DLS ELECTRONIC SYSTEMS, INC.
166 South Carter, Genoa City, WI 53128

Company: Cambium Networks
Model Tested: C054045C004A
Report Number: 17833

Code of Federal Regulations 47 Part 15 – Radio Frequency Devices
Subpart C – Intentional Radiators
Section 15.247
Operation within the bands 902 - 928 MHz,
2400 - 2483.5 MHz, 5725 - 5875 MHz,
and 24.0 - 24.25 GHz.

And

Industry Canada Spectrum Management and Telecommunications
Radio Standards Specification
RSS-210 Issue 8 December 2010

PART II – 20 MHz Bandwidth Data

THE FOLLOWING **MEETS** THE ABOVE TEST SPECIFICATION

Formal Name:	PMP450SM 5.7GHz OFDM Radio with cross-polarized antenna
Kind of Equipment:	Point-to-Point Digital Transmission Transceiver
Frequency Range:	5.730 to 5.845 MHz (10 MHz bandwidth) **5.735 to 5.840 MHz (20 MHz bandwidth)**
Test Configuration:	Stand-alone
Model Number(s):	C054045C001A, C054045C002A, C054045C003A, C054045C004A
Model(s) Tested:	C054045C004A
Serial Number(s):	0A003EA00037 (integrated), 0A003EA00047 (connectorized)
Date of Tests:	April 2nd to May 1st, 2012
Test Conducted For:	Cambium Networks 1299 E. Algonquin Road. Schaumburg, IL 60196, 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.

SIGNATURE PAGE

Tested By:

Craig Brandt
Test Engineer

Reviewed By:

William Stumpf
OATS Manager

Approved By:

Brian Mattson
General Manager

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United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 100276-0

D.L.S. Electronic Systems, Inc.

Wheeling, IL

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

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

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

2011-10-01 through 2012-09-30

Effective dates

For the National Institute of Standards and Technology

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

1.0 Summary of Test Report

It was determined that the Cambium Networks PMP450SM 5.7GHz OFDM Radio with cross-polarized antenna, Model C054045C004A, complies with the requirements of CFR 47 Part 15 Subpart C Section 15.247 and Industry Canada RSS-210 Issue 8. FCC limits & procedures were used to show compliance with Industry Canada regulations.

Applicable Technical Requirements Tested:

Section	Description	Procedure	Note	Compliant?
Informative	26 dB Emission Bandwidth	FCC Publication KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1	1	NA
15.247(a)(2) & RSS-210 A8.2(a)	6 dB Emission Bandwidth	FCC Publication KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1	1	Yes
15.247(b)(3) & RSS-210 A8.4(4)(5)	Fundamental Emission Output Power – Average	FCC Publication KDB 558074 D01 DTS Meas Guidance v01 Section 5.2.2.1-AVG1	1	Yes
15.247(e) & RSS-210 A8.2(b)	Maximum Power Spectral Density Level in the Fundamental Emission - Average	FCC Publication KDB 558074 D01 DTS Meas Guidance v01 Section 5.3.2-AVGPSD	1	Yes
15.247(d) & RSS-210 A8.5	Maximum Unwanted Emission Levels – RF Conducted	FCC Publication KDB 558074 D01 DTS Meas Guidance v01 Sections 5.4.1 & 5.4.2	1	Yes
15.247 (d), 15.205 & RSS-210 A8.5 RSS-Gen 7.2.2	Unwanted Emissions into Restricted Frequency Bands - Radiated	ANSI C63.10-2009 Sections 6.5 & 6.6	2	Yes
15.247(d) & RSS-210 A8.5	Band Edge Measurements	FCC Publication KDB 558074 D01 DTS Meas Guidance v01 Sections 5.4.1 & 5.4.2	1	Yes
15.35(c) & RSS-Gen 7.2.3	Duty Cycle of Test Unit	ANSI C63.10-2009 Section 7.5	1	NA
15.207(a) & RSS-Gen 7.2.4	AC Line Conducted Emissions	ANSI C63.10-2009 Section 6.2		Yes

Note 1: RF conducted measurement.
Note 2: Radiated emission measurement.

2.0 Introduction

From April 2 through May 1, 2012 the PMP450SM 5.7GHz OFDM Radio with cross-polarized antenna, Model C054045C004A, as provided from Cambium Networks, was tested to the requirements of CFR 47 Part 15 Subpart C Section 15.247 and Industry Canada RSS-210 Issue 8. To meet these requirements, the procedures contained within this report were performed by personnel of D.L.S Electronic Systems, Inc.

3.0 Test Facilities

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

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

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

4.0 Description of Test Sample

Description:

Point-to-Point 5.7 GHz DTS Transceiver with either integrated Patch (9 dBi) and external Cassegrain Lens (9 dBi) antennas or integrated Patch (9 dBi) and Reflector Dish (18 dBi) antennas with 10 MHz or 20 MHz channel bandwidth.

Type of Equipment / Frequency Range:

Stand-Alone / 5.730 to 5.845 MHz (10 MHz bandwidth)
5.735 to 5.840 MHz (20 MHz bandwidth)

Physical Dimensions of Equipment Under Test:

Length: 10 in. Width: 3 in. Height:1 in.

Power Source:

29 VDC (Power Over Ethernet to Radio)
120 Vac, 60 Hz using Phihong power supply model: PSA15R-295 (MOT)

Internal Frequencies:

150 kHz (Switching Power Supply Frequency)
25 MHz, 20 MHz

Transmit Frequencies Used For Test Purpose:

10 MHz Channel Bandwidth:	Low channel: 5730 MHz, Middle channel: 5800 MHz, High channel: 5845 MHz
20 MHz Channel Bandwidth:	Low channel: 5735 MHz, Middle channel: 5800 MHz, High channel: 5840 MHz

Type of Modulations:

16 QAM, 64 QAM, & QPSK

Description of Circuit Board(s) / Part Number:

Cambium Networks PC Board	84010124001 P6
Patch Antenna	85015000001
2 x Connector (for test unit only)	0989419C01

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	837808/006	20 Hz – 40 GHz	4/12	4/13
Preamplifier	Rohde & Schwarz	TS-PR10	032001/004	9 kHz – 1 GHz	1/12	1/13
Antenna	EMCO	3104C	00054892	20 MHz – 200 MHz	9/10	9/12
Antenna	EMCO	3146	1205	200 MHz – 1 GHz	9/10	9/12
Preamp	Miteq	AMF-6D-100200-50	313936	1GHz-10GHz	8/11	8/12
Preamp	Miteq	AMF-6D-010100-50	213976	10GHz-18GHz	8/11	8/12
Horn Antenna	EMCO	3115	9903-5731	1-18GHz	6/11	6/13
Low Pass Filter	Mini-Circuits	VLFX-1125	RUU926000920	DC-1125MHz	8/11	8/12
Preamp	Miteq	AMF-8B-180265-40-10P-H/S	438727	18GHz-26GHz	8/11	8/12
Horn Antenna	EMCO	3116	2549	18 – 40GHz	8/10	8/12
High Pass Filter	Planar Filter Co.	HP8G-7G8-CD-SFF	PF1225/0728	7.5 GHz – 18 GHz	8/11	8/12
High Pass Filter	Planar Filter Co.	CL22600-9000-CD-SS	PF1230/0728	16.2 GHz – 40 GHz	8/11	8/12
LISN	Solar	9252-50-R-24-BNC	971612	9 kHz – 30 MHz	3/12	3/13
Filter- High-Pass	Solar	7930-120	090701	120 kHz– 30 MHz	1/12	1/13
Limiter	Electro-Metrics	EM-7600	705	9 kHz – 30 MHz	1/12	1/13
20 dB attenuator	Aeroflex/weinschel	75A-20-12	1071	DC – 40 GHz	6/11	6/12
10 dB attenuator	narda	4768-10	0702	DC – 40 GHz	8/11	8/12
Preamp	Rohde & Schwarz	TS-PR40	052002/025	26 GHz – 40 GHz	6/11	6/12
50 Ohm Load	Pasternack	PE6039	DLS #527	DC – 18 GHz	NA	NA

6.0 Test Arrangements

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 A – Measurement Data. **See the separate exhibit 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

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 558074 D01 DTS Meas Guidance v01 and ANSI C63.10-2009, unless otherwise noted. Description of procedures and measurements can be found in Appendix A – Measurement Data. **See the separate exhibit for additional photos of the test set up.**

7.0 Test Conditions

Normal Test Conditions:

Temperature and Humidity:

68°F at 33% RH

Supply Voltage:

29 VDC (Power Over Ethernet to Radio)
120 Vac, 60 Hz using Phihong power supply model: PSA15R-295 (MOT)

8.0 Modifications Made To EUT for Compliance

No modifications made at time of test.

9.0 Additional Descriptions

Mode of operation: Continuously scanning all channels.

Emission Designators: 10M0X1D, 20M0X1D

10.0 Results

Measurements were performed in accordance with FCC Publication KDB 558074 D01 DTS Meas Guidance v01and ANSI C63.10-2009. Graphical and tabular data can be found in Appendix A at the end of this report.

11.0 Conclusion

The PMP450SM 5.7GHz OFDM Radio with cross-polarized antenna, Model C054045C004A, as provided from Cambium Networks tested from April 2nd to May 1, 2012 **meets** the requirements of CFR 47 Part 15 Subpart C Section 15.247 and Industry Canada RSS-210 Issue 8.

Note: FCC limits & procedures were used to show compliance with Industry Canada regulations.

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Appendix A – Measurement Data

A1.0 26 dB Emission Bandwidth - Conducted

Rule Section: Informative

Test Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 – *Guidance for Performing Gompliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247*

Section 5.1.1

Description: RBW = 1-5% of EBW
VBW ≥ 3 x RBW
Detector = Peak
Trace mode = max hold
Sweep = auto couple

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

Measurements were taken for QPSK, 16-QAM, and 64-QAM modulation types, and at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously (power setting 19 dBm) with 98% duty cycle.

Limit: Informative

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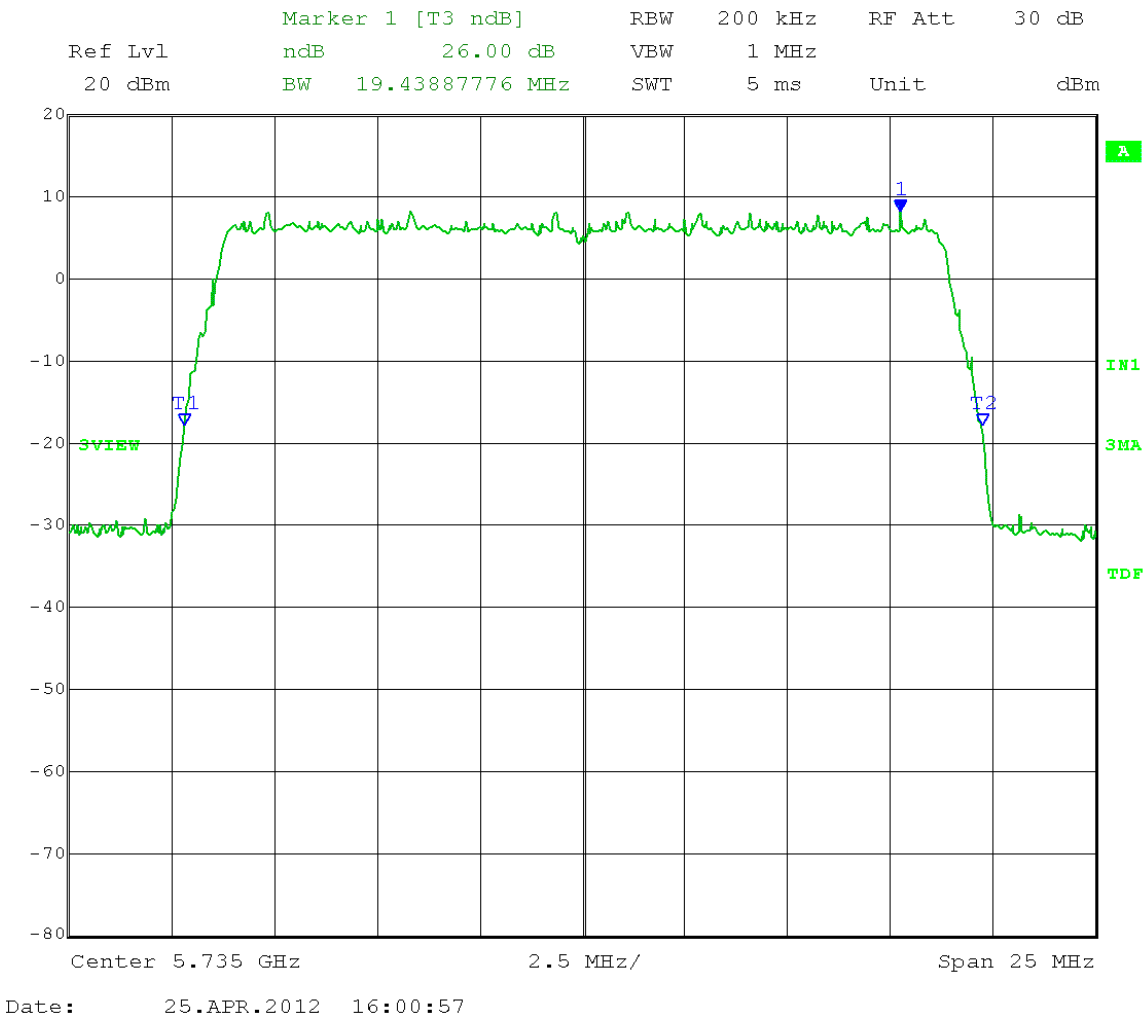
Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

26 dB Emission Bandwidth = 19.44 MHz



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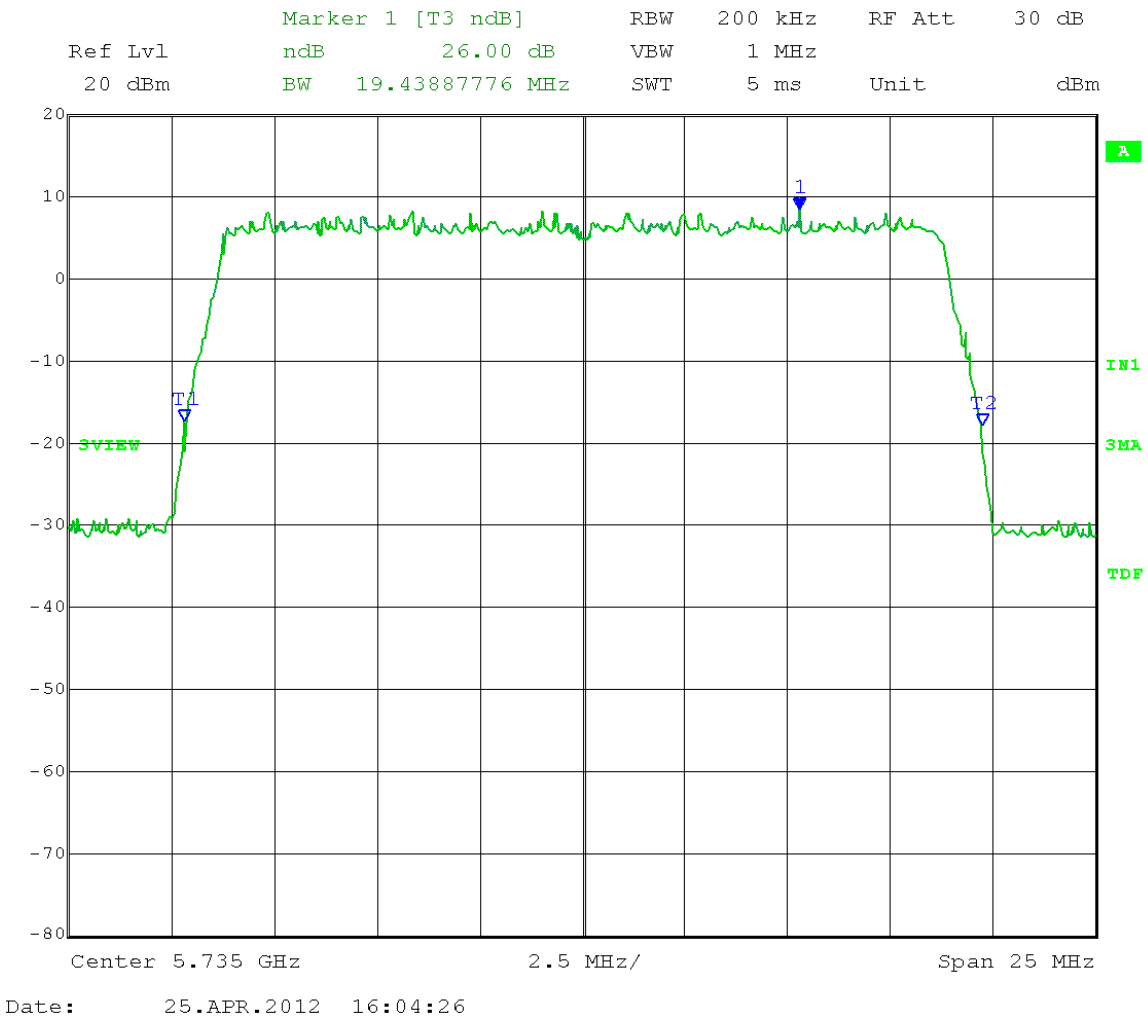
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

26 dB Emission Bandwidth = 19.44 MHz



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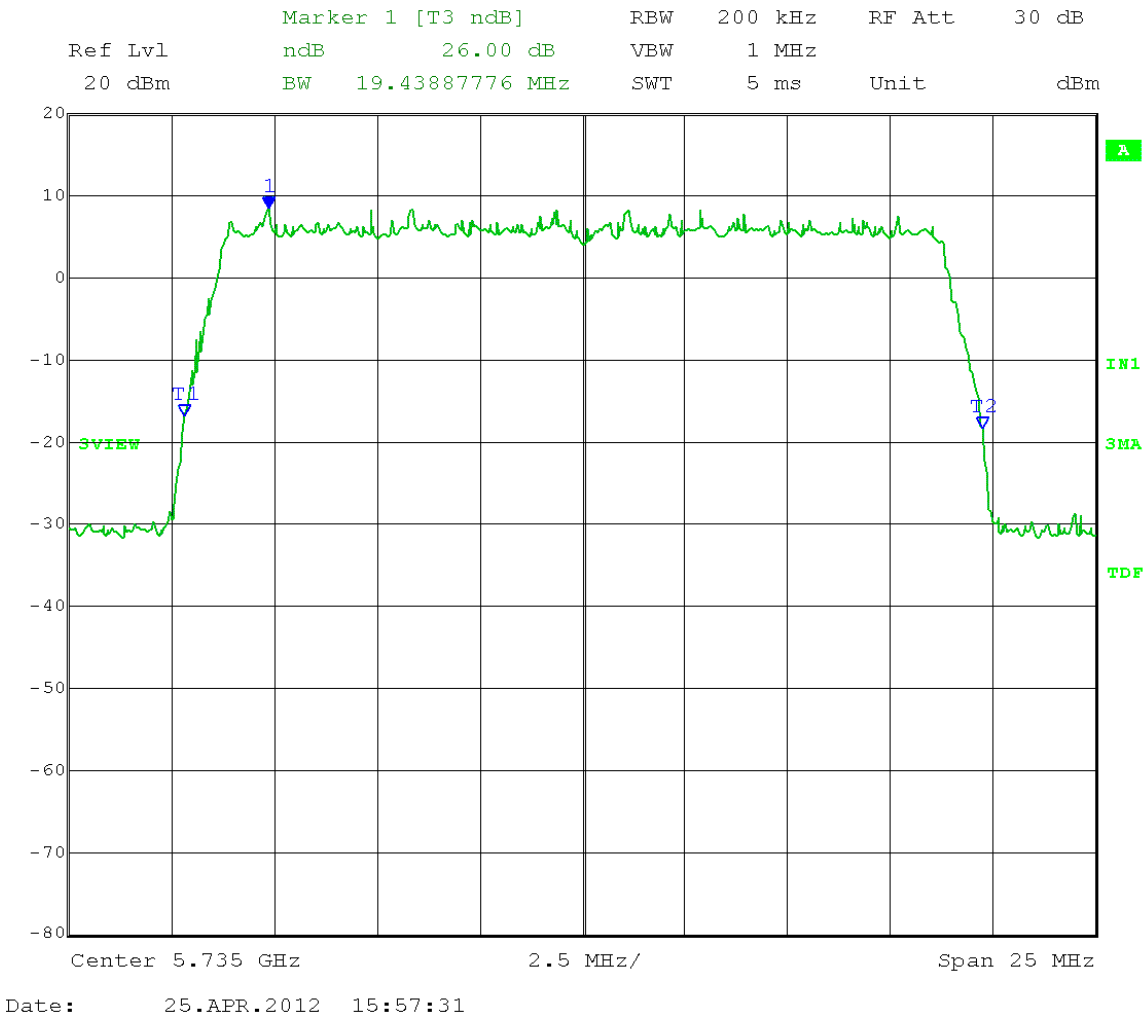
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

26 dB Emission Bandwidth = 19.44 MHz



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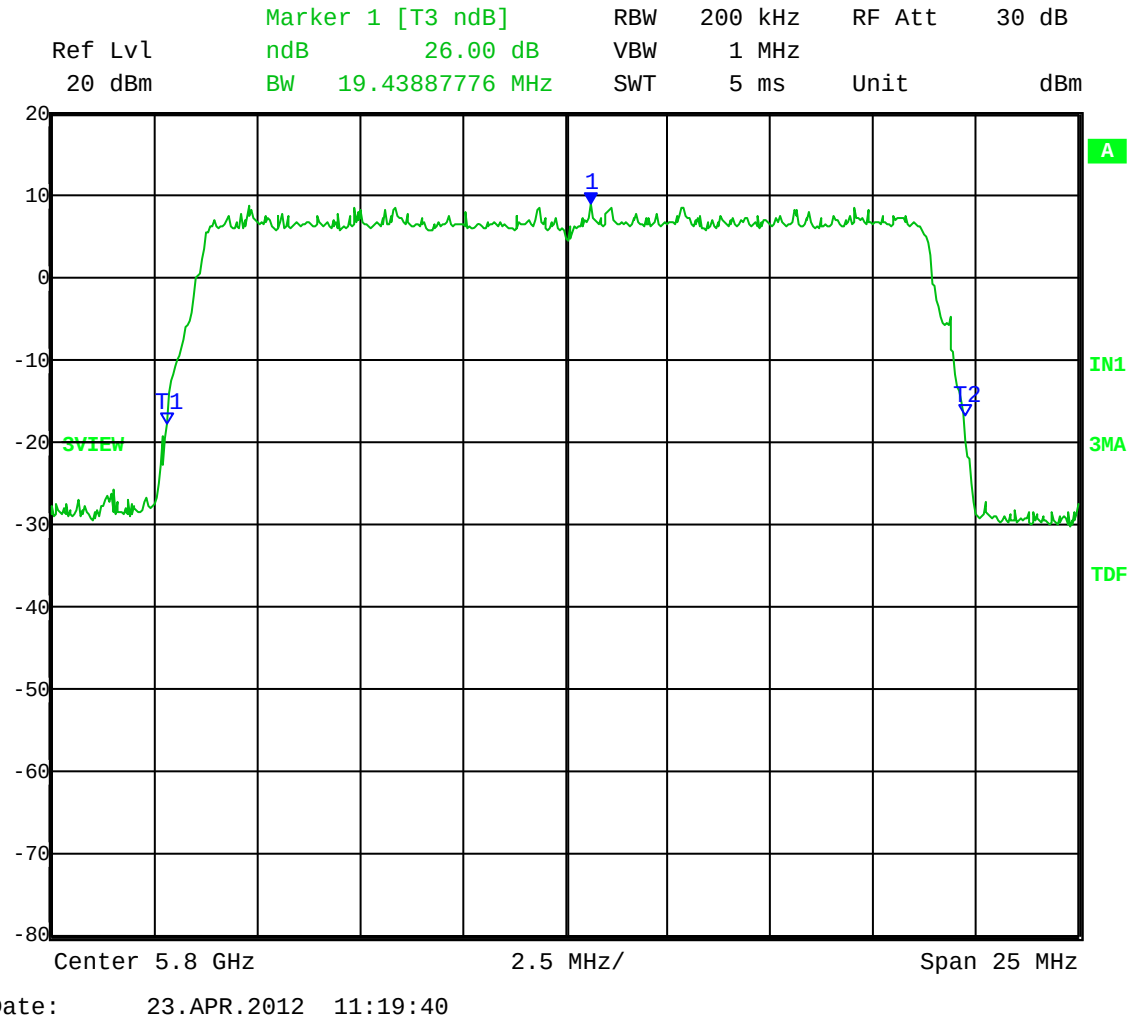
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: 16QAM

26 dB Emission Bandwidth = 19.44 MHz



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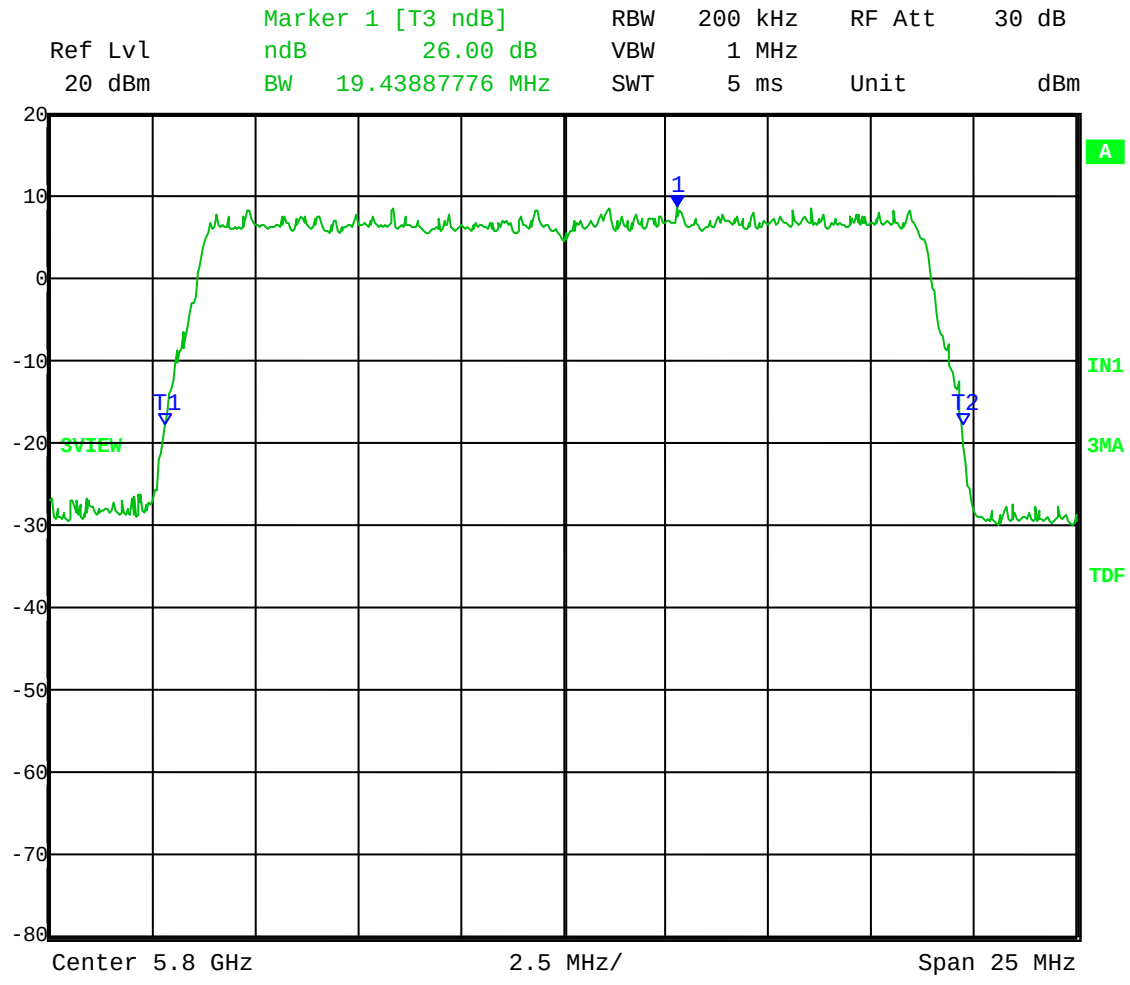
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: 64QAM

26 dB Emission Bandwidth = 19.44 MHz



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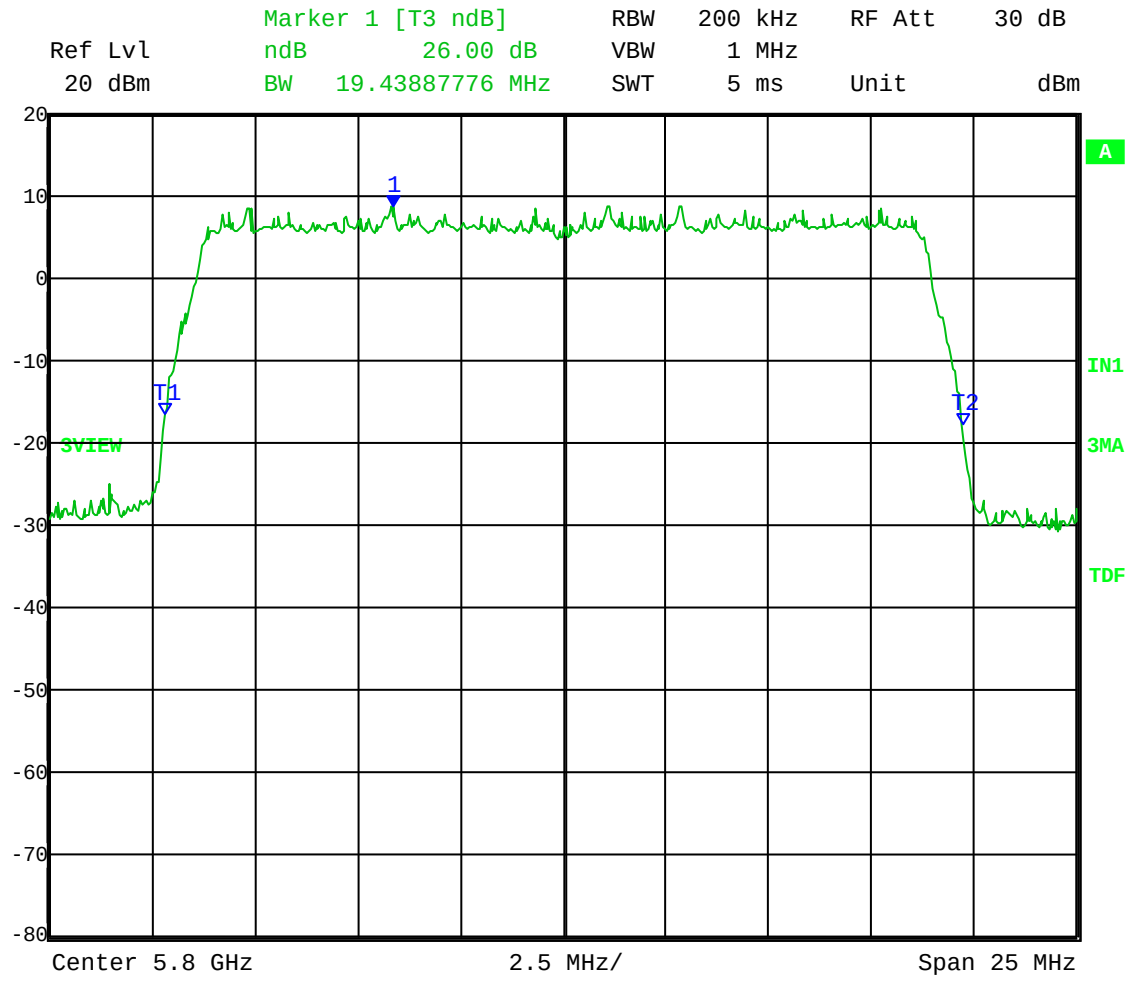
Appendix A – Measurement Data

Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: QPSK

26 dB Emission Bandwidth = 19.44 MHz



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Test Date: 04-25-2012
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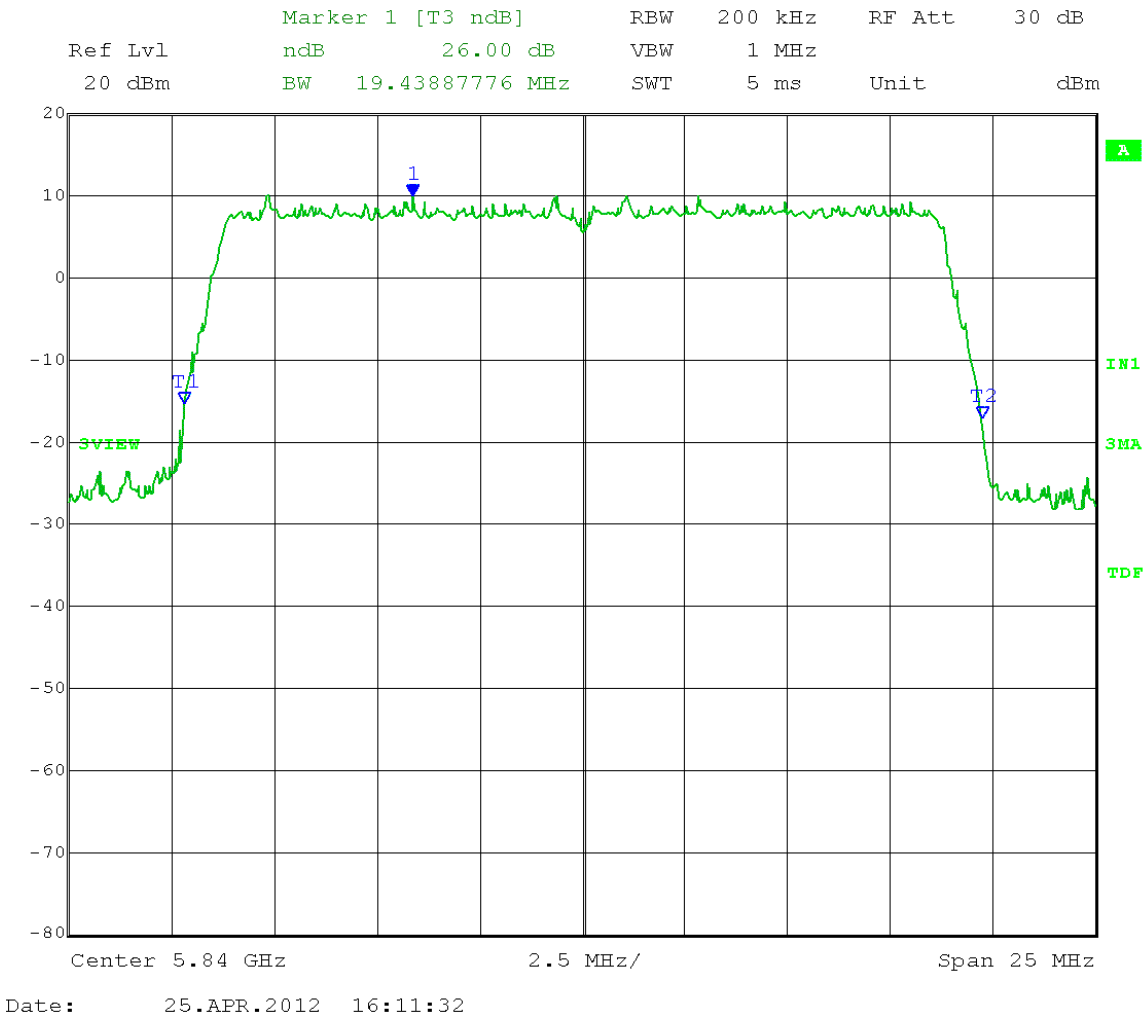
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

26 dB Emission Bandwidth = 19.44 MHz



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Test Date: 04-25-2012
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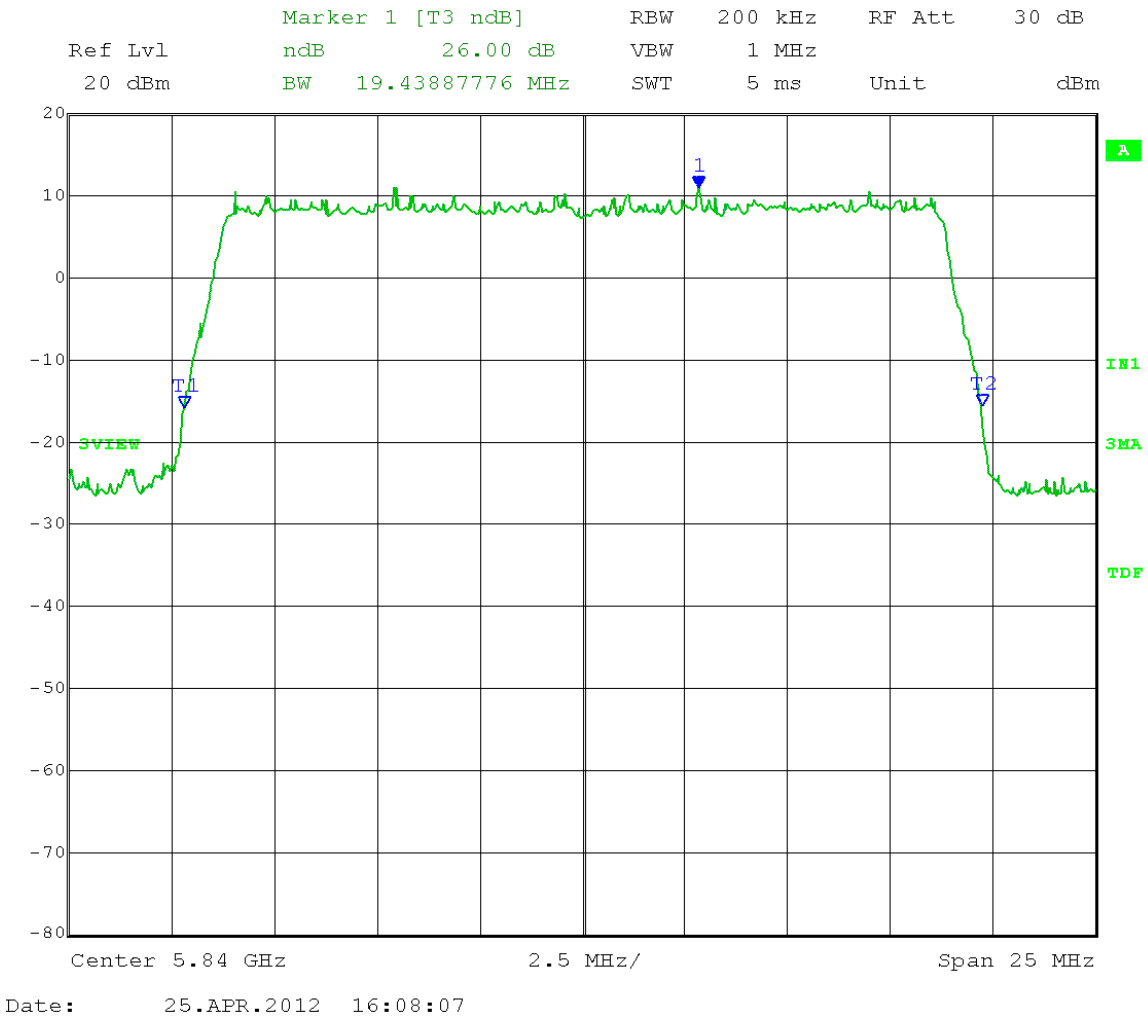
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

26 dB Emission Bandwidth = 19.44 MHz



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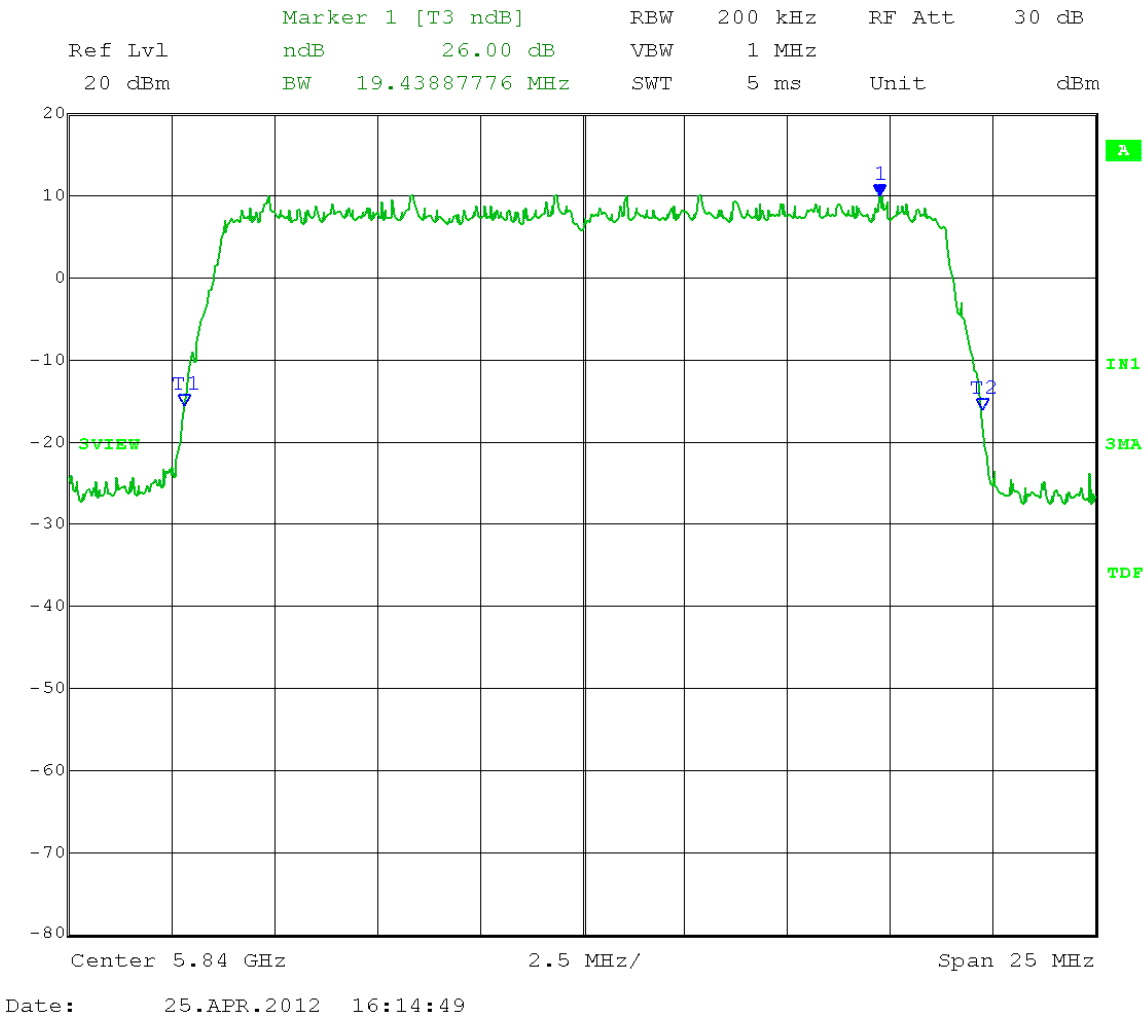
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

26 dB Emission Bandwidth = 19.44 MHz



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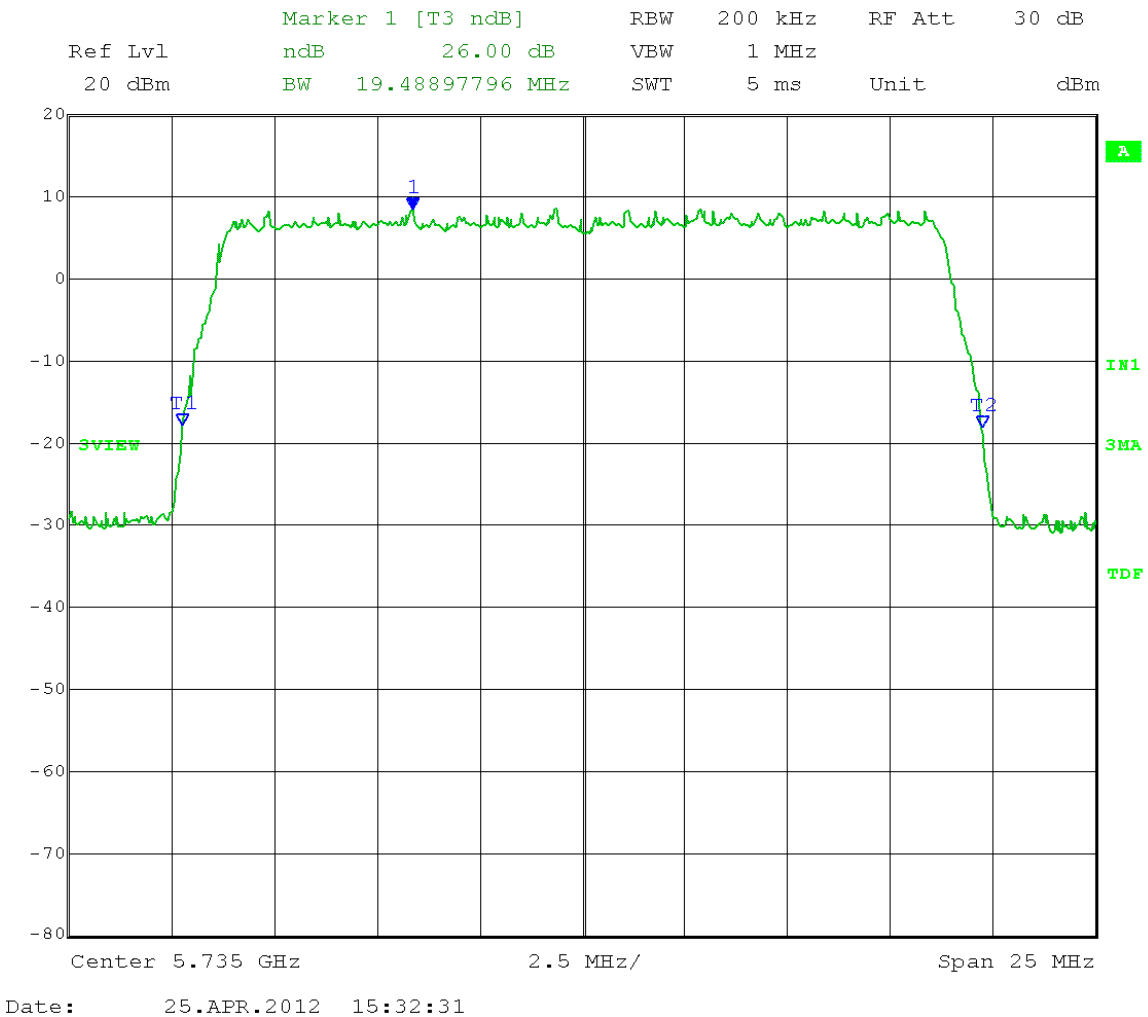
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

