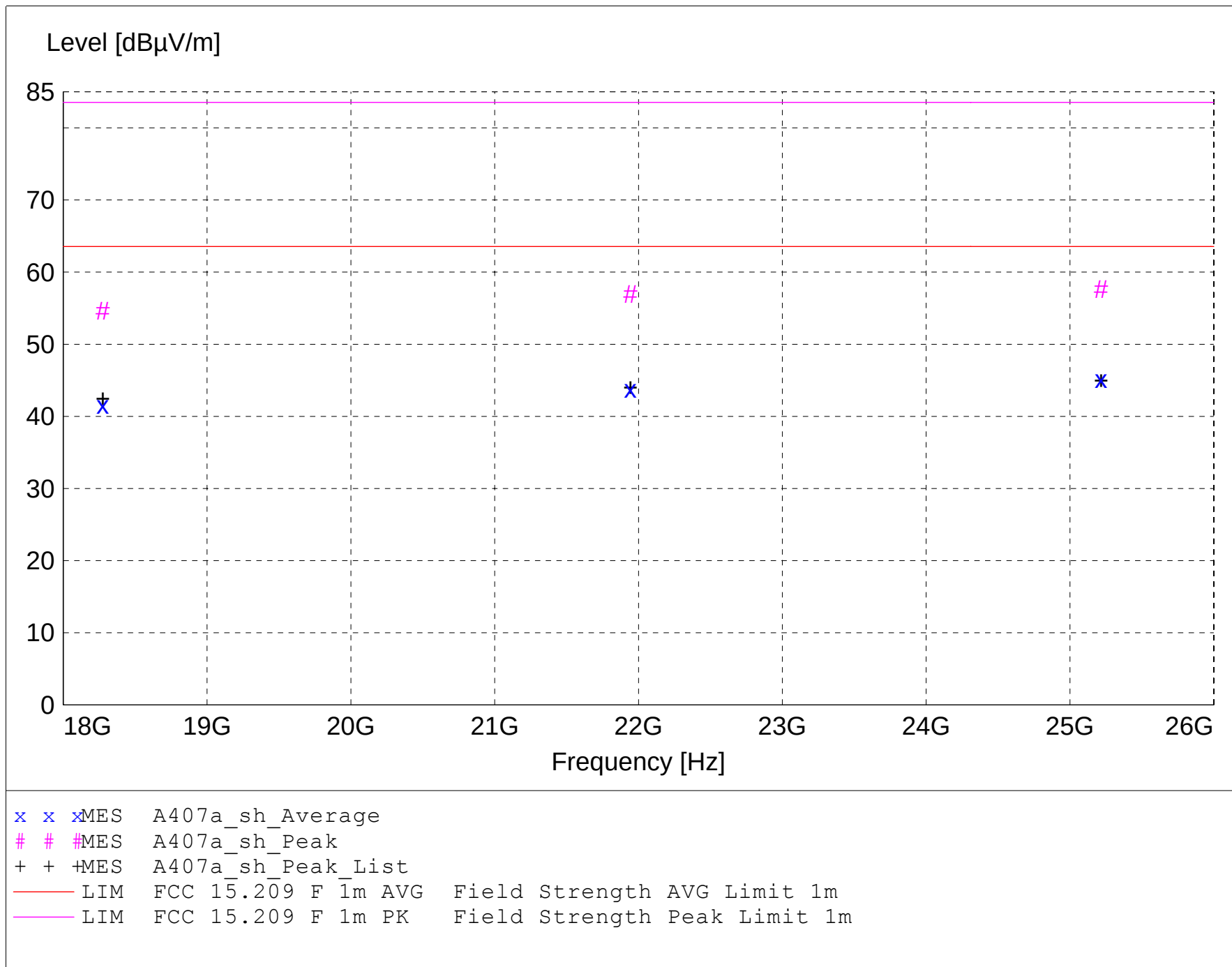
TEXT: "Horz 1 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 1 Meters with HORIZONTAL Antenna Polarization

Equations: $\text{Total Level (dB}\mu\text{V/m)} = \text{Level (dB}\mu\text{V)} + \text{System Loss (dB)} + \text{Antenna Factor (dB}\mu\text{V/m)}$
 $\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Total Level (dB}\mu\text{V/m)}$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



MEASUREMENT RESULT: "A407a_sh_Final"

4/7/2014 2:02PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
25216.800000	34.86	46.86	-36.6	45.1	63.5	18.4	1.30	0	AVERAGE	noise floor
21944.000000	37.78	46.40	-40.4	43.8	63.5	19.8	1.30	0	AVERAGE	noise floor
18274.800000	35.50	44.70	-38.6	41.6	63.5	22.0	1.30	0	AVERAGE	noise floor
25216.800000	47.33	46.86	-36.6	57.6	83.5	25.9	1.30	0	MAX PEAK	noise floor
21944.000000	50.95	46.40	-40.4	57.0	83.5	26.6	1.30	0	MAX PEAK	noise floor
18274.800000	48.55	44.70	-38.6	54.6	83.5	28.9	1.30	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.2 & 5.4 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg. F; 27% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels (both bands)
Comment: Both ports Tx setting 8.5; with 23 dBi Panel antenna and 5 dB pad on EUT Port 1
Date: 04-07-2014

TEXT: "Vert 1 meters"