26 dB Emission Bandwidth = 19.49 MHz



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Company: Cambium Networks
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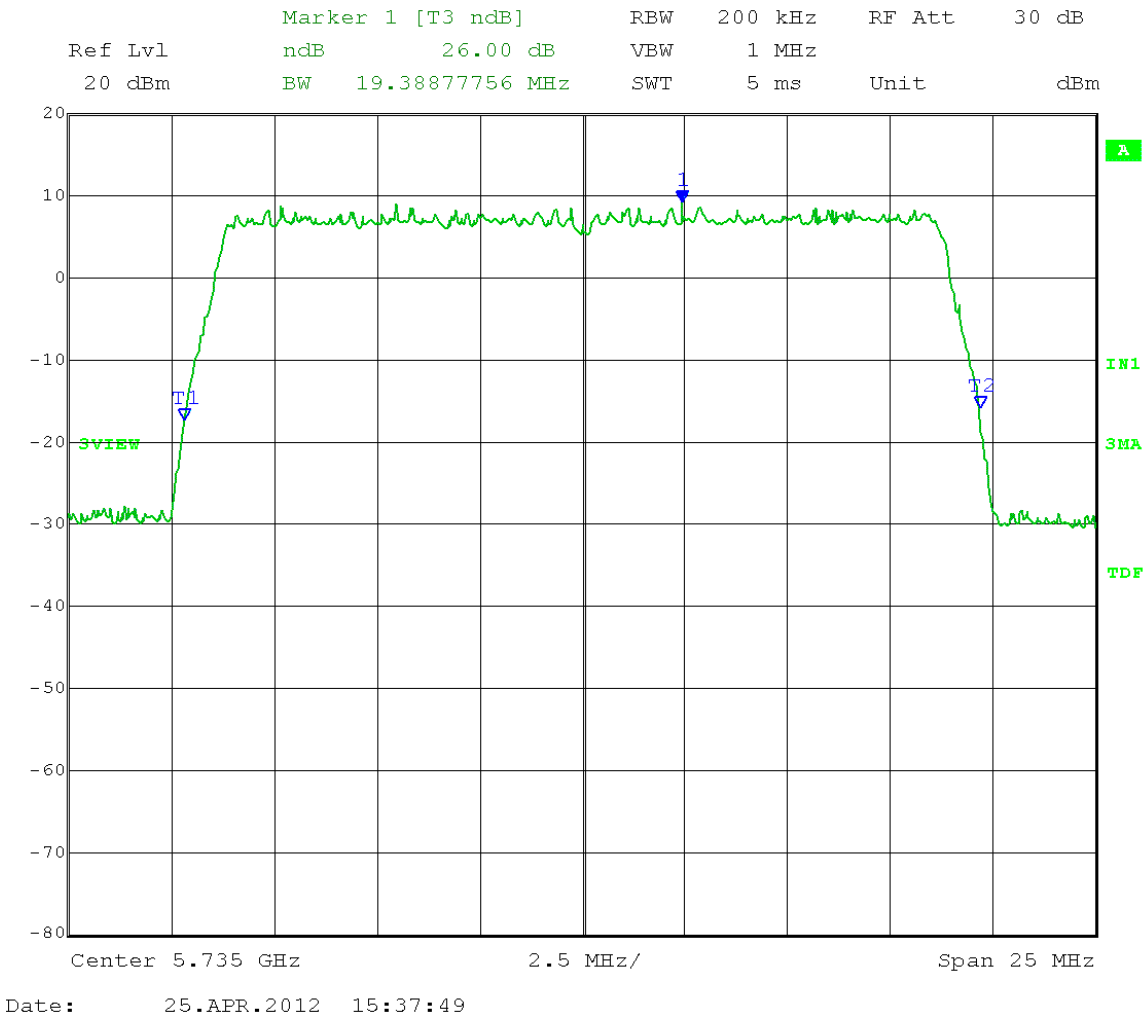
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

26 dB Emission Bandwidth = 19.39 MHz



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Appendix A – Measurement Data

Test Date: 04-25-2012
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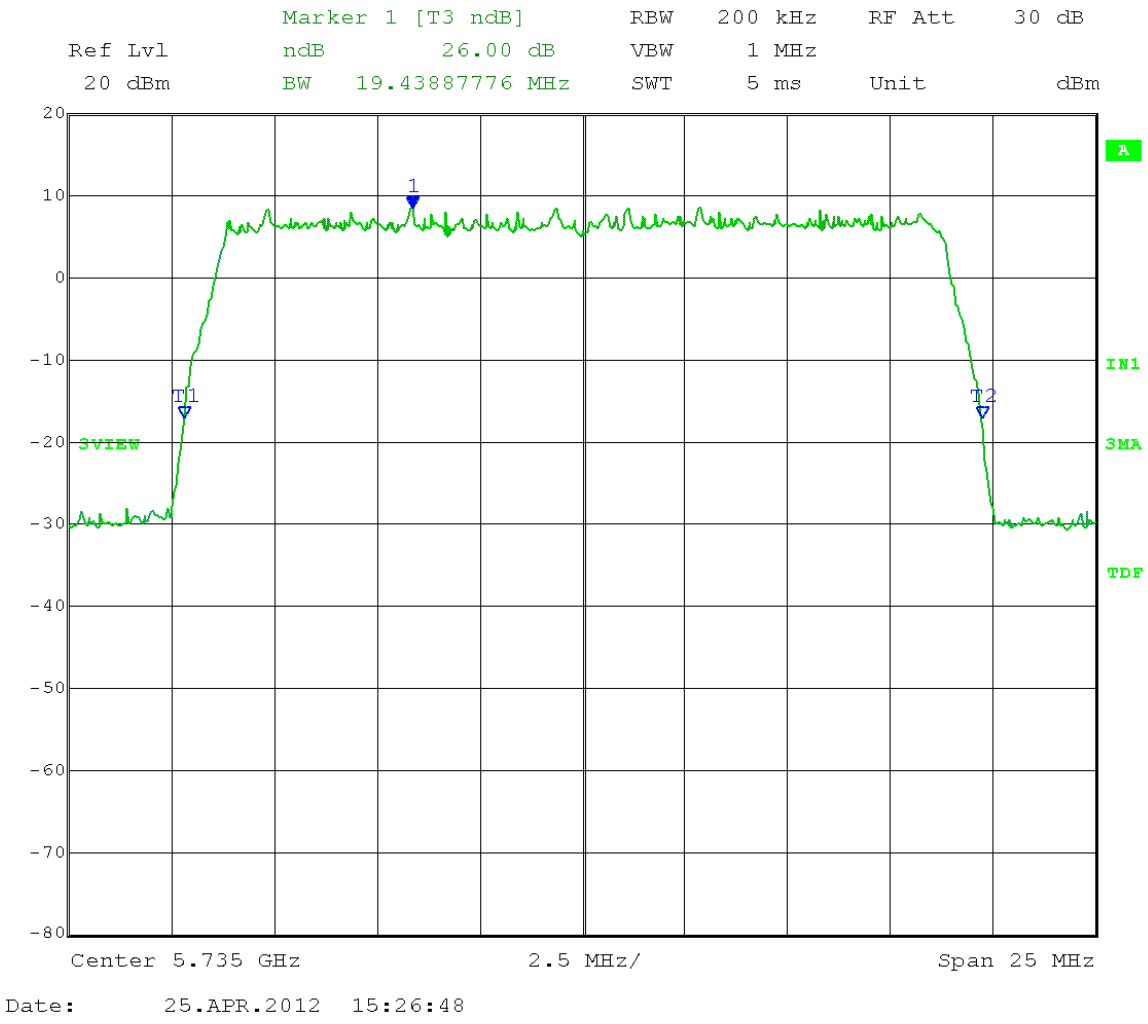
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

26 dB Emission Bandwidth = 19.44 MHz



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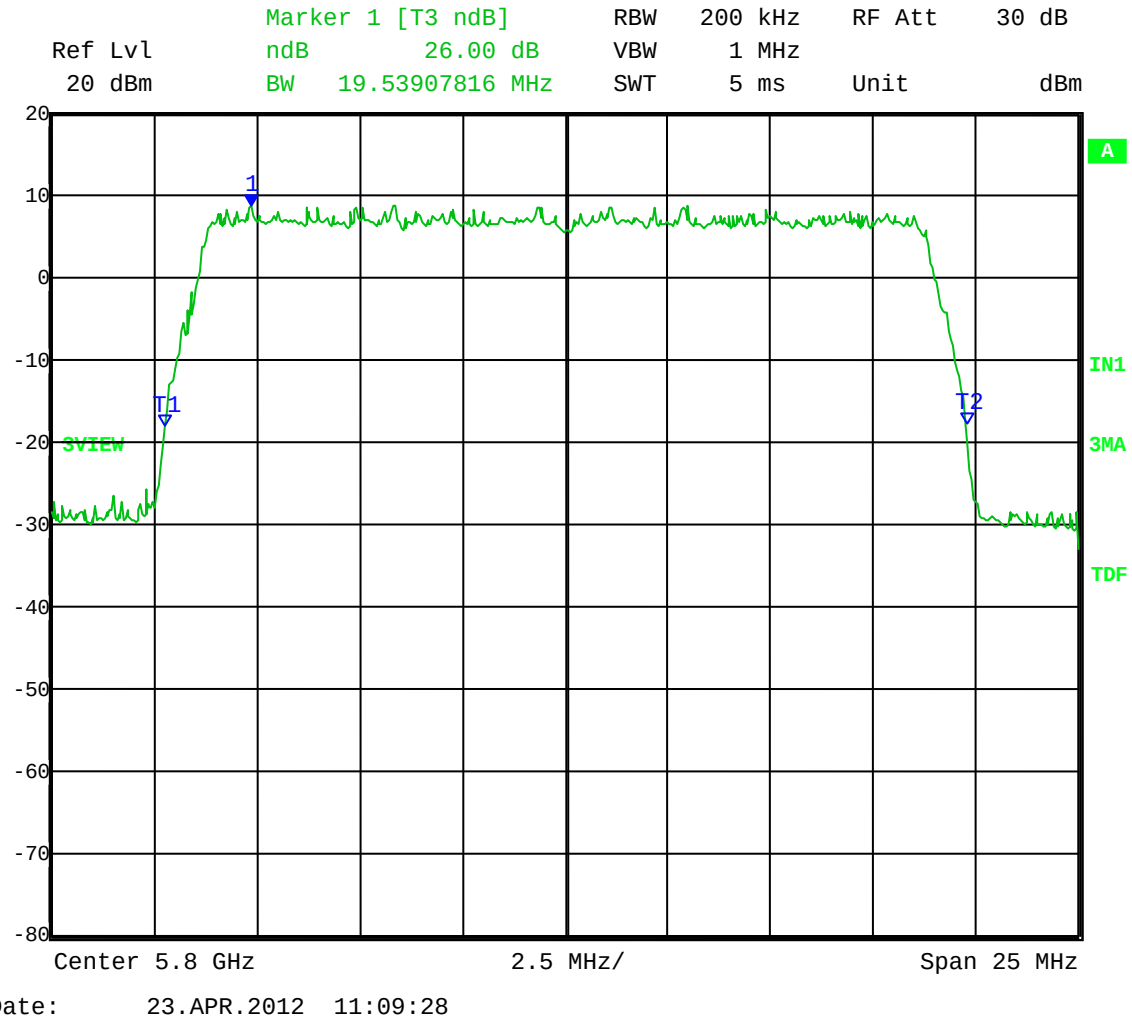
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: 16QAM

26 dB Emission Bandwidth = 19.539 MHz



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Operator: Craig B

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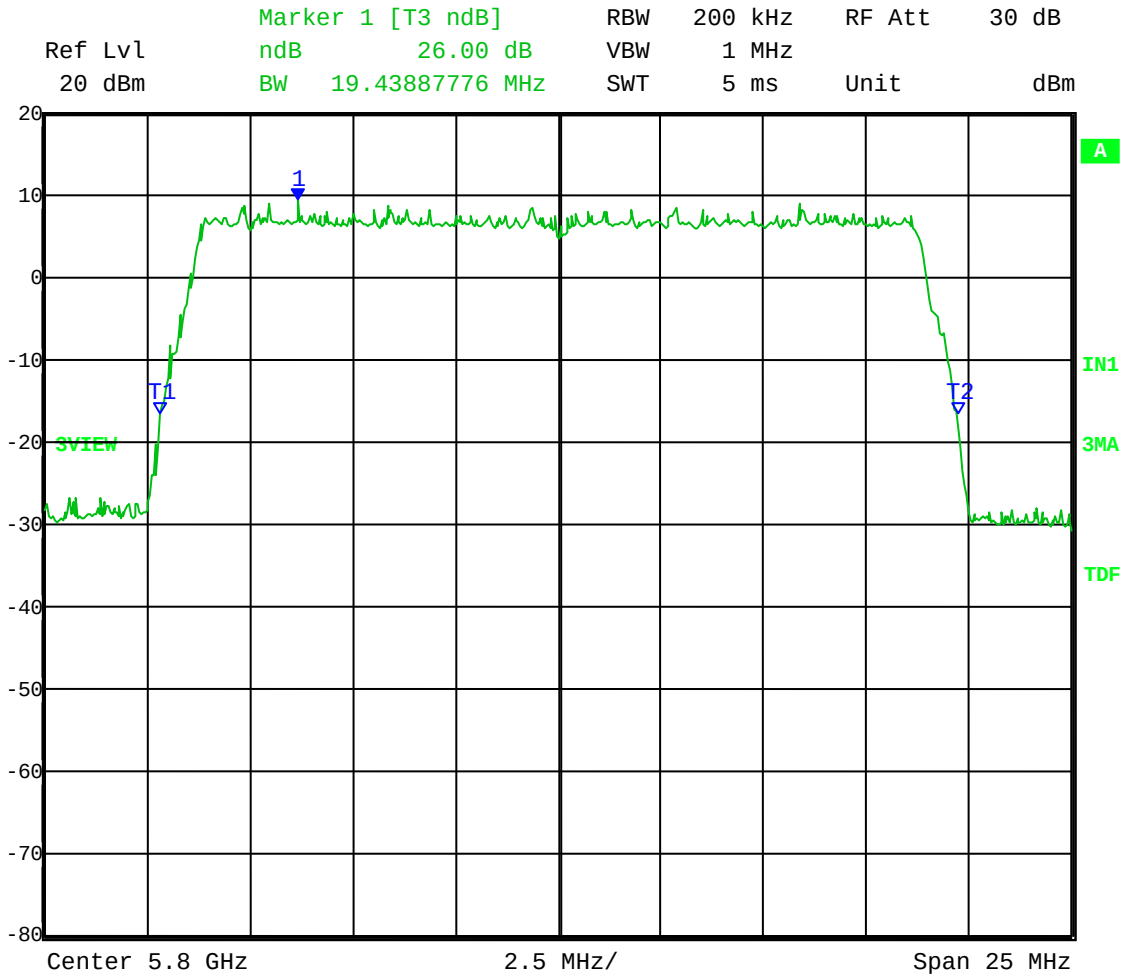
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: 64QAM

26 dB Emission Bandwidth = 19.44 MHz



Date: 23.APR.2012 11:11:14

166 South Carter, Genoa City, WI 53128

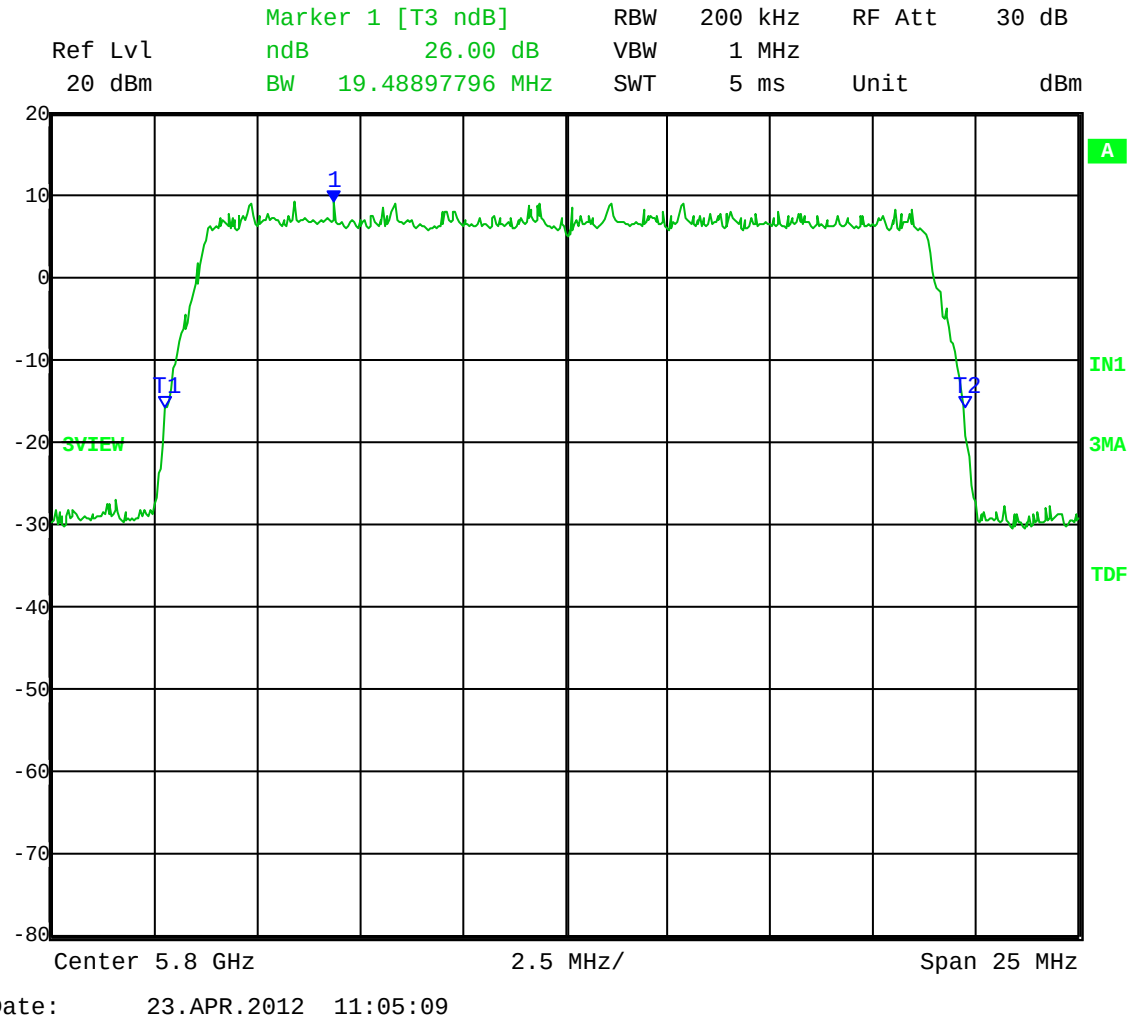
Appendix A – Measurement Data

Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: QPSK

26 dB Emission Bandwidth = 19.489 MHz



Date: 23.APR.2012 11:05:09

166 South Carter, Genoa City, WI 53128

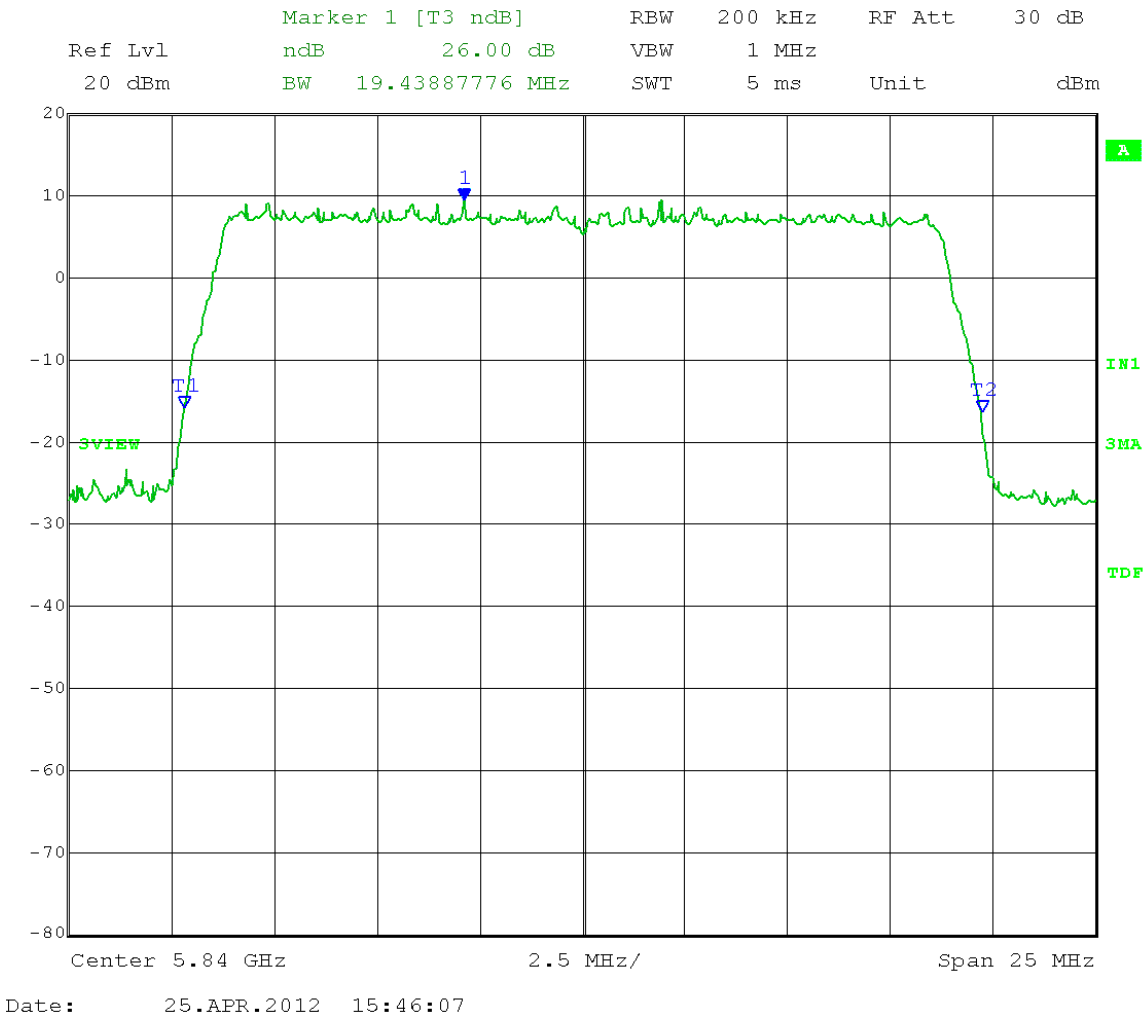
Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

26 dB Emission Bandwidth = 19.44 MHz



166 South Carter, Genoa City, WI 53128

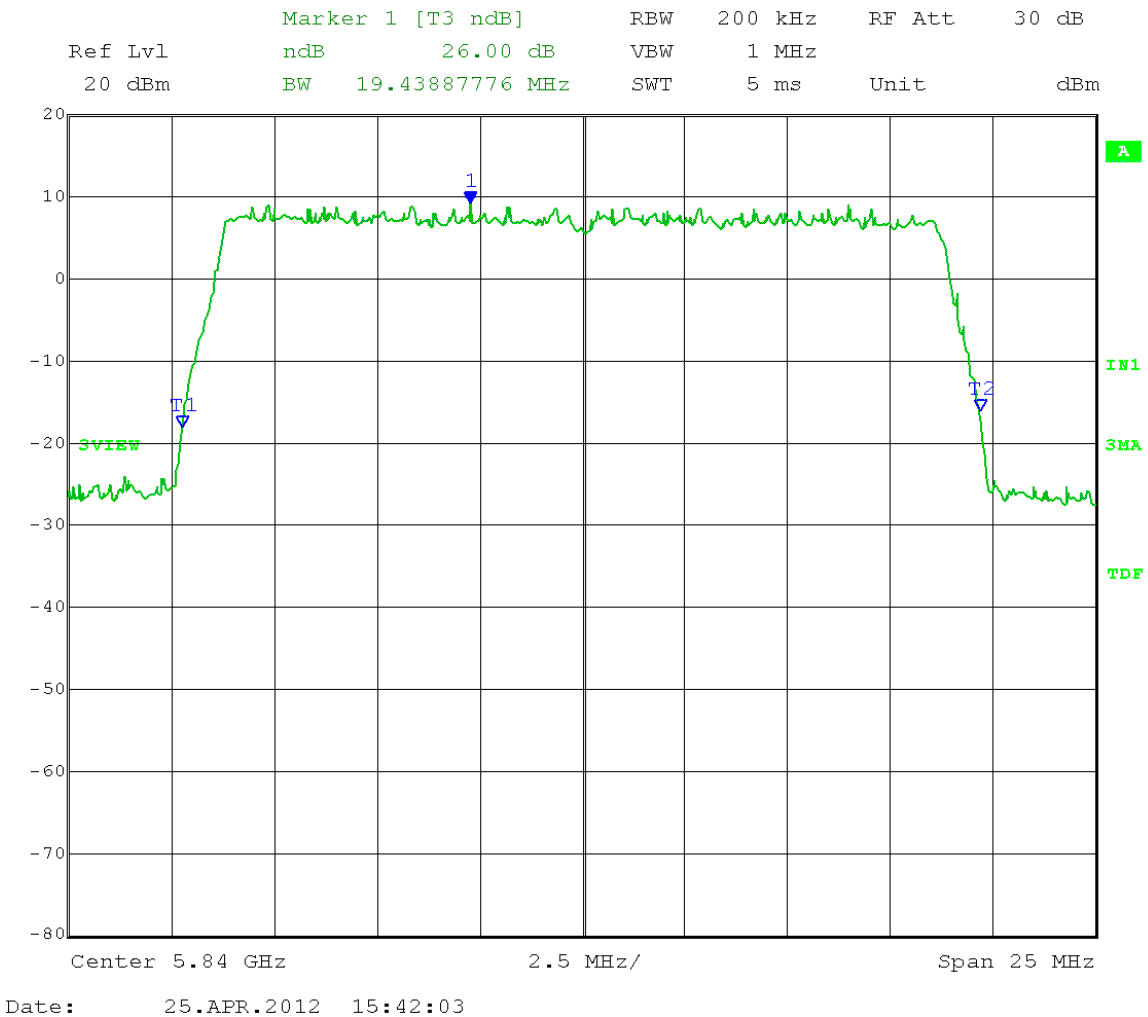
Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

26 dB Emission Bandwidth = 19.44 MHz



166 South Carter, Genoa City, WI 53128

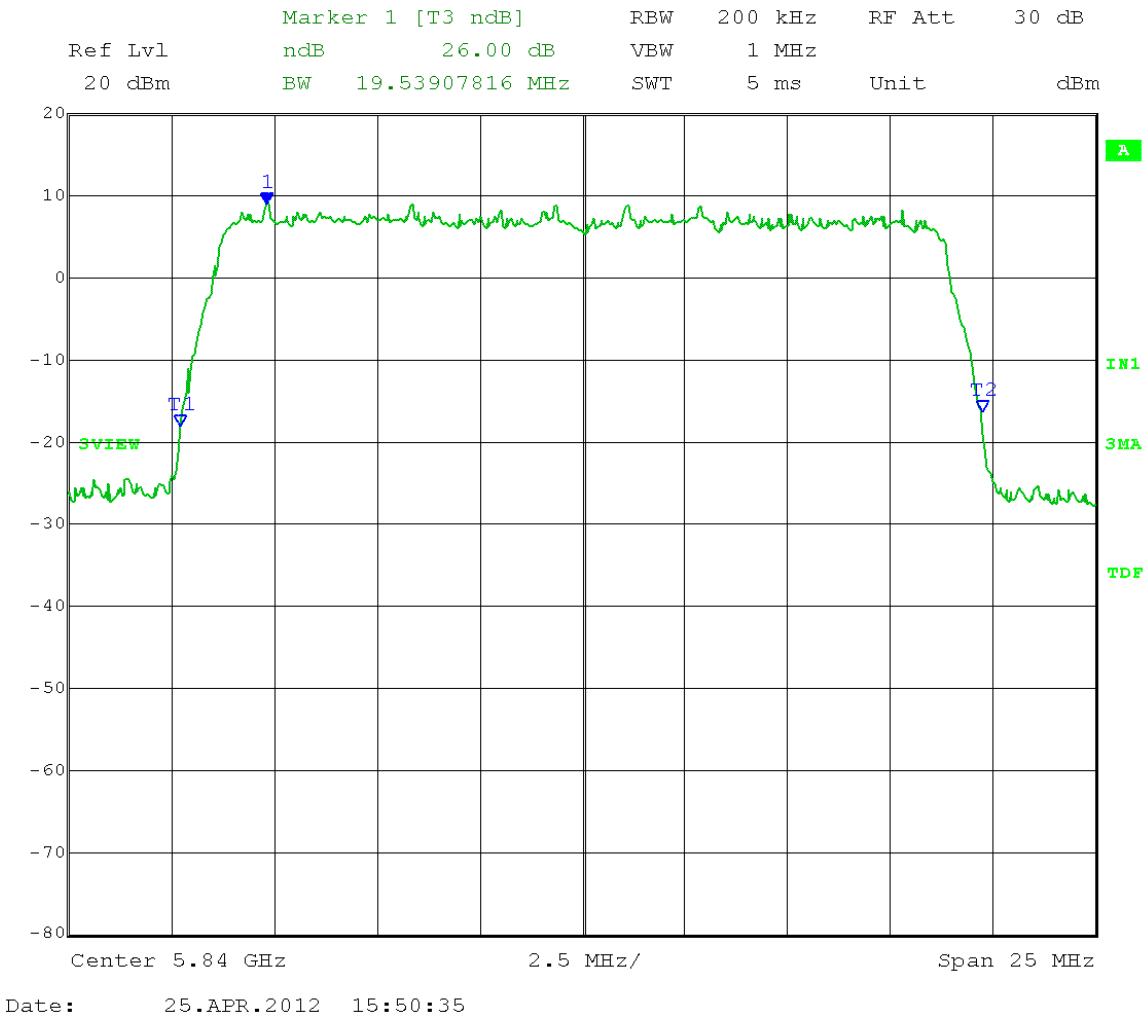
Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 26 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

26 dB Emission Bandwidth = 19.54 MHz



Appendix A – Measurement Data

A2.0 Emission Bandwidth – 6 dB bandwidth - conducted

Rule Section: Section 15.247(a)(2)
RSS-210 A8.2(a)

Test Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 – *Guidance for Performing Gompliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247*

Section 5.1.1

Description: RBW = 1-5% of EBW
VBW ≥ 3 x RBW
Detector = Peak
Trace mode = max hold
Sweep = auto couple

Measure the maximum width of the emission between the lower and upper frequencies that measure 6 dB below the maximum level of the in-band emission.

Measurements were taken for QPSK, 16-QAM, and 64-QAM modulation types, and at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously (power setting 19 dBm) with 98% duty cycle.