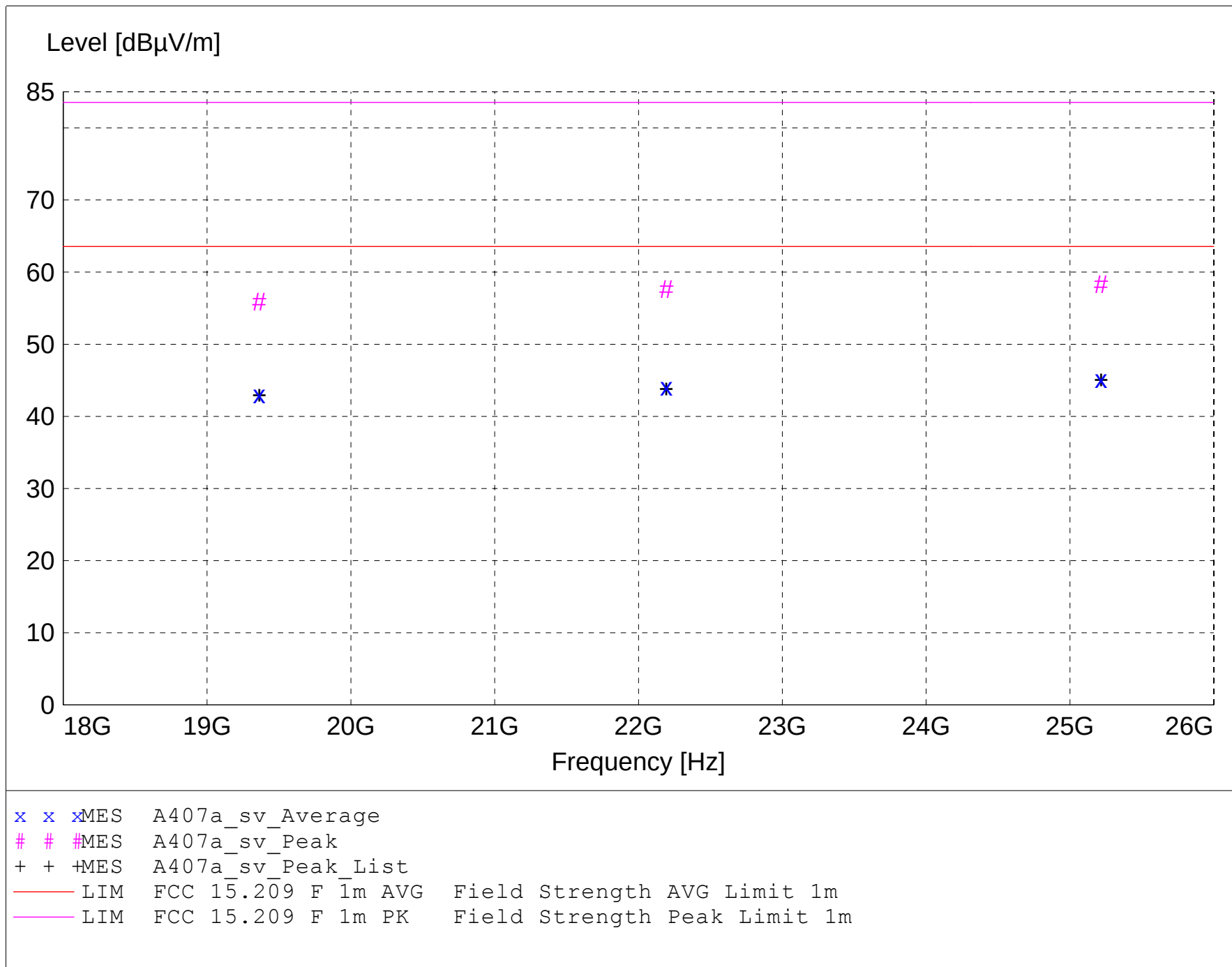
Short Description: Test Set-up

Test Set-up: EUT Measured at 1 Meters with VERTICAL Antenna Polarization

Sample Equations:
$$\begin{array}{rclclcl} \text{Total Level (dB}\mu\text{V/m)} & = & \text{Level (dB}\mu\text{V)} & + & \text{System Loss (dB)} & + & \text{Antenna Factor (dB}\mu\text{V/m)} \\ 24.6 & & = 35.51 & & + (-22.1) & & + 11.20 \end{array}$$

$$\begin{array}{rclcl} \text{Margin (dB)} & = & \text{Limit (dB}\mu\text{V/m)} & - & \text{Total Level (dB}\mu\text{V/m)} \\ 15.4 & = & 40 & - & 24.6 \end{array}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



MEASUREMENT RESULT: "A407a_sv_Final"

4/7/2014 1:57PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
25216.500000	34.94	46.86	-36.6	45.2	63.5	18.3	1.25	0	AVERAGE	noise floor
22194.000000	38.35	46.40	-40.6	44.1	63.5	19.4	1.25	0	AVERAGE	noise floor
19363.000000	37.11	45.76	-39.8	43.1	63.5	20.5	1.25	0	AVERAGE	noise floor
25216.500000	48.02	46.86	-36.6	58.3	83.5	25.3	1.25	0	MAX PEAK	noise floor
22194.000000	51.89	46.40	-40.6	57.6	83.5	25.9	1.25	0	MAX PEAK	noise floor
19363.000000	49.92	45.76	-39.8	55.9	83.5	27.7	1.25	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.2 & 5.4 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg. F; 27% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels (both bands)
Comment: Both ports Tx setting 8.5; ith 23 dBi Panel antenna and 5 dB pad on EUT Port 1
Date: 04-07-2014

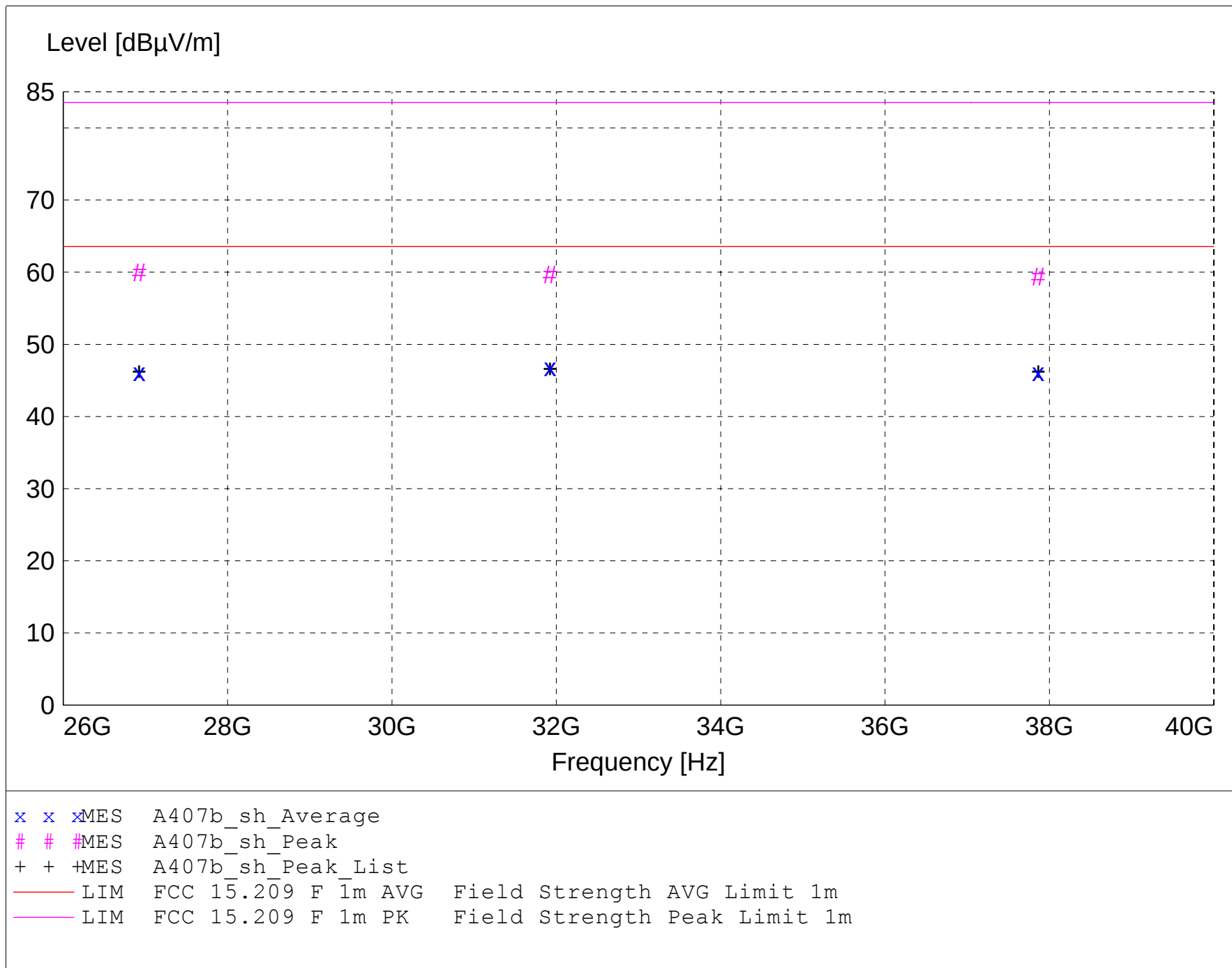
TEXT: "Horz 1 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 1 Meters with HORIZONTAL Antenna Polarization