Limit: 6 dB bandwidth shall be at least 500 kHz

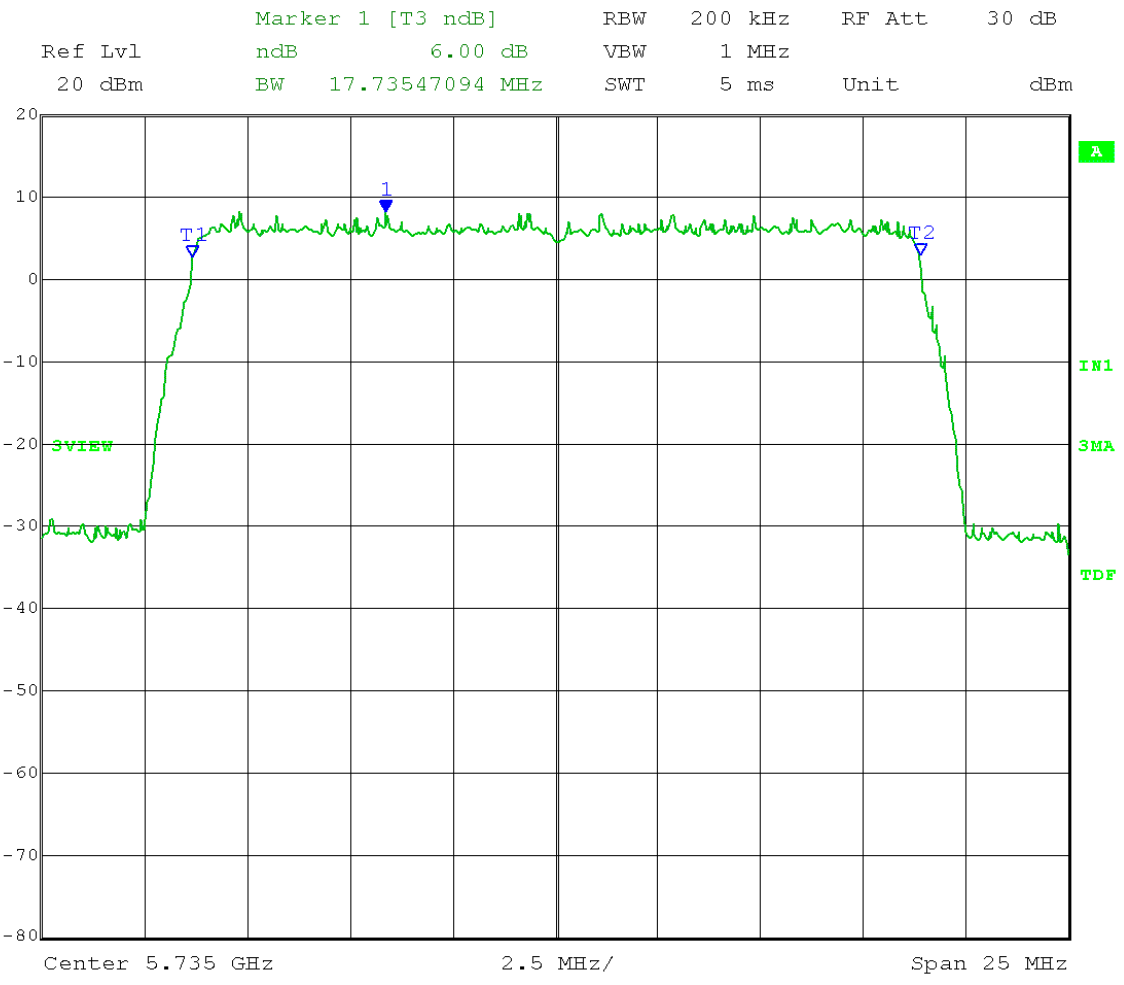
Results: Passed

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

6 dB Bandwidth = 17.735 MHz



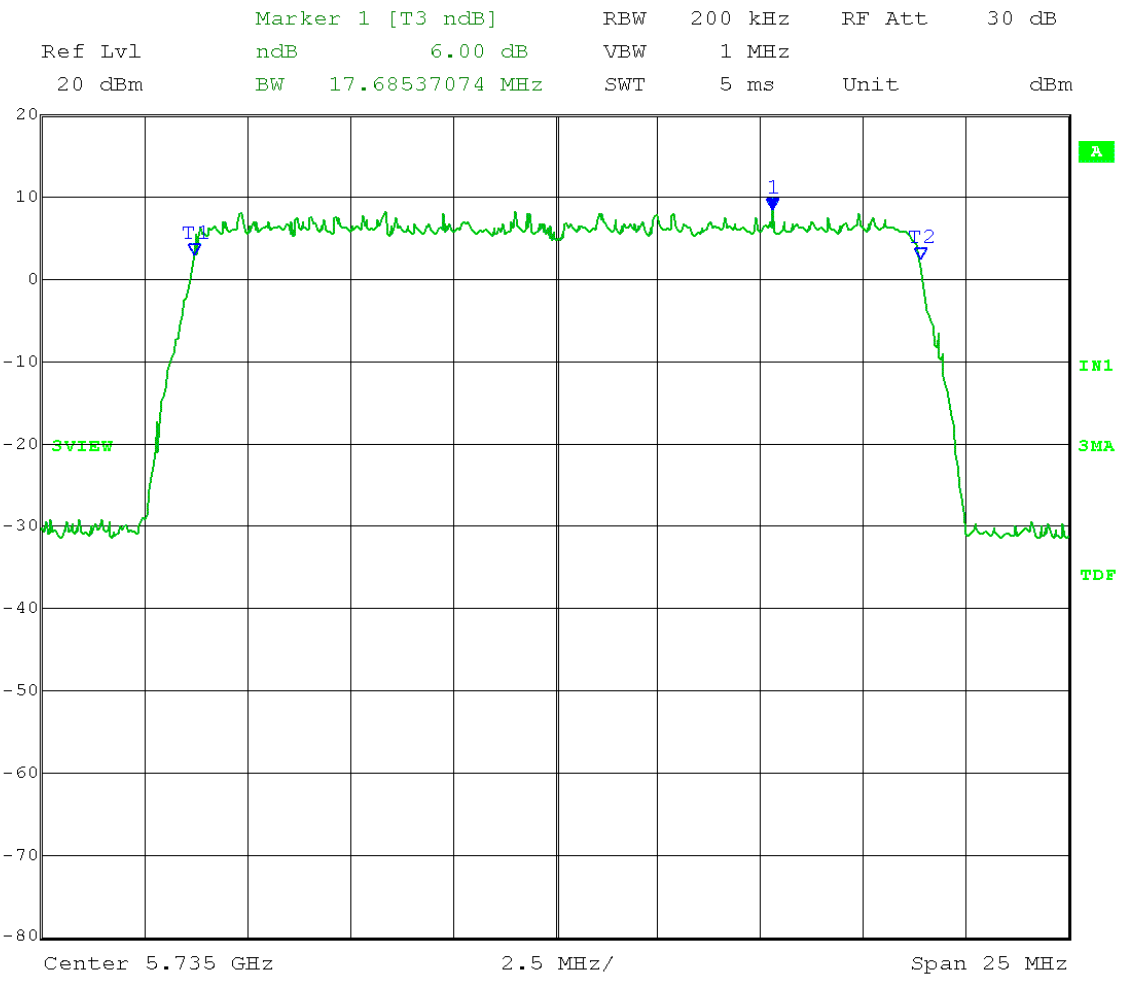
Date: 25.APR.2012 16:02:24

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

6 dB Bandwidth = 17.69 MHz



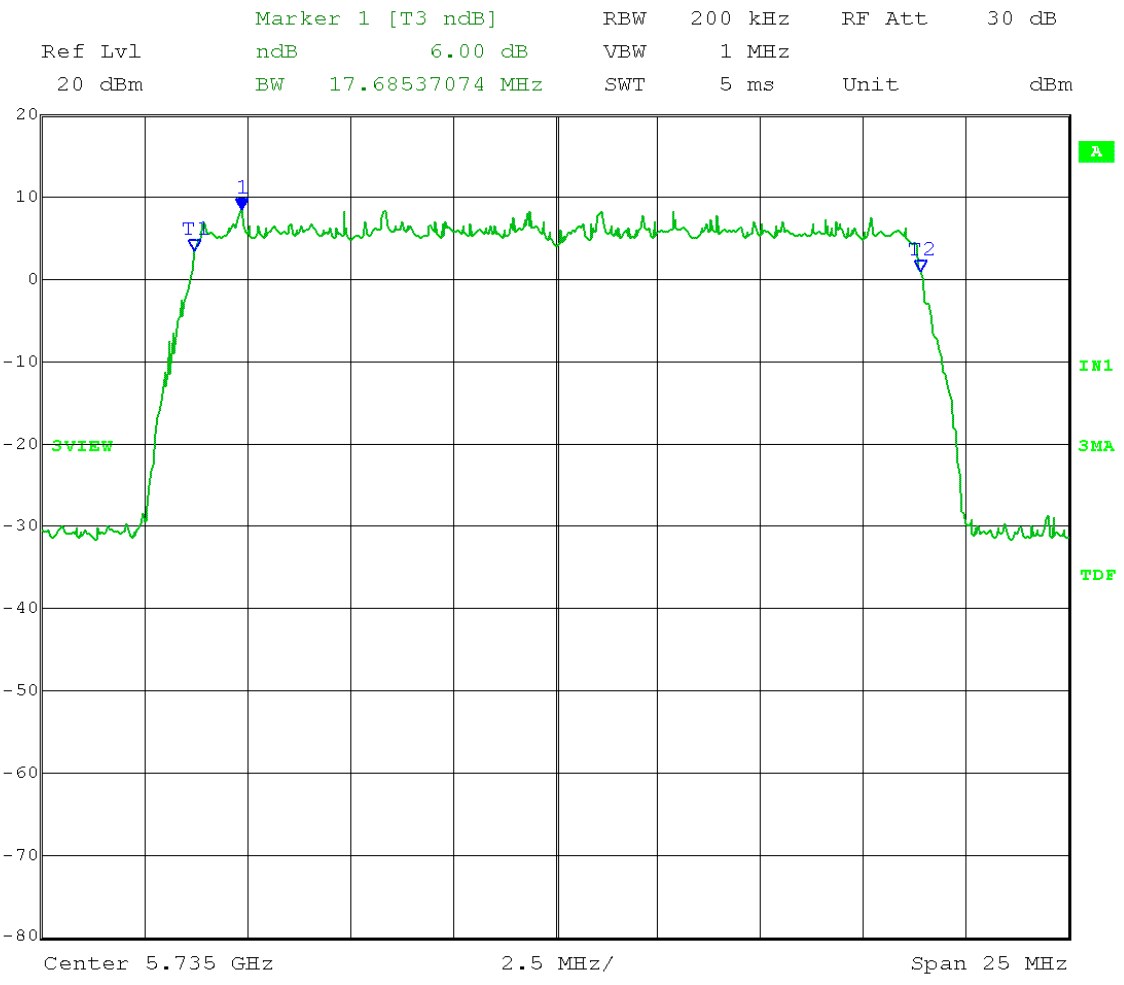
Date: 25.APR.2012 16:05:35

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

6 dB Bandwidth = 17.69 MHz



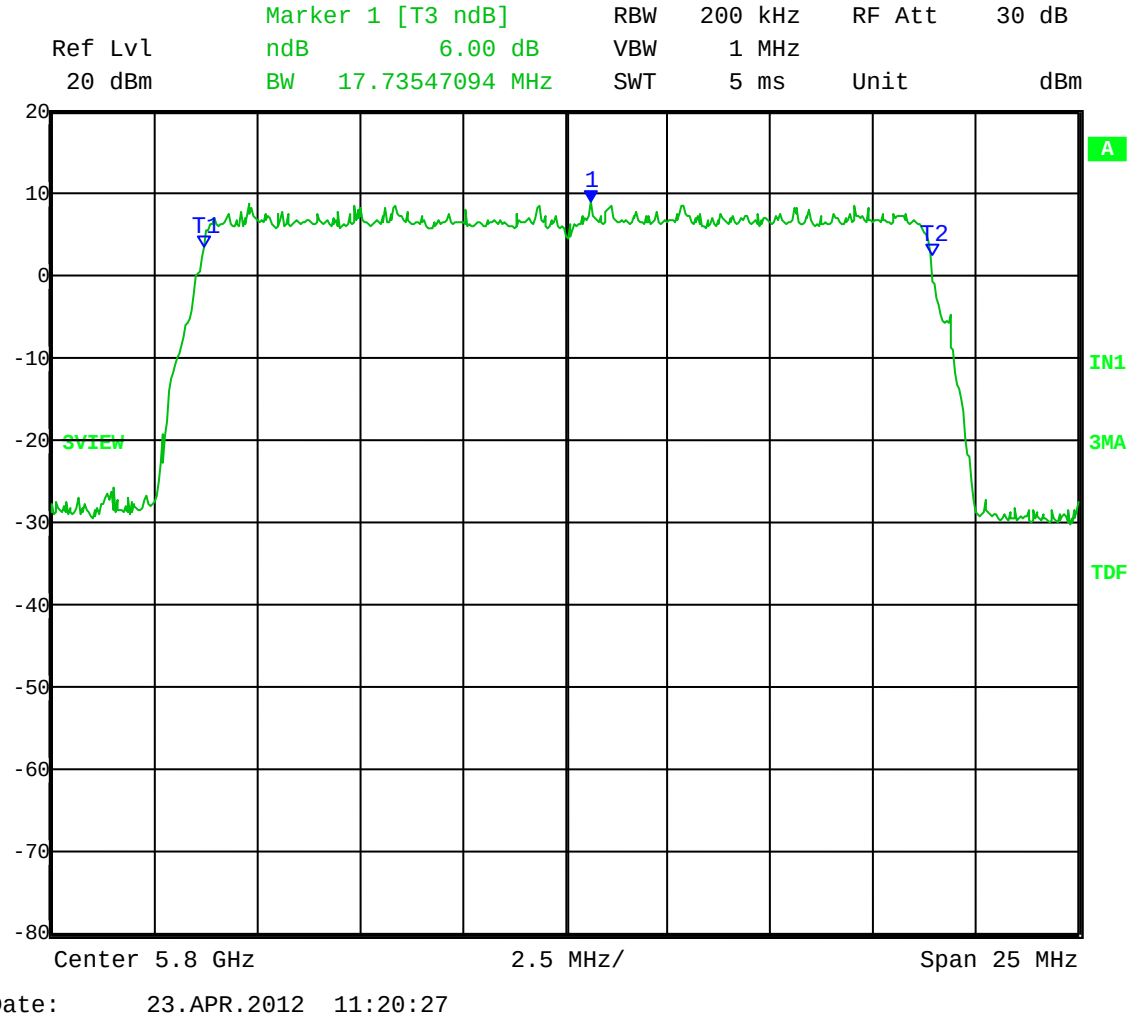
Date: 25.APR.2012 15:58:31

Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: 16QAM

6 dB Bandwidth = 17.735 MHz

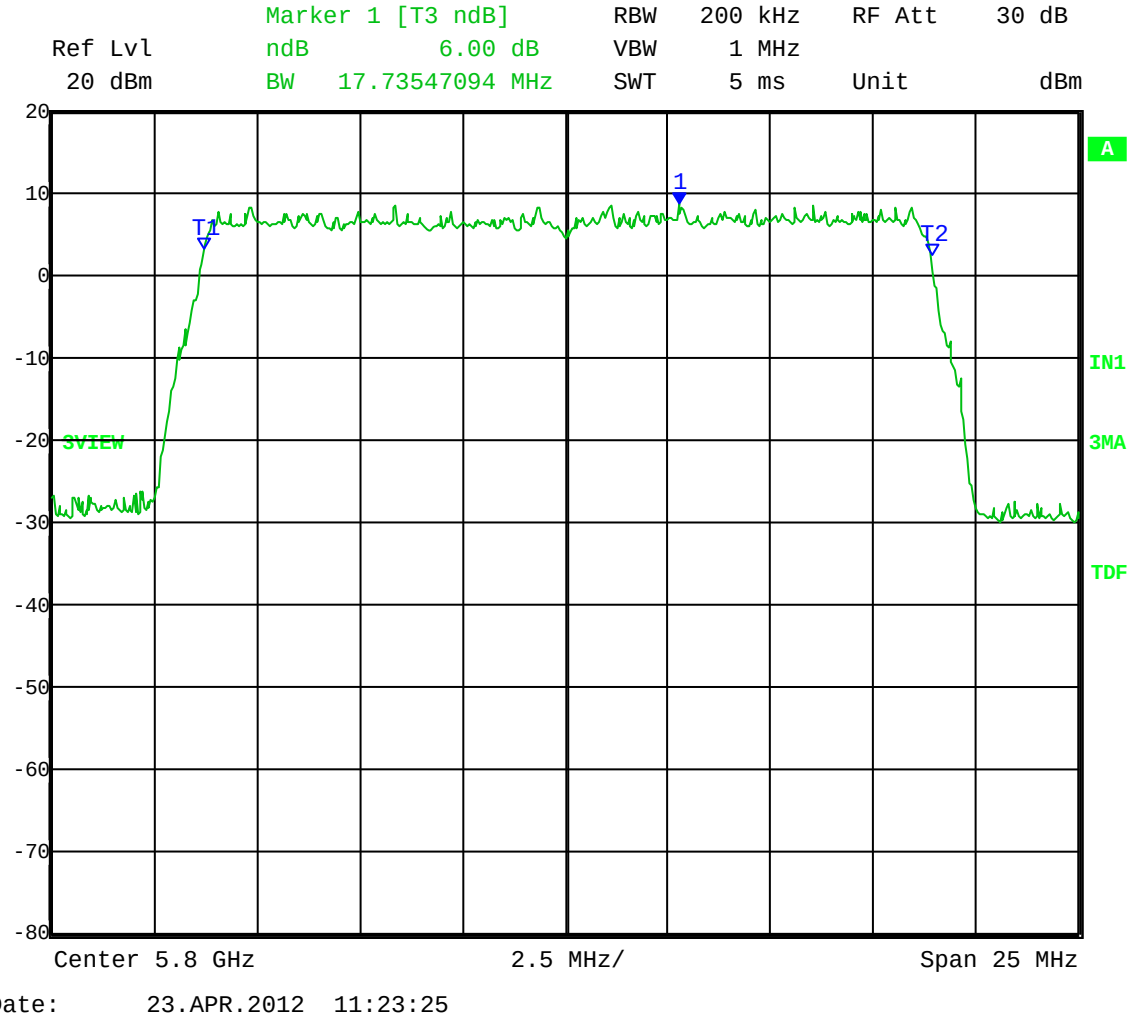


Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: 64QAM

6 dB Bandwidth = 17.74 MHz



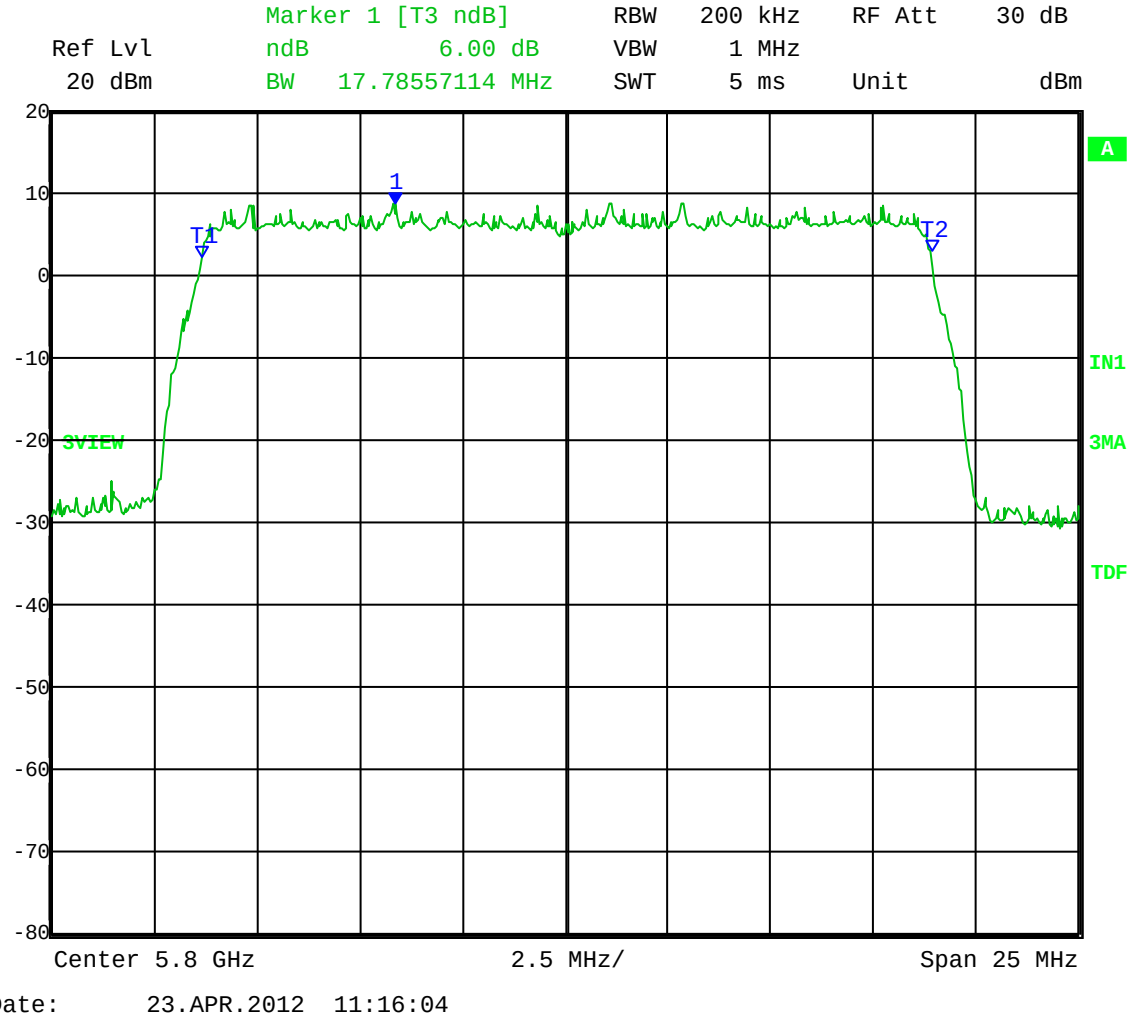
Date: 23.APR.2012 11:23:25

Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: QPSK

6 dB Bandwidth = 17.786 MHz

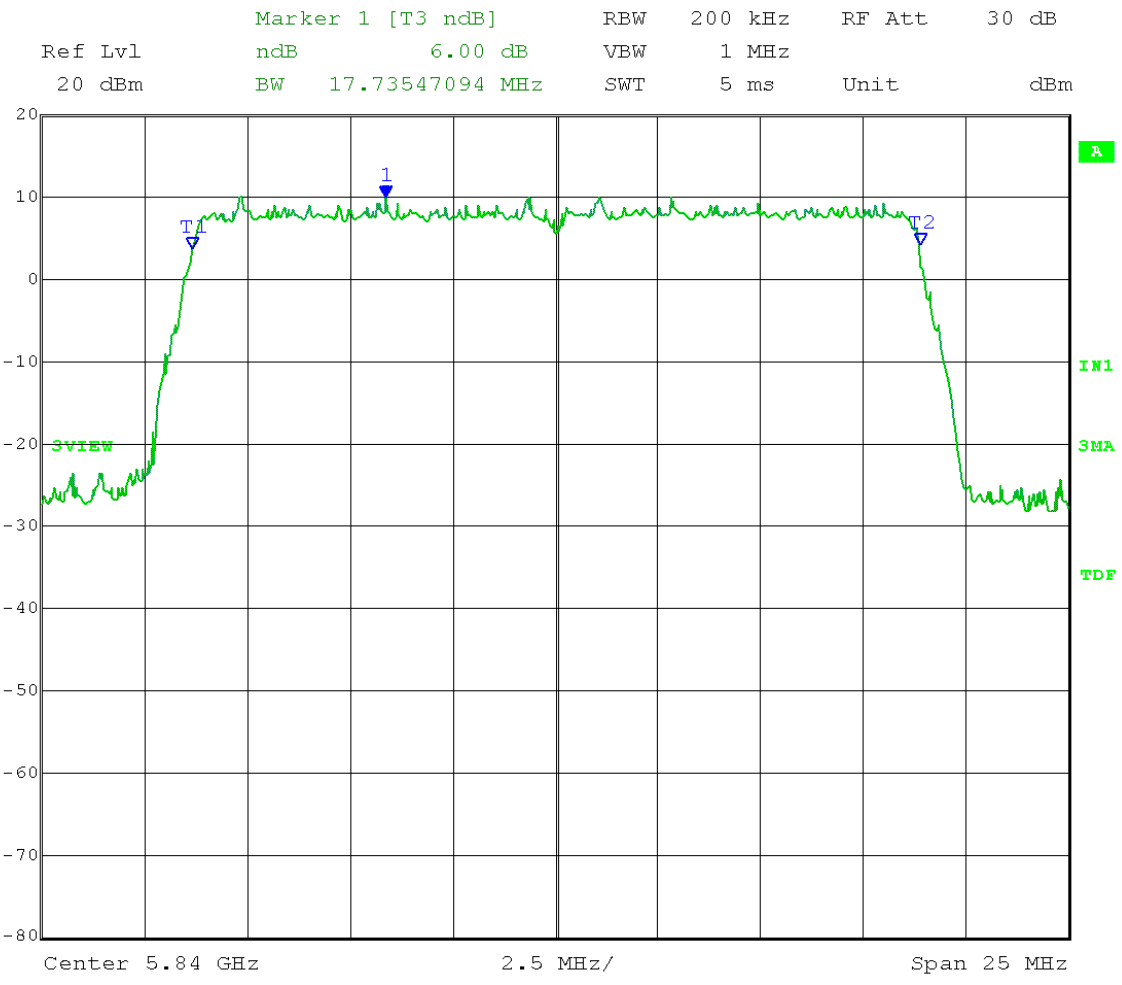


Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

6 dB Bandwidth = 17.735 MHz



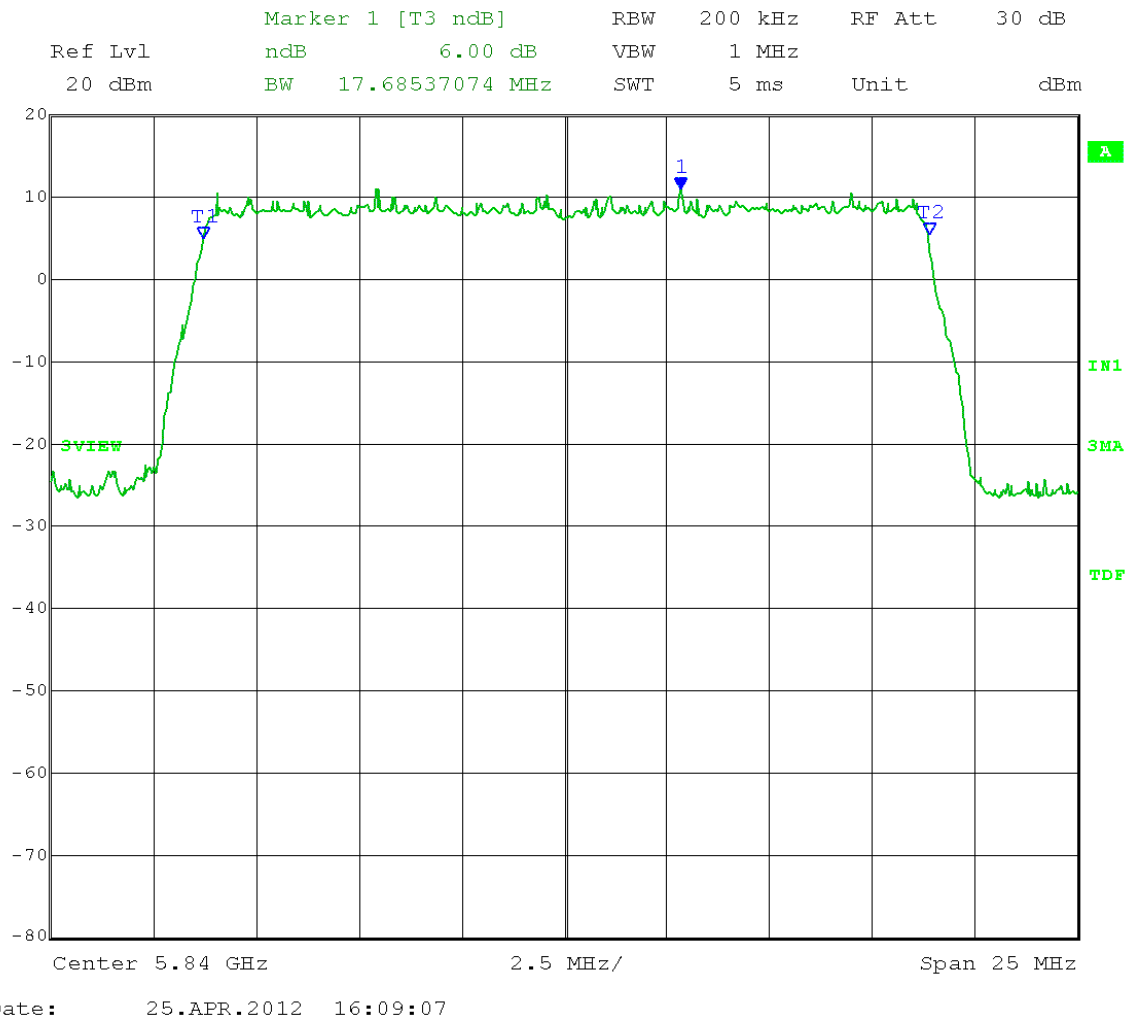
Date: 25.APR.2012 16:12:44

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

6 dB Bandwidth = 17.69 MHz



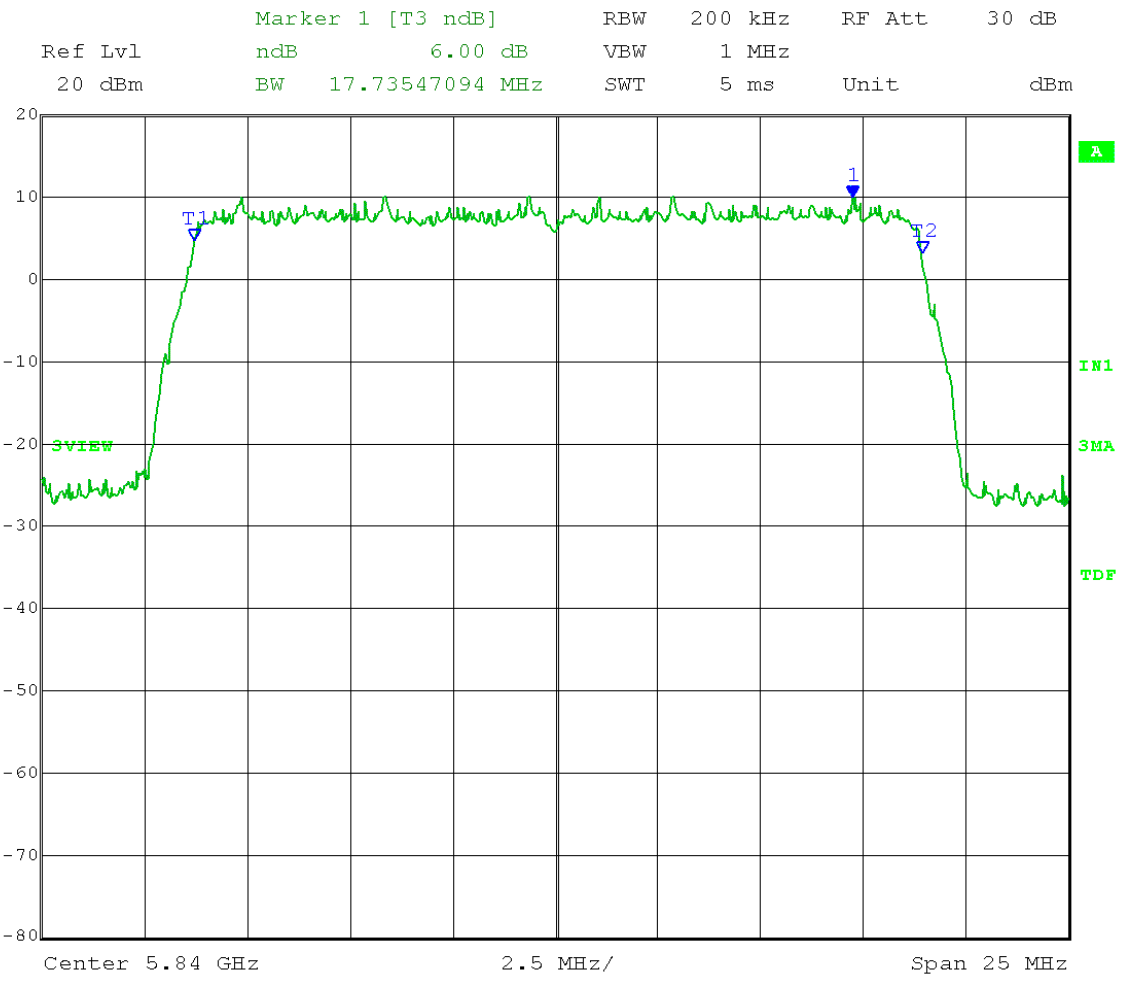
Date: 25.APR.2012 16:09:07

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

6 dB Bandwidth = 17.74 MHz



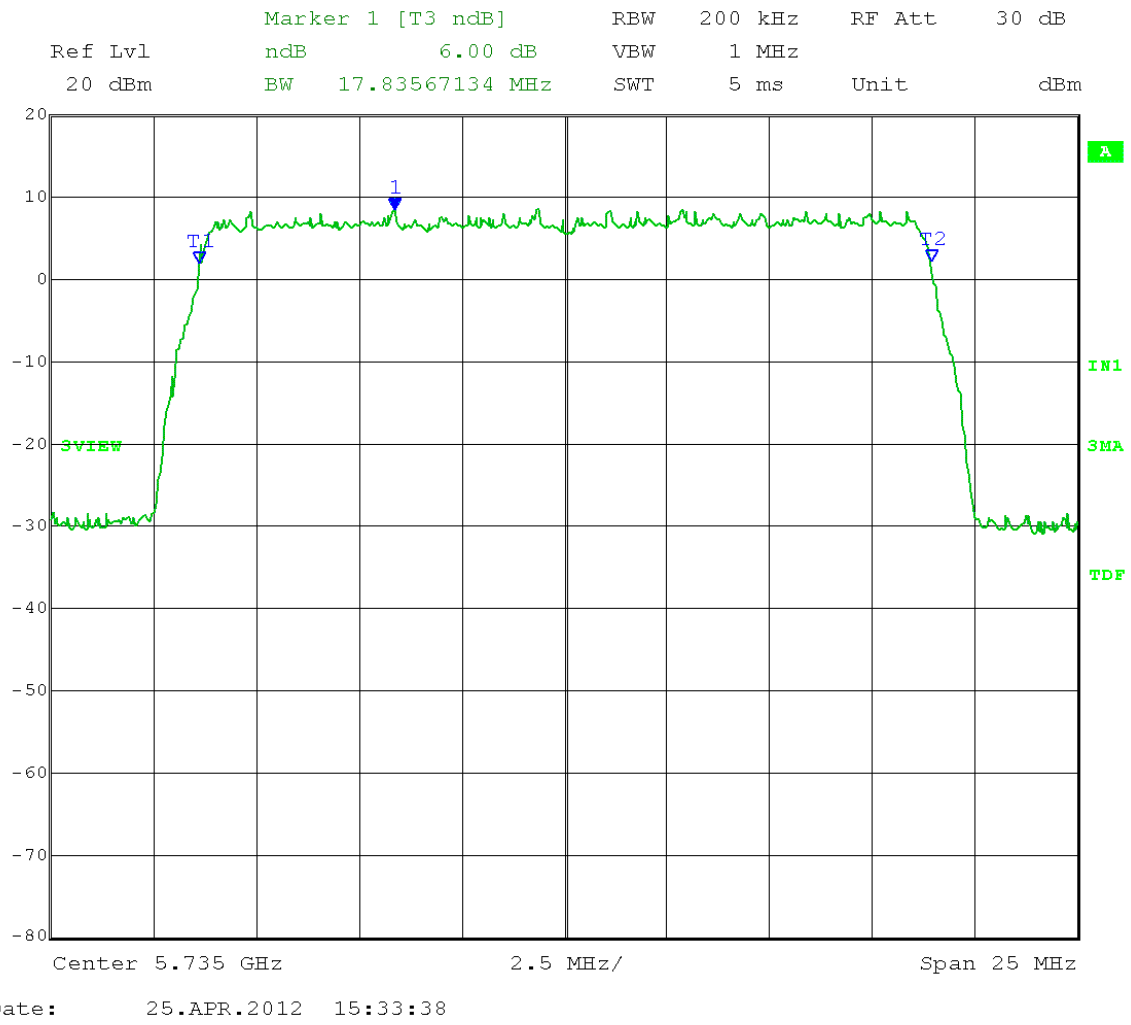
Date: 25.APR.2012 16:15:55

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

6 dB Bandwidth = 17.84 MHz



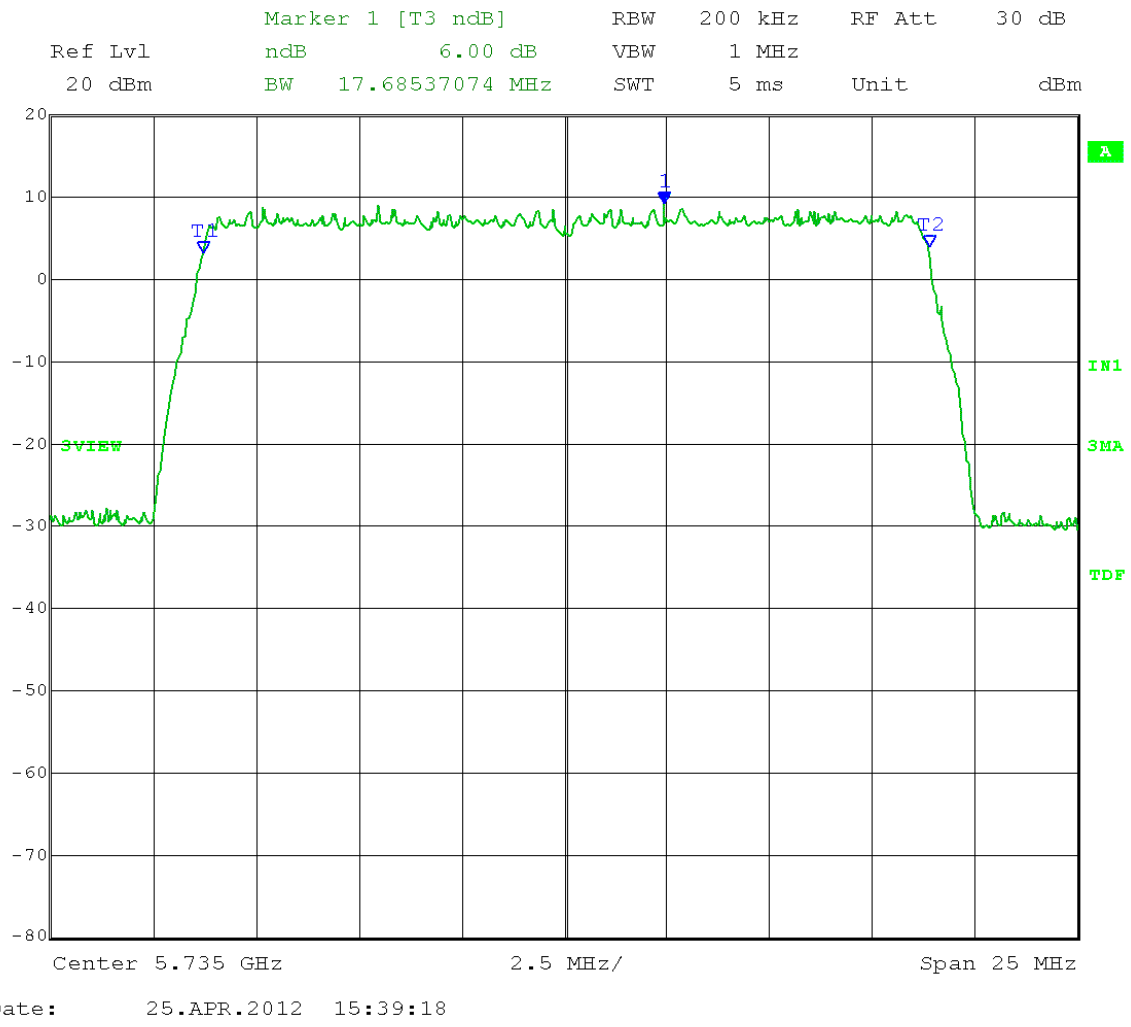
Date: 25.APR.2012 15:33:38

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

6 dB Bandwidth = 17.685 MHz



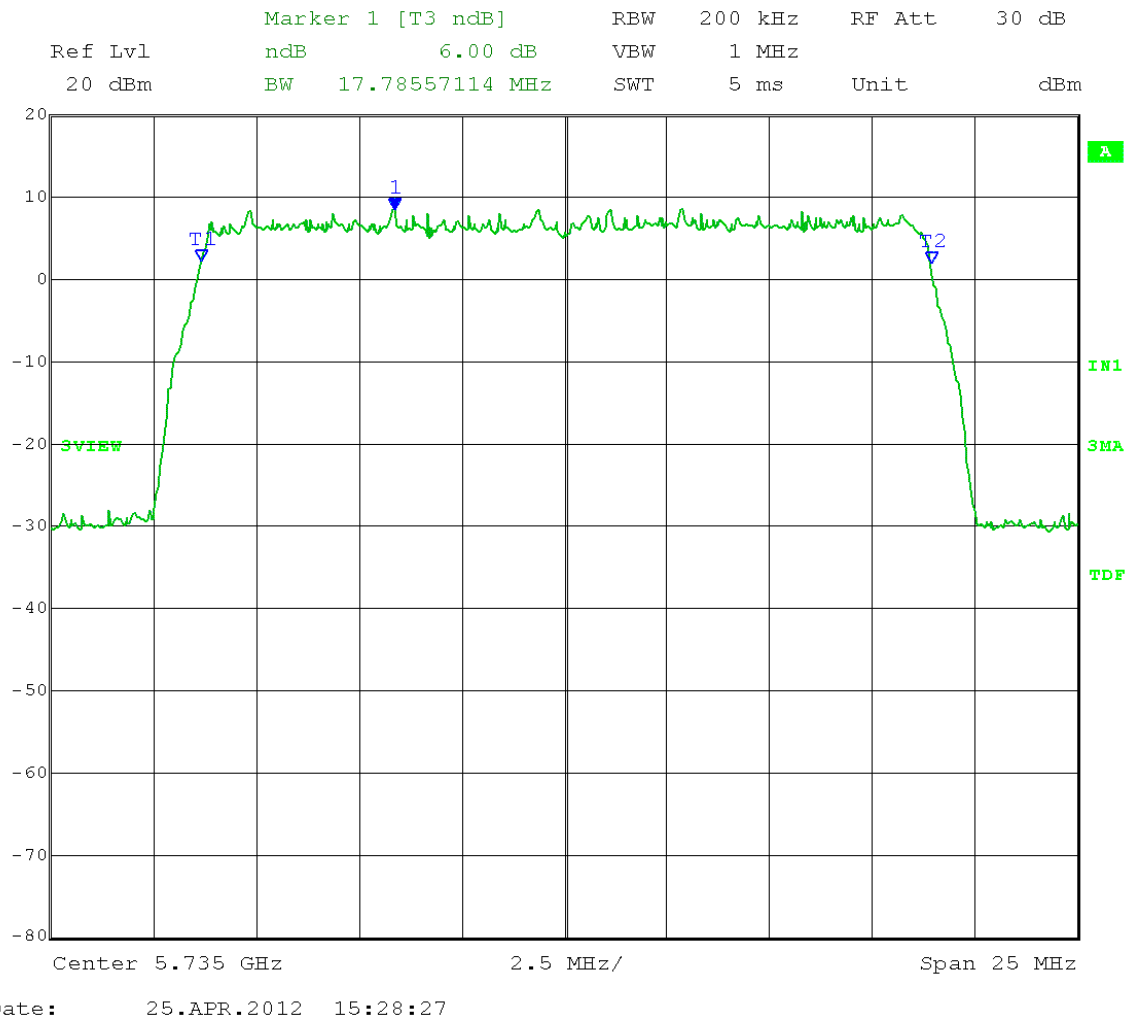
Date: 25.APR.2012 15:39:18

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

6 dB Bandwidth = 17.8 MHz



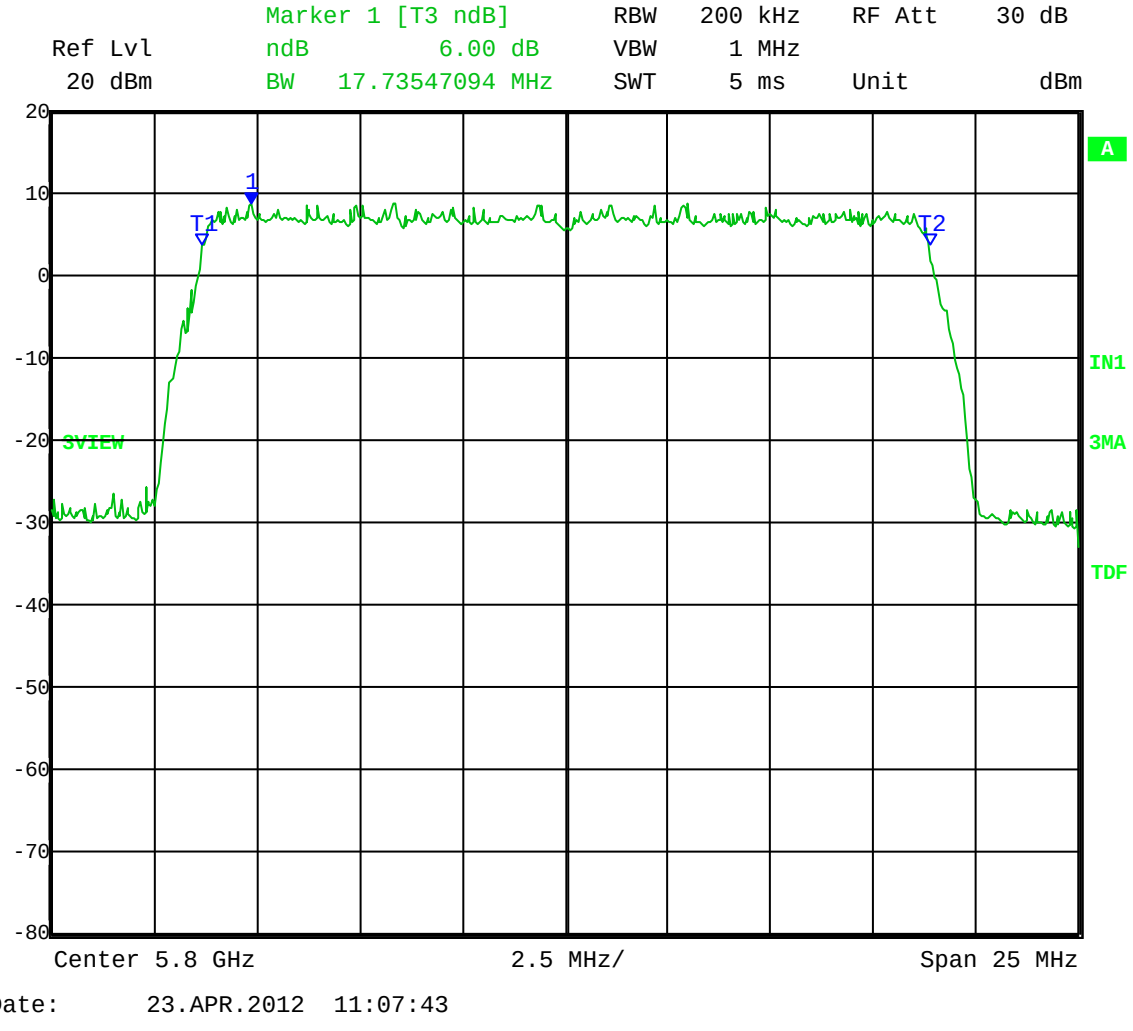
Date: 25.APR.2012 15:28:27

Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: 16QAM

6 dB Bandwidth = 17.735 MHz

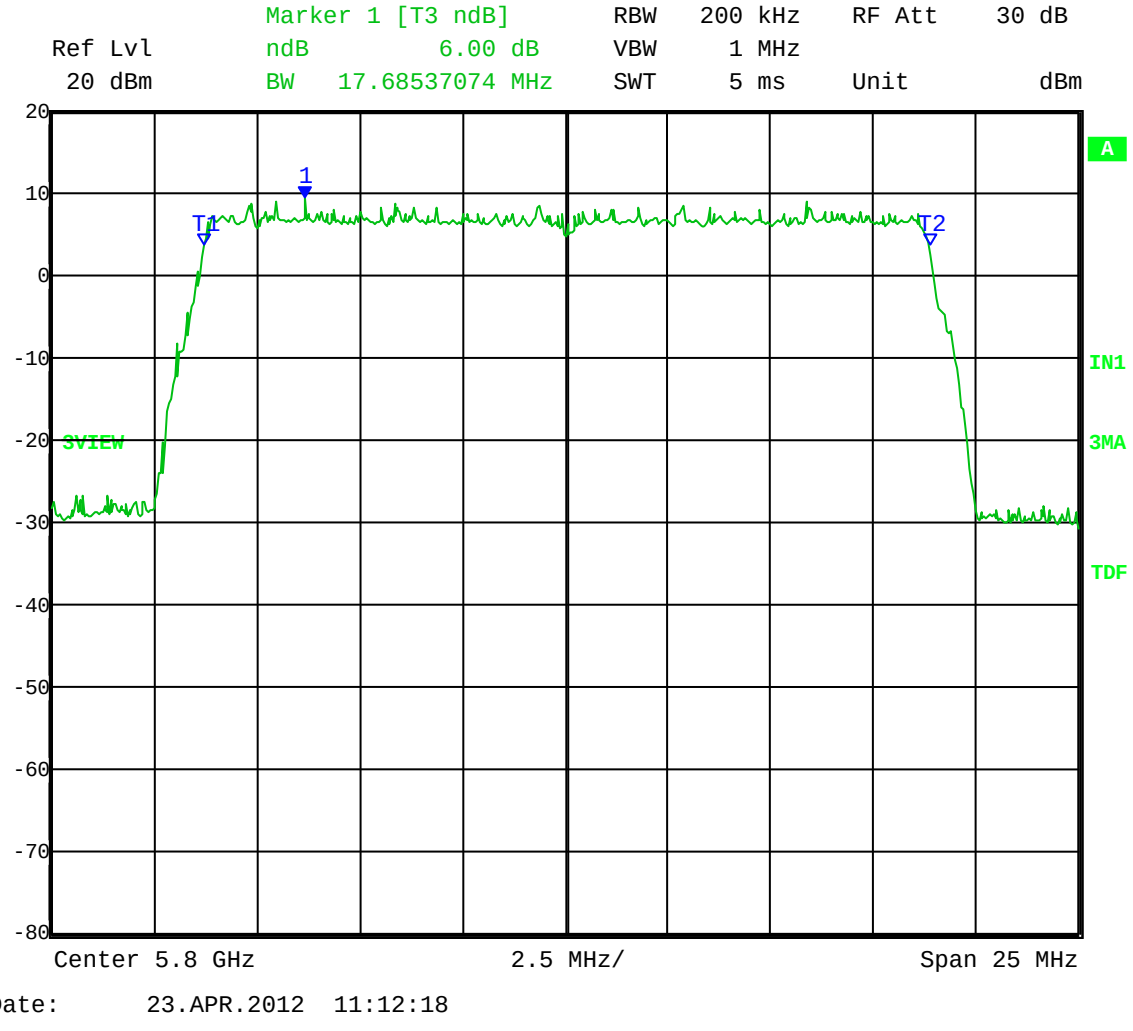


Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: 64QAM

6 dB Bandwidth = 17.685 MHz

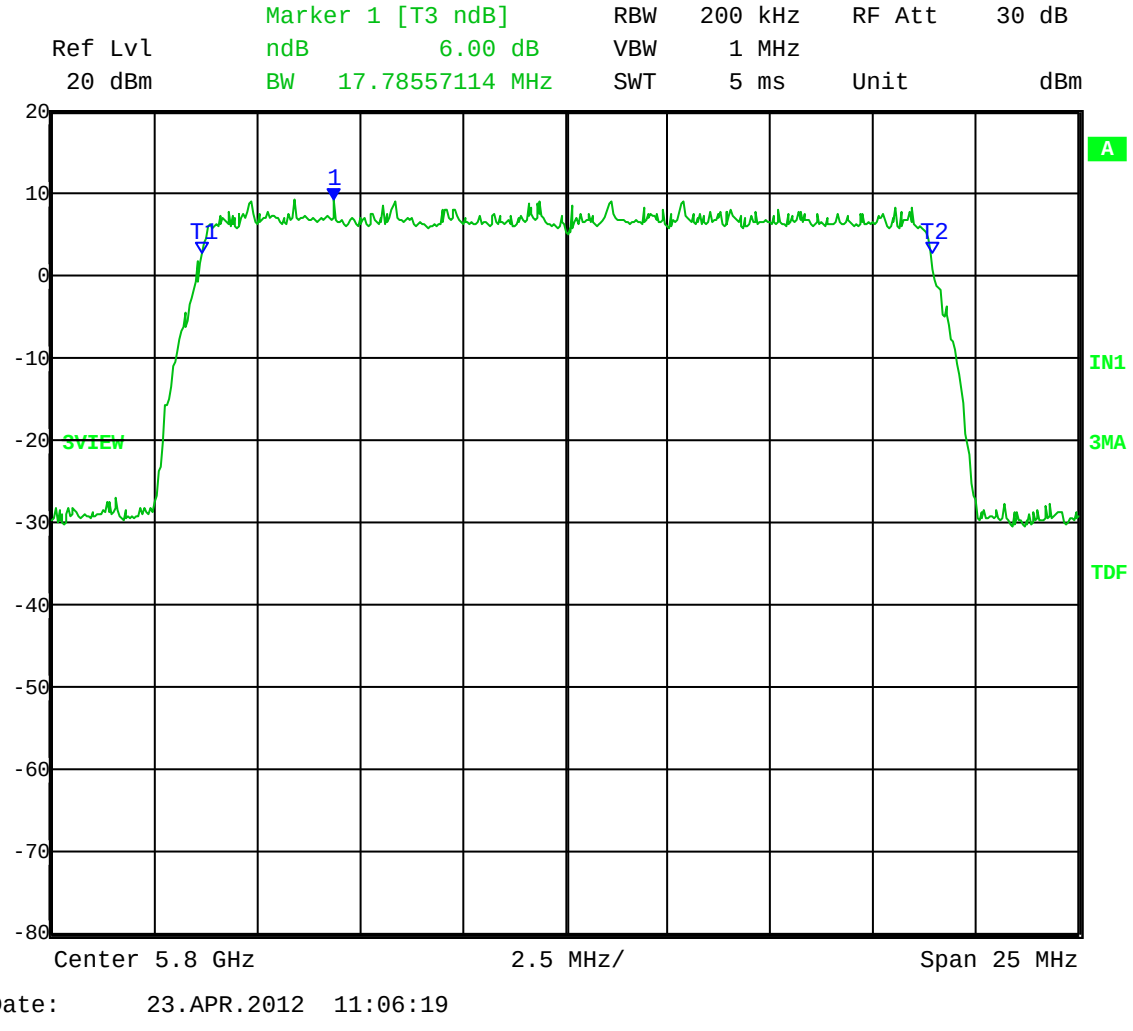


Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.8 GHz
Output power setting: 19; Modulation Type: QPSK

6 dB Bandwidth = 17.8 MHz

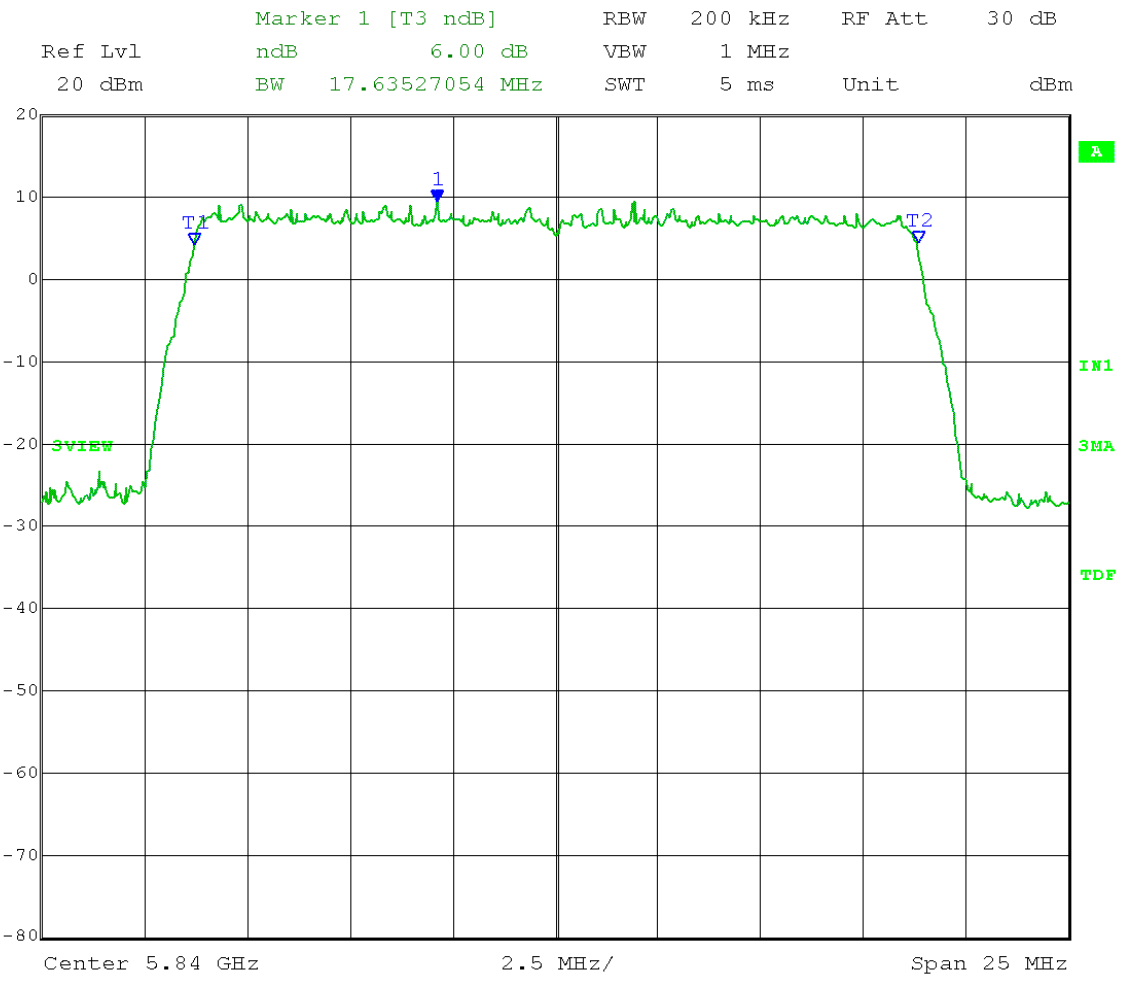


Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

6 dB Bandwidth = 17.64 MHz



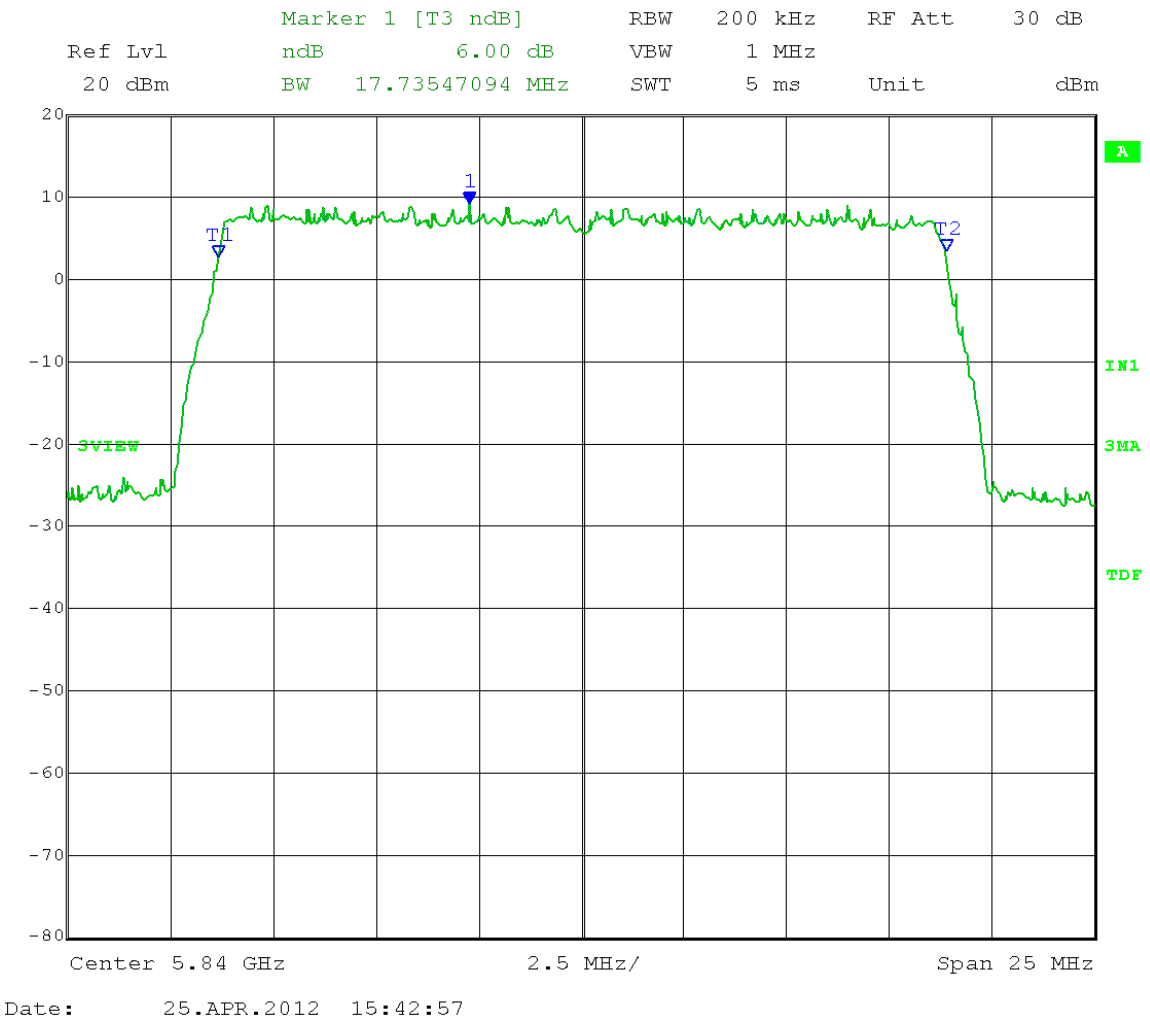
Date: 25.APR.2012 15:47:22

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

6 dB Bandwidth = 17.74 MHz



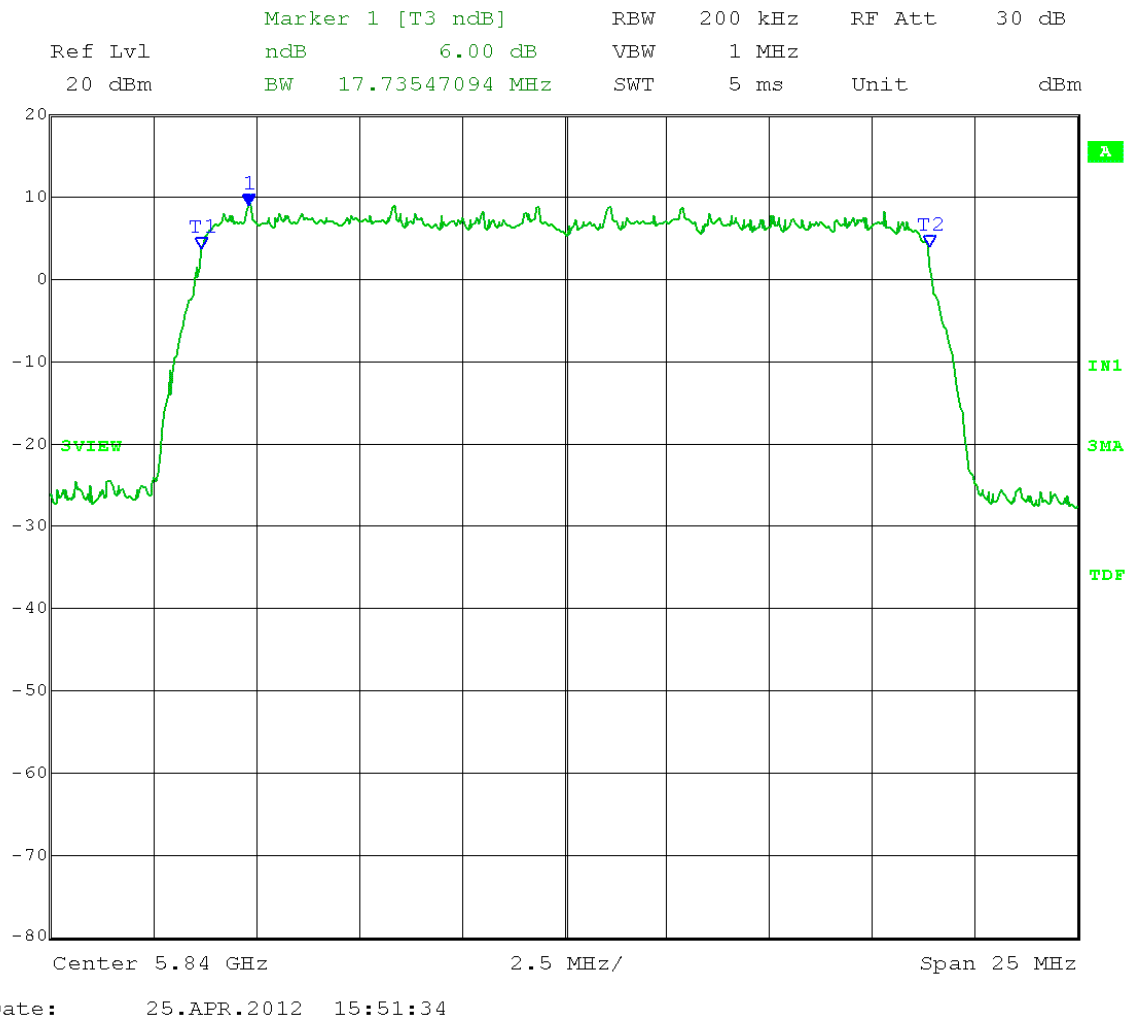
Date: 25.APR.2012 15:42:57

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Emission Bandwidth – 6 dB bandwidth – conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.1.1
Operator: Craig B

RBW = 1-5% of EBW; VBW ≥ 3 x RBW
Detector = Peak; Trace mode = max hold
Sweep = auto couple
Limit: [15.247(a)(2)]: 6 dB bandwidth shall be at least 500 kHz

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

6 dB Bandwidth = 17.74 MHz



Date: 25.APR.2012 15:51:34

166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

A3.0 Fundamental Emission Output Power - Conducted

Rule Section: Section 15.247(b)(3)
RSS-210 A8.4(4) – allowing Average Measurements &
RSS-210 A8.4(5) – Point-to-Point (unlimited EIRP)

Test Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 – *Guidance for Performing Gompliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247*

Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)

Description: Span = 5-30% greater than the EBW
RBW = 1 MHz;
Detector = power average (RMS)
VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
Trace mode: single sweep
Use analyzer band power function with band limits set to EBW band edges.