Equations:
$$\text{Total Level (dB}\mu\text{V/m)} = \text{Level (dB}\mu\text{V)} + \text{System Loss (dB)} + \text{Antenna Factor (dB}\mu\text{V/m)}$$
$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Total Level (dB}\mu\text{V/m)}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



MEASUREMENT RESULT: "A407b_sh_Final"

4/7/2014 2:49PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
31923.600000	49.32	47.82	-50.3	46.8	63.5	16.7	1.30	0	AVERAGE	noise floor
26924.600000	50.11	46.38	-50.3	46.2	63.5	17.4	1.30	0	AVERAGE	noise floor
37864.800000	46.75	45.41	-46.0	46.1	63.5	17.4	1.30	0	AVERAGE	noise floor
26924.600000	63.91	46.38	-50.3	60.0	83.5	23.6	1.30	0	MAX PEAK	noise floor
31923.600000	62.18	47.82	-50.3	59.7	83.5	23.9	1.30	0	MAX PEAK	noise floor
37864.800000	59.97	45.41	-46.0	59.3	83.5	24.2	1.30	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.2 & 5.4 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg. F; 27% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels (both bands)
Comment: Both ports Tx setting 8.5; ith 23 dBi Panel antenna and 5 dB pad on EUT Port 1
Date: 04-07-2014

TEXT: "Vert 1 meters"

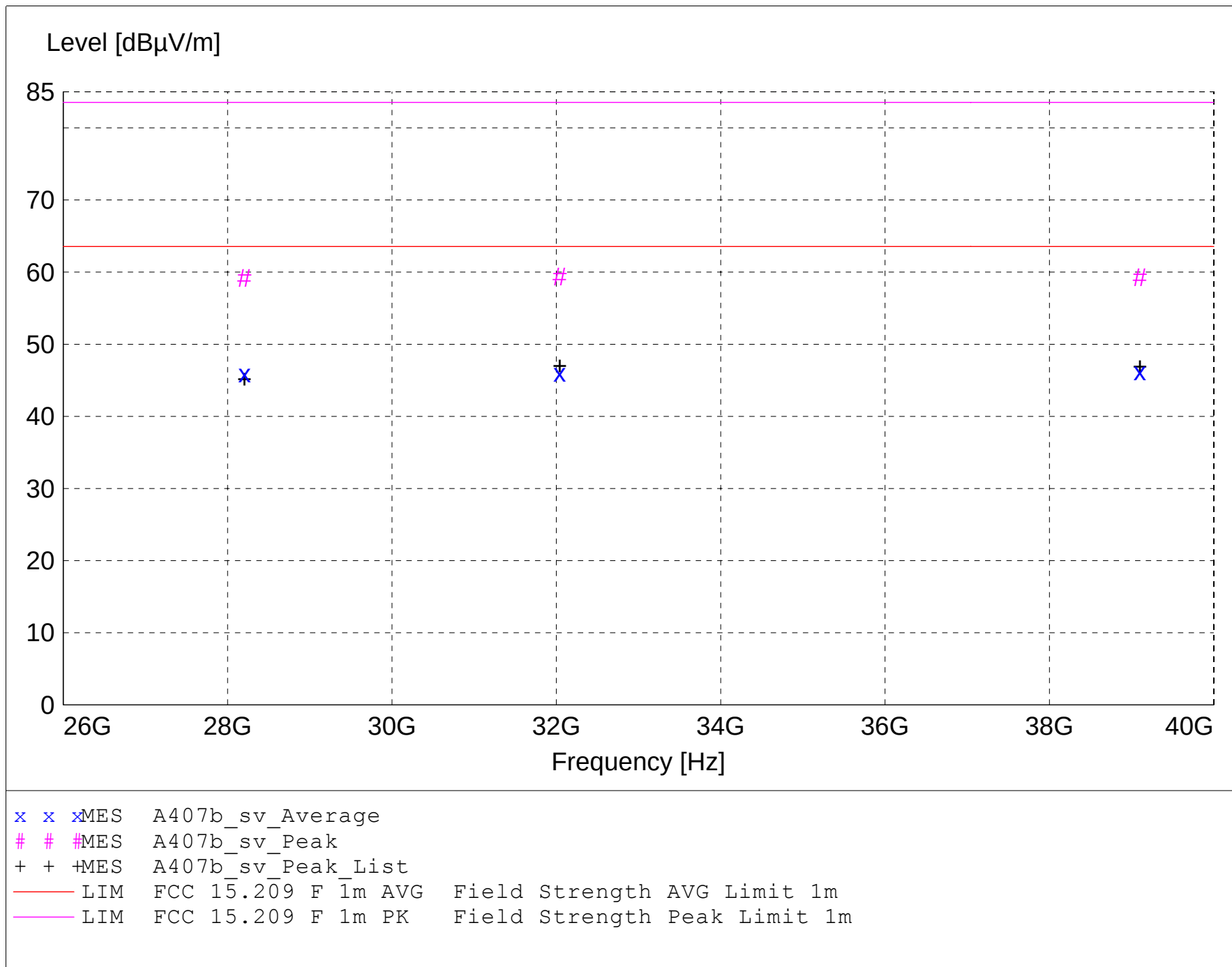
Short Description: Test Set-up

Test Set-up: EUT Measured at 1 Meters with VERTICAL Antenna Polarization

Sample Equations:
$$\begin{array}{rclclcl} \text{Total Level (dB}\mu\text{V/m)} & = & \text{Level (dB}\mu\text{V)} & + & \text{System Loss (dB)} & + & \text{Antenna Factor (dB}\mu\text{V/m)} \\ 24.6 & & = 35.51 & & + (-22.1) & & + 11.20 \end{array}$$

$$\begin{array}{rclcl} \text{Margin (dB)} & = & \text{Limit (dB}\mu\text{V/m)} & - & \text{Total Level (dB}\mu\text{V/m)} \\ 15.4 & = & 40 & - & 24.6 \end{array}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



MEASUREMENT RESULT: "A407b_sv_Final"

4/7/2014 2:35PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
39101.800000	47.52	45.74	-47.1	46.2	63.5	17.3	1.30	0	AVERAGE	noise floor
32042.600000	48.62	47.94	-50.5	46.1	63.5	17.5	1.30	0	AVERAGE	noise floor
28205.600000	49.72	46.57	-50.3	45.9	63.5	17.6	1.30	0	AVERAGE	noise floor
32042.600000	61.92	47.94	-50.5	59.4	83.5	24.2	1.30	0	MAX PEAK	noise floor
39101.800000	60.63	45.74	-47.1	59.3	83.5	24.2	1.30	0	MAX PEAK	noise floor
28205.600000	62.97	46.57	-50.3	59.2	83.5	24.3	1.30	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.4 & 5.2 GHz OFDM ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg C 27% R.H.
Test Site: DLS O.F. G1
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 27.5 (24=0 cal table); with 30 dBi Dish antenna (w/6 dB atten)
Date: 04-15-2014

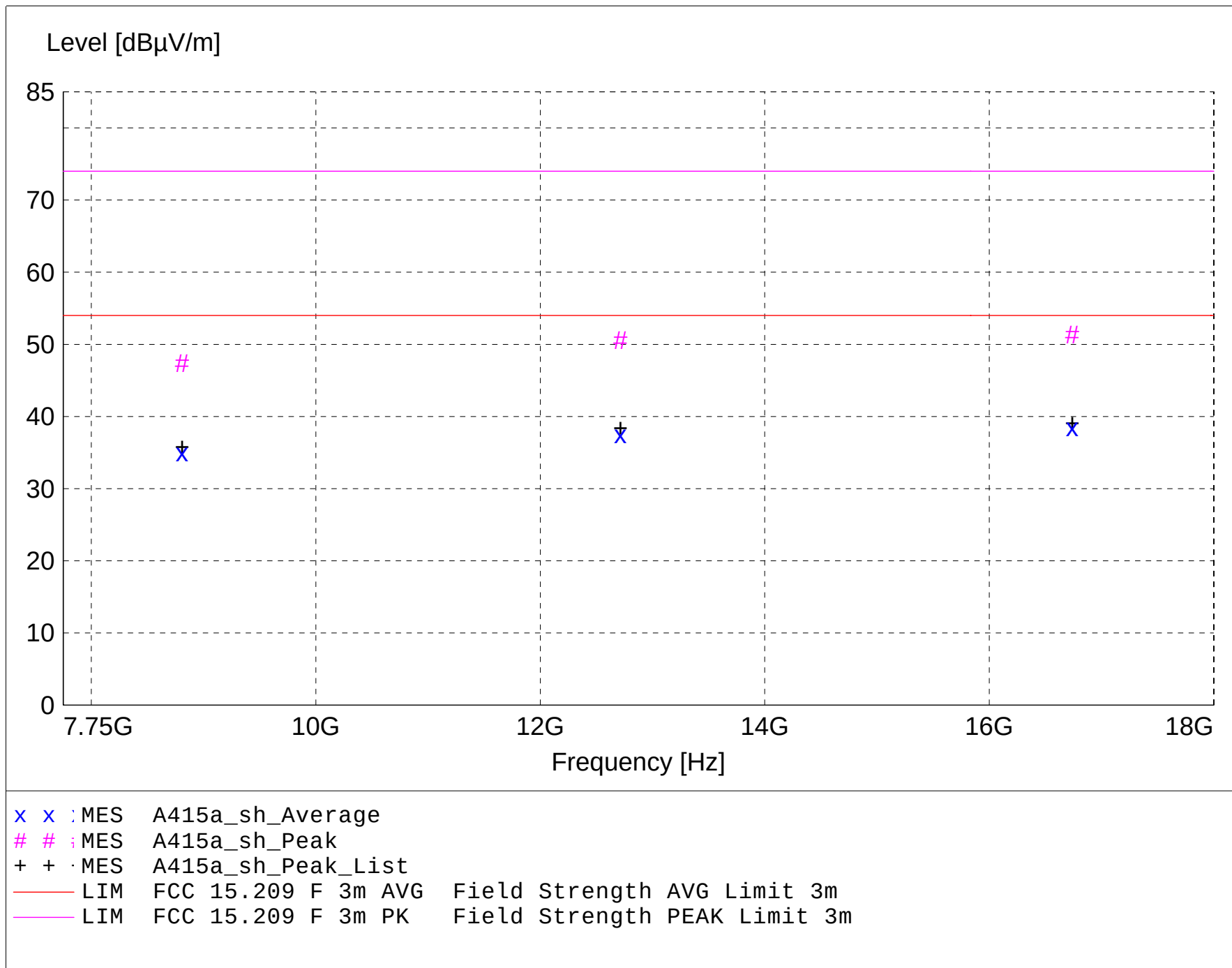
TEXT: "Horz 3 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization

Sample Equations:
$$\begin{aligned} \text{Total Level(dB}\mu\text{V/m)} &= \text{Level(dB}\mu\text{V)} + \text{System Loss(dB)} + \text{Antenna Factor(dB}\mu\text{V/m)} \\ 24.6 &= 35.51 + (-22.1) + 11.20 \end{aligned}$$
$$\begin{aligned} \text{Margin(dB)} &= \text{Limit(dB}\mu\text{V/m)} - \text{Total Level(dB}\mu\text{V/m)} \\ 15.4 &= 40 - 24.6 \end{aligned}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



MEASUREMENT RESULT: "A415a_sh_Final"

4/15/2014 10:41AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
16739.800000	37.00	39.25	-37.8	38.5	54.0	15.5	1.33	0	AVERAGE	noise floor
12713.500000	33.89	39.77	-36.2	37.5	54.0	16.5	1.33	0	AVERAGE	noise floor
8808.400000	33.74	37.59	-36.3	35.0	54.0	19.0	1.33	0	AVERAGE	noise floor
16739.800000	49.90	39.25	-37.8	51.4	74.0	22.6	1.33	0	MAX PEAK	noise floor
12713.500000	46.98	39.77	-36.2	50.6	74.0	23.4	1.33	0	MAX PEAK	noise floor
8808.400000	46.06	37.59	-36.3	47.3	74.0	26.7	1.33	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.4 & 5.2 GHZ OFDM ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg C 27% R.H.
Test Site: DLS O.F. G1
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 27.5 (24=0 cal table); with 30 dBi Dish antenna (w/ 6 dB atten)
Date: 04-15-2014