Measurements were taken for QPSK, 16-QAM, and 64-QAM modulation types, and at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously (power setting 19 dBm) with 98% duty cycle.

Limit: 1 Watt (30 dBm)

Results: Passed

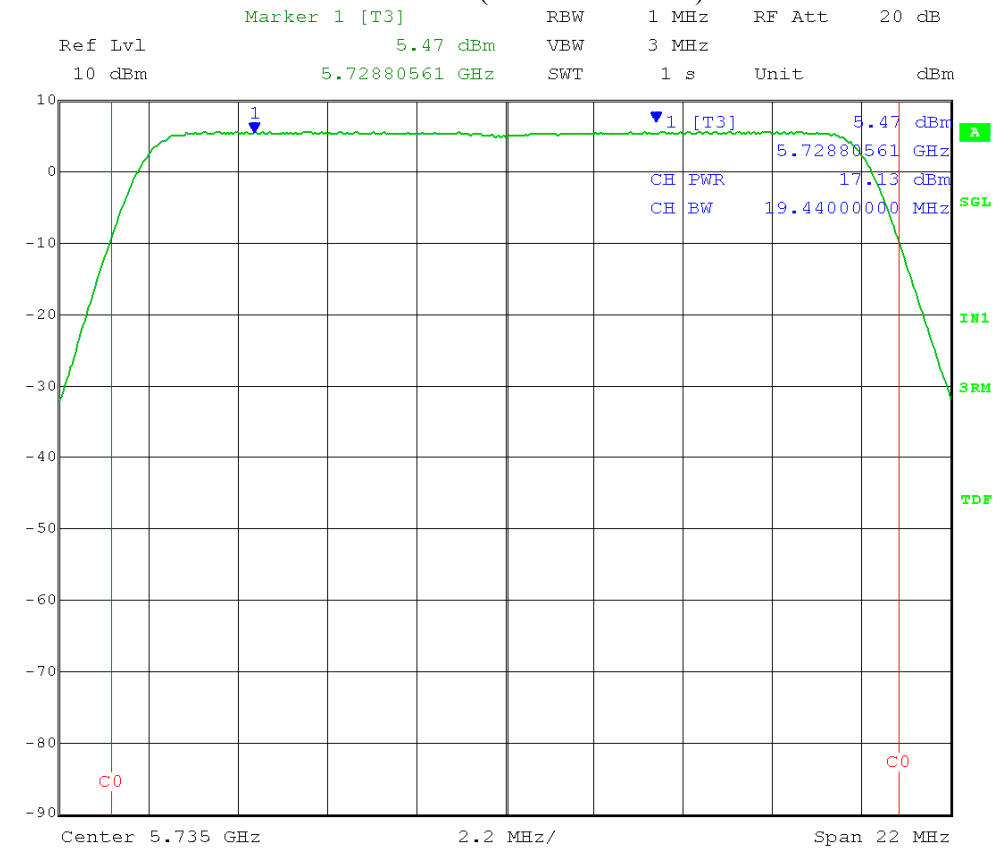
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.13 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.13 dBm = **130 mW**



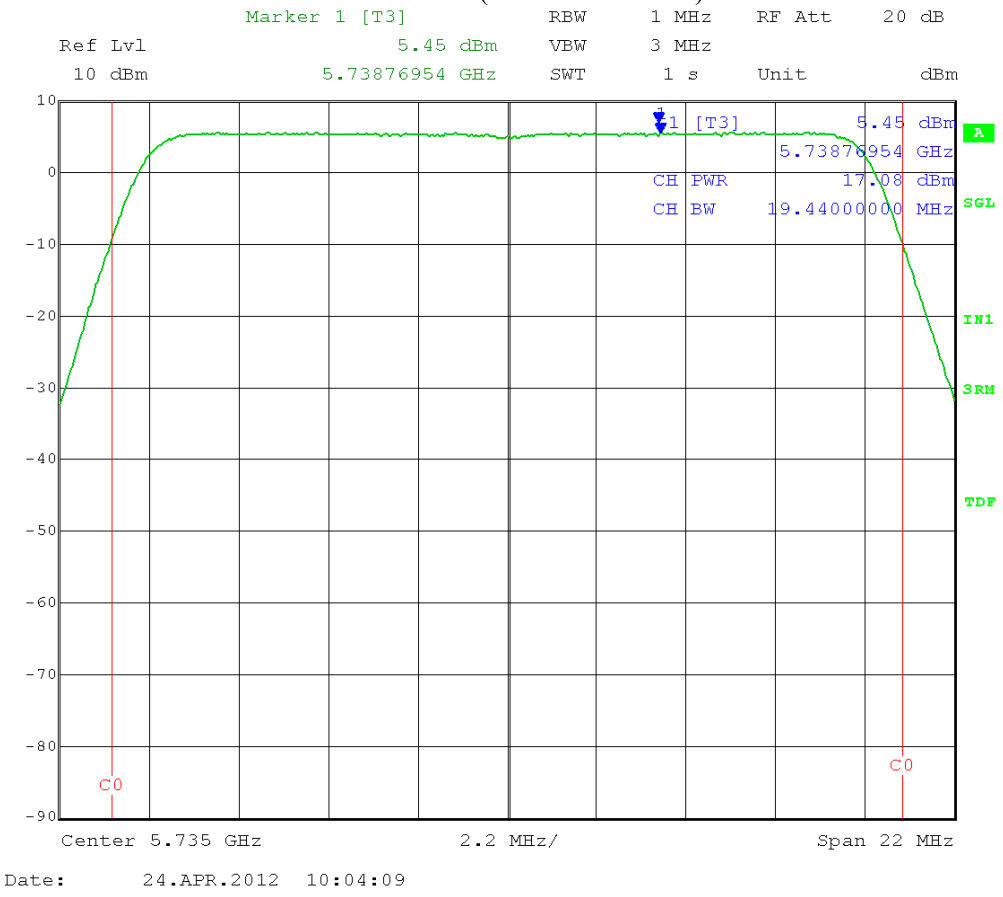
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.08 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.08 dBm = **128 mW**



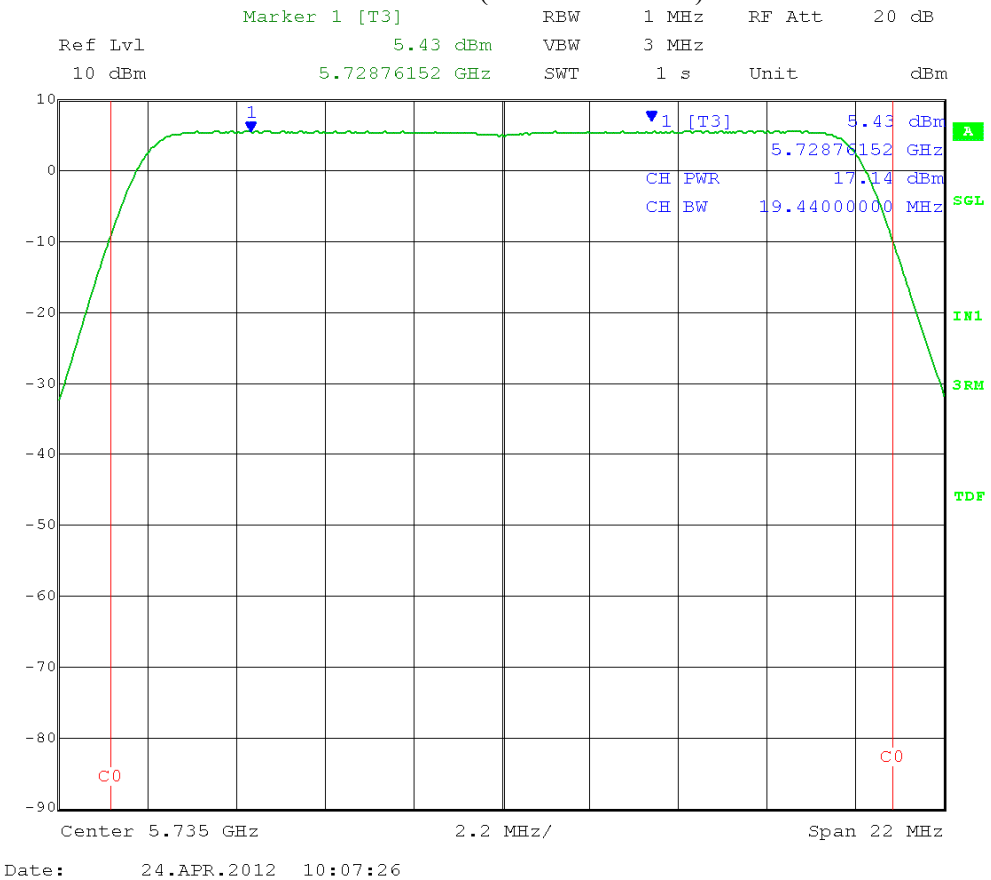
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.14 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.14 dBm = **130 mW**



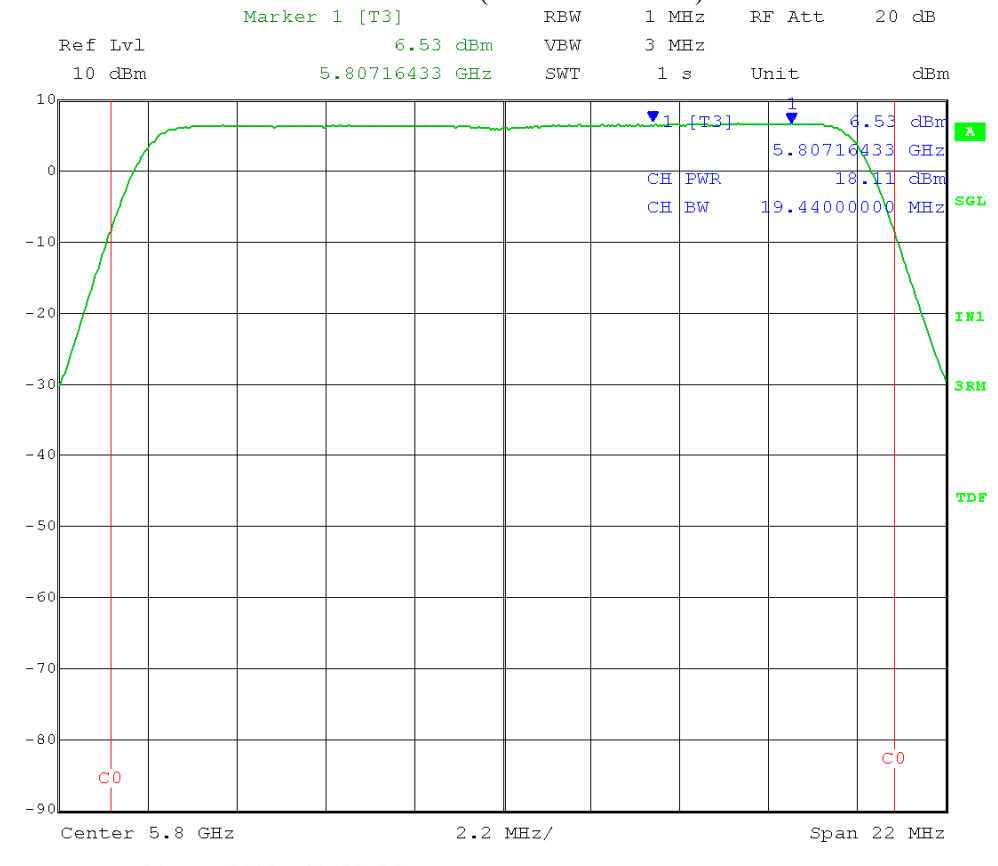
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.11 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.11 dBm = **163 mW**



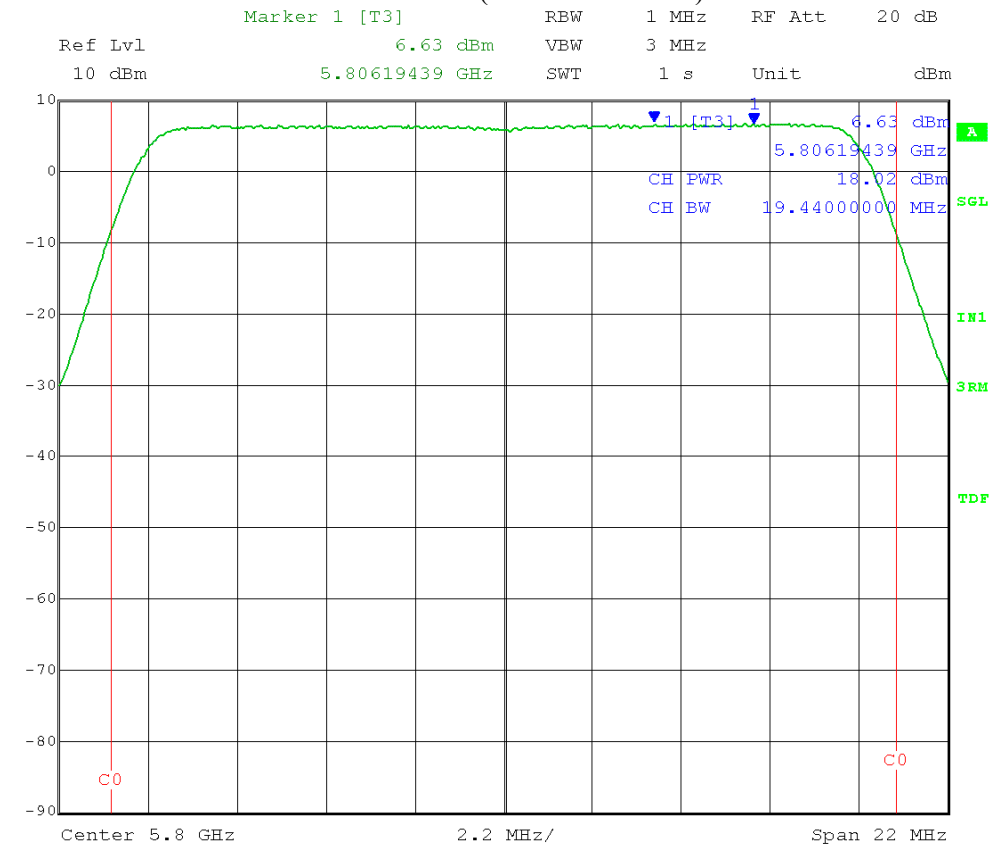
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.02 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.02 dBm = **159 mW**



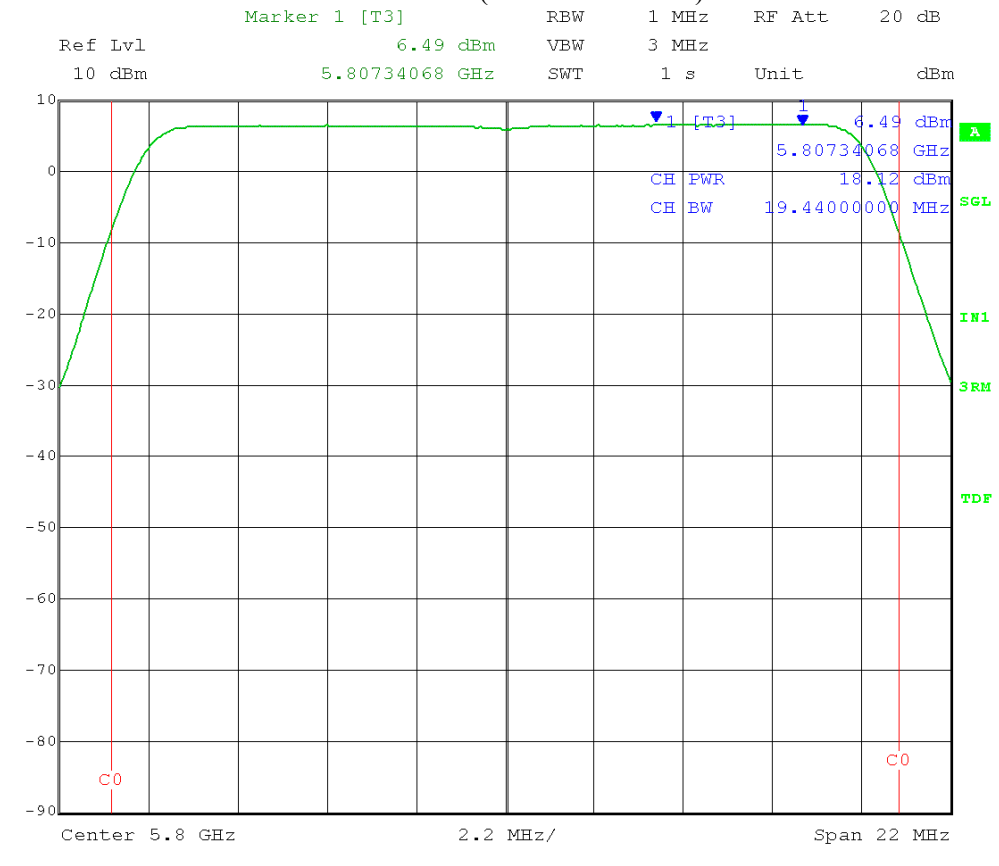
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.12 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.12 dBm = **163 mW**



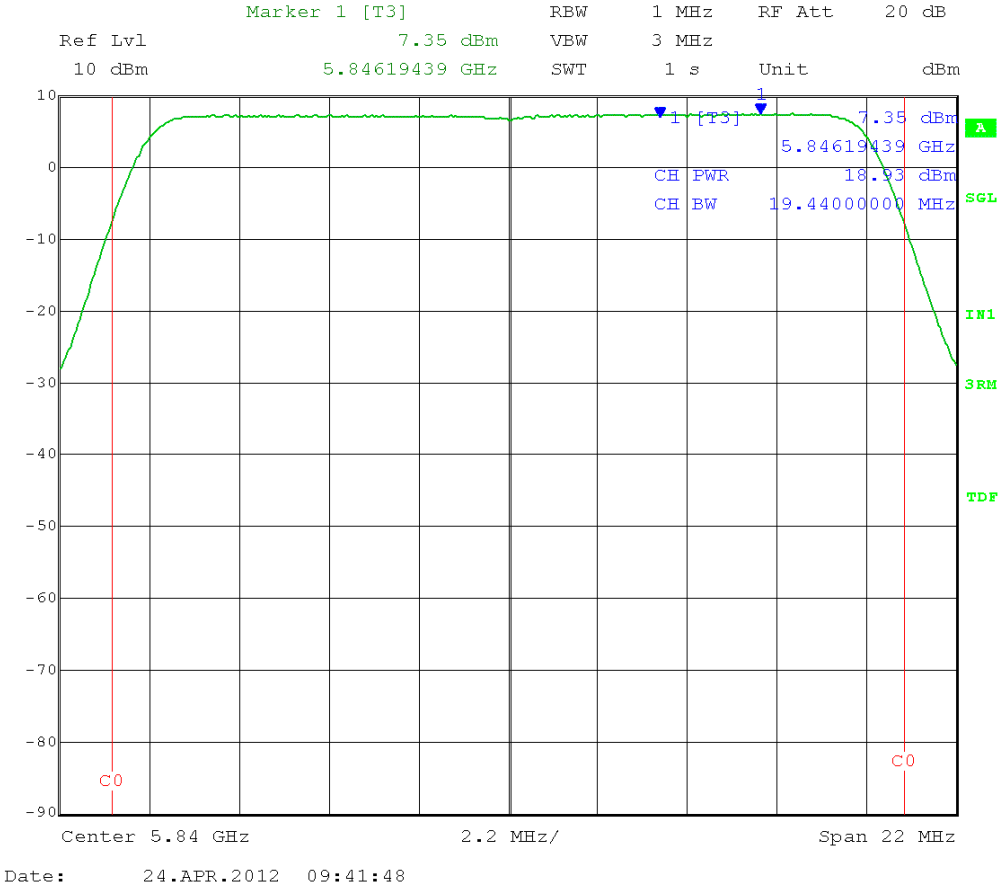
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.93 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.93 dBm = **196 mW**



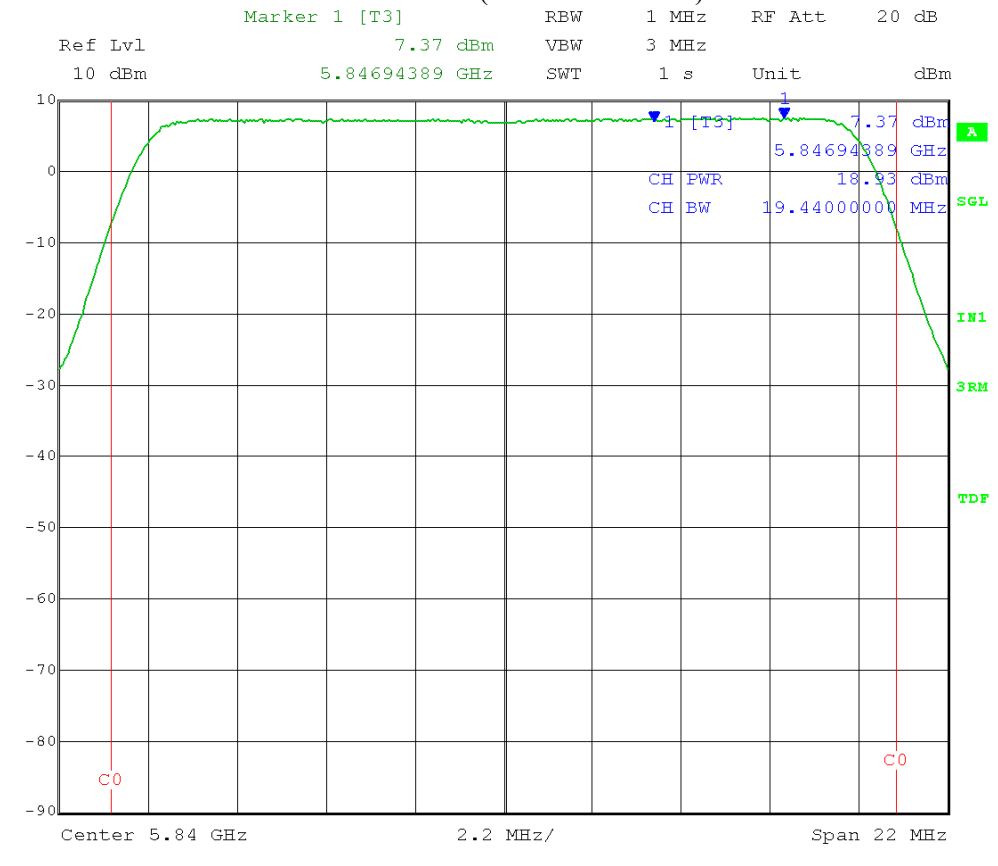
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.93 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.93 dBm = **196 mW**



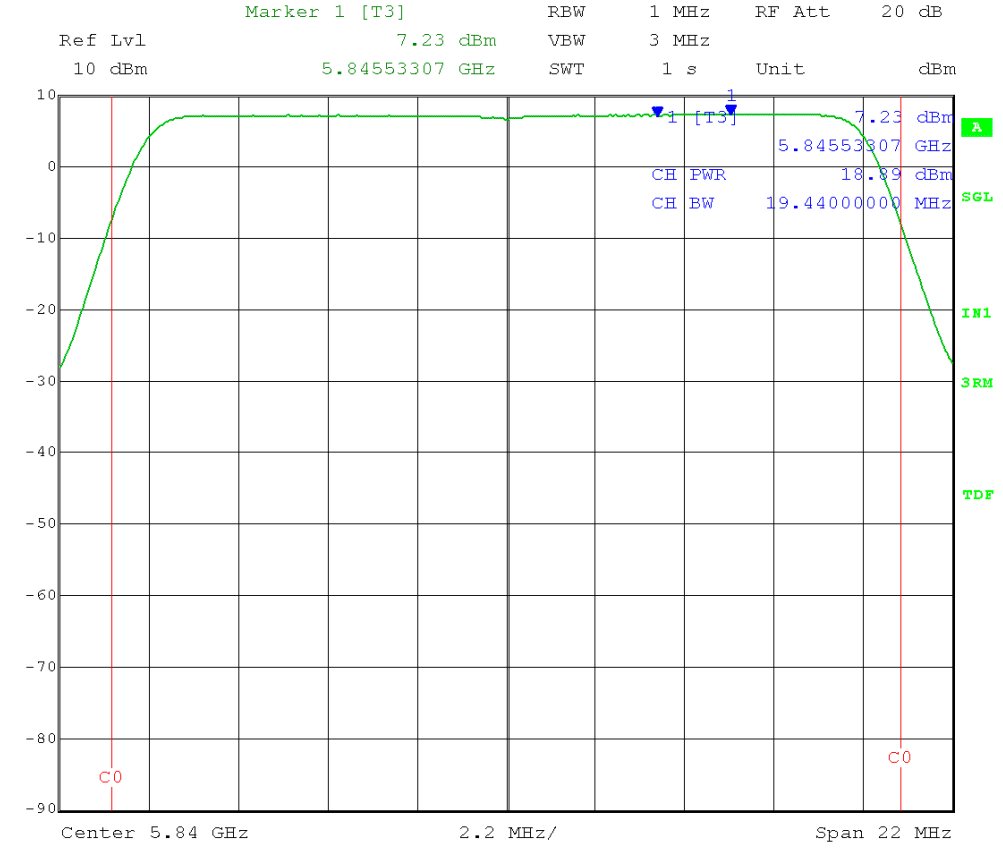
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.89 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.89 dBm = **195 mW**



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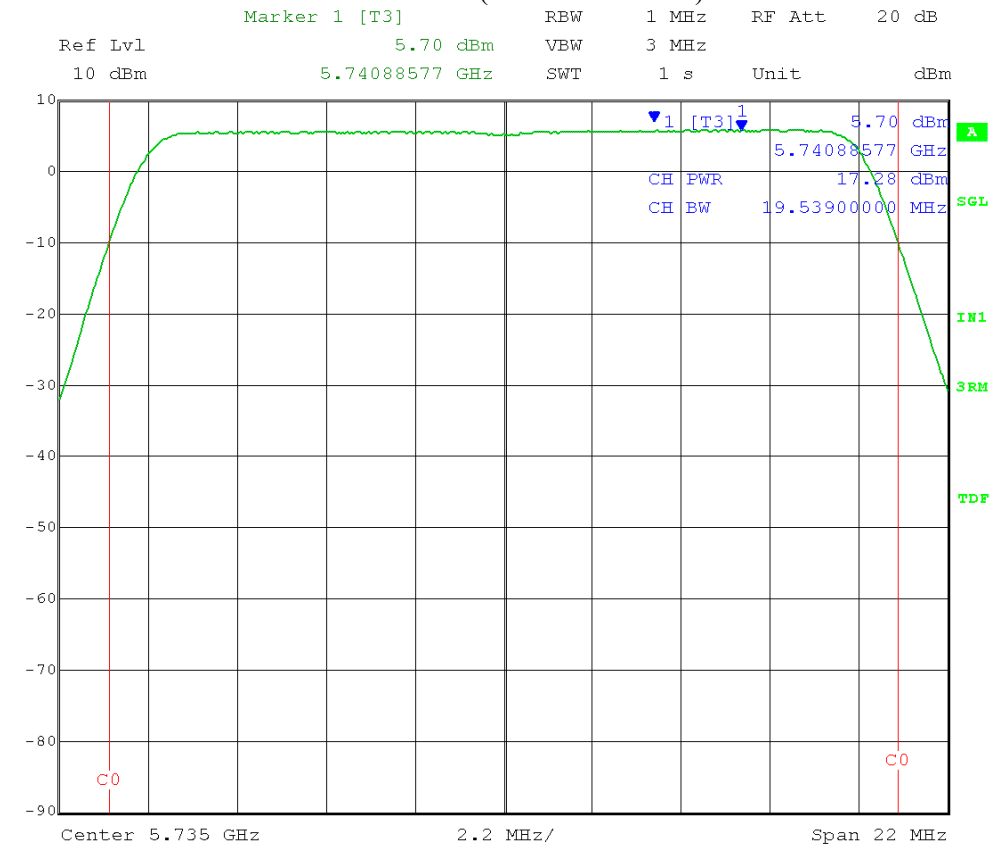
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM
26 dB EBW: 19.539 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.28 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.28 dBm = **134 mW**



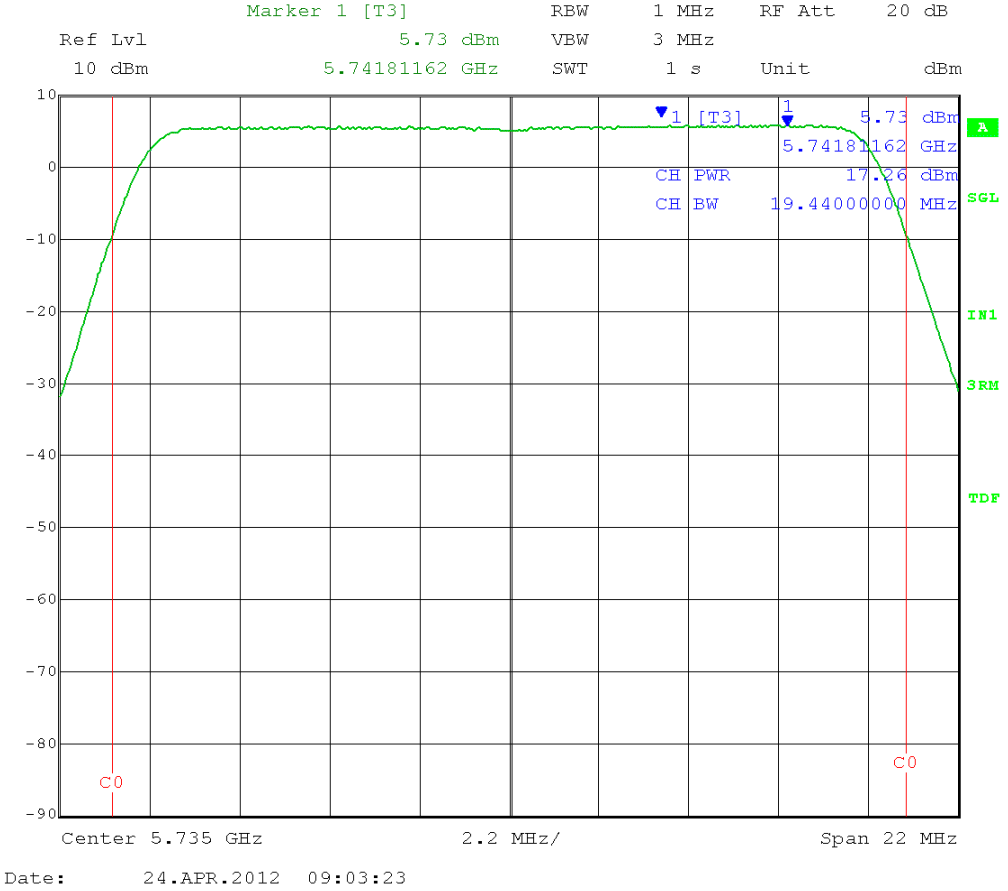
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.26 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.26 dBm = **134 mW**



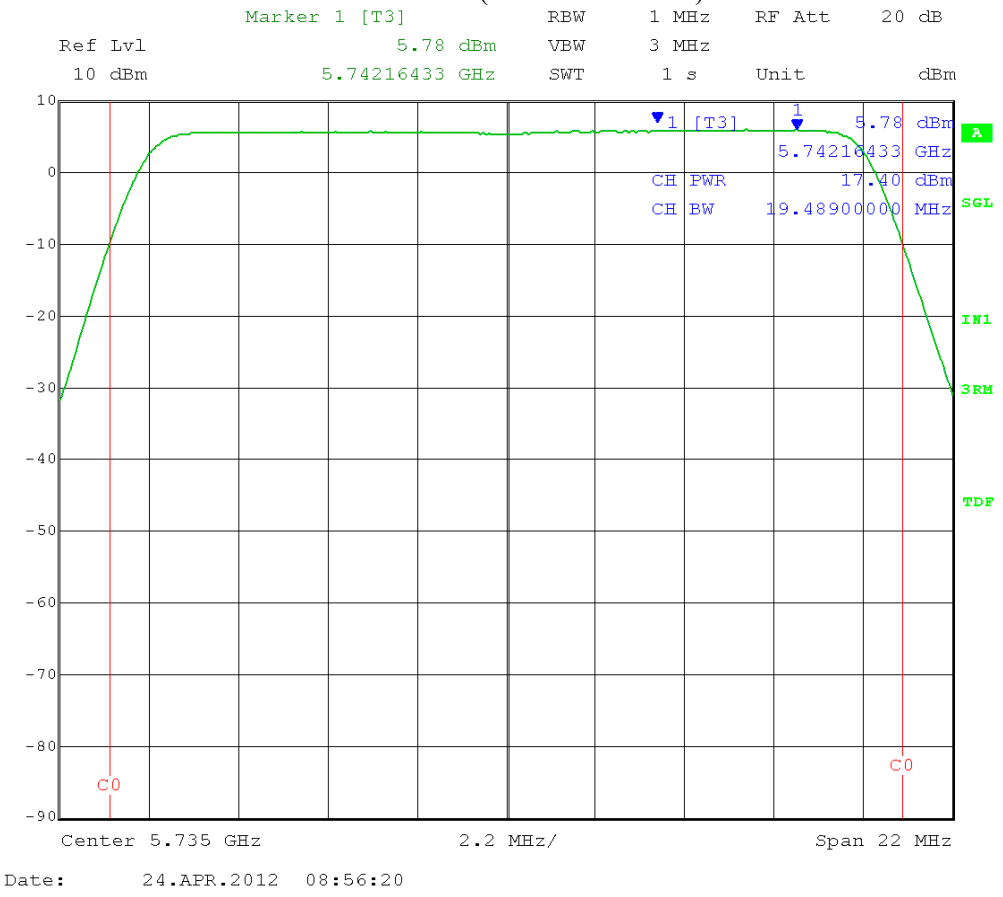
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK
26 dB EBW: 19.489 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.40 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.40 dBm = **138 mW**



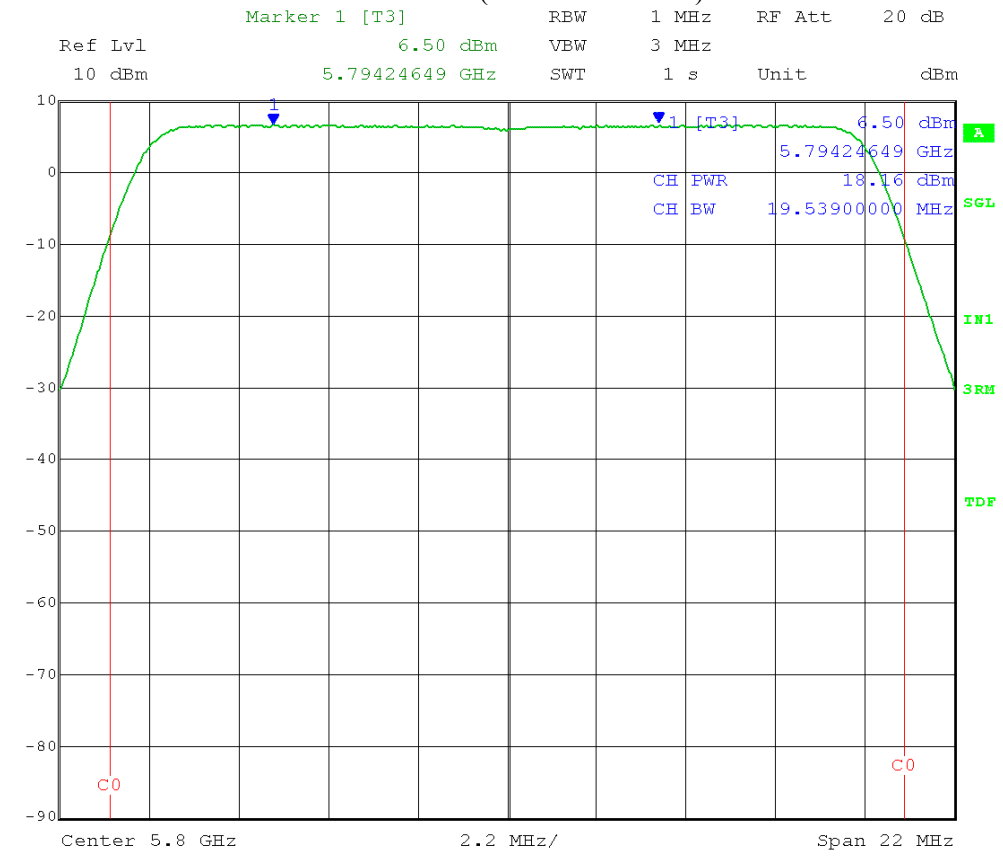
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM
26 dB EBW: 19.539 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.16 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.16 dBm = **164 mW**



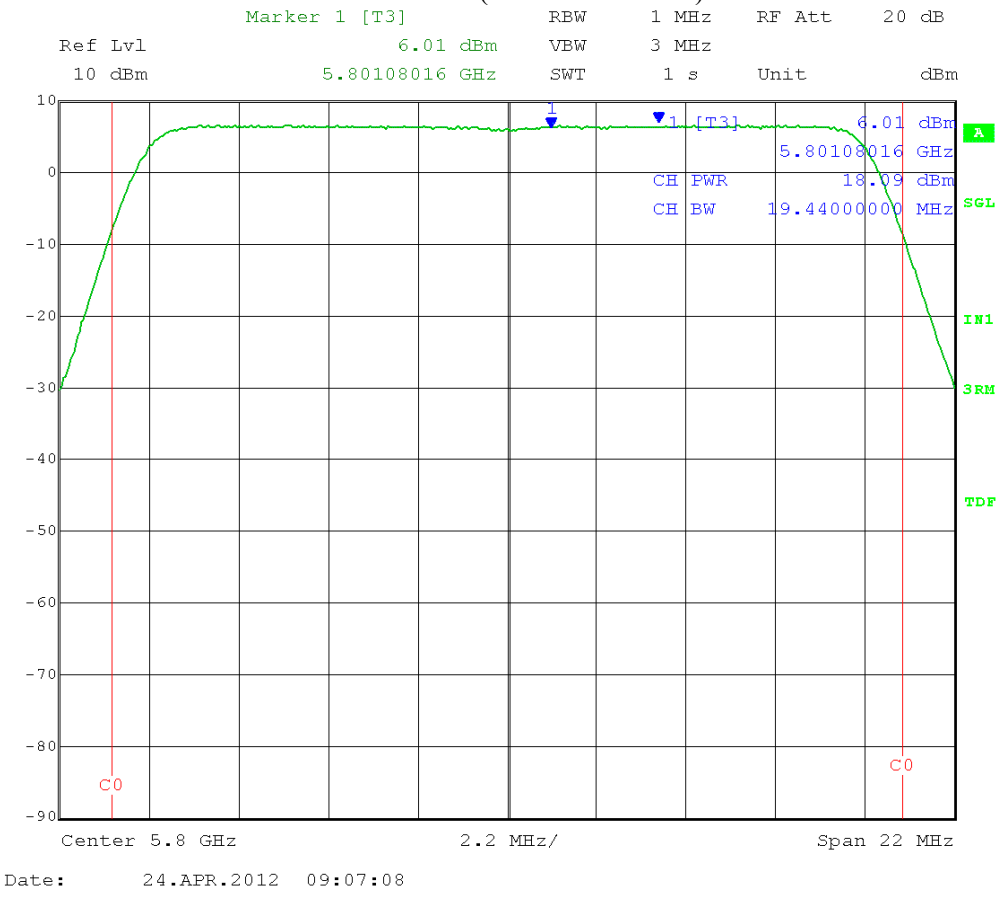
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.09 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.09 dBm = **162 mW**



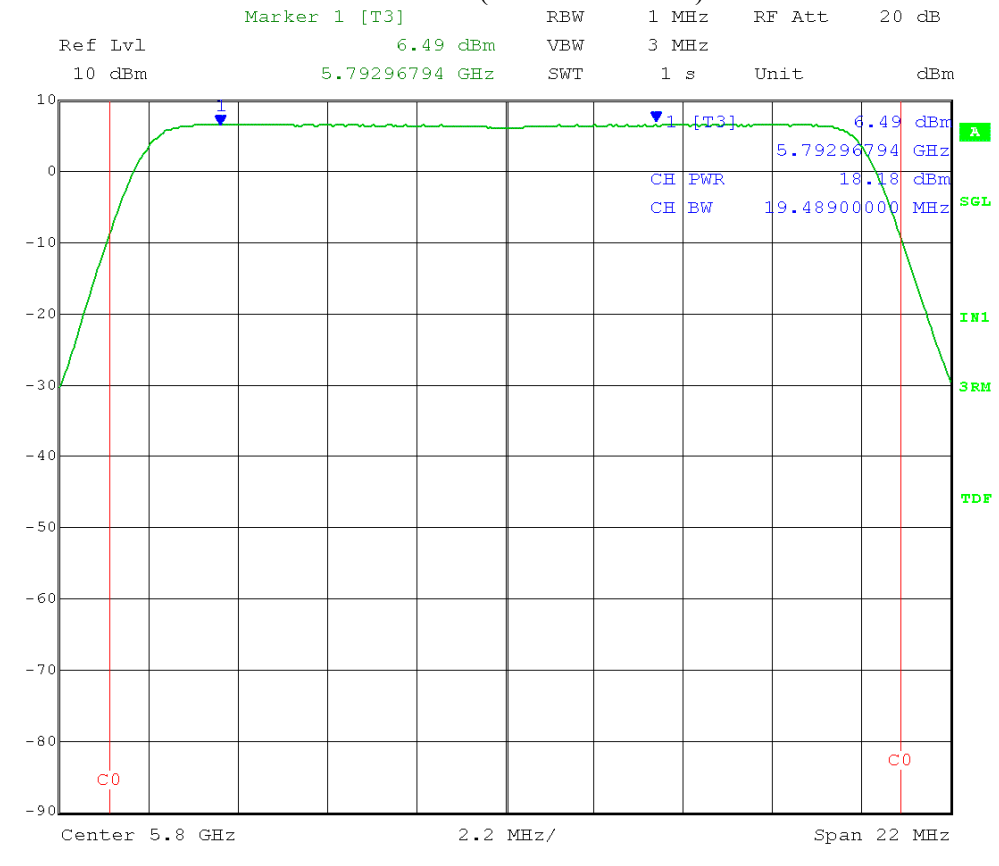
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK
26 dB EBW: 19.489 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 18.18 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 22.18 dBm = **165 mW**