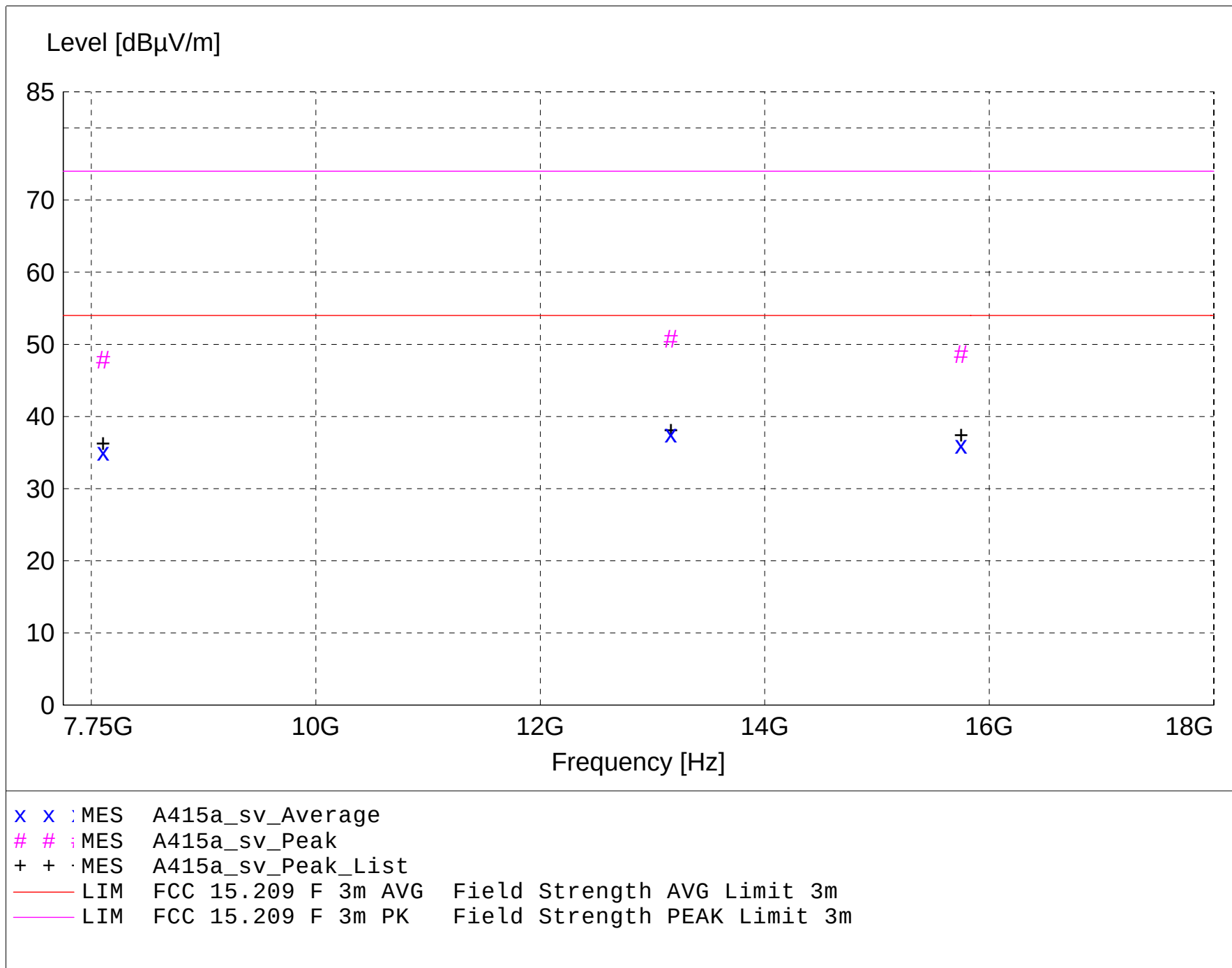
TEXT: "Vert 3 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 3 Meters with VERTICAL Antenna Polarization

Sample Equations:
$$\begin{array}{rcll} \text{Total Level(dB}\mu\text{V/m)} & = & \text{Level(dB}\mu\text{V)} & + \text{ System Loss(dB)} & + \text{ Antenna Factor(dB}\mu\text{V/m)} \\ 24.6 & & = 35.51 & + (-22.1) & + 11.20 \end{array}$$
$$\begin{array}{rcll} \text{Margin(dB)} & = & \text{Limit(dB}\mu\text{V/m)} & - \text{ Total Level(dB}\mu\text{V/m)} \\ 15.4 & & = 40 & - 24.6 \end{array}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



MEASUREMENT RESULT: "A415a_sv_Final"

4/15/2014 11:16AM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
13163.200000	34.75	39.78	-36.9	37.6	54.0	16.4	1.30	0	AVERAGE	noise floor
15748.600000	35.68	37.97	-37.6	36.1	54.0	17.9	1.30	0	AVERAGE	noise floor
8104.900000	33.28	36.67	-34.8	35.1	54.0	18.9	1.30	0	AVERAGE	noise floor
13163.200000	47.88	39.78	-36.9	50.8	74.0	23.2	1.30	0	MAX PEAK	noise floor
15748.600000	48.27	37.97	-37.6	48.7	74.0	25.3	1.30	0	MAX PEAK	noise floor
8104.900000	46.06	36.67	-34.8	47.9	74.0	26.1	1.30	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.4 & 5.2 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg. F; 31% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 27.5 (24=0 cal table); with 30 dBi Dish antenna (w/ 6 dB atten)
Date: 04-15-2014