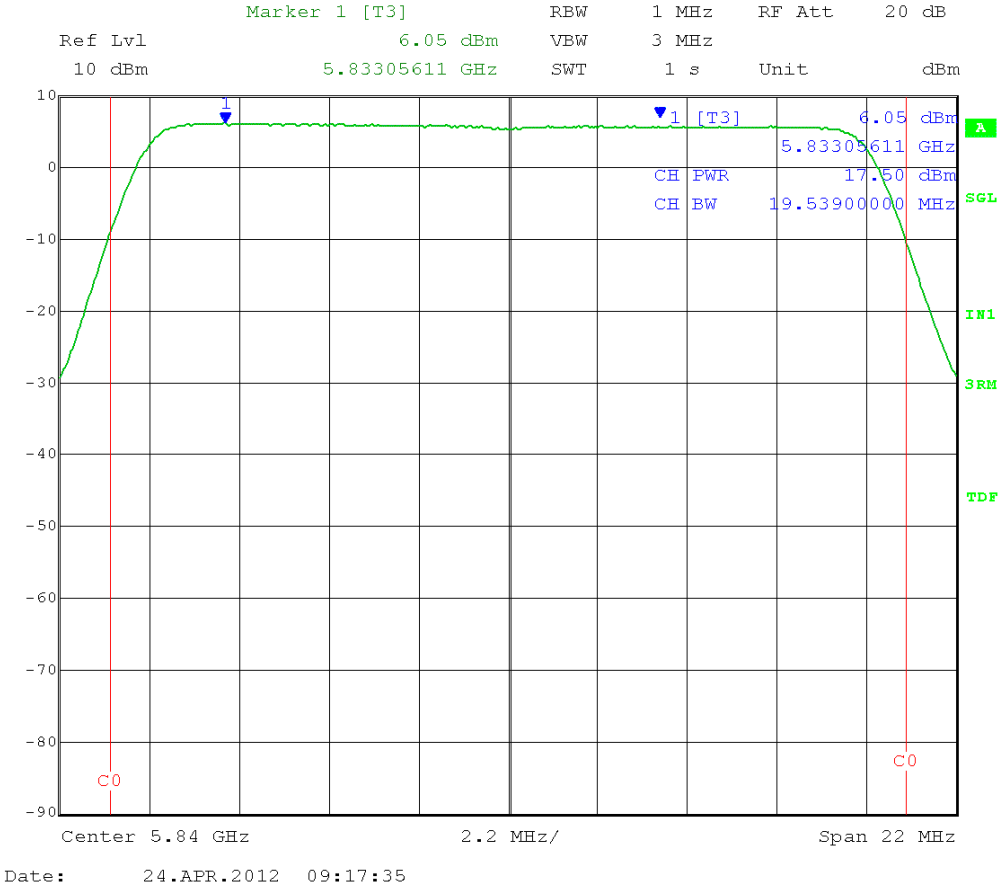
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM
26 dB EBW: 19.539 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.50 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.50 dBm = **141 mW**



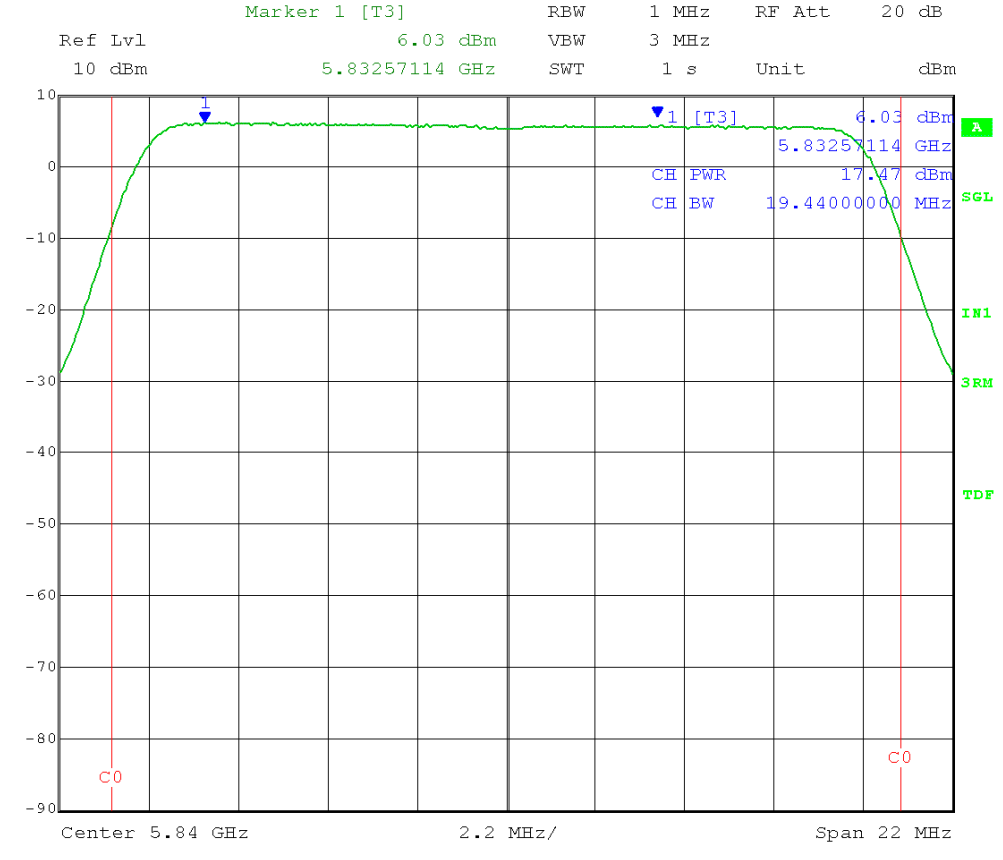
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM
26 dB EBW: 19.44 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.47 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.47 dBm = **140 mW**



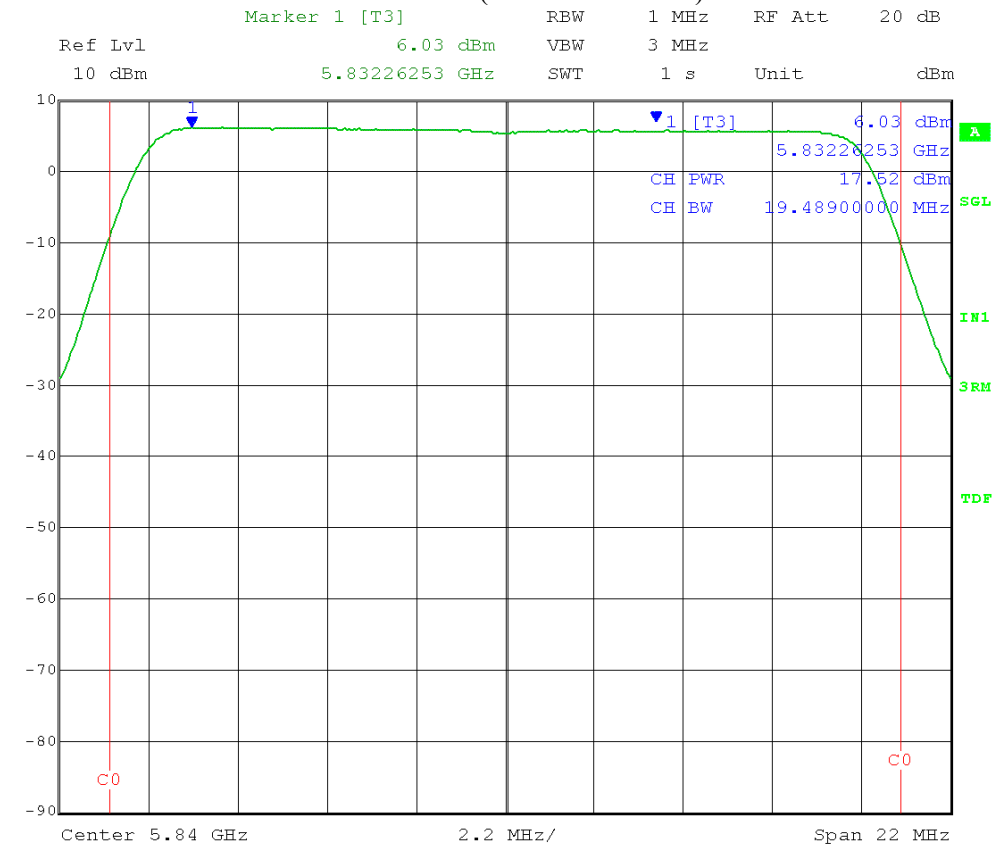
Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Fundamental Emission Output Power – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.2.2.1 – AVG1 (power averaging over the EBW with slow sweep speed)
Operator: Craig B

Span = 5-30% greater than the EBW; RBW = 1 MHz
Detector = power average (RMS); VBW ≥ 3 MHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep
Use band power function with band limits set to EBW band edges.

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK
26 dB EBW: 19.489 MHz

Limit: [15.247(b)(3)]: 1 Watt (30 dBm)
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Fundamental Emission AVERAGE Output Power = 17.52 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 21.52 dBm = **142 mW**



166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

A4.0 Maximum Power Spectral Density – Conducted

Rule Section: Section 15.247(e)
RSS-210 A8.2(b)

Test Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 – *Guidance for Performing Gompliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247*

Section 5.3.2 – AVGPSD (Average output power procedure was used to measure the fundamental emission power)

Description: Span = 5-30% greater than the EBW
RBW = 100 kHz
VBW ≥ 300 kHz
Detector = power average (RMS)
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

Measurements were taken for QPSK, 16-QAM, and 64-QAM modulation types, and at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously (power setting 19 dBm) with 98% duty cycle.

Limit: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.

Results: Passed

Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

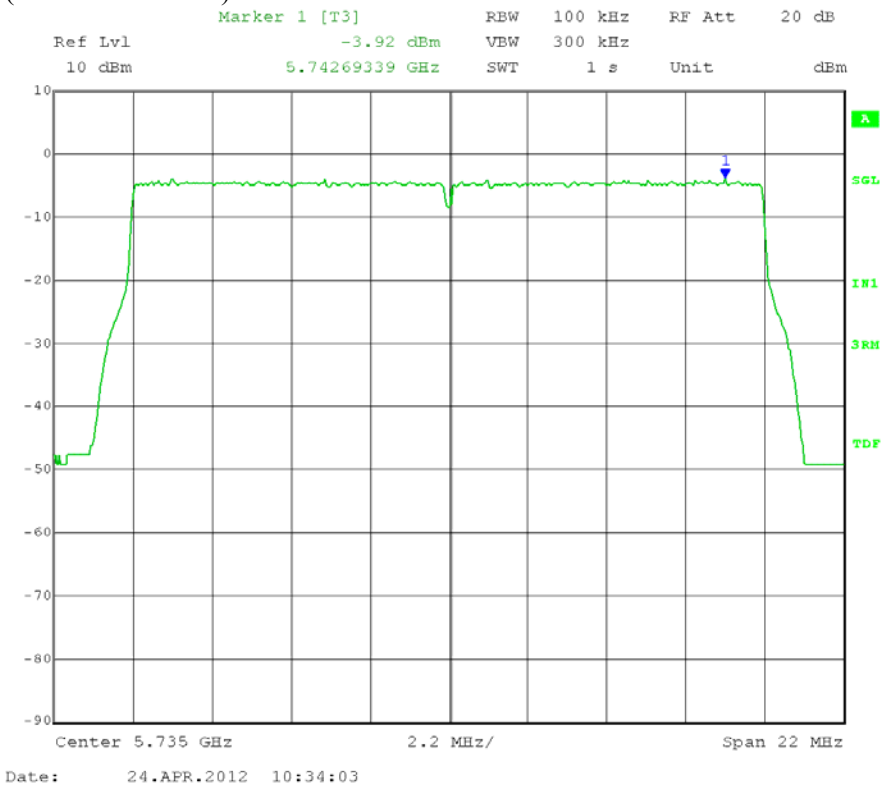
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.92 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.080 dBm – 15.2 dB = -15.12 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

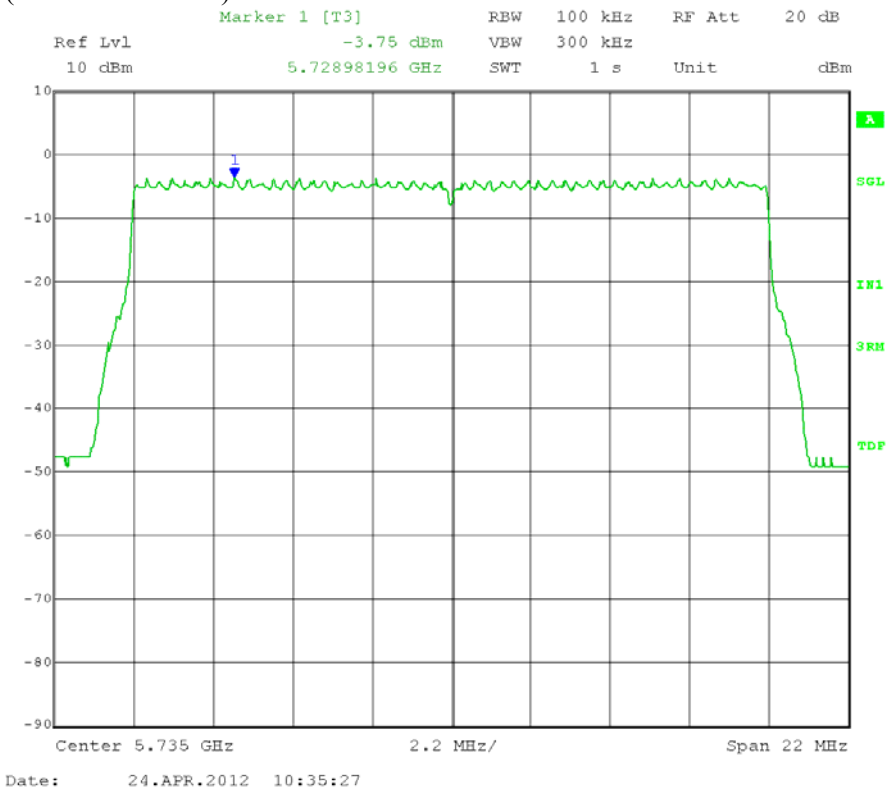
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.75 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.250 dBm – 15.2 dB = -14.95 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

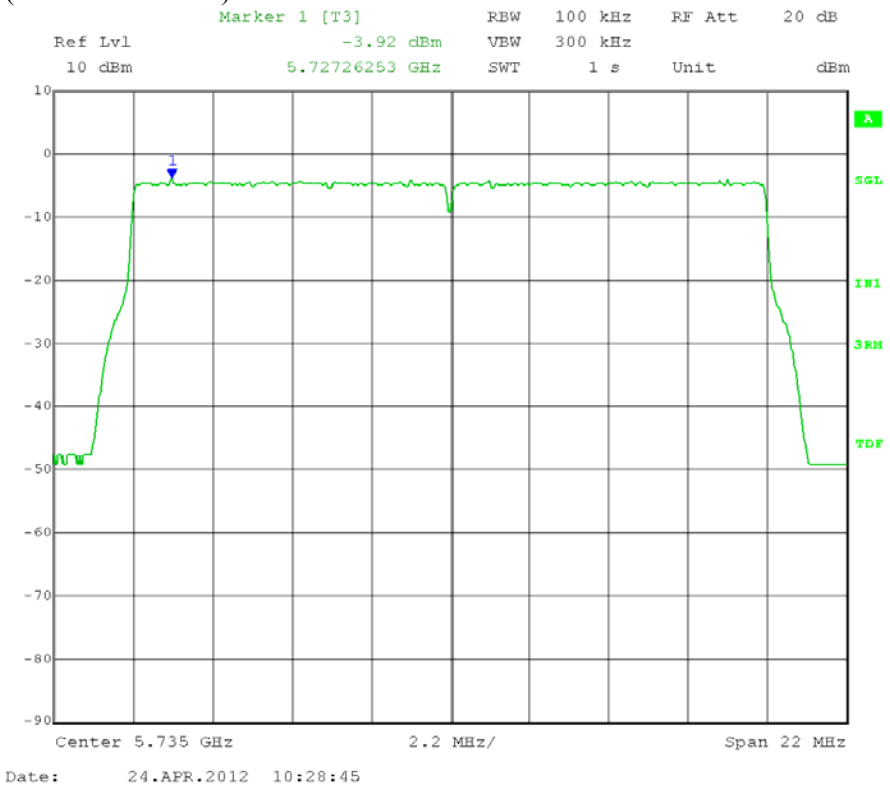
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.92 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.080 dBm – 15.2 dB = -15.12 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

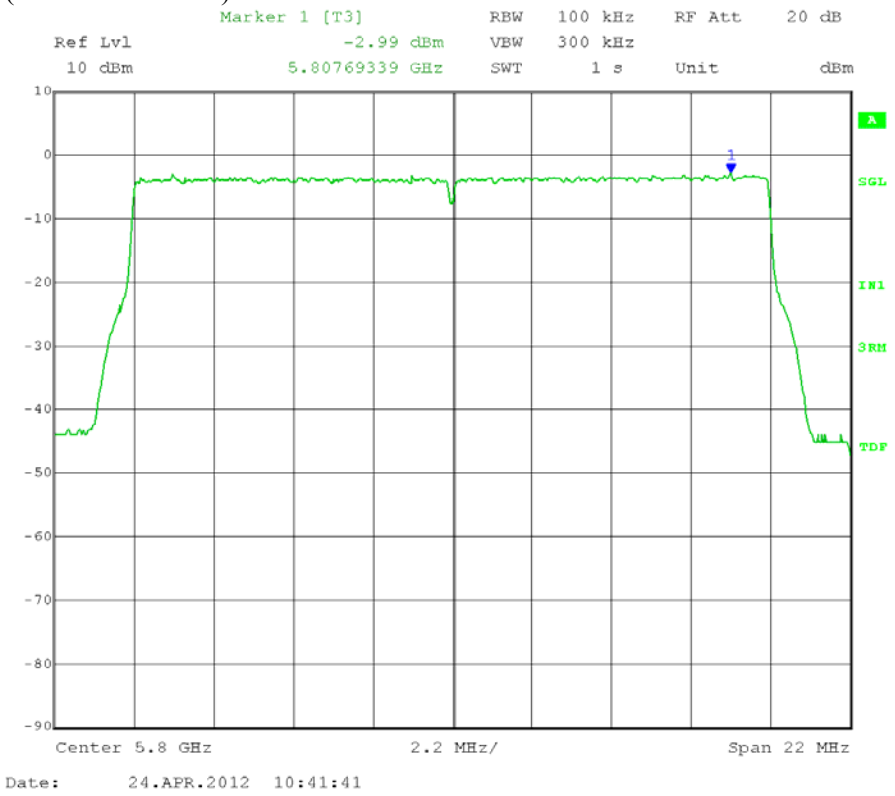
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -2.99 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 1.01 dBm – 15.2 dB = -14.19 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

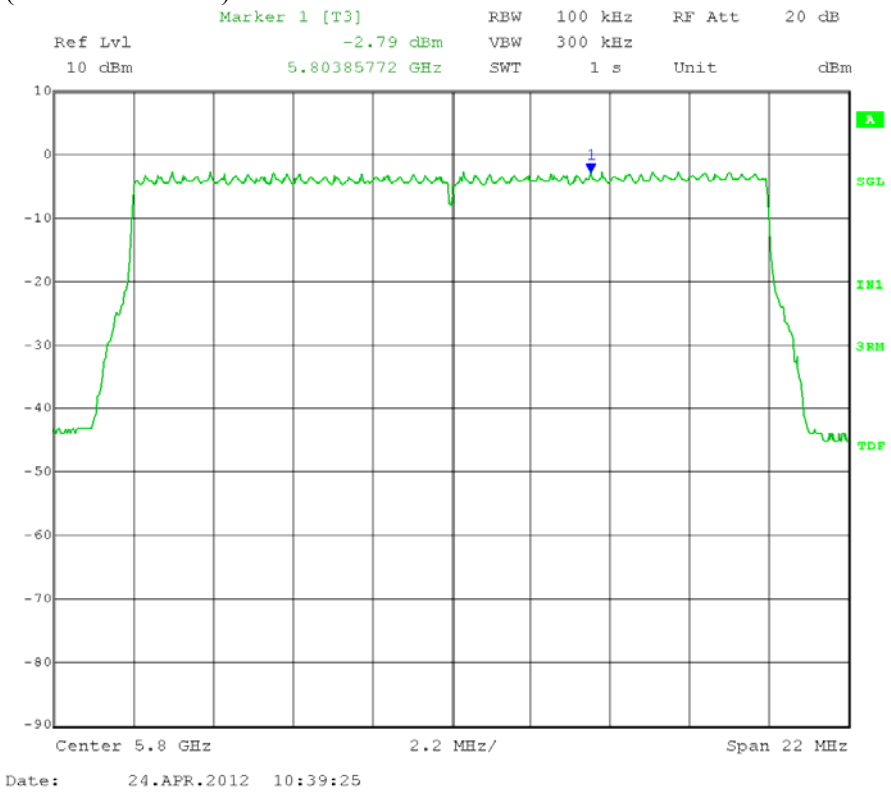
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -2.79 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 1.21 dBm – 15.2 dB = -13.99 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

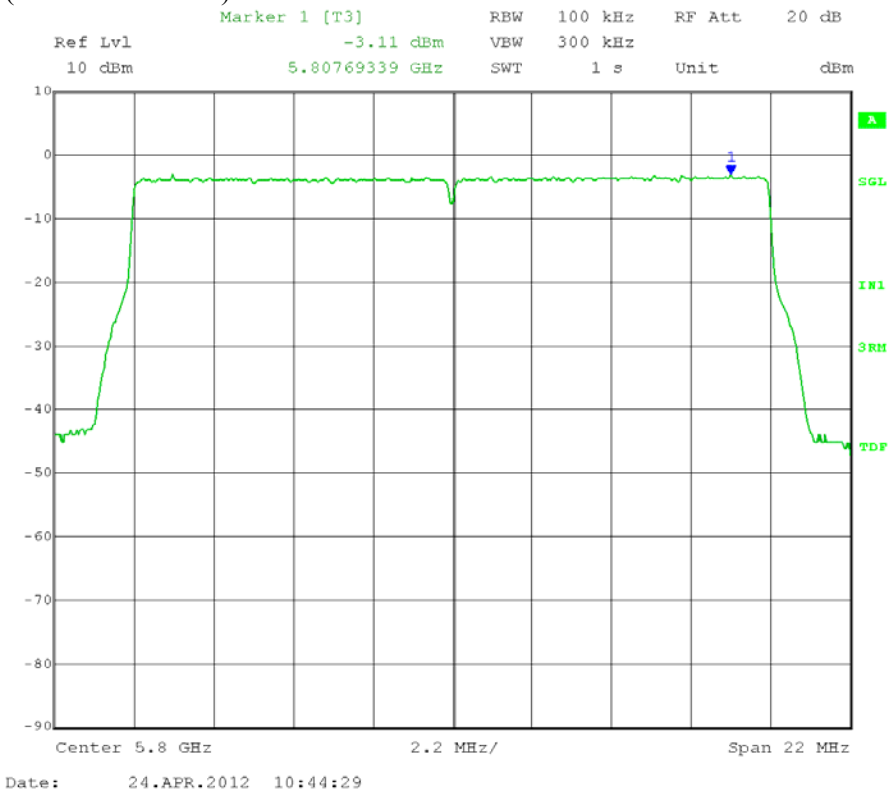
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.11 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.890 dBm – 15.2 dB = -14.31 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

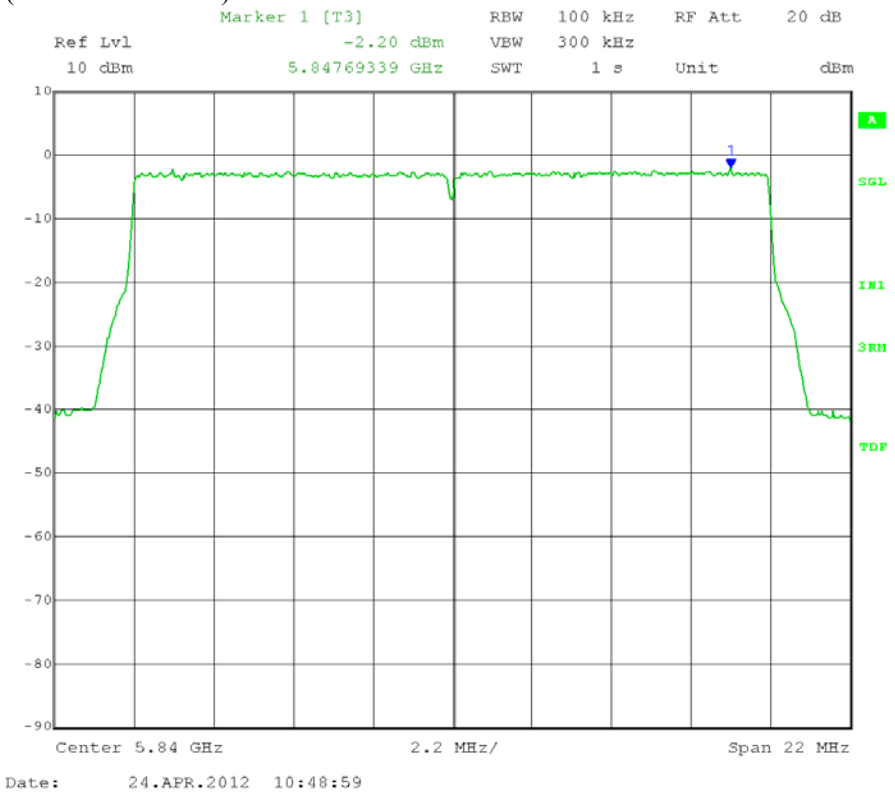
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -2.20 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 1.80 dBm – 15.2 dB = -13.40 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

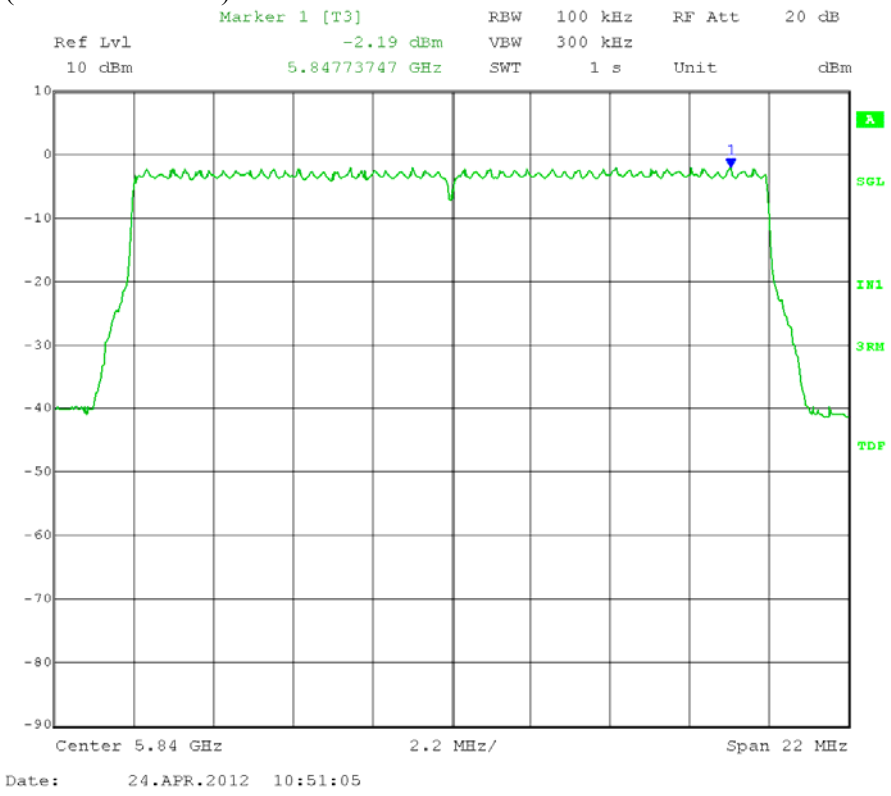
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -2.19 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 1.81 dBm – 15.2 dB = -13.39 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

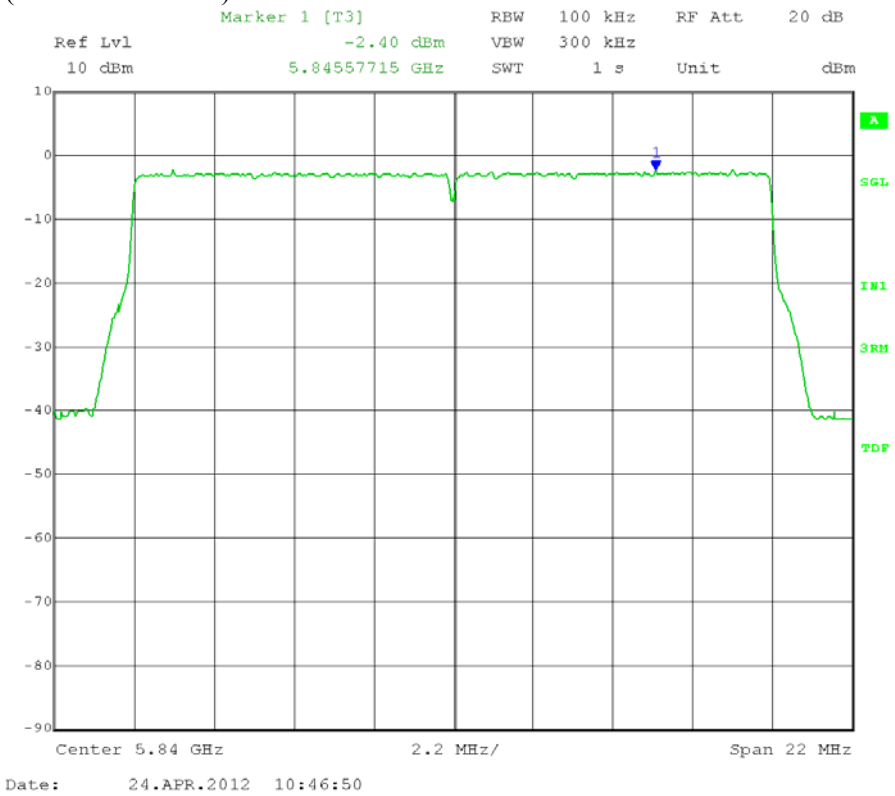
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -2.40 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 1.60 dBm – 15.2 dB = -13.60 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

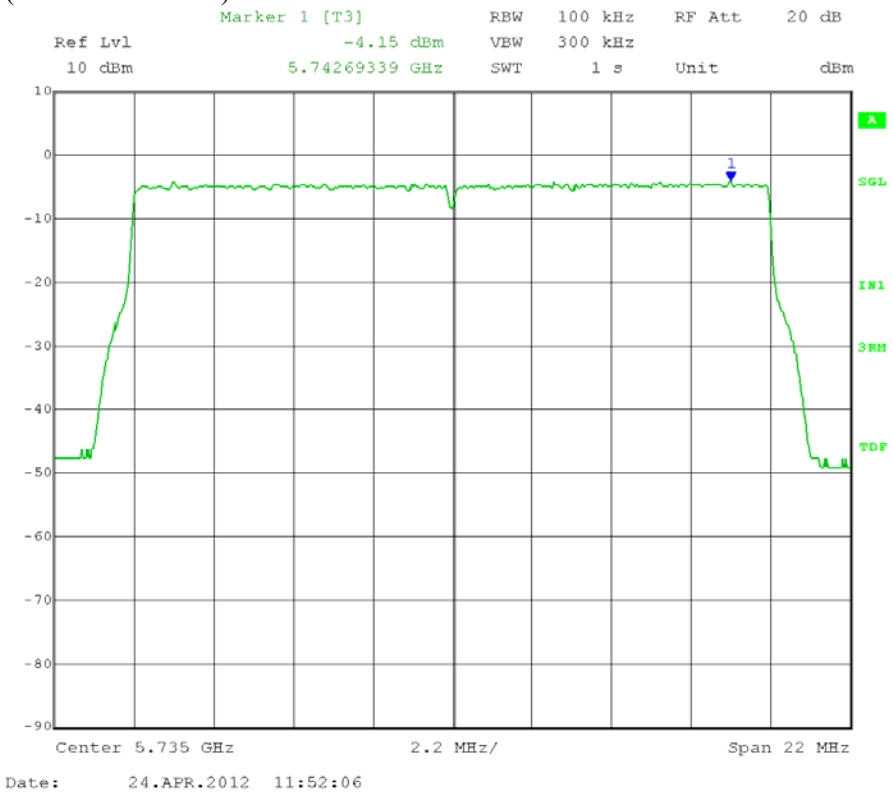
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -4.15 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = -0.150 dBm – 15.2 dB = -15.35 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

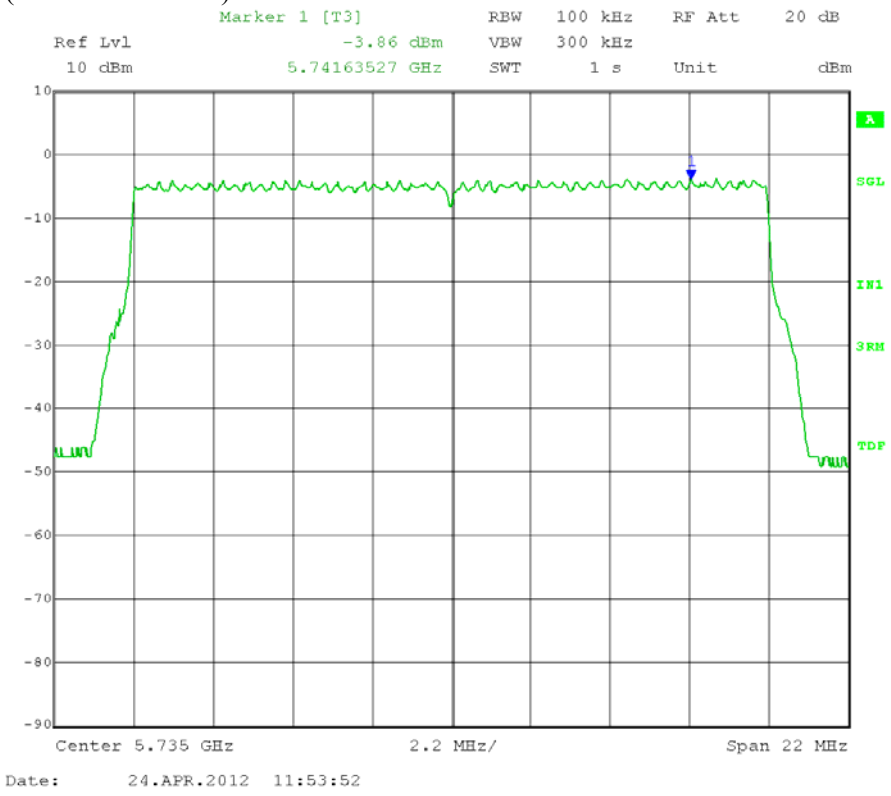
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.86 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.140 dBm – 15.2 dB = -15.06 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

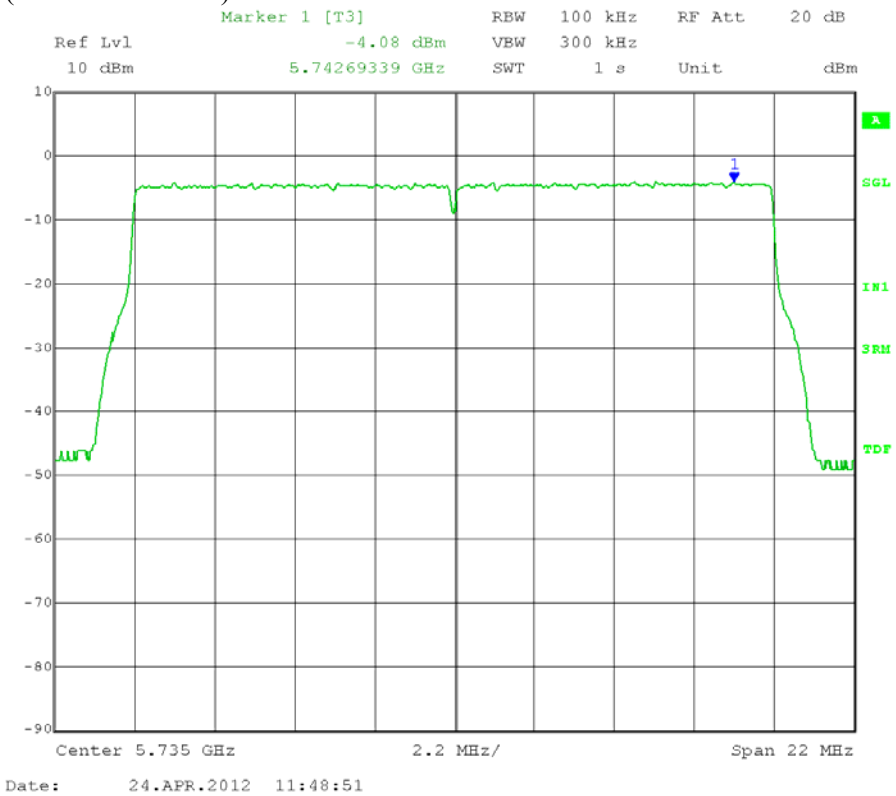
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -4.08 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = -0.080 dBm – 15.2 dB = -15.28 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

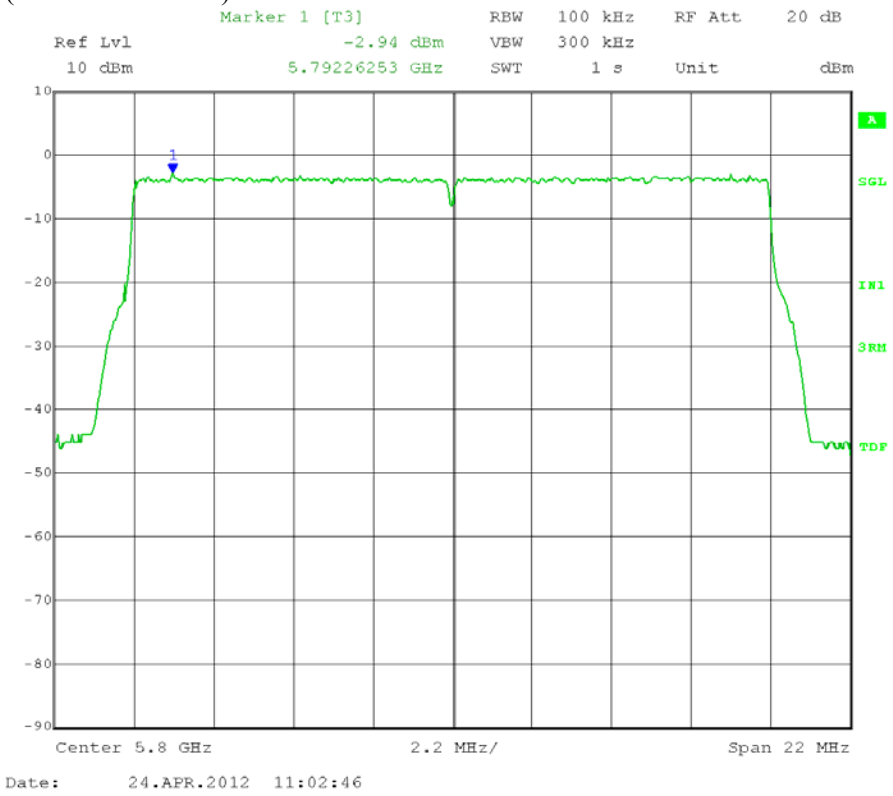
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -2.94 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 1.06 dBm – 15.2 dB = -14.14 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

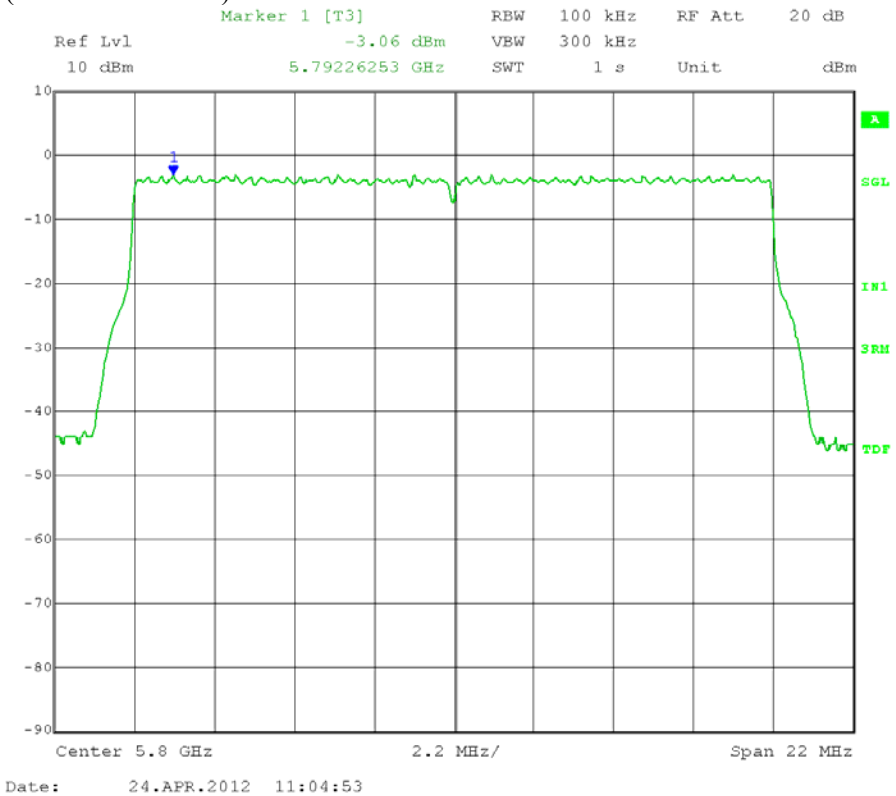
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.06 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.940 dBm – 15.2 dB = -14.26 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

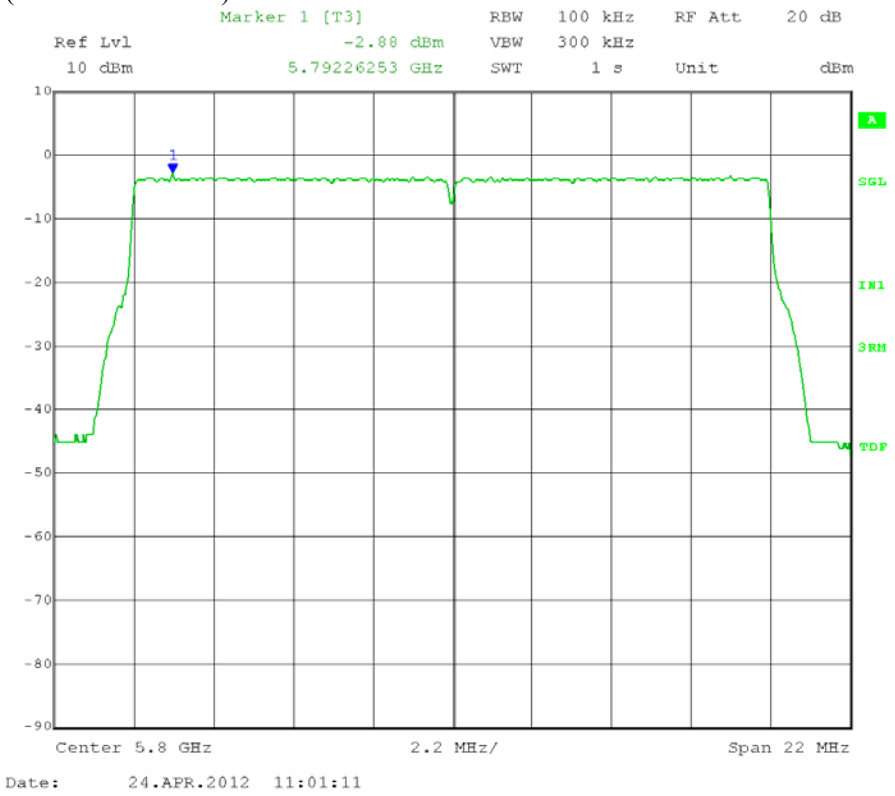
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -2.88 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 1.12 dBm – 15.2 dB = -14.08 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

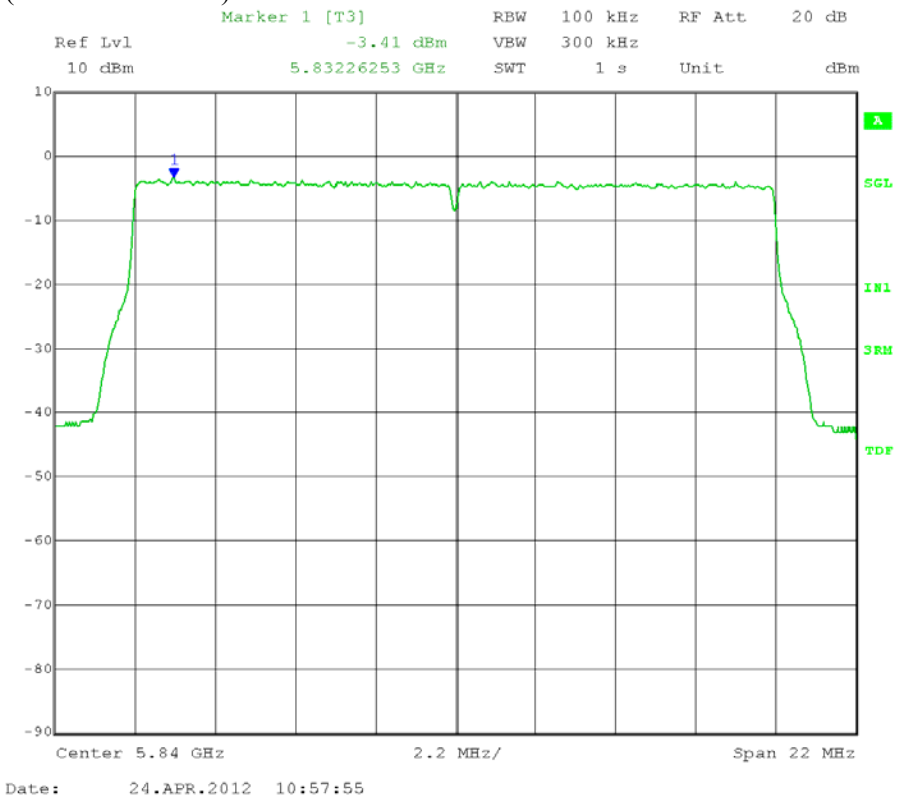
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.41 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.590 dBm – 15.2 dB = -14.61 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

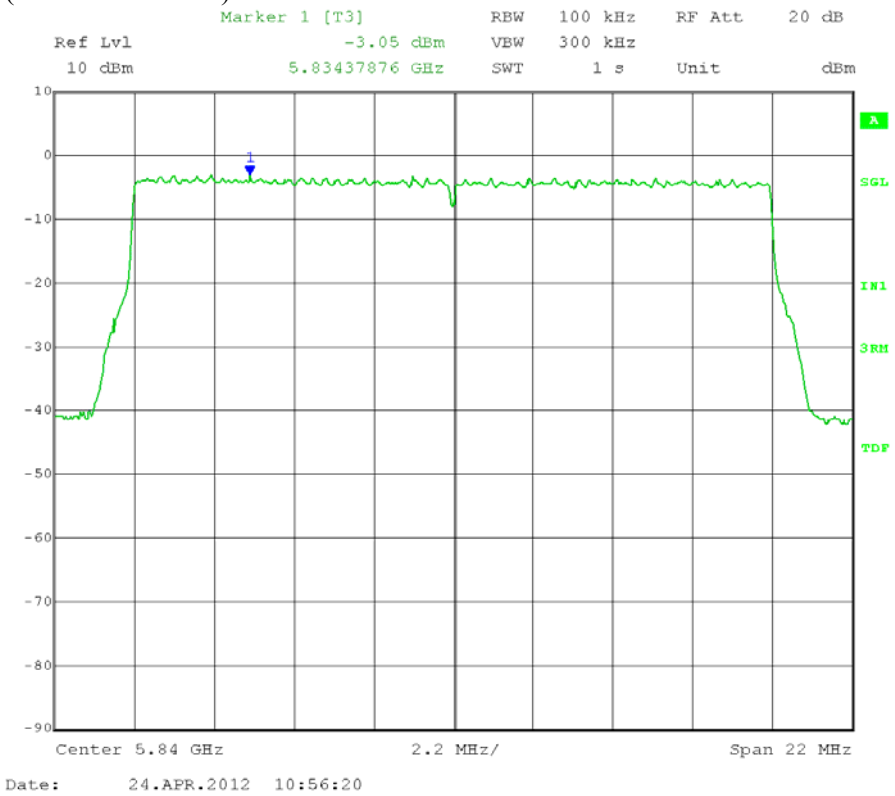
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.05 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.950 dBm – 15.2 dB = -14.25 dBm



Test Date: 04-24-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: AVERAGE Maximum Power Spectral Density – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.3.2 – AVGPSD
Operator: Craig B

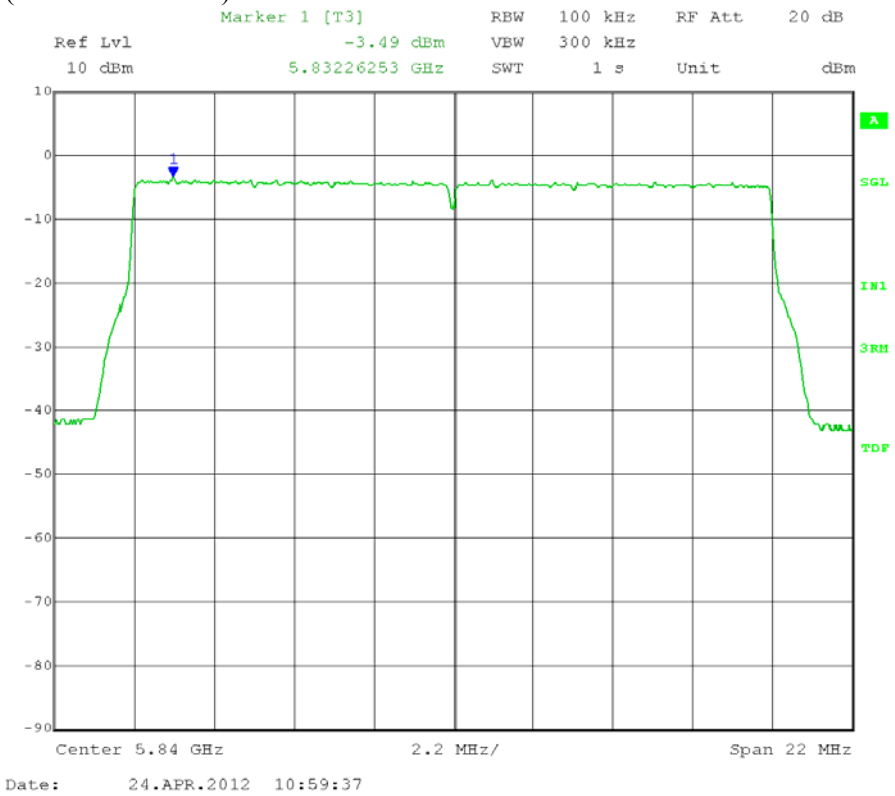
Span = 5-30% greater than the EBW; RBW = 100 kHz
Detector = power average (RMS); VBW ≥ 300 kHz
Number of measurement points in sweep ≥ 2 x (span/RBW)
Sweep time: ≥ 10 x (number of measurement points) x (transmission symbol period)
= 10 x 500 x 56 µs = 0.28 sec
Trace mode: single sweep

Set marker to maximum level within the fundamental EBW.
Scale the observed power level to an equivalent level in 3 kHz by reducing the measured power by 15.2 dB (bandwidth correction factor = 10log (3 kHz / 100 kHz = -15.2 dB)

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(e)]: 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission.
Measure-and-sum technique for MIMO with Cross-Polarized antenna:
Measure and add 10 log(N) dB, where N is the number of outputs.
= 10 log(2) = 3 dB

Maximum PSD = -3.49 dBm + 1 dB for Cambium Networks connectorized cable + 3 dB (MIMO Cross-Pol) = 0.510 dBm – 15.2 dB = -14.69 dBm



166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

A5.0 Maximum Unwanted Emission Levels – Conducted

Rule Section: Section 15.247(d)
RSS-210 A8.5

Test Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 – *Guidance for Performing Gompliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247*

Section 5.4.1.2 – Unwanted Emissions

Description: RBW = 100 kHz
VBW ≥ 300 kHz
Span = spectrum to be examined – (Unwanted Emissions)
Detector = peak
Sweep = auto couple
Trace mode = max hold

Measurements were taken for QPSK, 16-QAM, and 64-QAM modulation types, and at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously (power setting 19 dBm) with 98% duty cycle.

Limit: 30 dB below maximum in-band average PSD level (maximum level in any 100 kHz band). Average output power procedure was used to measure the fundamental emission power

Results: Passed

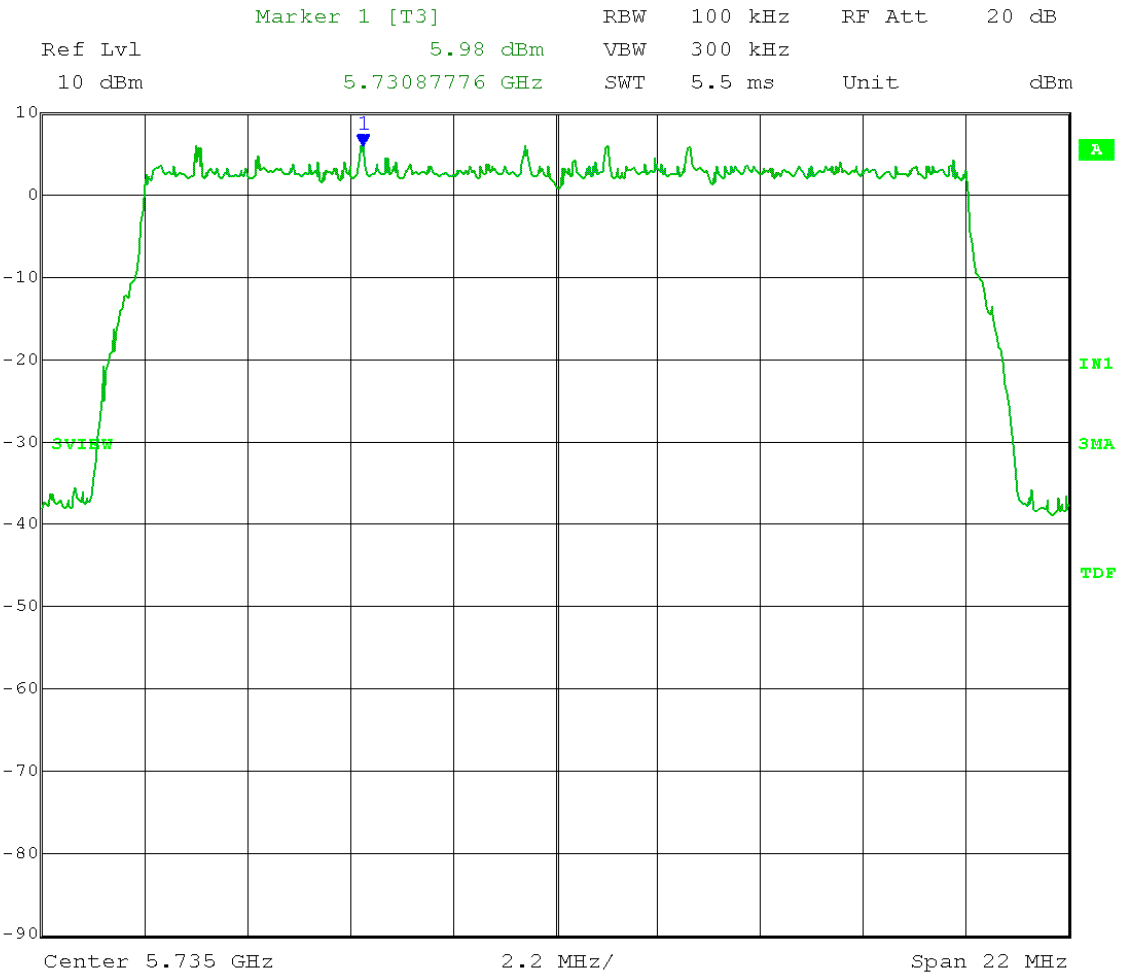
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.98 dBm – 30 dB = -24.02 dBm



Date: 23.APR.2012 12:25:16

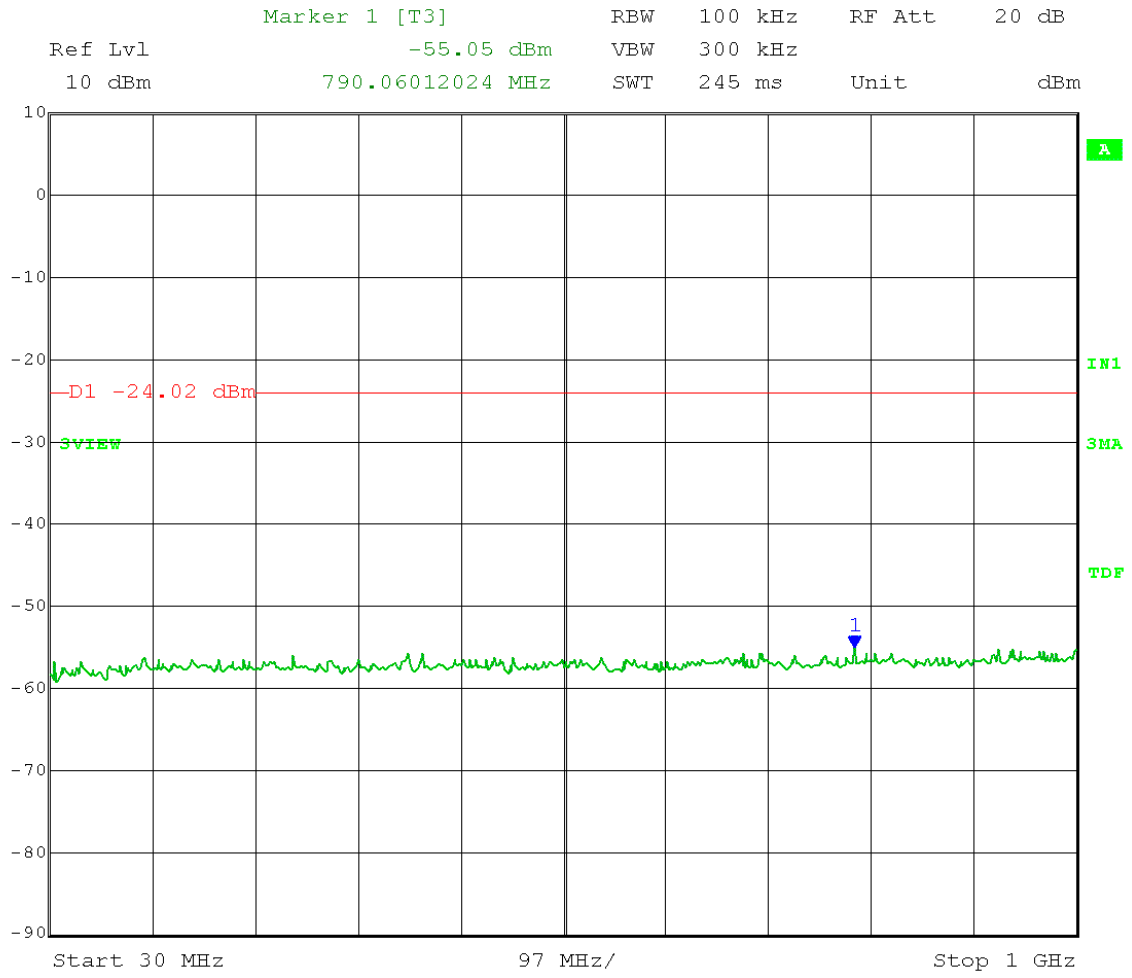
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 5.98 dBm – 30 dB = -24.02 dBm



Date: 25.APR.2012 11:09:16

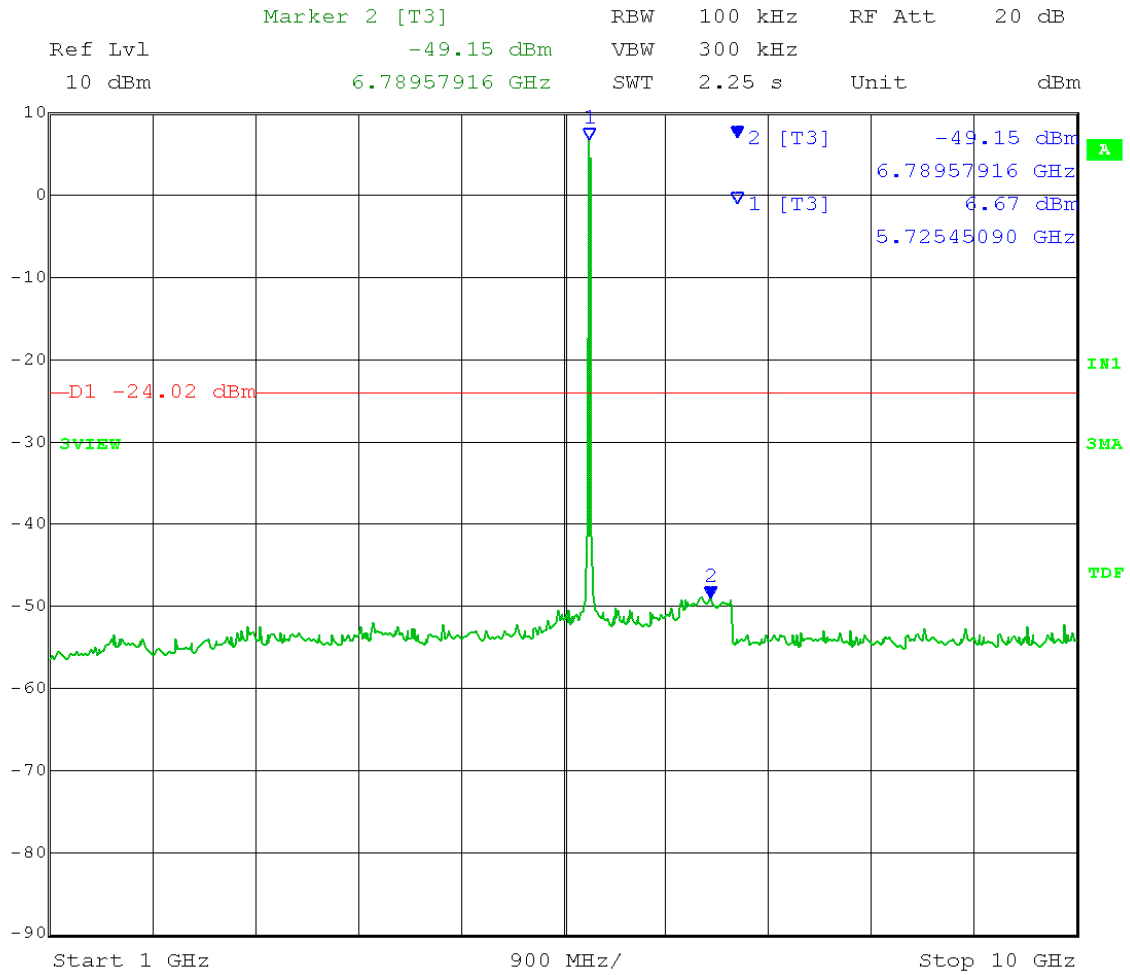
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 5.98 dBm – 30 dB = -24.02 dBm



Date: 25.APR.2012 11:04:36

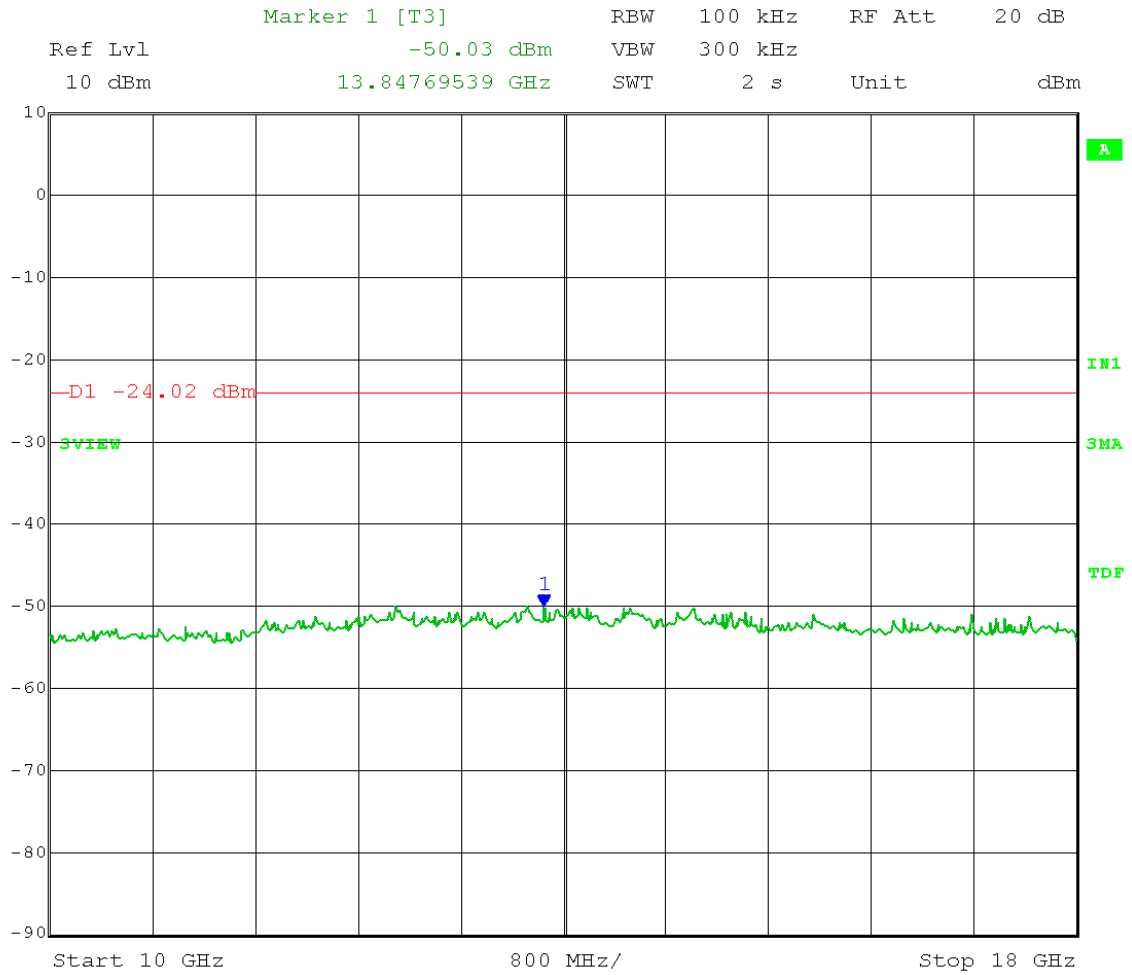
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 5.98 dBm – 30 dB = -24.02 dBm



Date: 25.APR.2012 11:06:00

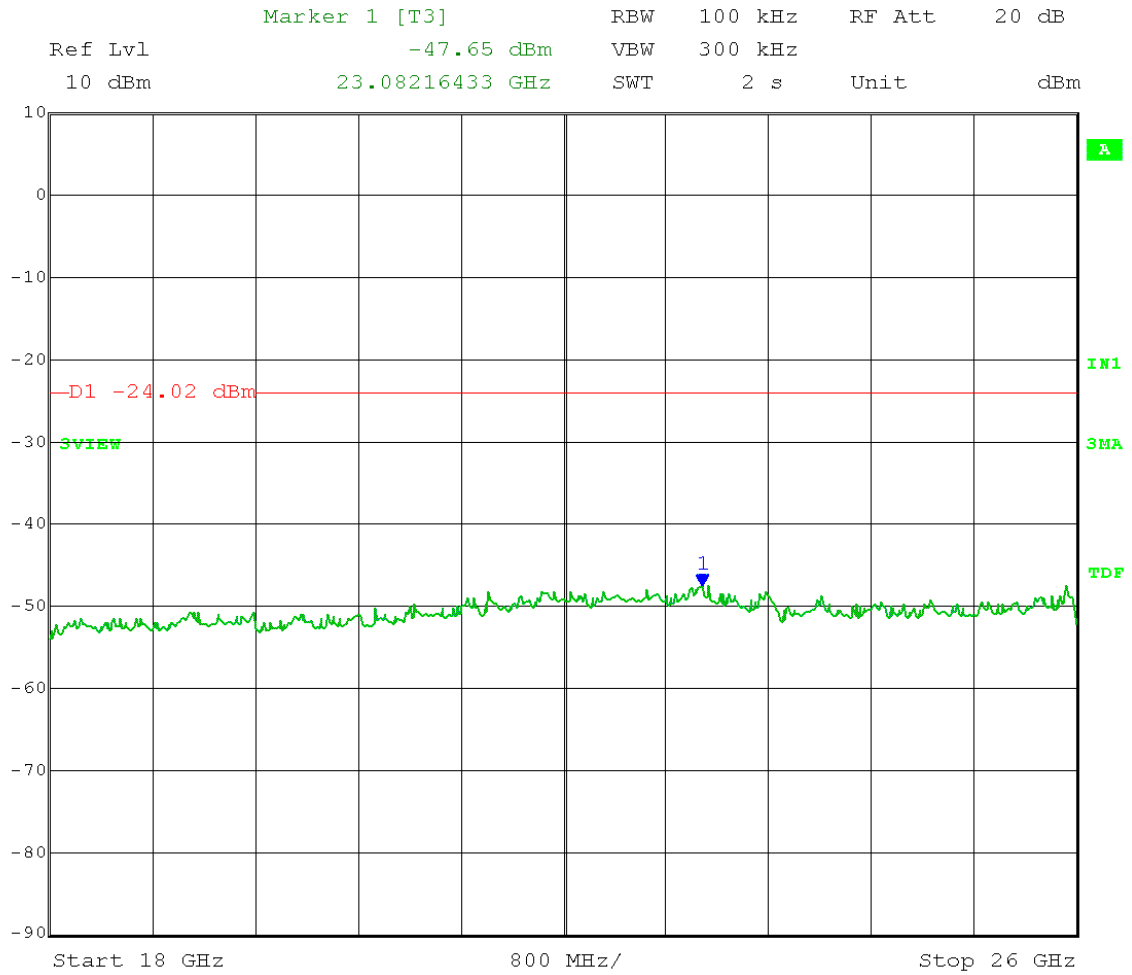
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 5.98 dBm – 30 dB = -24.02 dBm



Date: 25.APR.2012 11:07:33

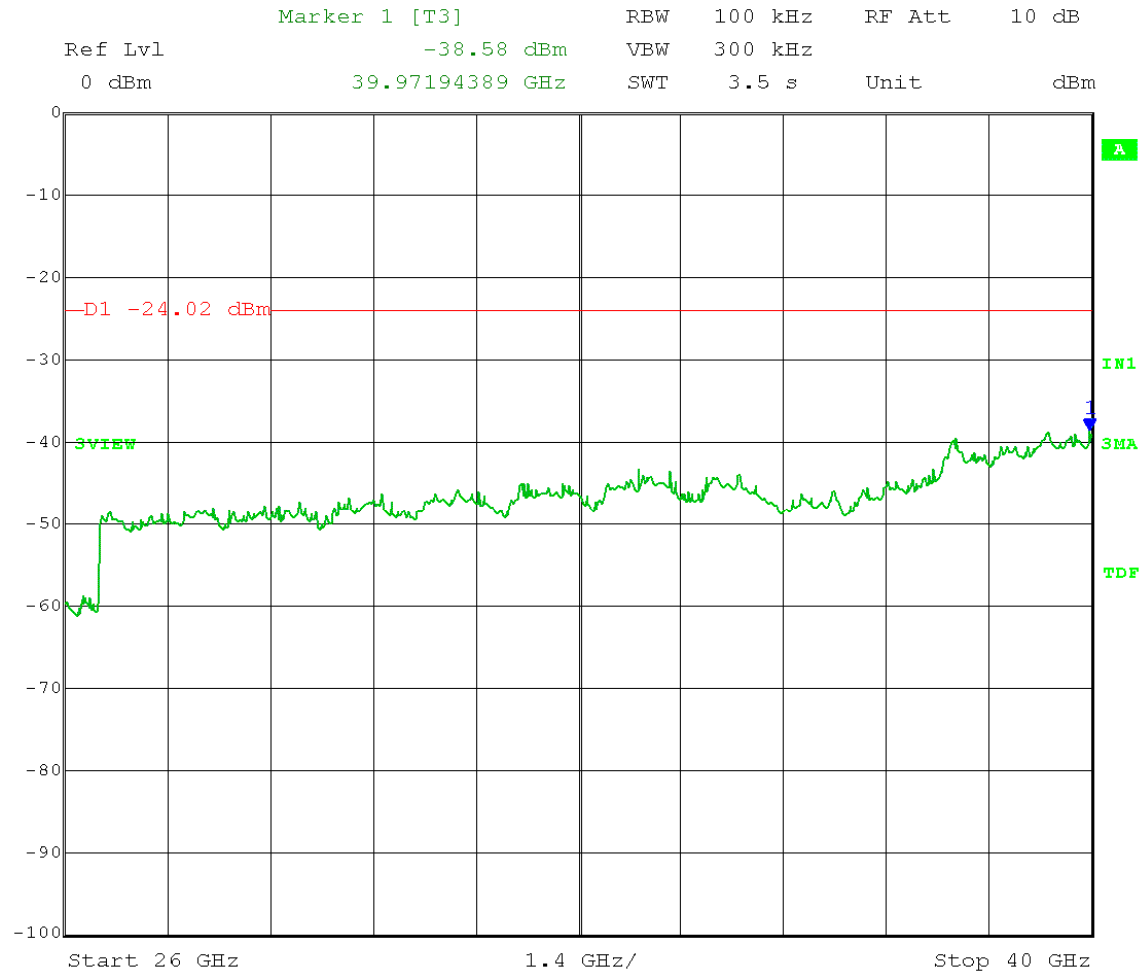
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 5.98 dBm – 30 dB = -24.02 dBm



Date: 25.APR.2012 11:10:42

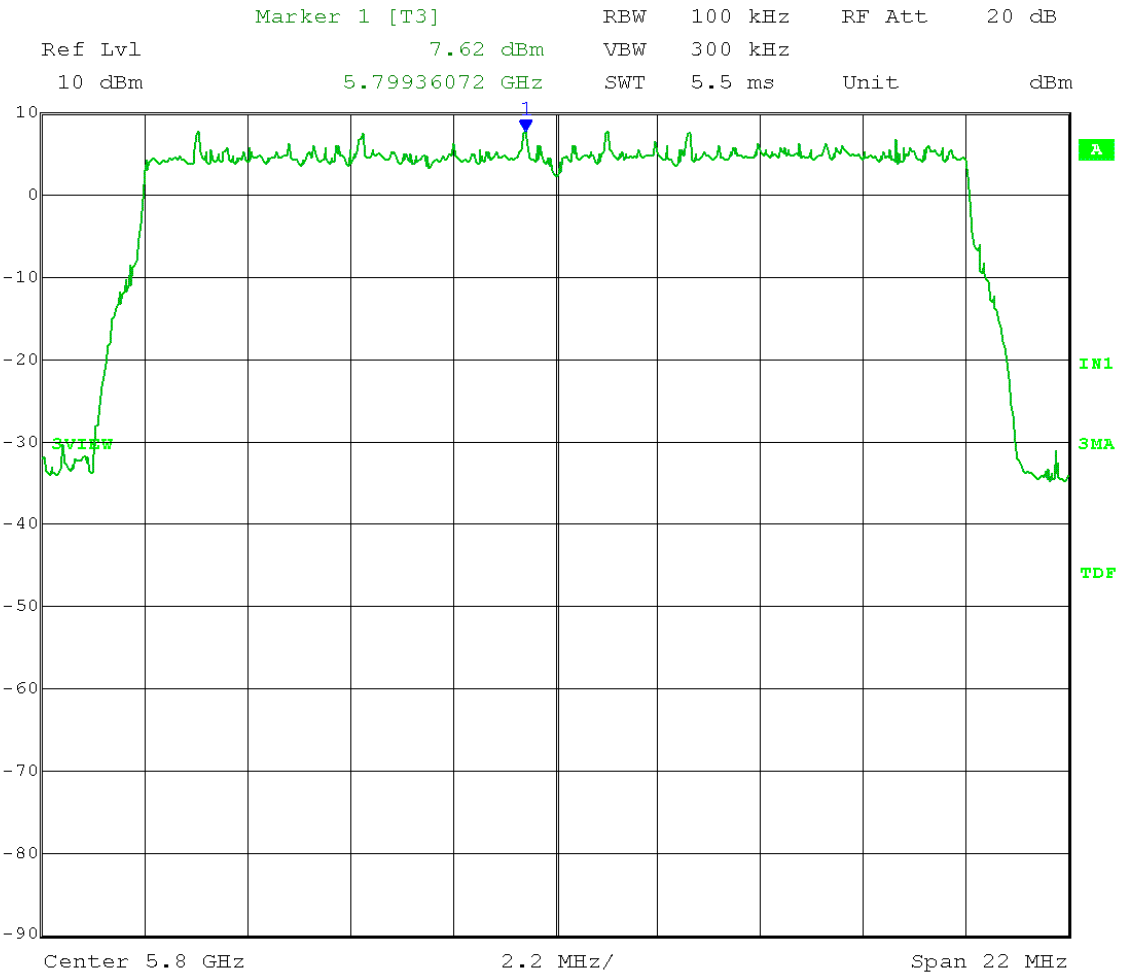
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 7.62 dBm – 30 dB = -22.38 dBm



Date: 25.APR.2012 11:39:36

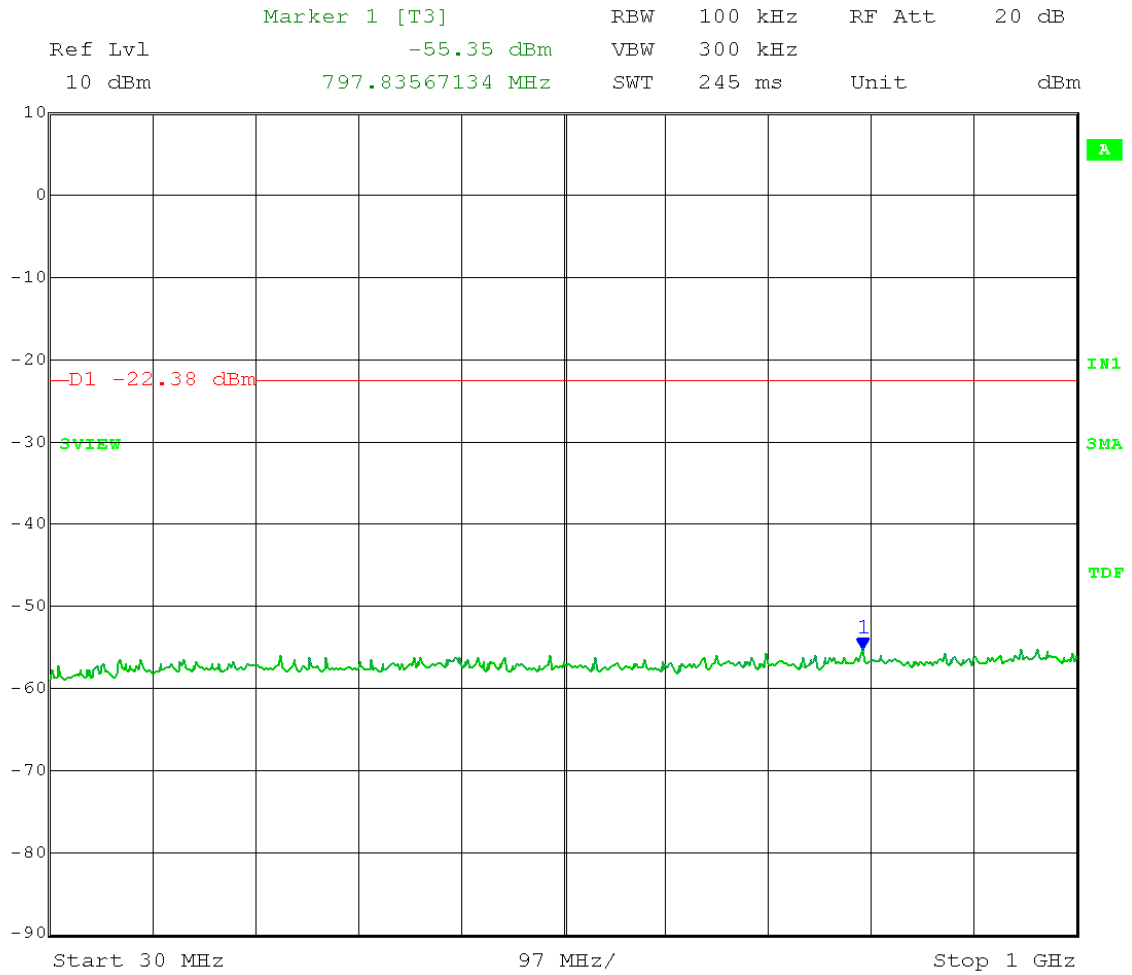
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 7.62 dBm – 30 dB = -22.38 dBm



Date: 25.APR.2012 11:46:41

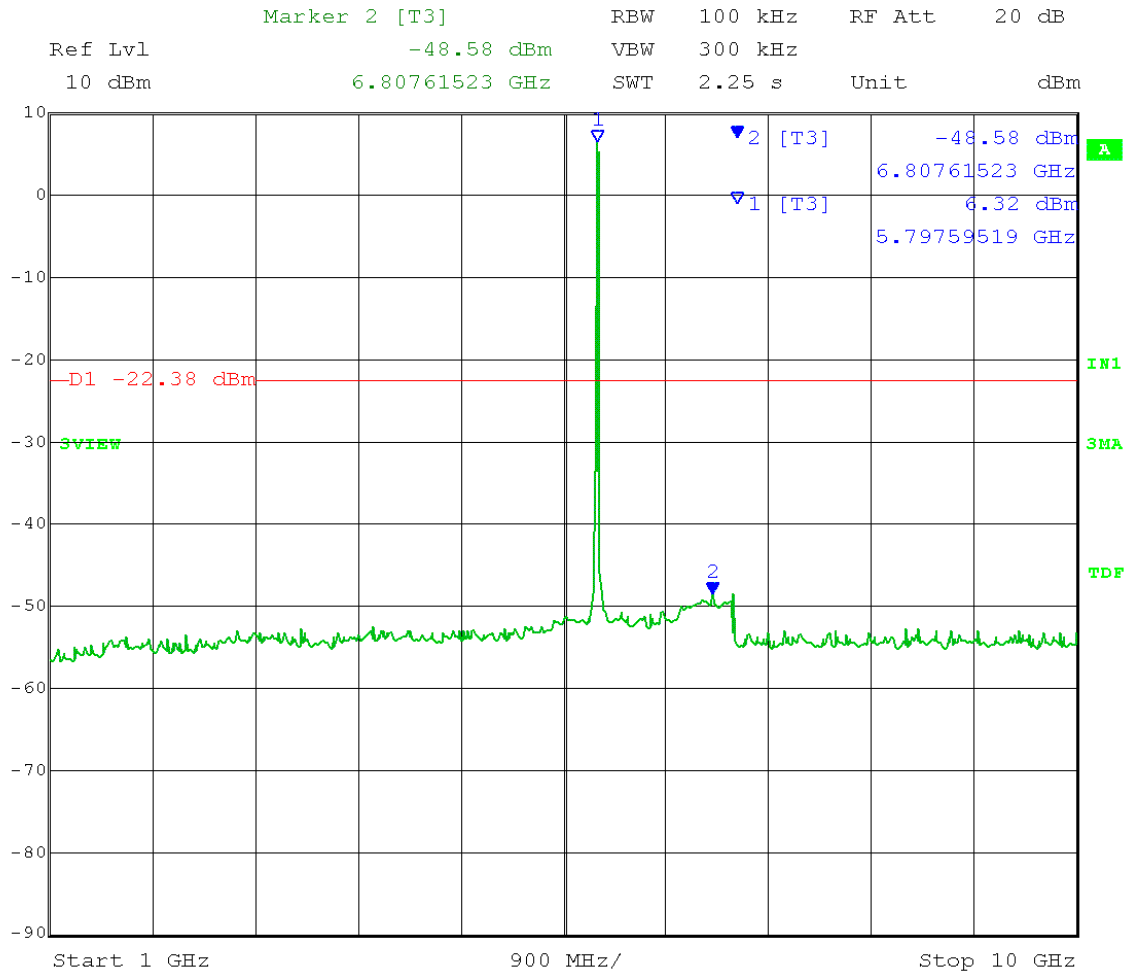
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 7.62 dBm – 30 dB = -22.38 dBm



Date: 25.APR.2012 11:41:55

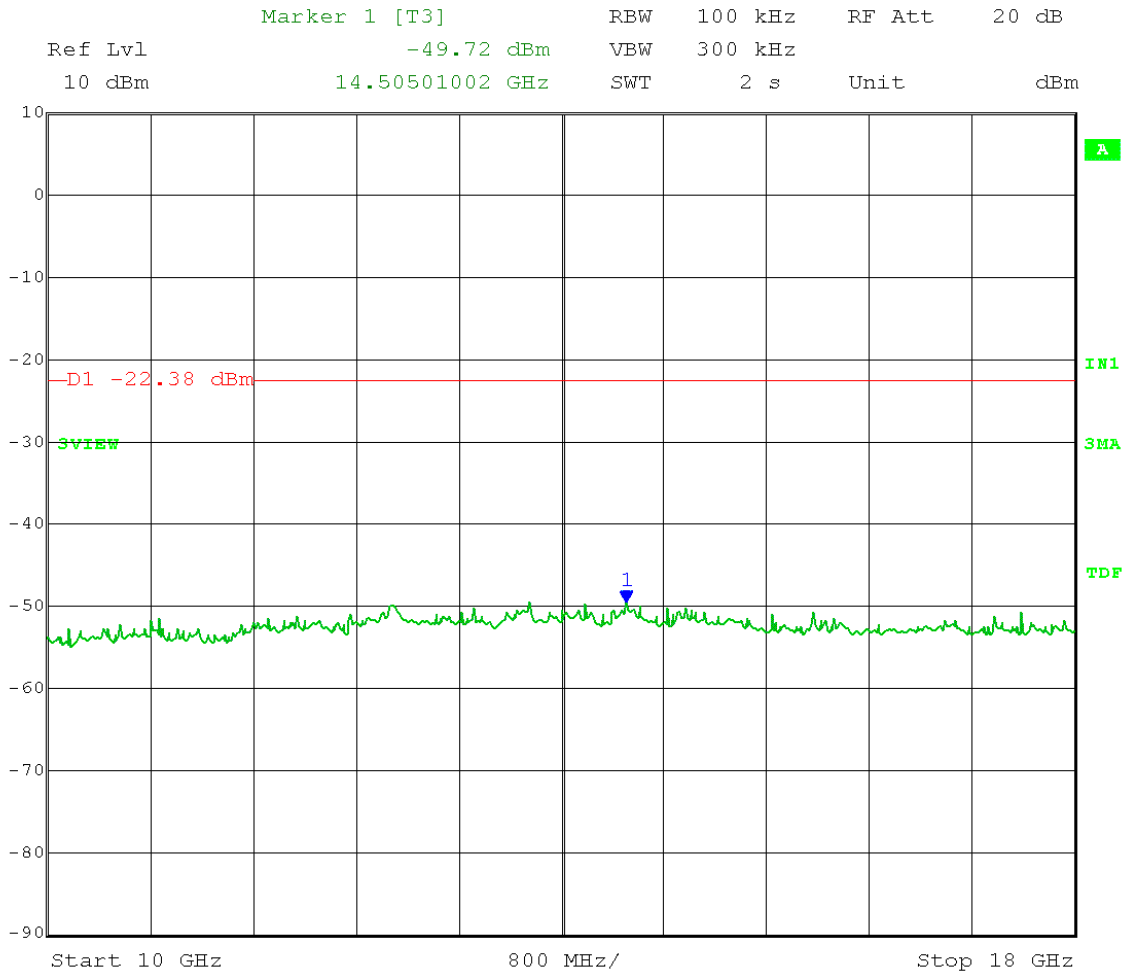
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 7.62 dBm – 30 dB = -22.38 dBm



Date: 25.APR.2012 11:44:00

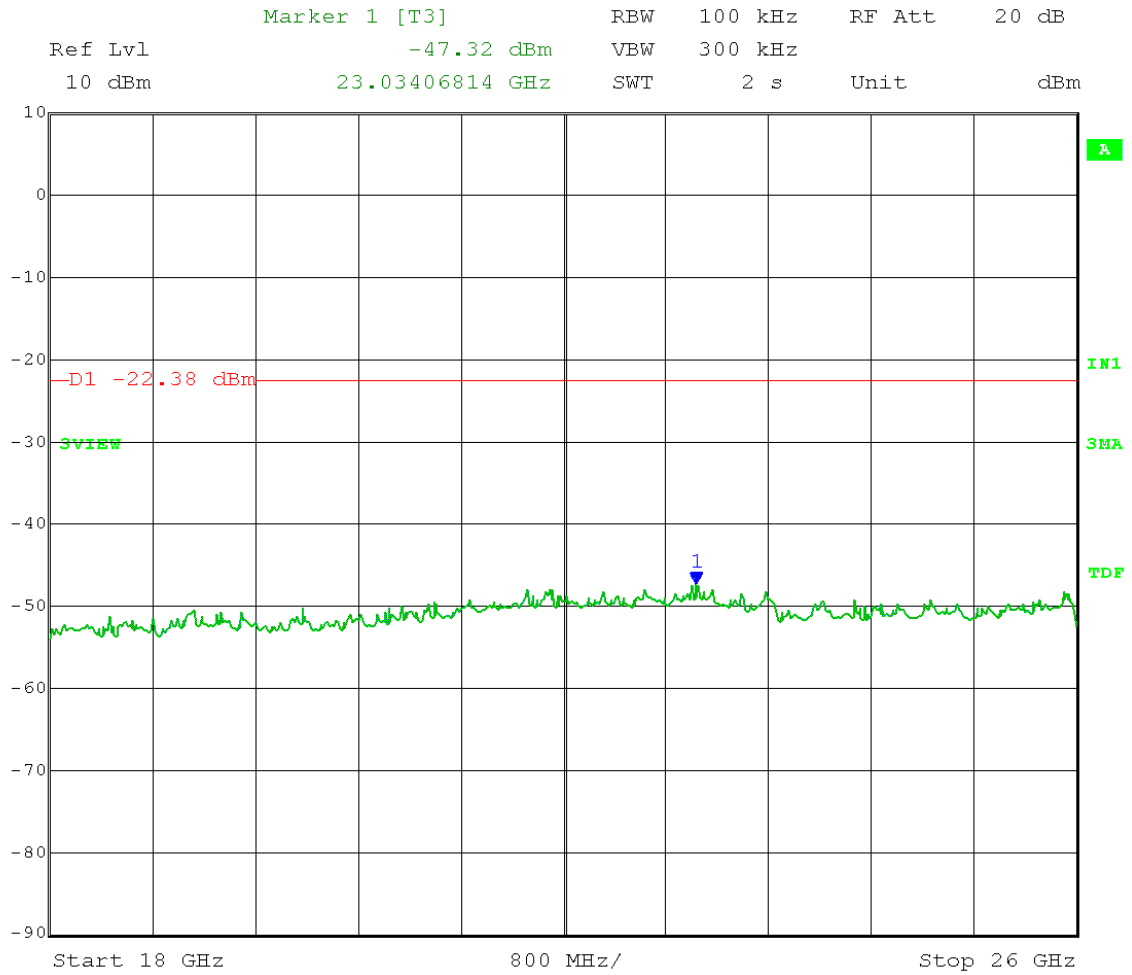
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 7.62 dBm – 30 dB = -22.38 dBm



Date: 25.APR.2012 11:45:10

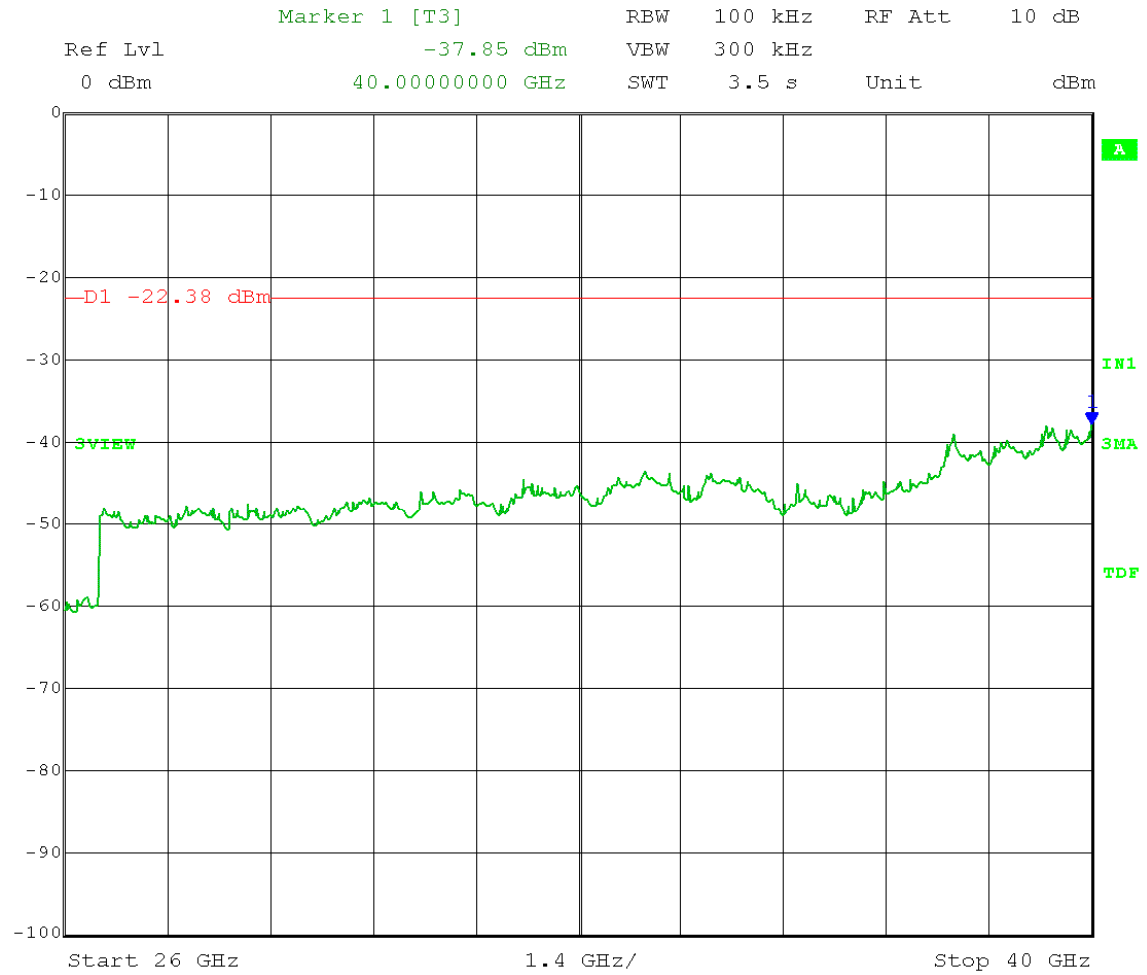
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 7.62 dBm – 30 dB = -22.38 dBm