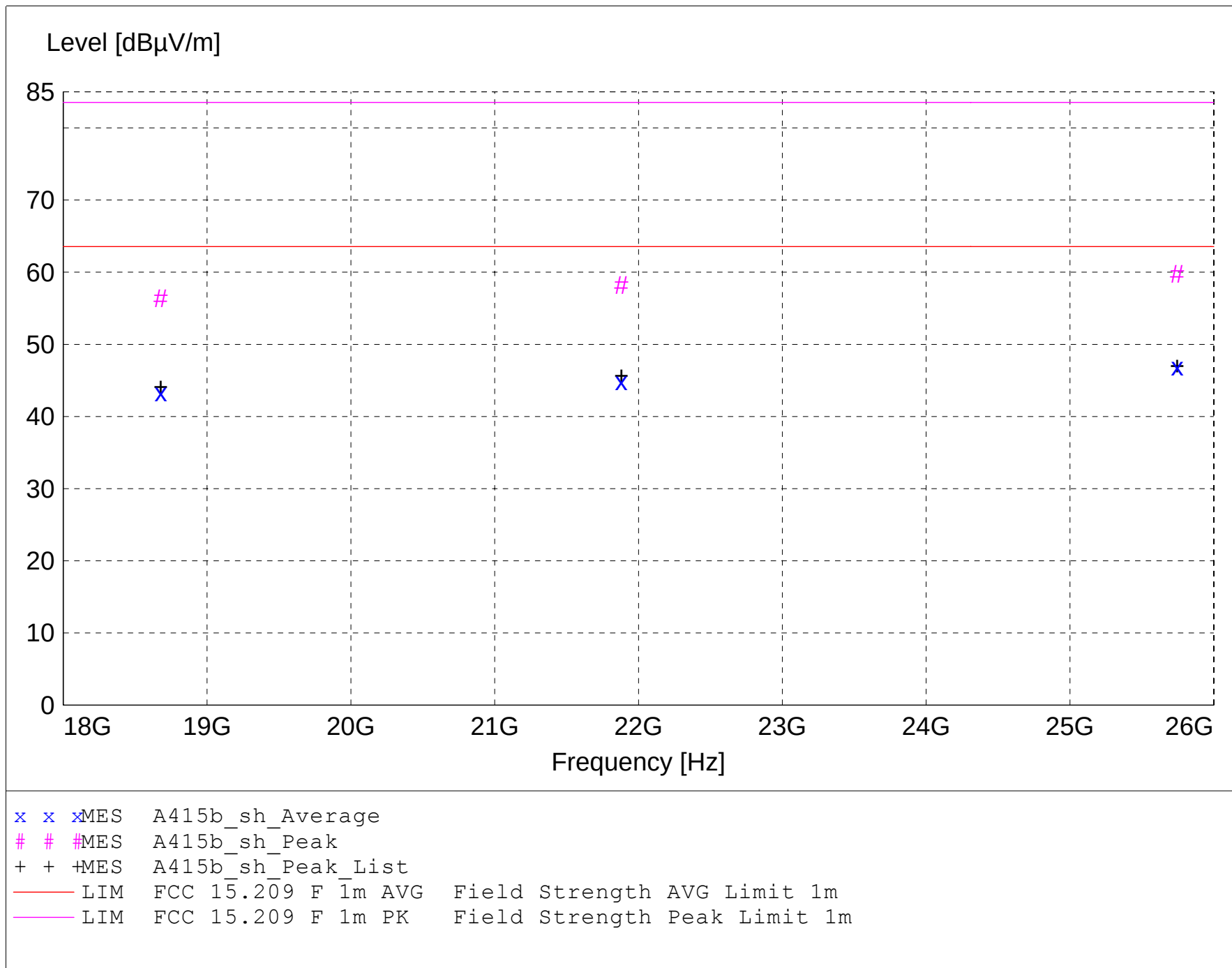
TEXT: "Horz 1 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 1 Meters with HORIZONTAL Antenna Polarization

Equations: $\text{Total Level (dB}\mu\text{V/m)} = \text{Level (dB}\mu\text{V)} + \text{System Loss (dB)} + \text{Antenna Factor (dB}\mu\text{V/m)}$
 $\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Total Level (dB}\mu\text{V/m)}$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



MEASUREMENT RESULT: "A415b_sh_Final"

4/15/2014 1:55PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
25746.300000	36.02	46.65	-35.7	46.9	63.5	16.6	1.30	0	AVERAGE	noise floor
21880.800000	38.73	46.44	-40.3	44.8	63.5	18.7	1.30	0	AVERAGE	noise floor
18678.000000	37.04	45.01	-38.8	43.3	63.5	20.2	1.30	0	AVERAGE	noise floor
25746.300000	48.81	46.65	-35.7	59.7	83.5	23.8	1.30	0	MAX PEAK	noise floor
21880.800000	52.11	46.44	-40.3	58.2	83.5	25.3	1.30	0	MAX PEAK	noise floor
18678.000000	50.14	45.01	-38.8	56.4	83.5	27.1	1.30	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.4 & 5.2 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg. F; 31% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 27.5 (24=0 cal table); with 30 dBi Dish antenna (w/ 6 dB atten)
Date: 04-15-2014

TEXT: "Vert 1 meters"

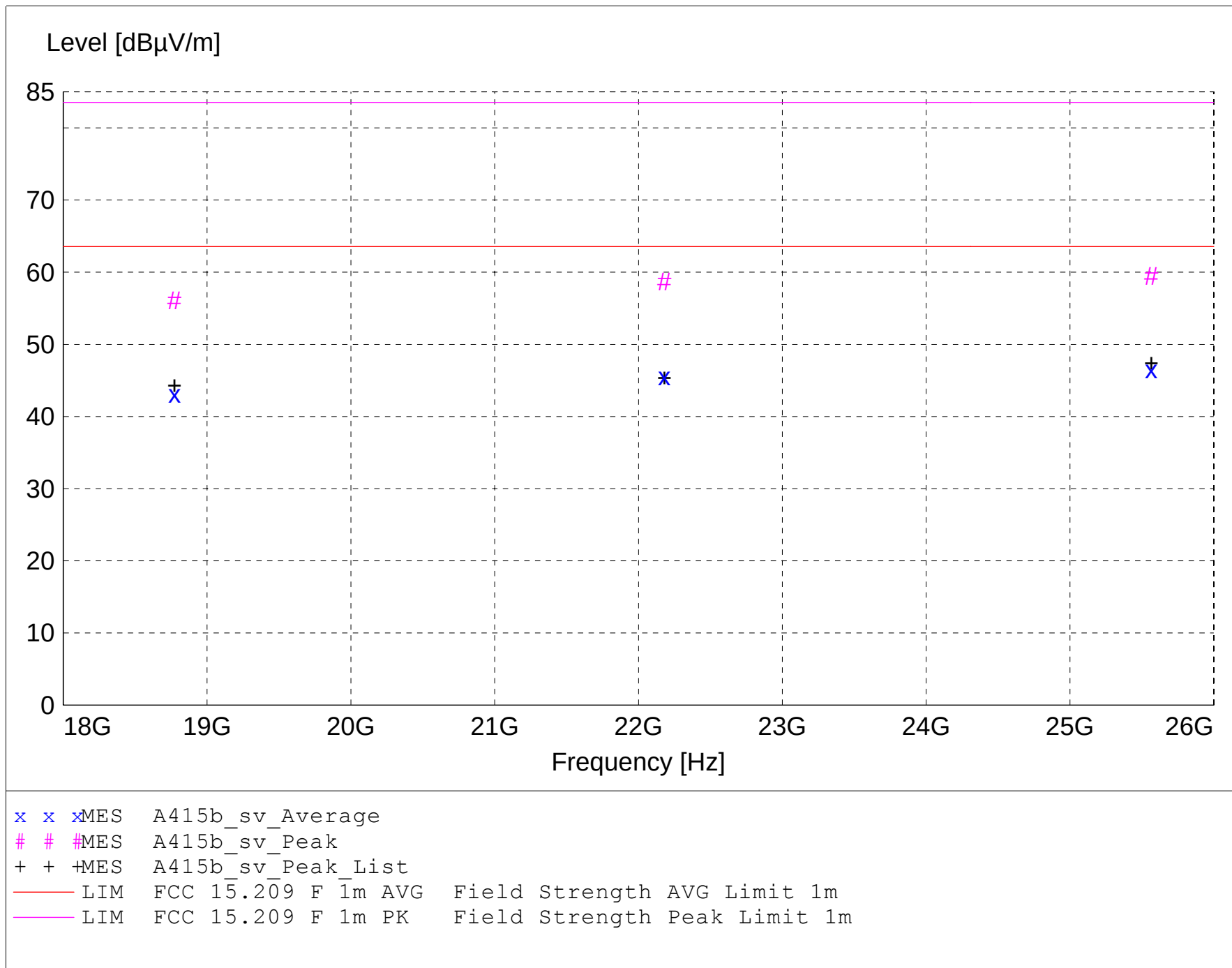
Short Description: Test Set-up

Test Set-up: EUT Measured at 1 Meters with VERTICAL Antenna Polarization

Sample Equations:
$$\begin{array}{rclclcl} \text{Total Level (dB}\mu\text{V/m)} & = & \text{Level (dB}\mu\text{V)} & + & \text{System Loss (dB)} & + & \text{Antenna Factor (dB}\mu\text{V/m)} \\ 24.6 & & = 35.51 & + & (-22.1) & + & 11.20 \end{array}$$

$$\begin{array}{rclcl} \text{Margin (dB)} & = & \text{Limit (dB}\mu\text{V/m)} & - & \text{Total Level (dB}\mu\text{V/m)} \\ 15.4 & = & 40 & - & 24.6 \end{array}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
 | Final maximized level using Quasi-Peak detector
 X Final maximized level using Average detector
 # Final maximized level using Peak detector



MEASUREMENT RESULT: "A415b_sv_Final"

4/15/2014 1:59PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
25565.400000	35.72	46.77	-36.0	46.5	63.5	17.0	1.30	0	AVERAGE	noise floor
22179.600000	39.78	46.39	-40.6	45.6	63.5	18.0	1.30	0	AVERAGE	noise floor
18773.800000	37.23	45.12	-39.2	43.2	63.5	20.4	1.30	0	AVERAGE	noise floor
25565.400000	48.67	46.77	-36.0	59.5	83.5	24.1	1.30	0	MAX PEAK	noise floor
22179.600000	52.90	46.39	-40.6	58.7	83.5	24.9	1.30	0	MAX PEAK	noise floor
18773.800000	50.14	45.12	-39.2	56.1	83.5	27.5	1.30	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.4 & 5.2 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg. F; 31% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 27.5 (24=0 cal table); with 30 dBi Dish antenna (w/ 6 dB atten)
Date: 04-15-2014

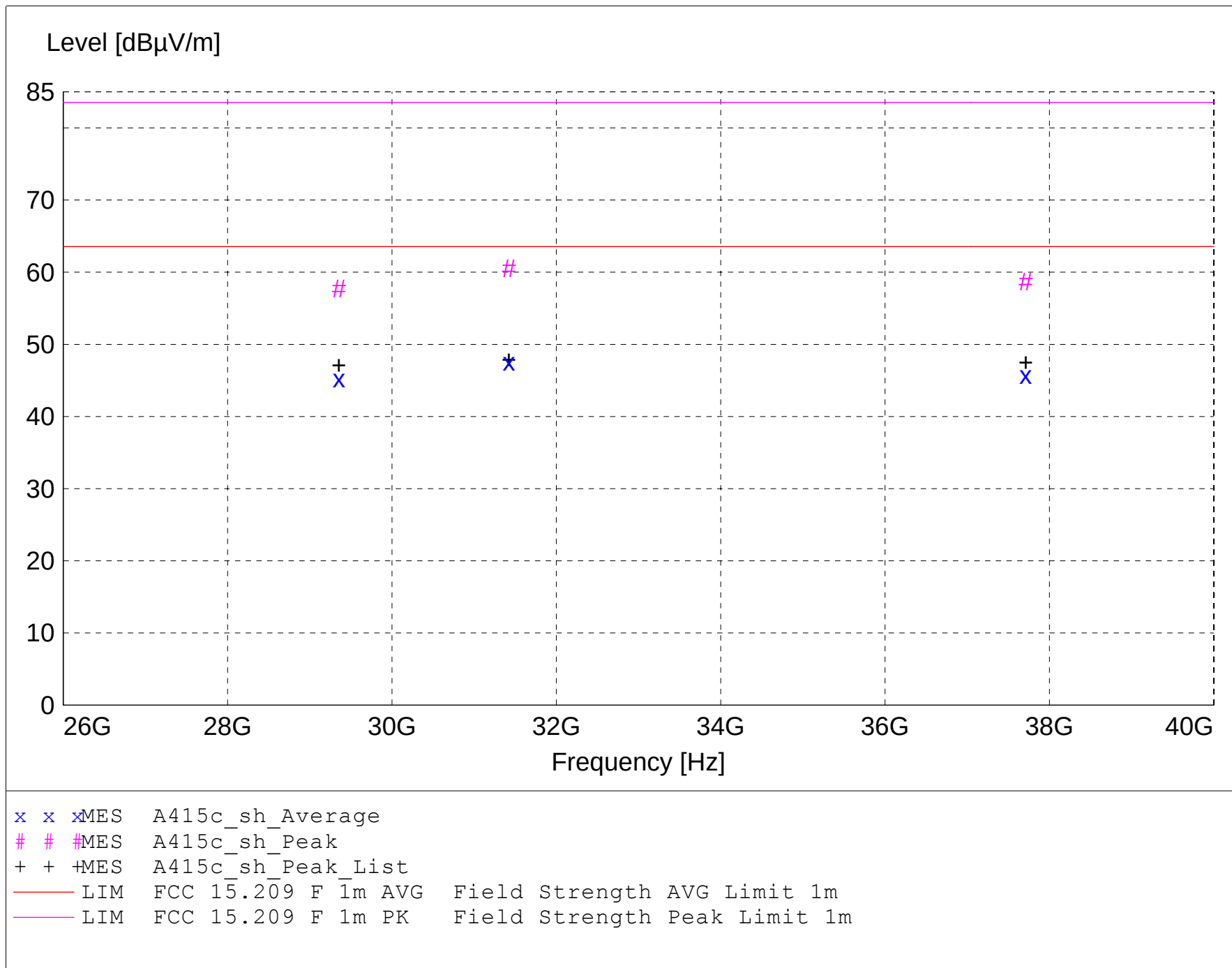
TEXT: "Horz 1 meters"

Short Description: Test Set-up

Test Set-up: EUT Measured at 1 Meters with HORIZONTAL Antenna Polarization

Equations:
$$\text{Total Level (dB}\mu\text{V/m)} = \text{Level (dB}\mu\text{V)} + \text{System Loss (dB)} + \text{Antenna Factor (dB}\mu\text{V/m)}$$
$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Total Level (dB}\mu\text{V/m)}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



MEASUREMENT RESULT: "A415c_sh_Final"