Date: 25.APR.2012 11:48:53

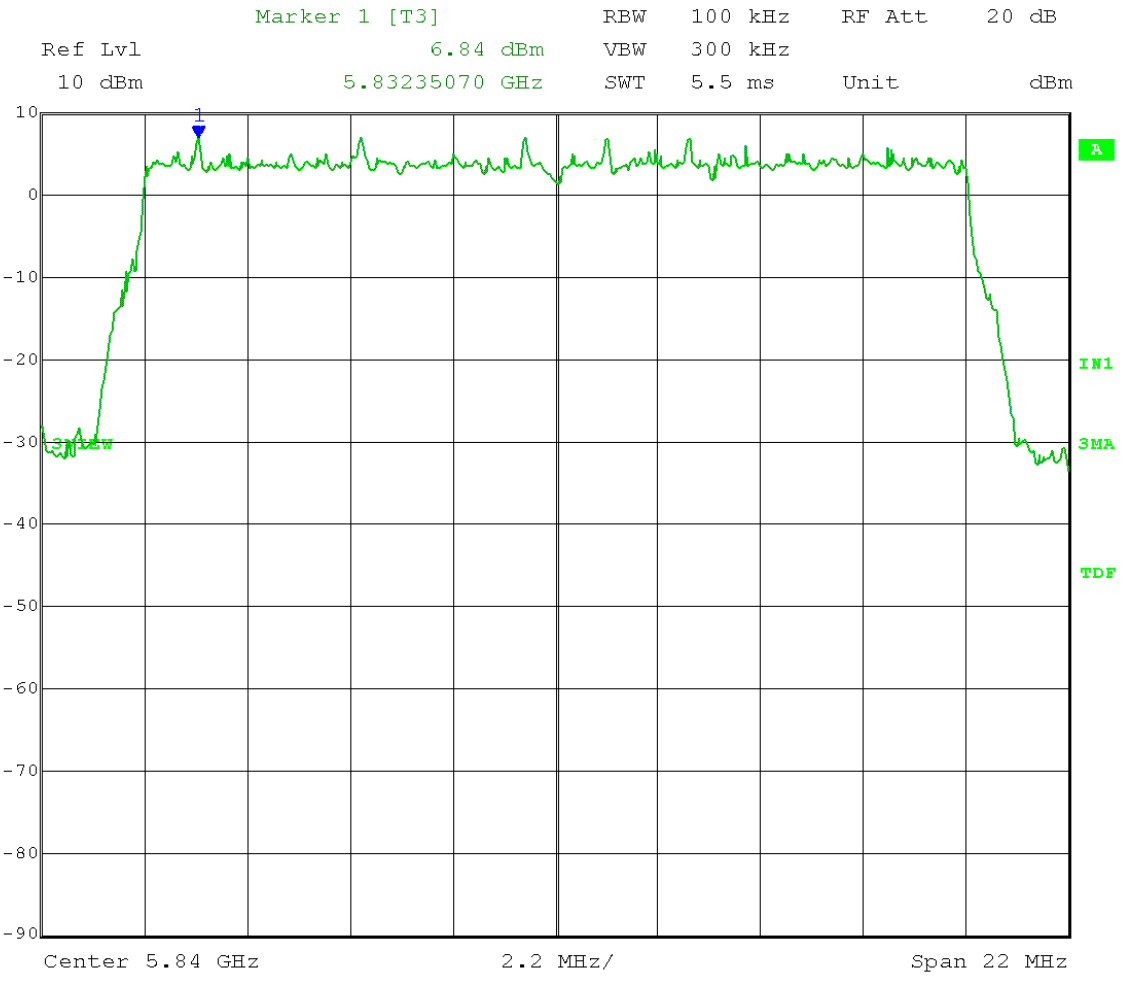
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.84 dBm – 30 dB = -23.16 dBm



Date: 23.APR.2012 12:43:48

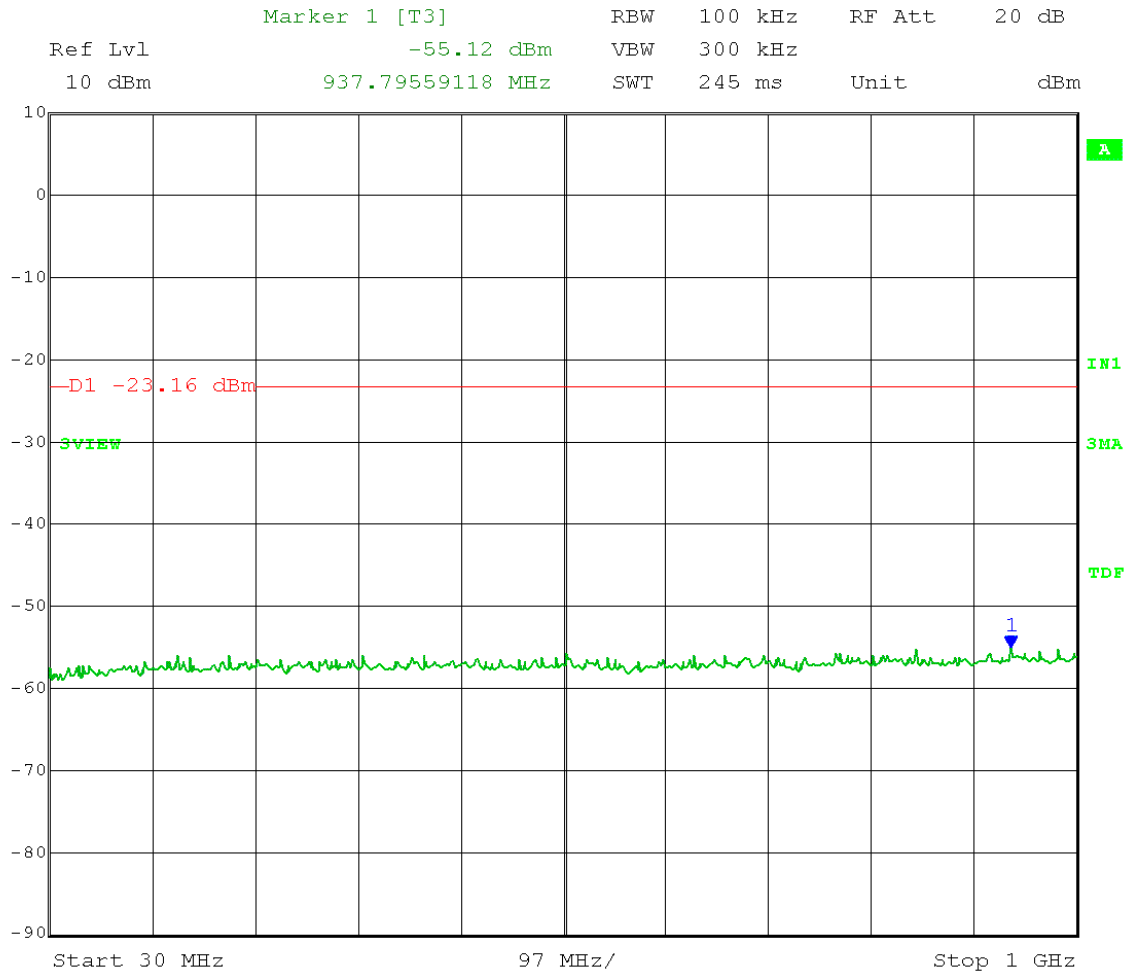
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 6.84 dBm – 30 dB = -23.16 dBm



Date: 25.APR.2012 12:56:11

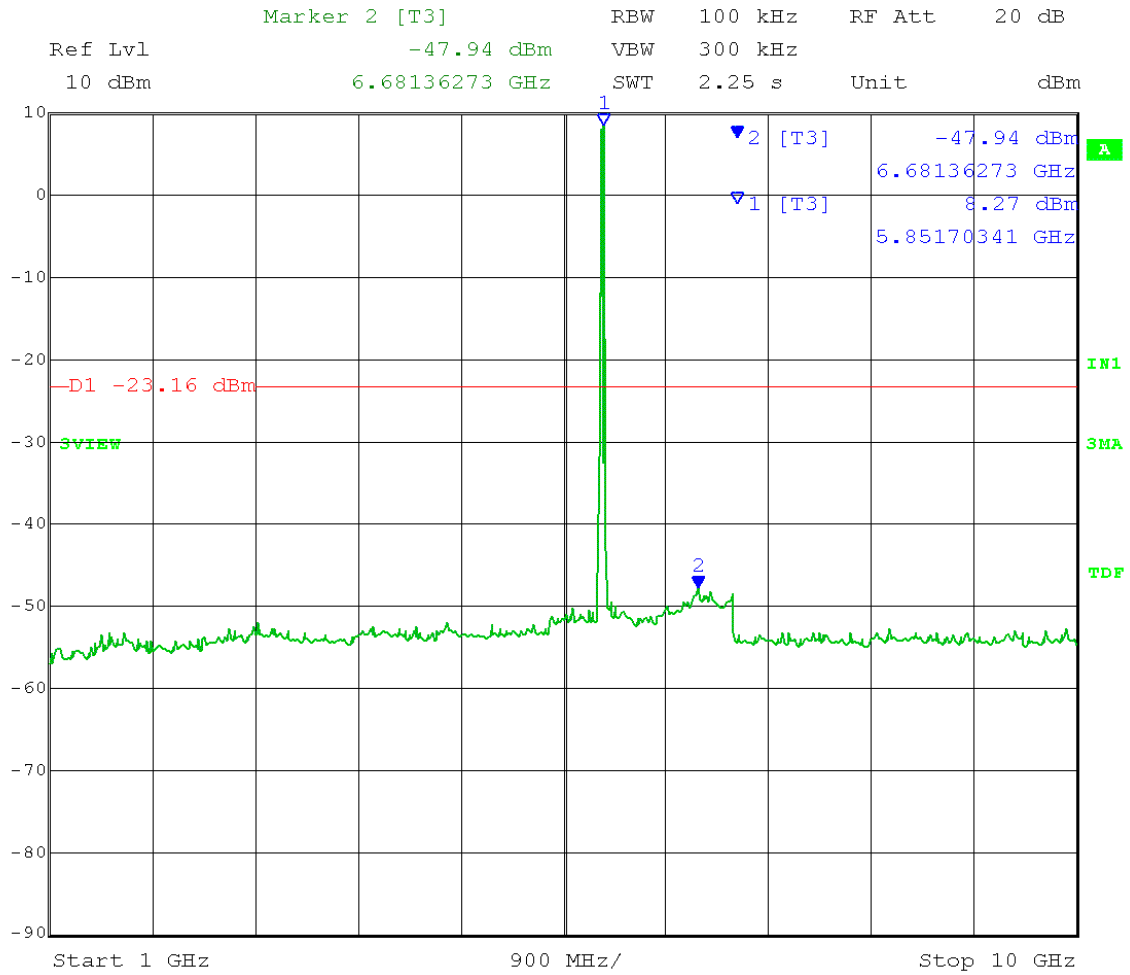
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 6.84 dBm – 30 dB = -23.16 dBm



Date: 25.APR.2012 12:51:09

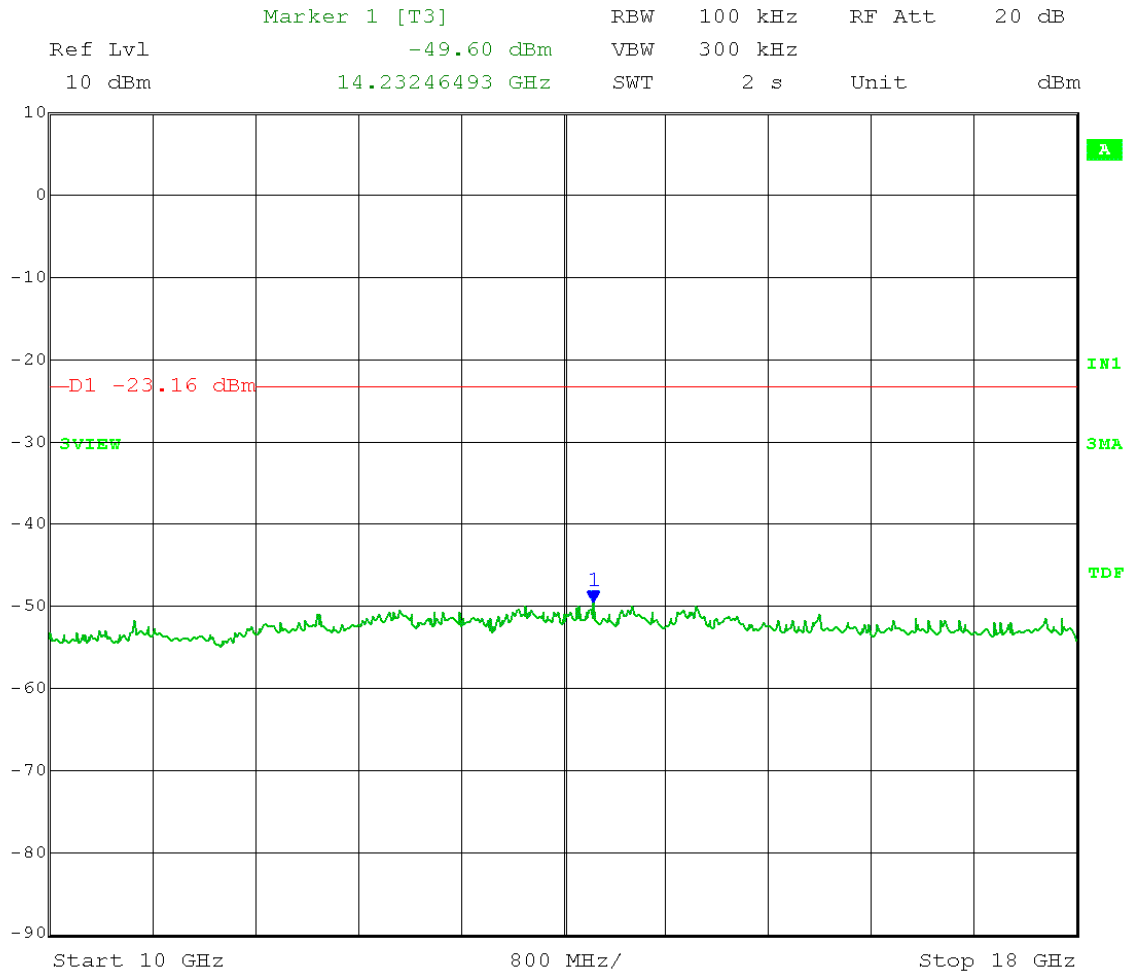
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 6.84 dBm – 30 dB = -23.16 dBm



Date: 25.APR.2012 12:53:02

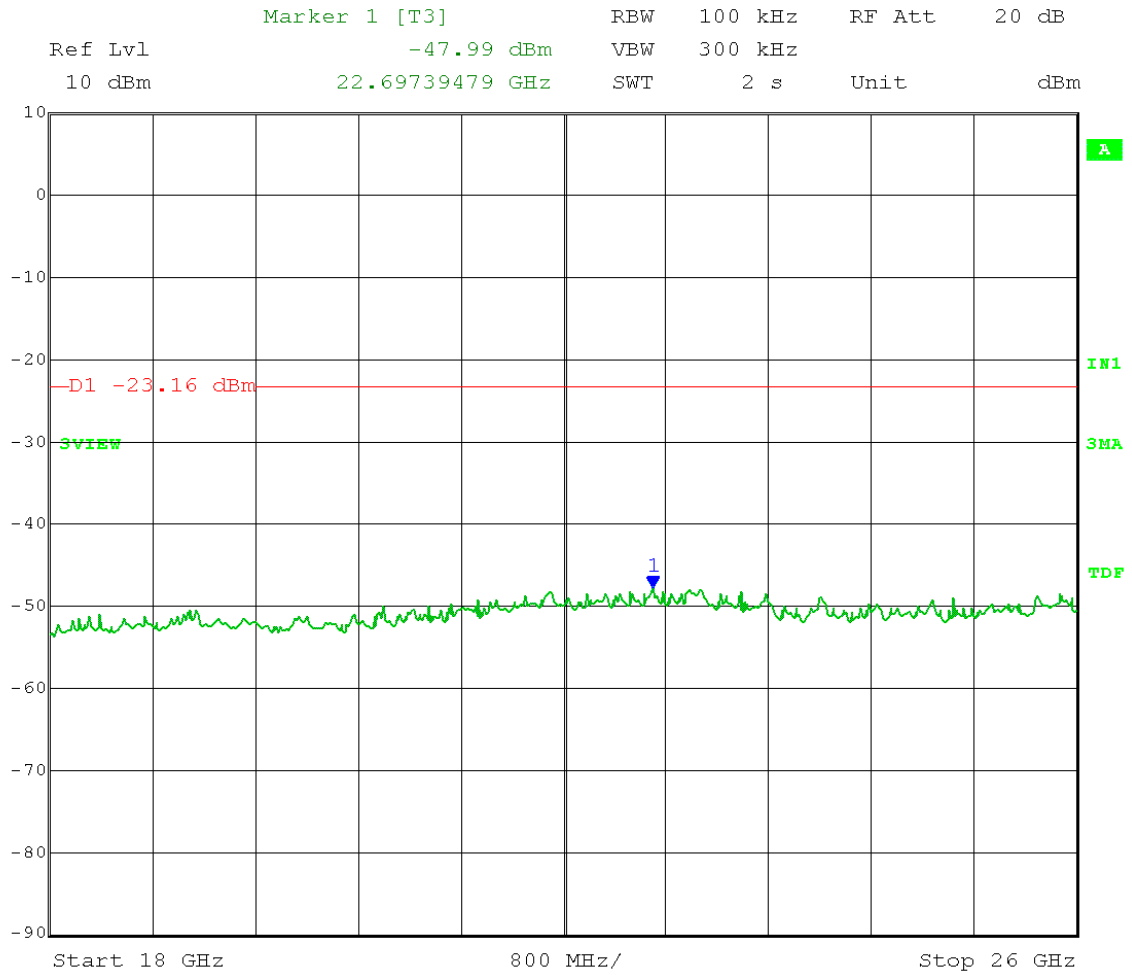
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 6.84 dBm – 30 dB = -23.16 dBm



Date: 25.APR.2012 12:54:31

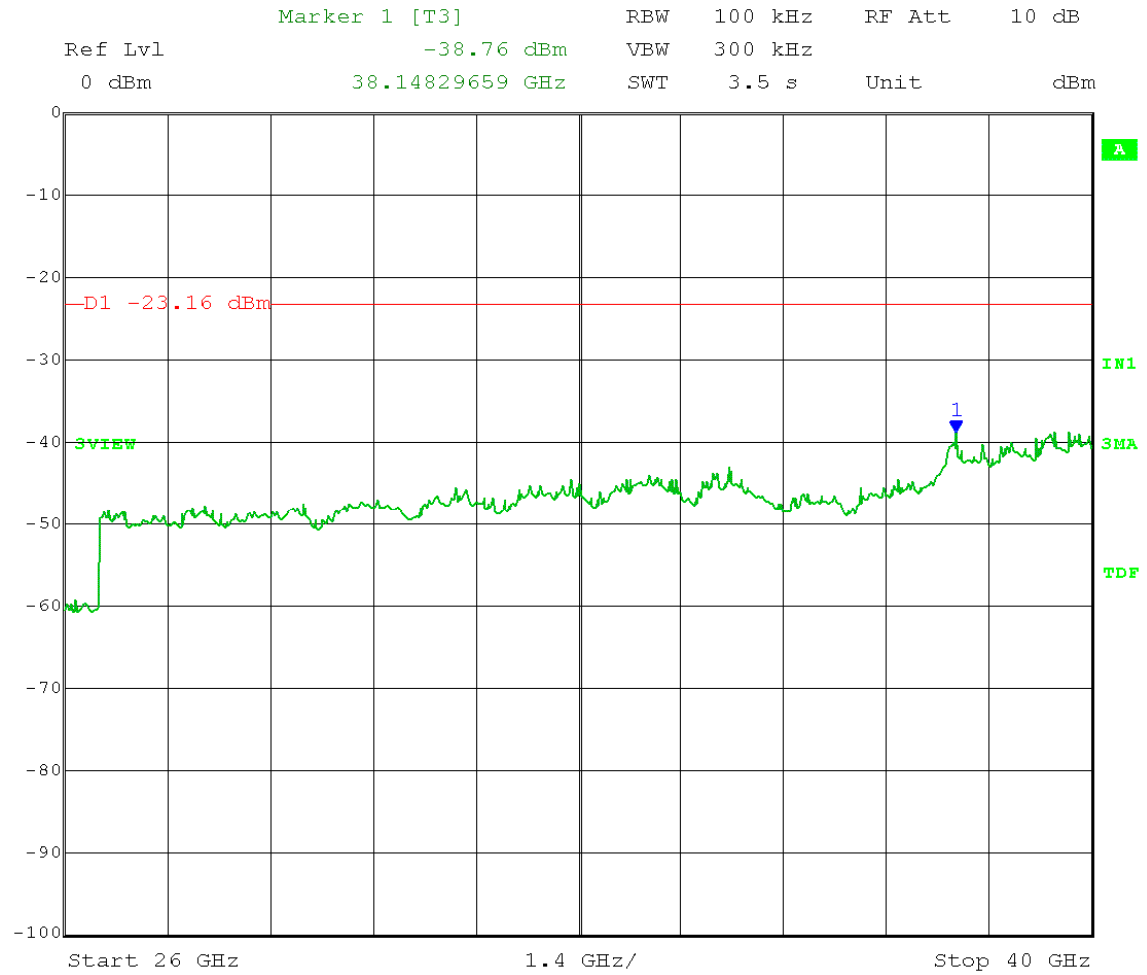
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 6.84 dBm – 30 dB = -23.16 dBm



Date: 25.APR.2012 12:58:13

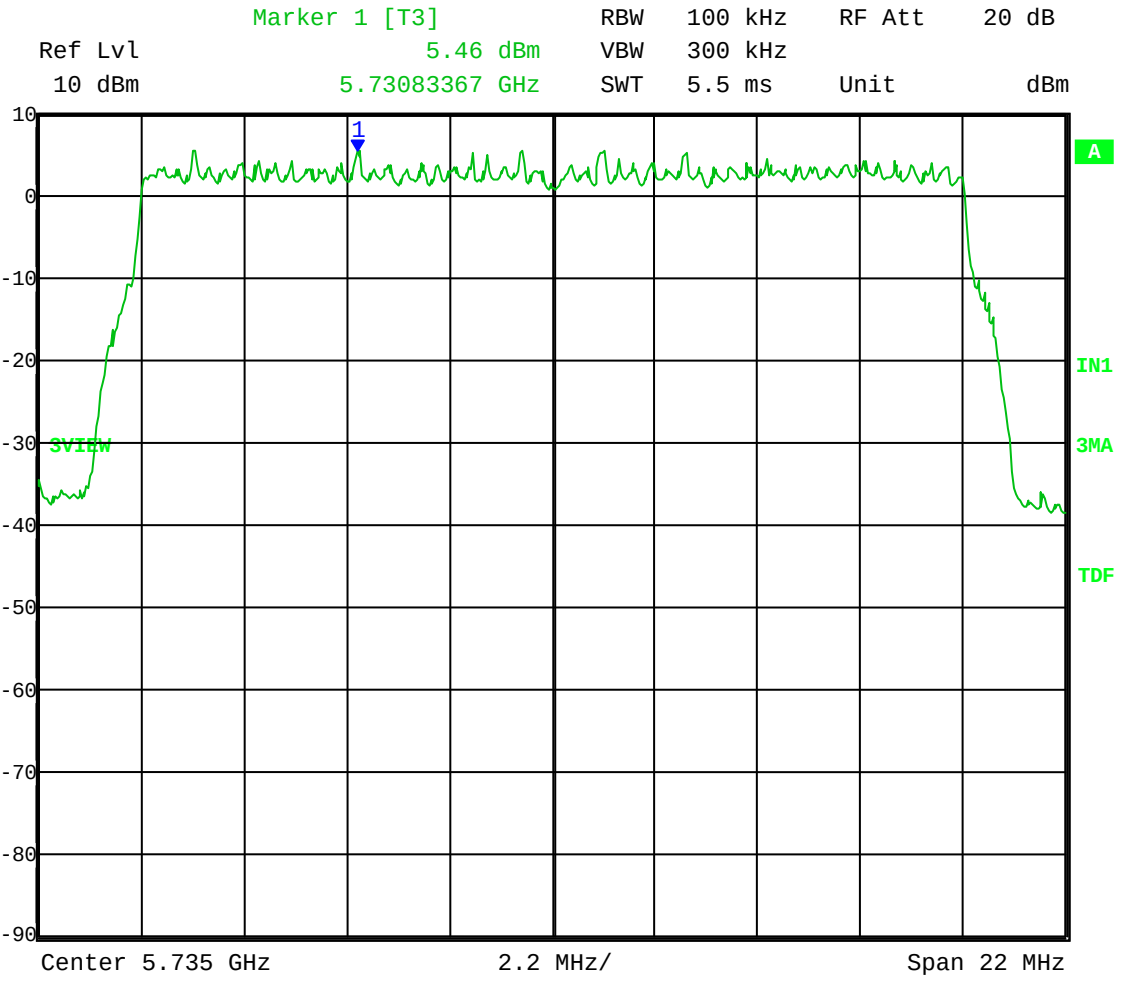
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.46 dBm – 30 dB = -24.54 dBm



Date: 23.APR.2012 11:38:37

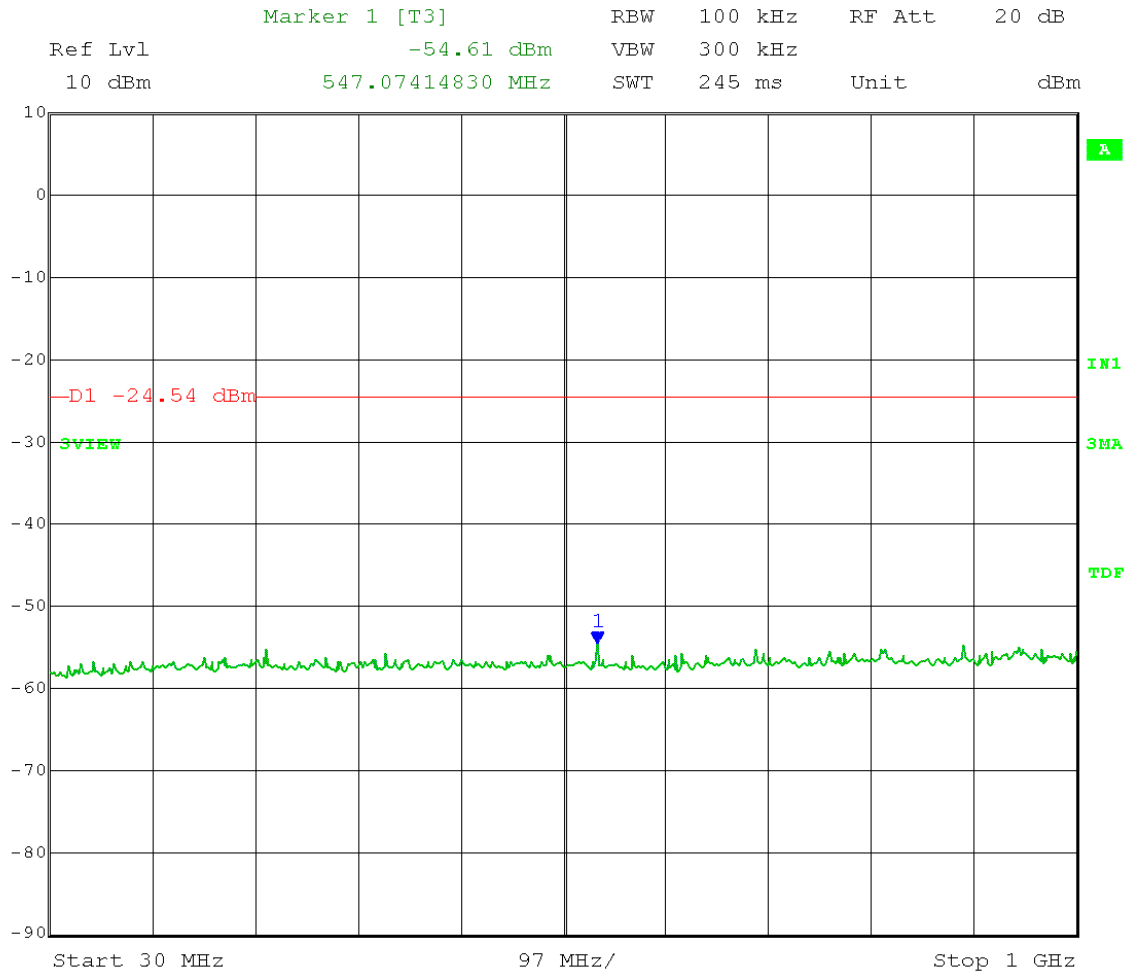
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 5.46 dBm – 30 dB = -24.54 dBm



Date: 25.APR.2012 11:18:47

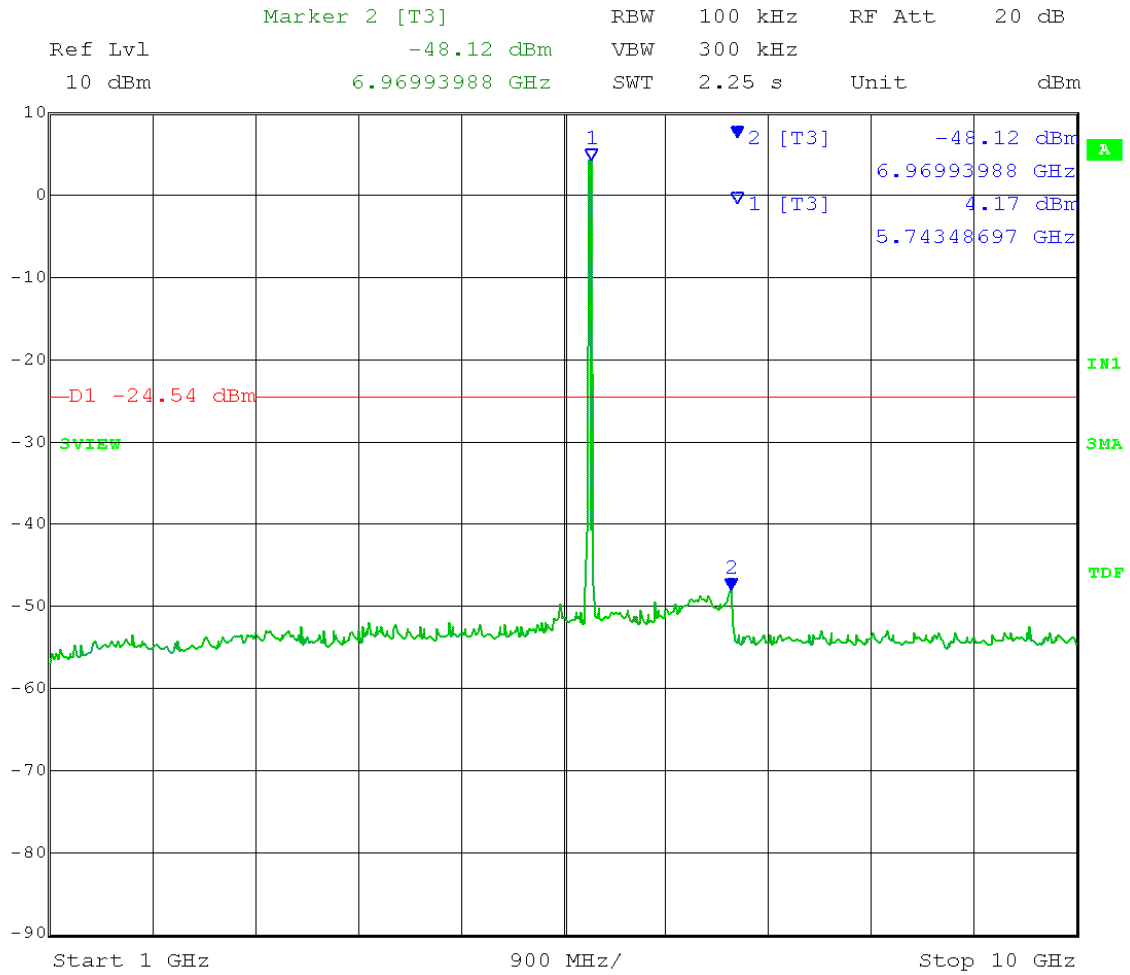
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 5.46 dBm – 30 dB = -24.54 dBm



Date: 25.APR.2012 11:13:45

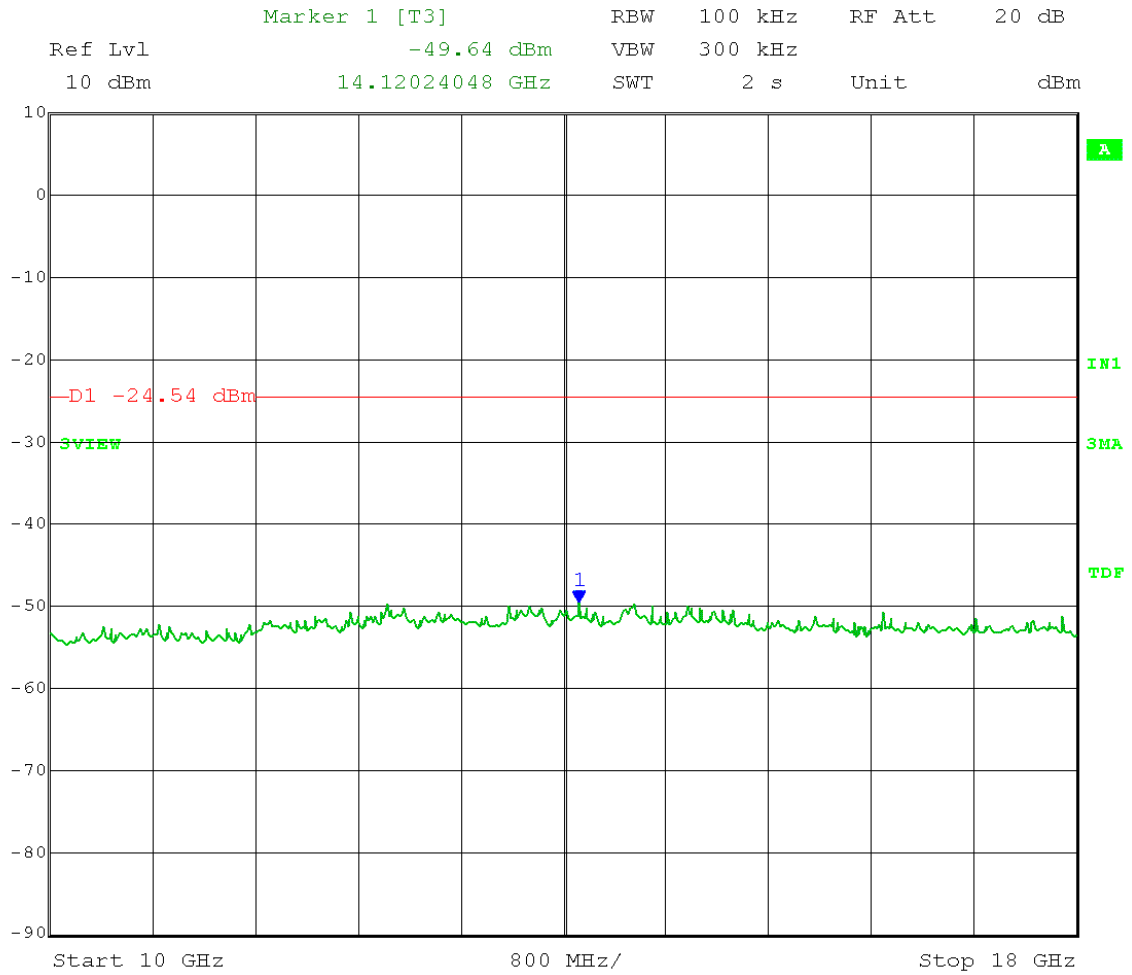
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 5.46 dBm – 30 dB = -24.54 dBm



Date: 25.APR.2012 11:15:21

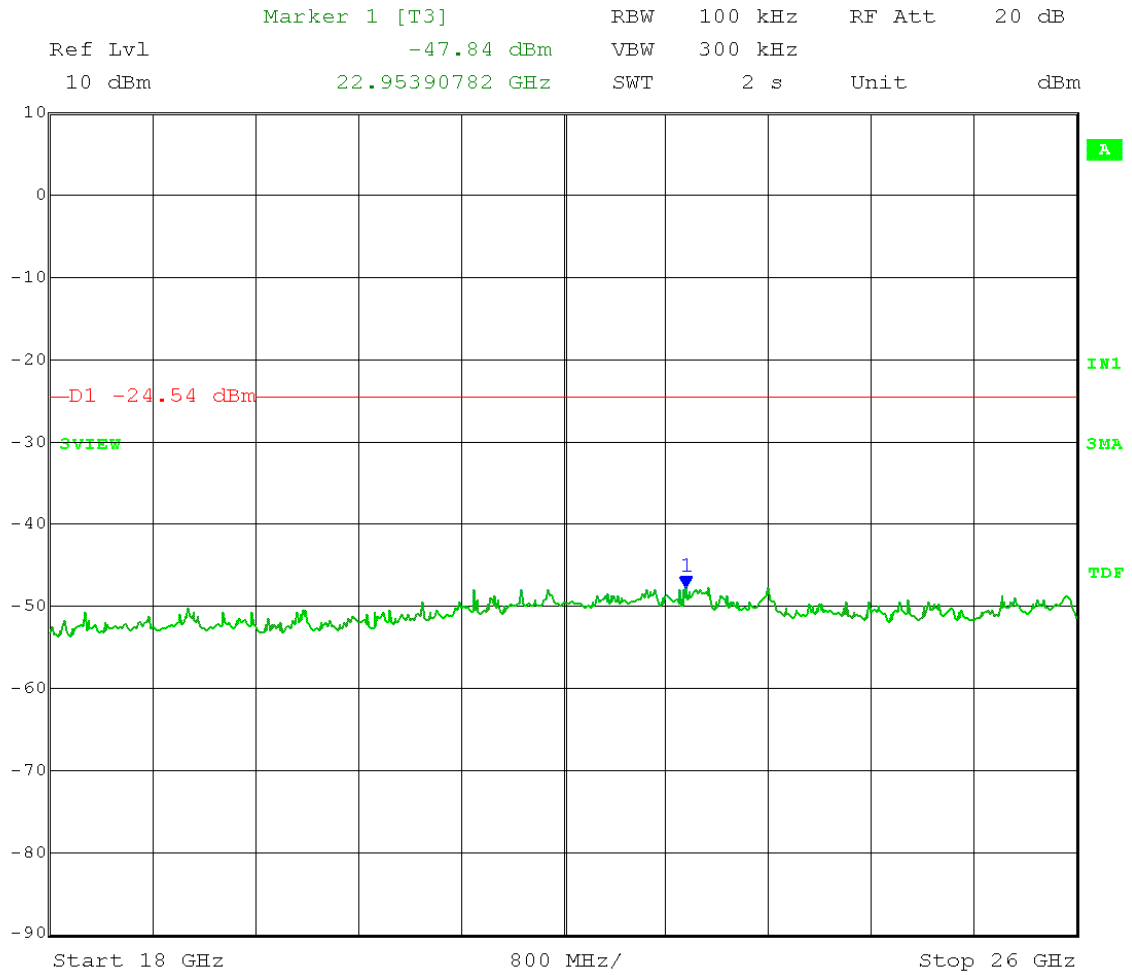
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 5.46 dBm – 30 dB = -24.54 dBm



Date: 25.APR.2012 11:16:47

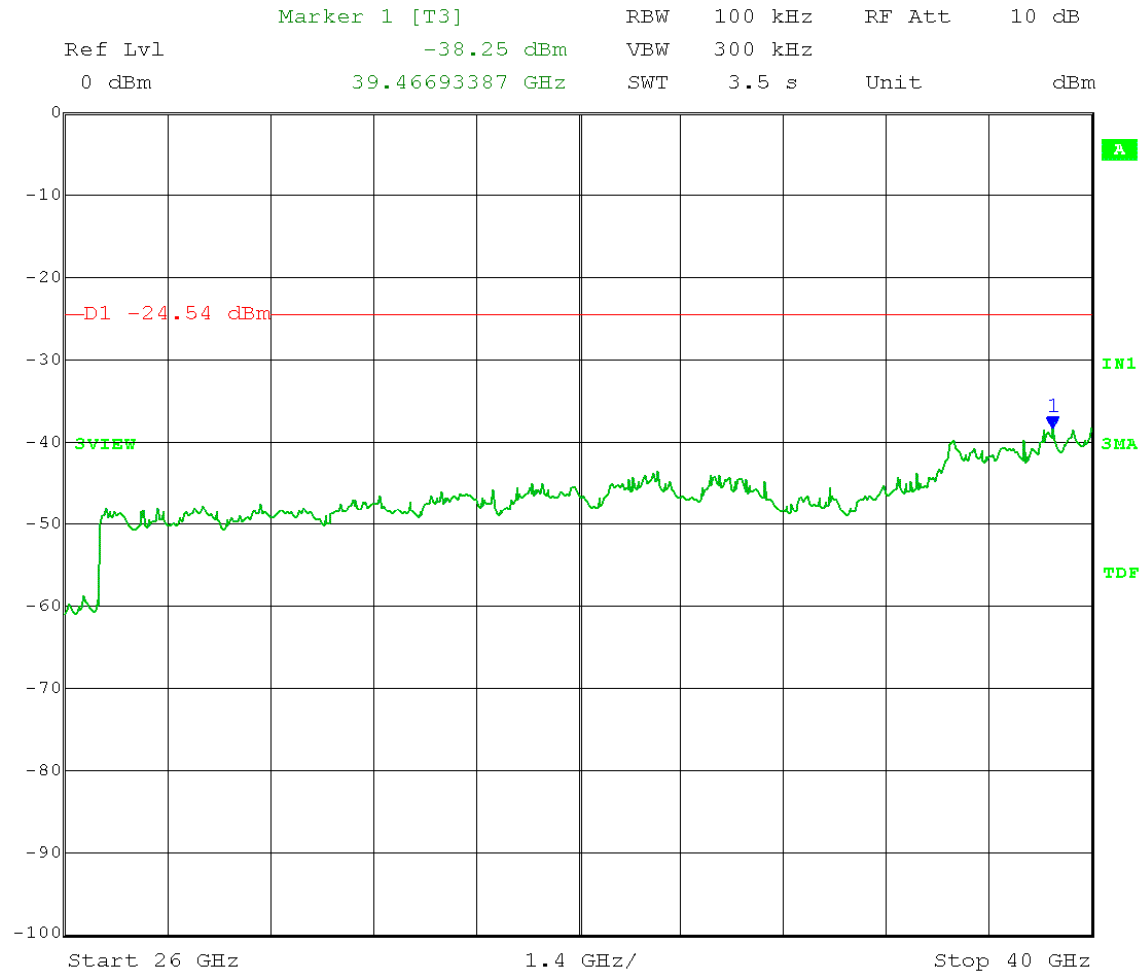
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 5.46 dBm – 30 dB = -24.54 dBm



Date: 25.APR.2012 11:20:31

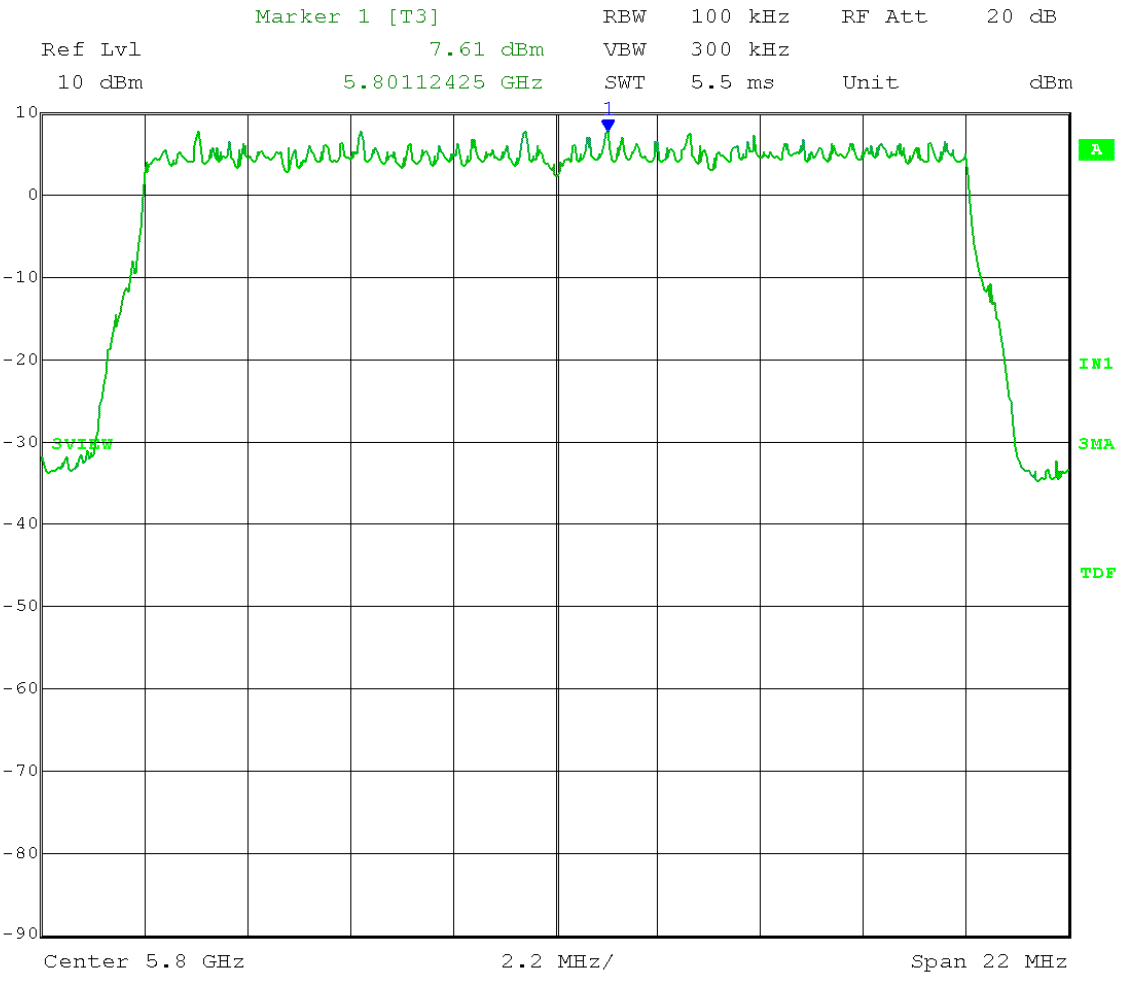
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 7.61 dBm – 30 dB = -22.39 dBm