4/15/2014 2:32PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
31423.000000	50.59	47.44	-50.4	47.6	63.5	15.9	1.30	0	AVERAGE	noise floor
37712.400000	46.39	45.36	-46.0	45.8	63.5	17.8	1.30	0	AVERAGE	noise floor
29355.000000	47.44	46.56	-48.7	45.3	63.5	18.3	1.30	0	AVERAGE	noise floor
31423.000000	63.51	47.44	-50.4	60.5	83.5	23.0	1.30	0	MAX PEAK	noise floor
37712.400000	59.29	45.36	-46.0	58.7	83.5	24.9	1.30	0	MAX PEAK	noise floor
29355.000000	59.92	46.56	-48.7	57.7	83.5	25.8	1.30	0	MAX PEAK	noise floor

FCC Part 15.209

Electric Field Strength

EUT: ePMP STA 5.4 & 5.2 GHz OFDM, ESN: 000456C560B4
Manufacturer: Cambium Networks
Operating Condition: 70 deg. F; 31% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Radiated spurious emissions; 20 & 40 MHz ch BW; L,M,H channels
Comment: Both ports Tx setting 27.5 (24=0 cal table); with 30 dBi Dish antenna (w/ 6 dB atten)
Date: 04-15-2014

TEXT: "Vert 1 meters"

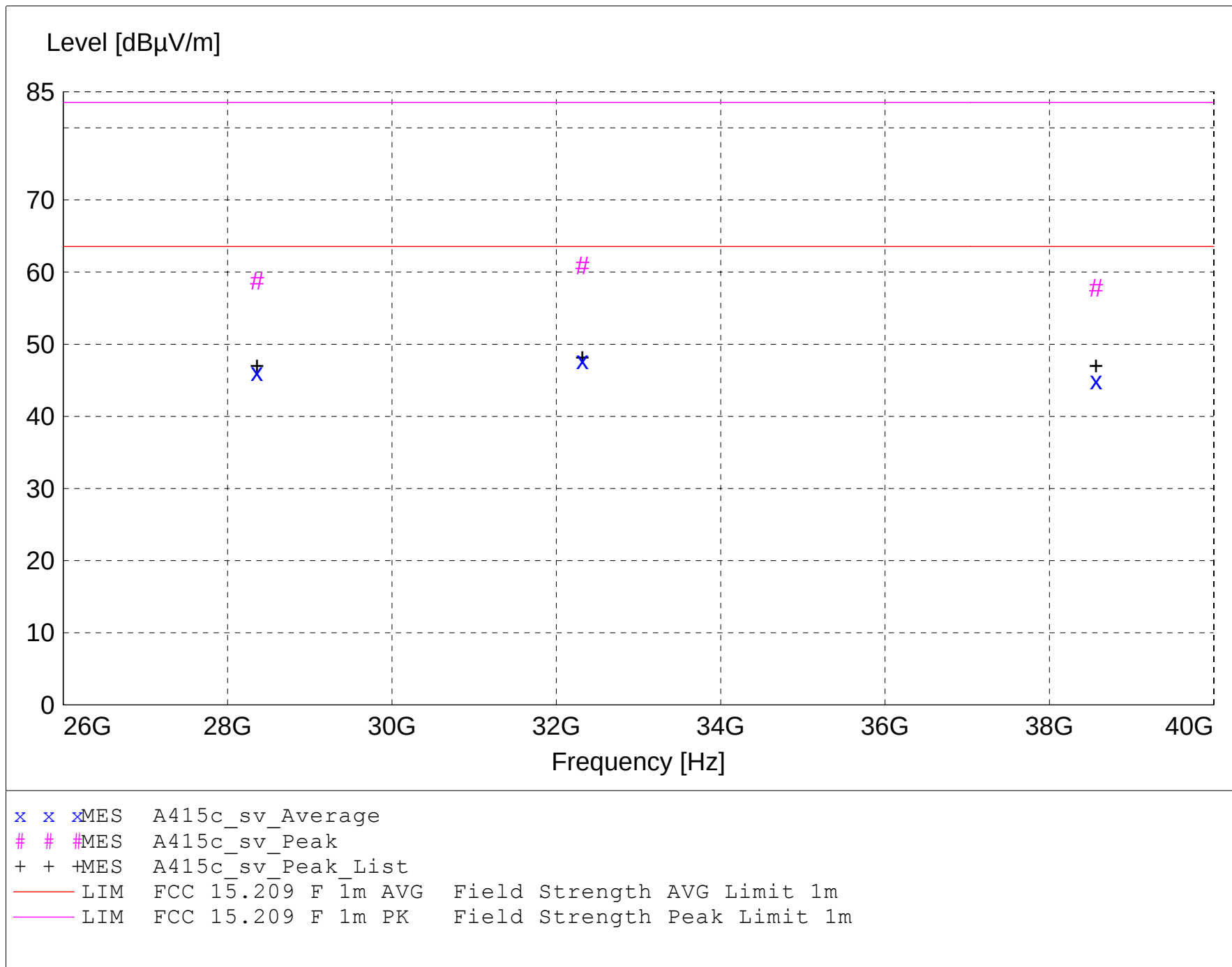
Short Description: Test Set-up

Test Set-up: EUT Measured at 1 Meters with VERTICAL Antenna Polarization

Sample Equations:
$$\begin{array}{rclclcl} \text{Total Level (dB}\mu\text{V/m)} & = & \text{Level (dB}\mu\text{V)} & + & \text{System Loss (dB)} & + & \text{Antenna Factor (dB}\mu\text{V/m)} \\ 24.6 & & = 35.51 & & + (-22.1) & & + 11.20 \end{array}$$

$$\begin{array}{rclcl} \text{Margin (dB)} & = & \text{Limit (dB}\mu\text{V/m)} & - & \text{Total Level (dB}\mu\text{V/m)} \\ 15.4 & = & 40 & - & 24.6 \end{array}$$

Graph Markers: + Frequency marker (Level of marker not related to final level)
 | Final maximized level using Quasi-Peak detector
 X Final maximized level using Average detector
 # Final maximized level using Peak detector



MEASUREMENT RESULT: "A415c_sv_Final"

4/15/2014 2:29PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBµV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
32319.200000	49.29	48.24	-49.8	47.8	63.5	15.8	1.30	0	AVERAGE	noise floor
28359.200000	49.91	46.57	-50.4	46.1	63.5	17.4	1.30	0	AVERAGE	noise floor
38570.000000	45.89	45.47	-46.4	45.0	63.5	18.6	1.30	0	AVERAGE	noise floor
32319.200000	62.45	48.24	-49.8	60.9	83.5	22.6	1.30	0	MAX PEAK	noise floor
28359.200000	62.58	46.57	-50.4	58.8	83.5	24.7	1.30	0	MAX PEAK	noise floor
38570.000000	58.78	45.47	-46.4	57.9	83.5	25.7	1.30	0	MAX PEAK	noise floor



166 South Carter, Genoa City, WI 53128

Company:
Models Tested:
Report Number:
DLS Project:

Cambium Networks
C058900P122A
19894
6493

END OF REPORT

Revision #	Date	Comments	By
1.0	4-22-2014	Preliminary Release	JS
1.1	4-22-2014	Notes added pages 11, 15, 28	JS