Date: 25.APR.2012 11:23:13

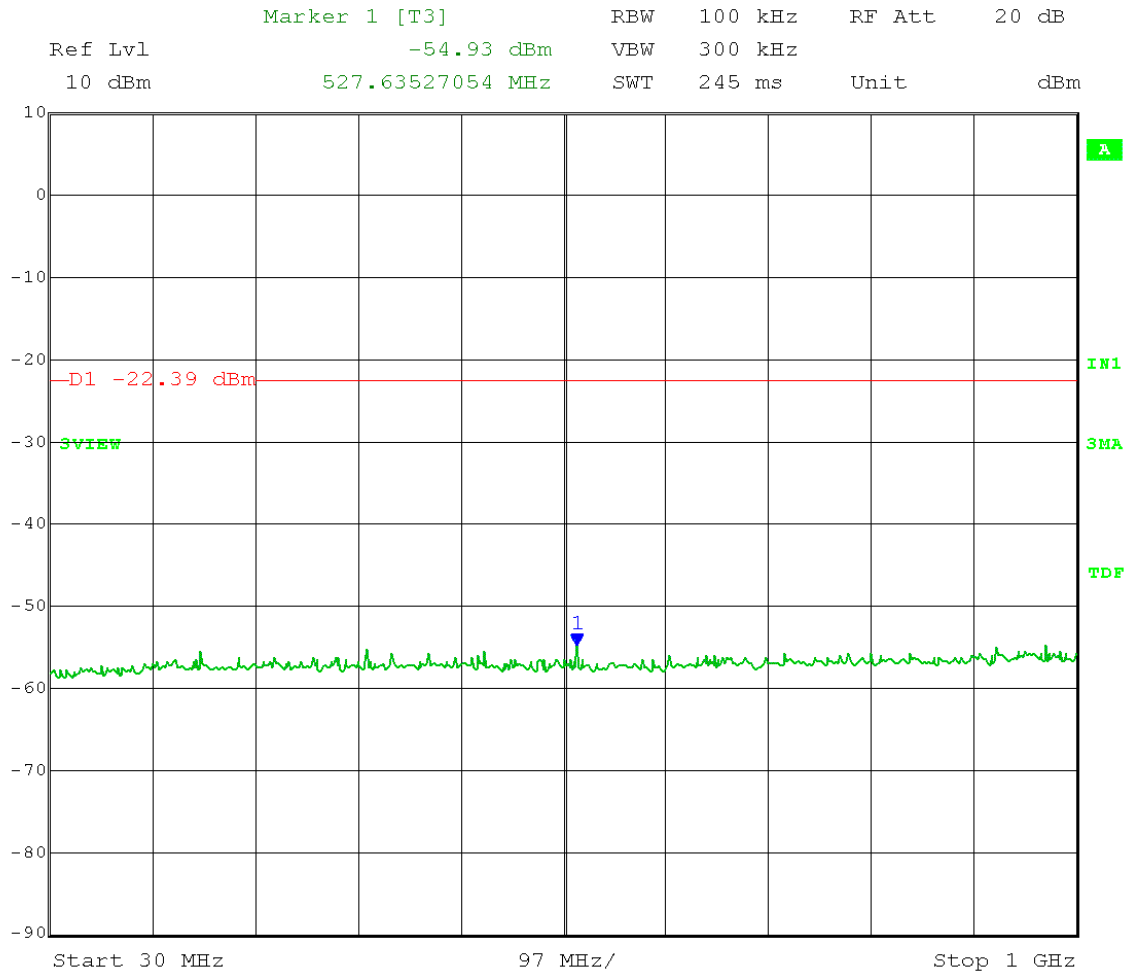
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 7.61 dBm – 30 dB = -22.39 dBm



Date: 25.APR.2012 11:31:56

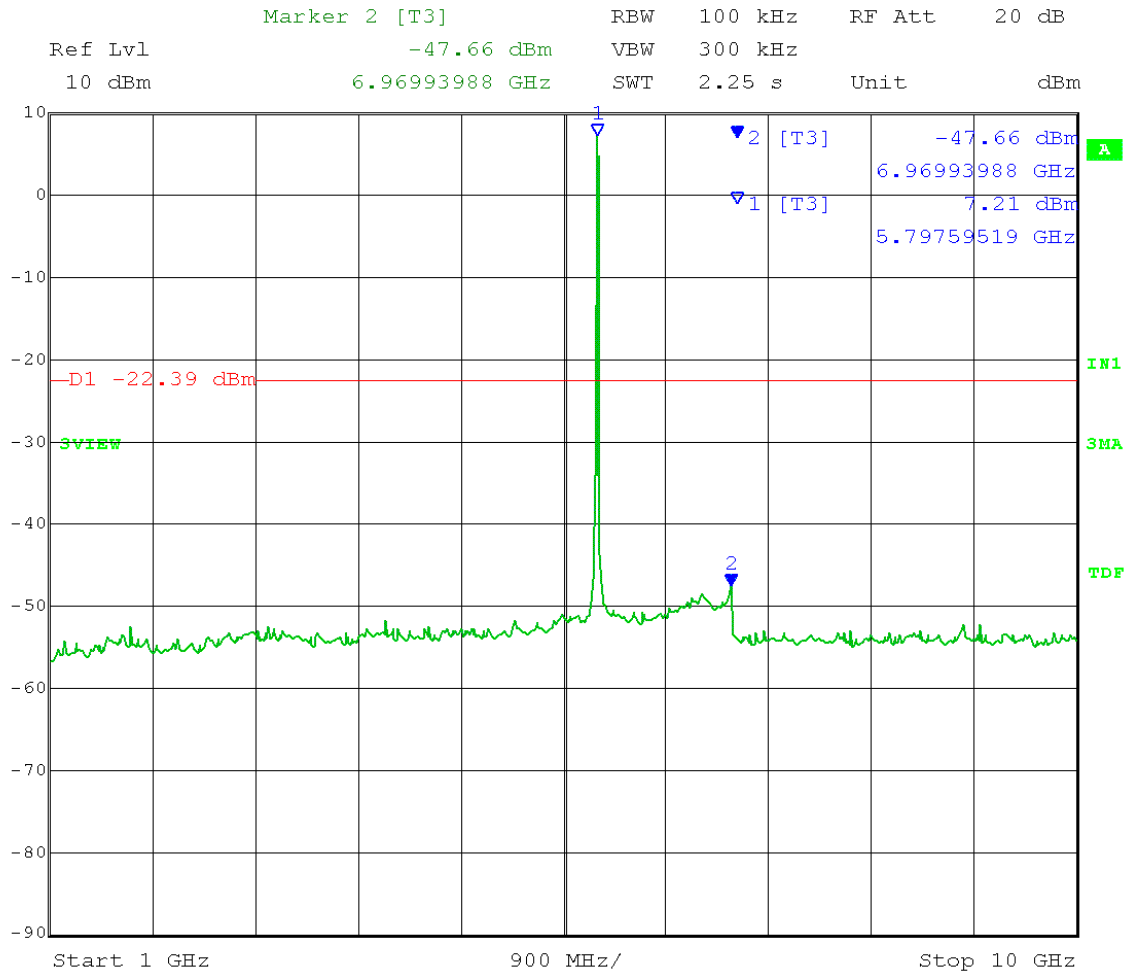
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 7.61 dBm – 30 dB = -22.39 dBm



Date: 25.APR.2012 11:26:54

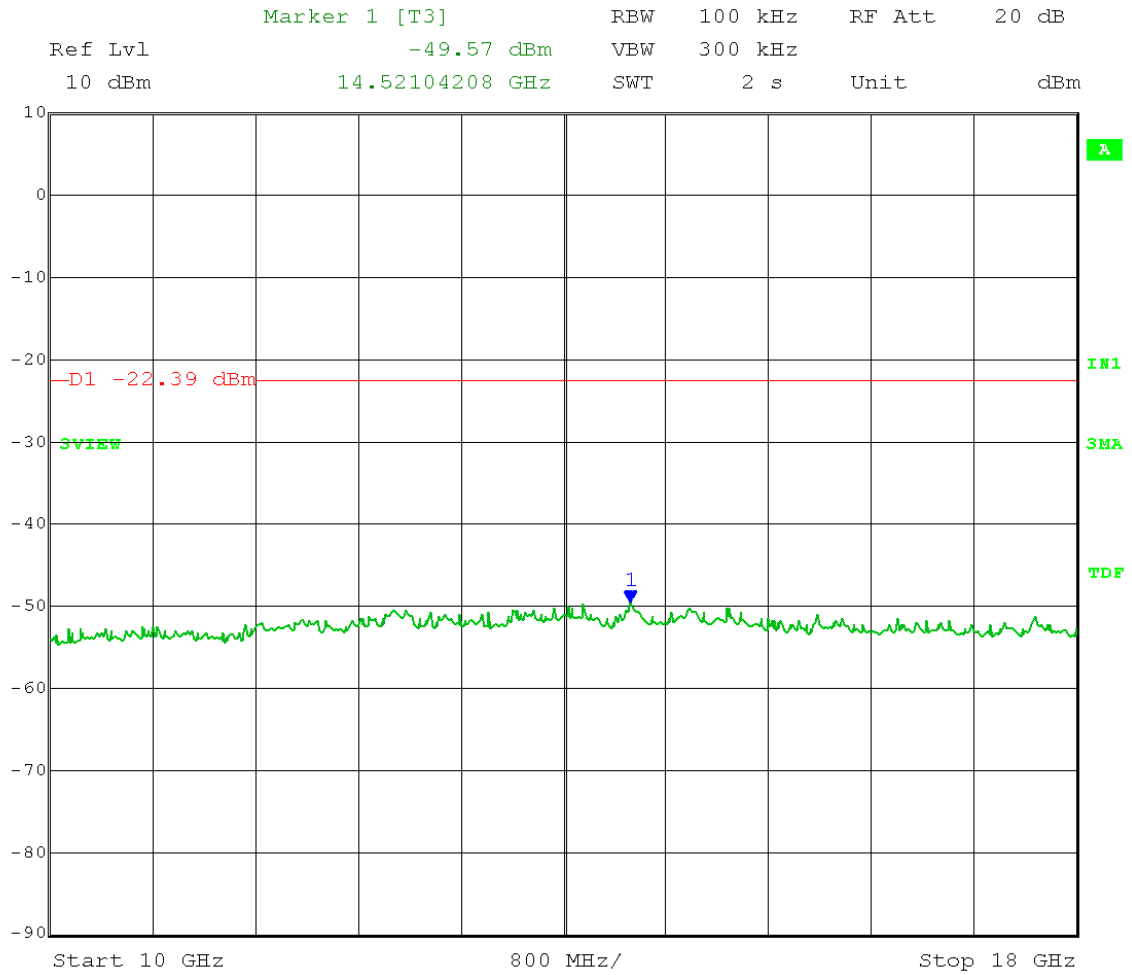
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 7.61 dBm – 30 dB = -22.39 dBm



Date: 25.APR.2012 11:28:35

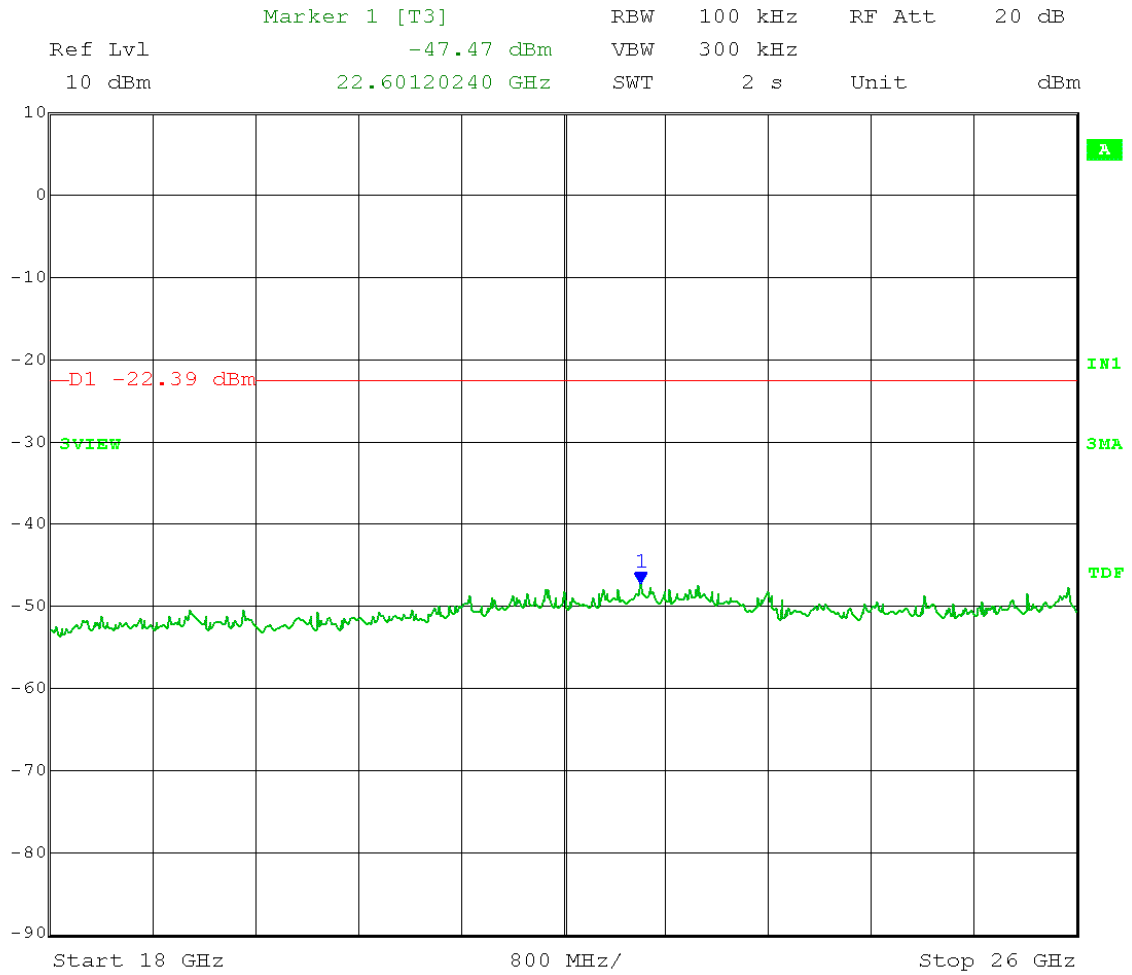
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 7.61 dBm – 30 dB = -22.39 dBm



Date: 25.APR.2012 11:30:01

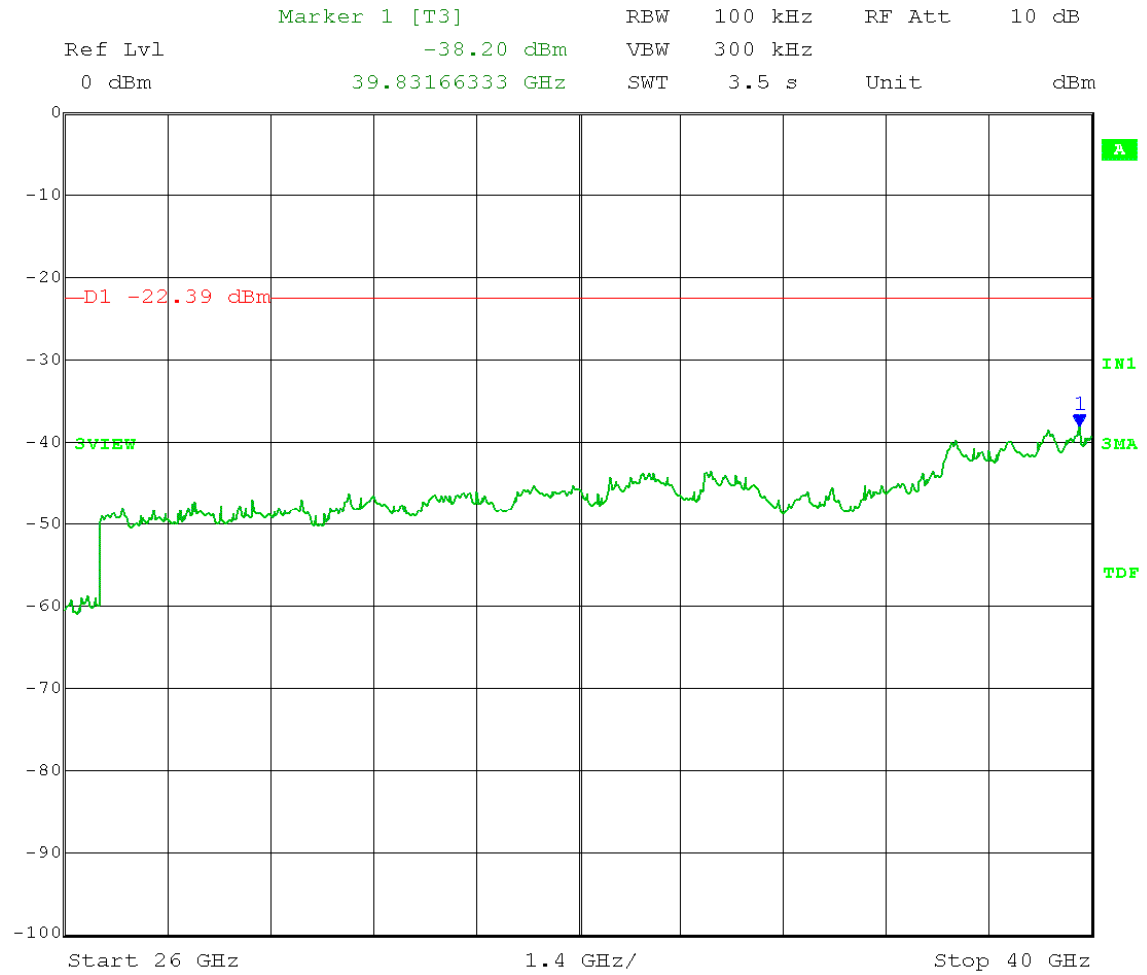
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 7.61 dBm – 30 dB = -22.39 dBm



Date: 25.APR.2012 11:34:00

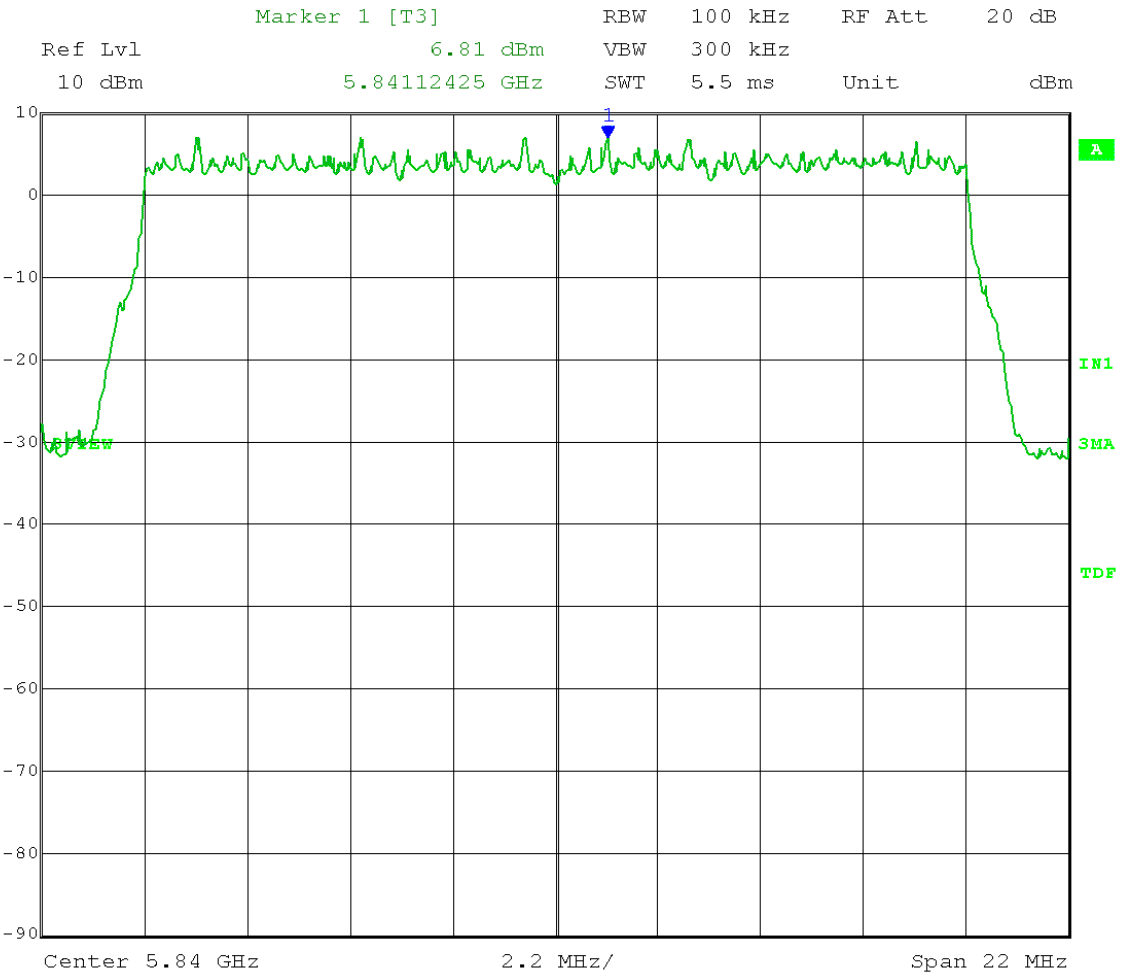
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.81 dBm – 30 dB = -23.19 dBm



Date: 23.APR.2012 12:47:46

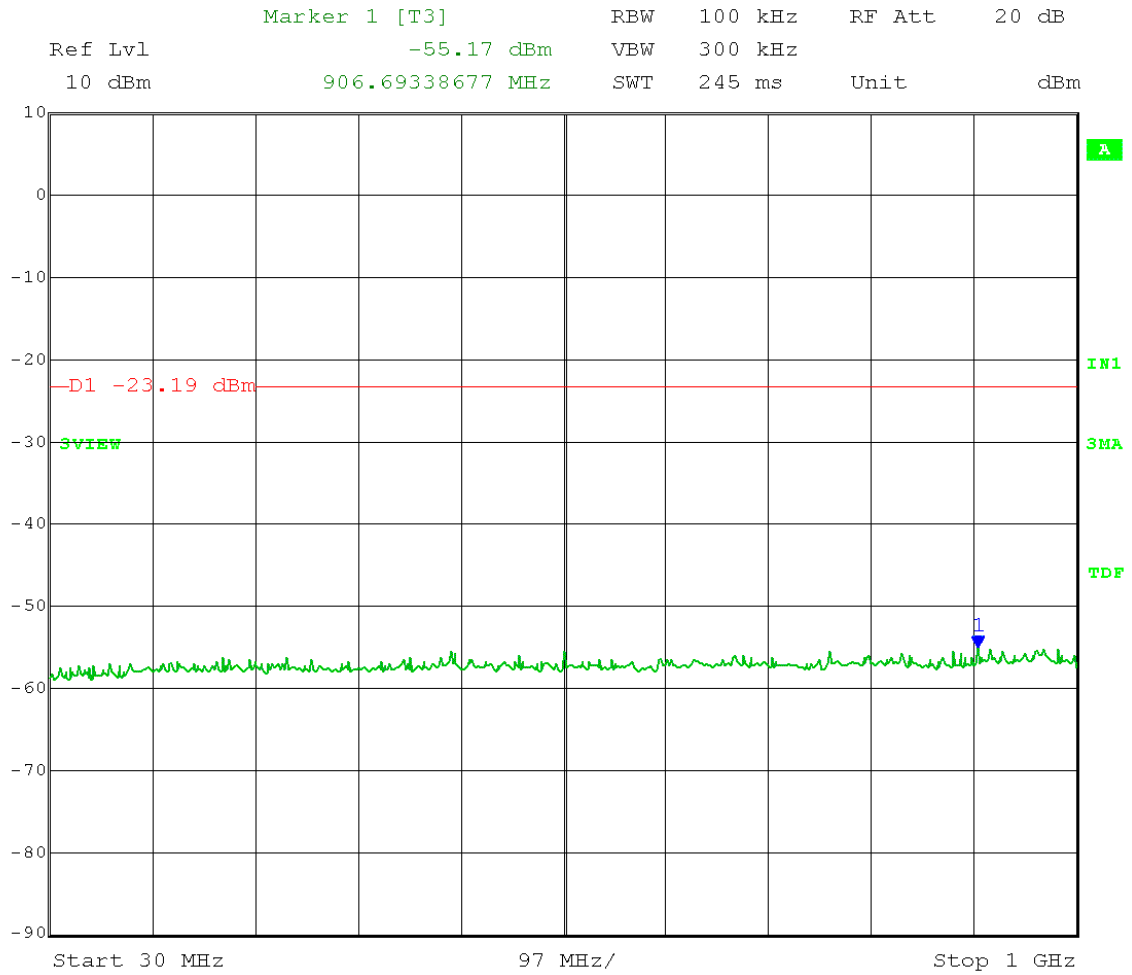
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 6.81 dBm – 30 dB = -23.19 dBm



Date: 25.APR.2012 13:05:40

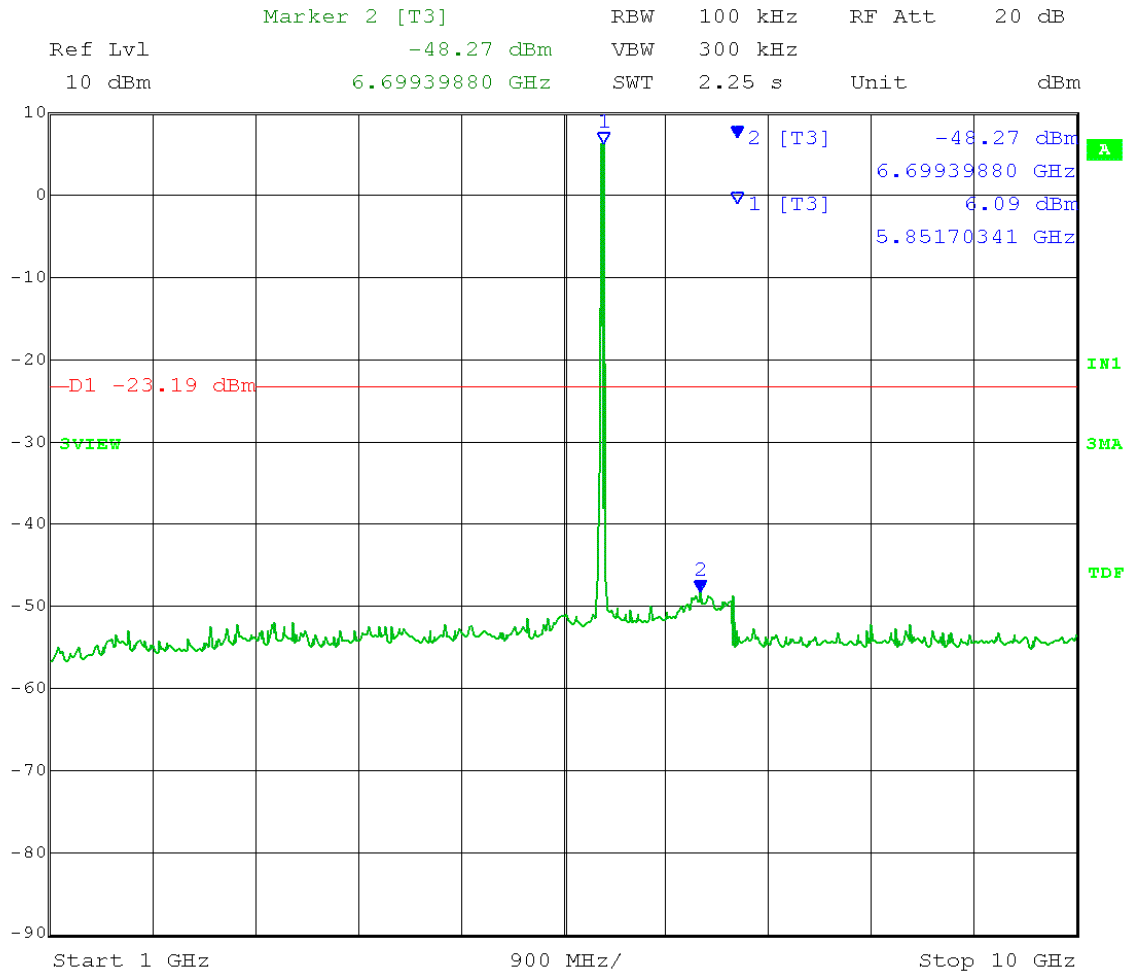
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 6.81 dBm – 30 dB = -23.19 dBm



Date: 25.APR.2012 13:01:23

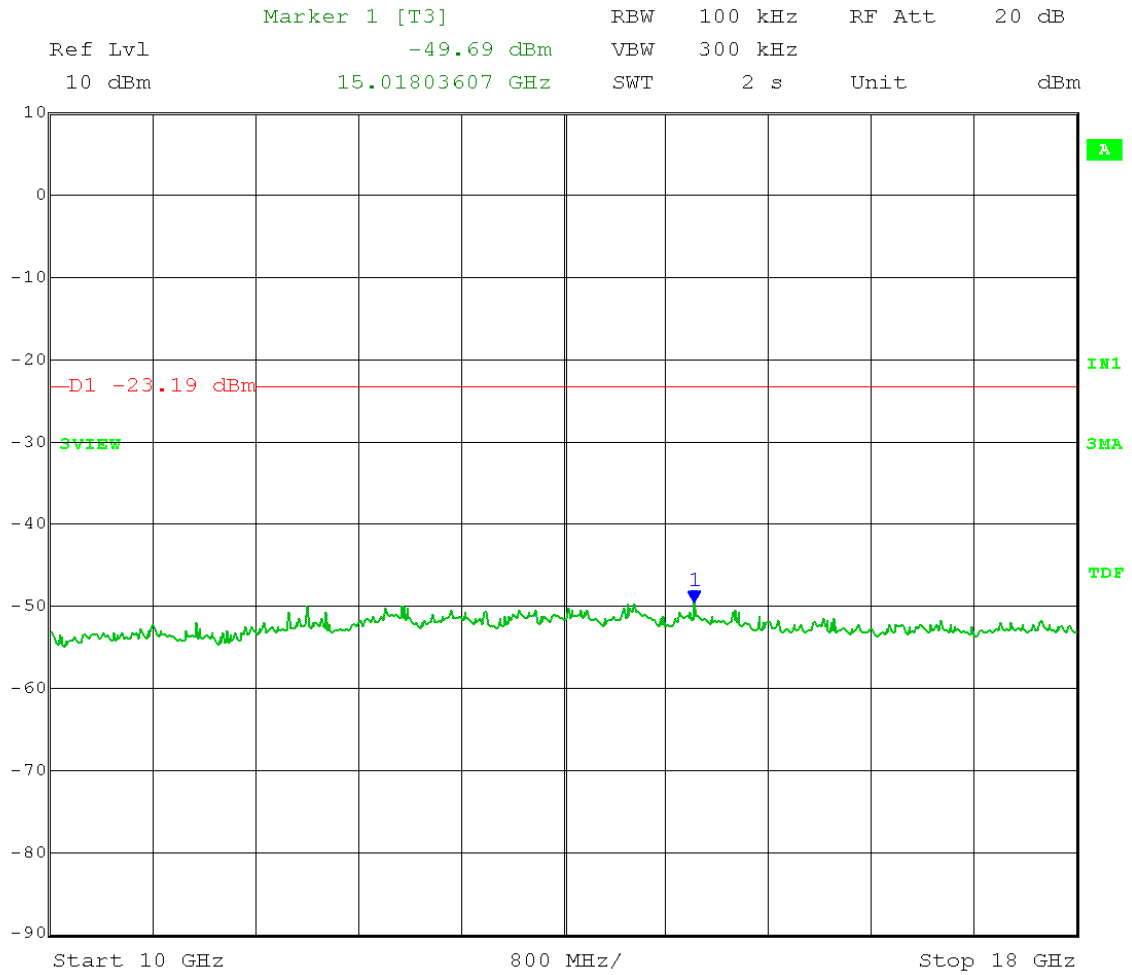
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 6.81 dBm – 30 dB = -23.19 dBm



Date: 25.APR.2012 13:02:54

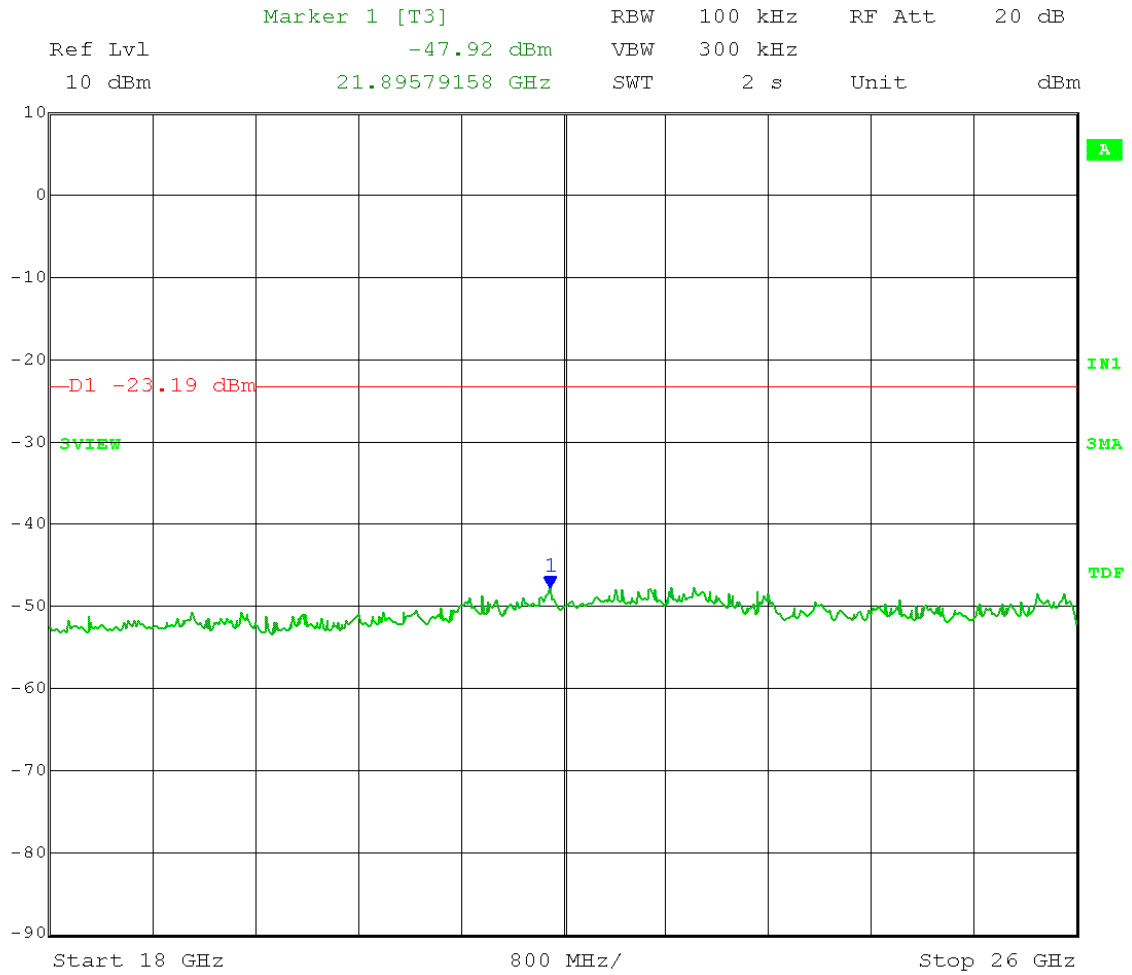
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 6.81 dBm – 30 dB = -23.19 dBm



Date: 25.APR.2012 13:04:11

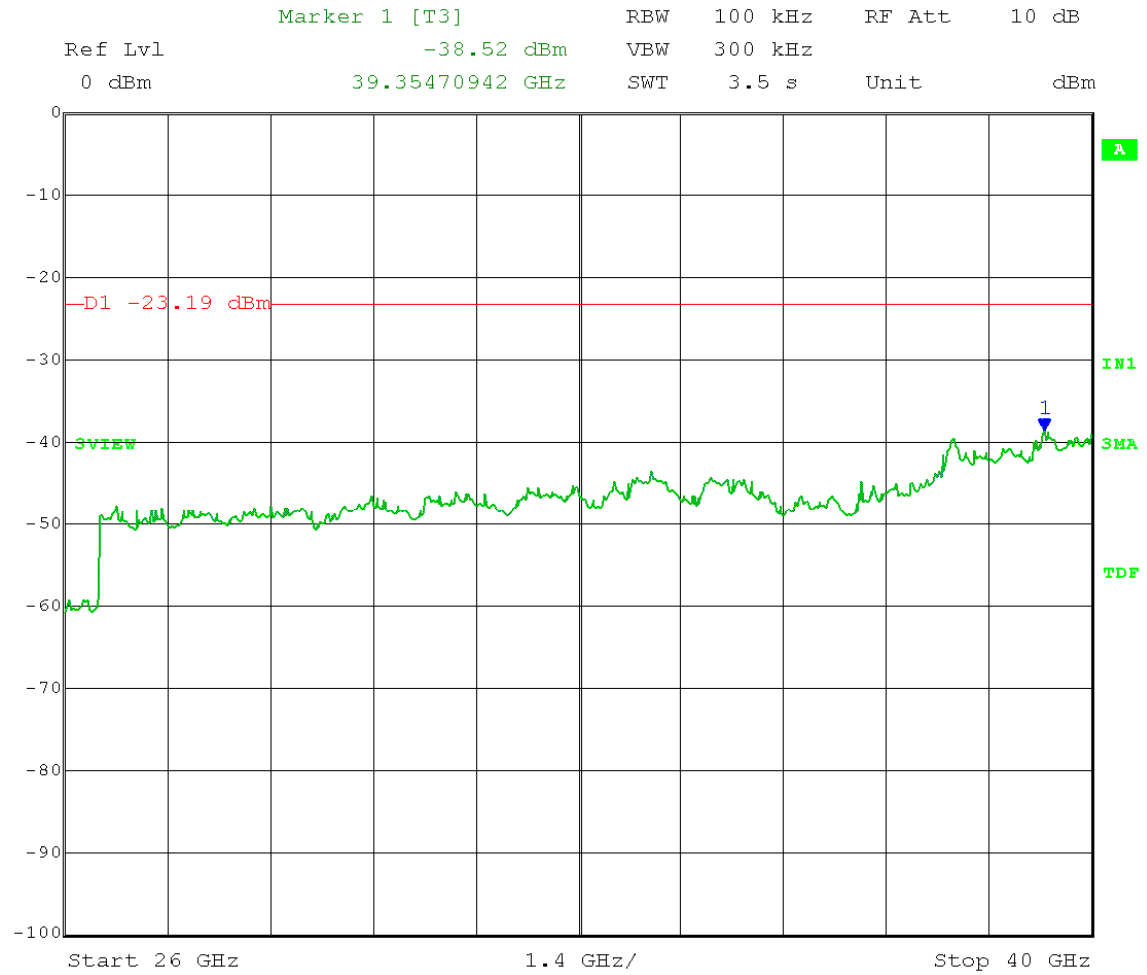
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 6.81 dBm – 30 dB = -23.19 dBm



Date: 25.APR.2012 13:07:24

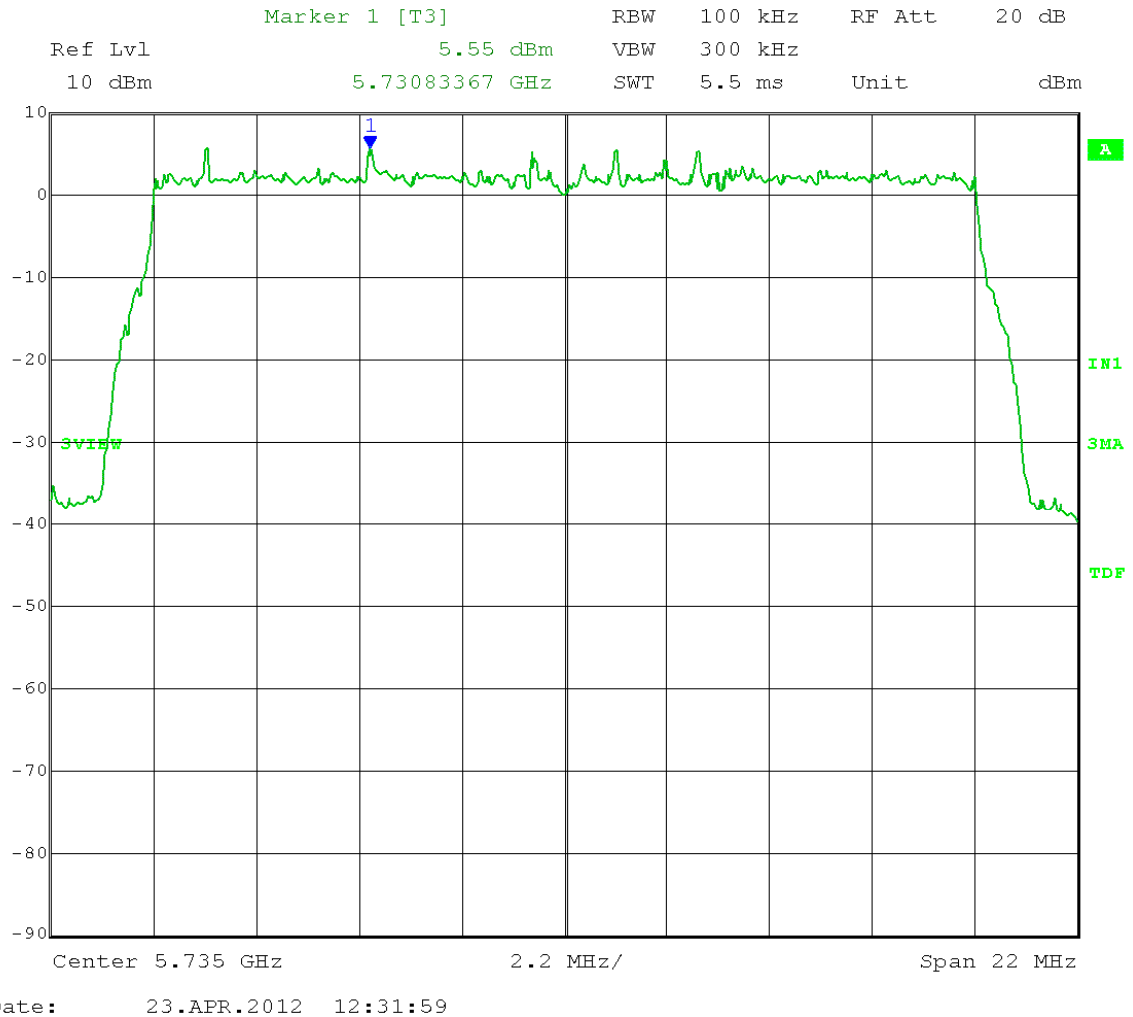
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.55 dBm – 30 dB = -24.45 dBm



Date: 23.APR.2012 12:31:59

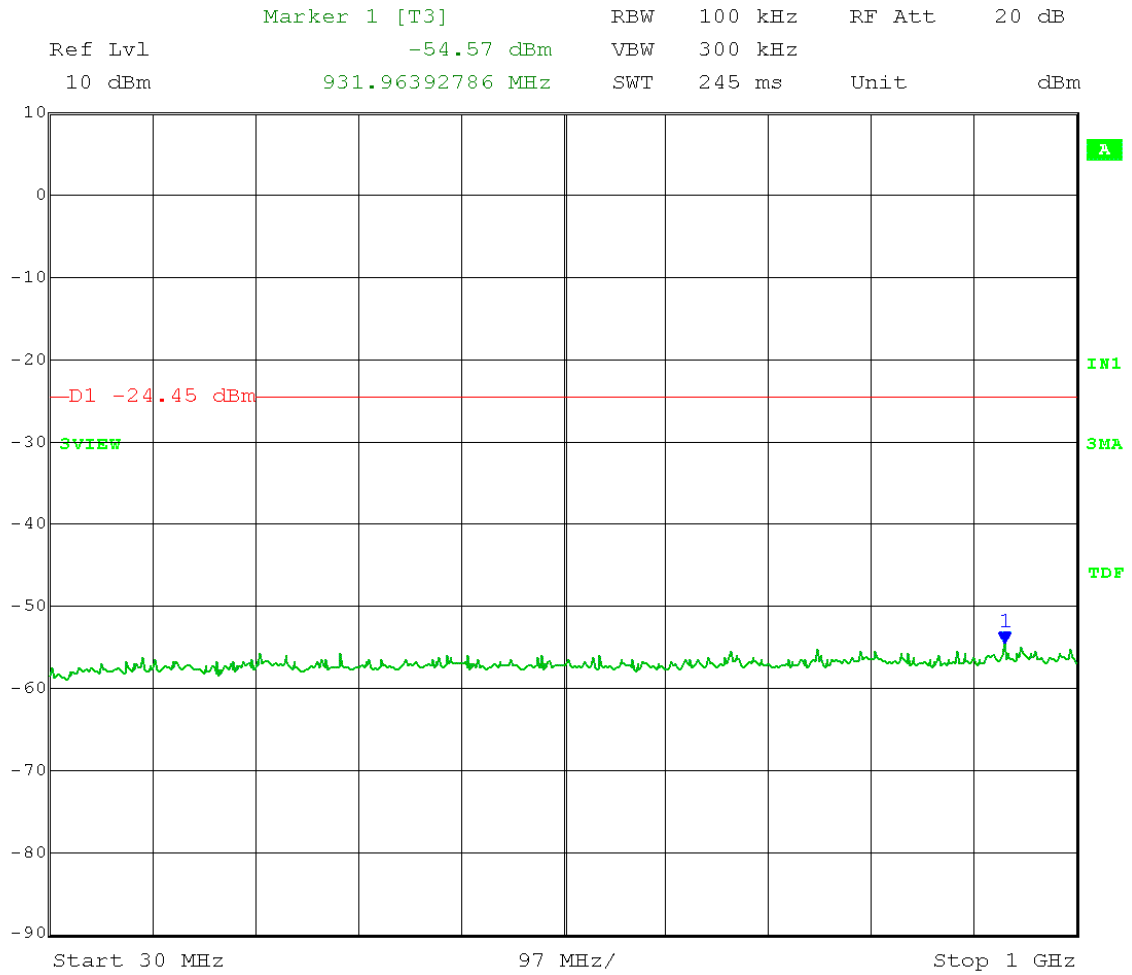
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 5.55 dBm – 30 dB = -24.45 dBm



Date: 25.APR.2012 10:59:41

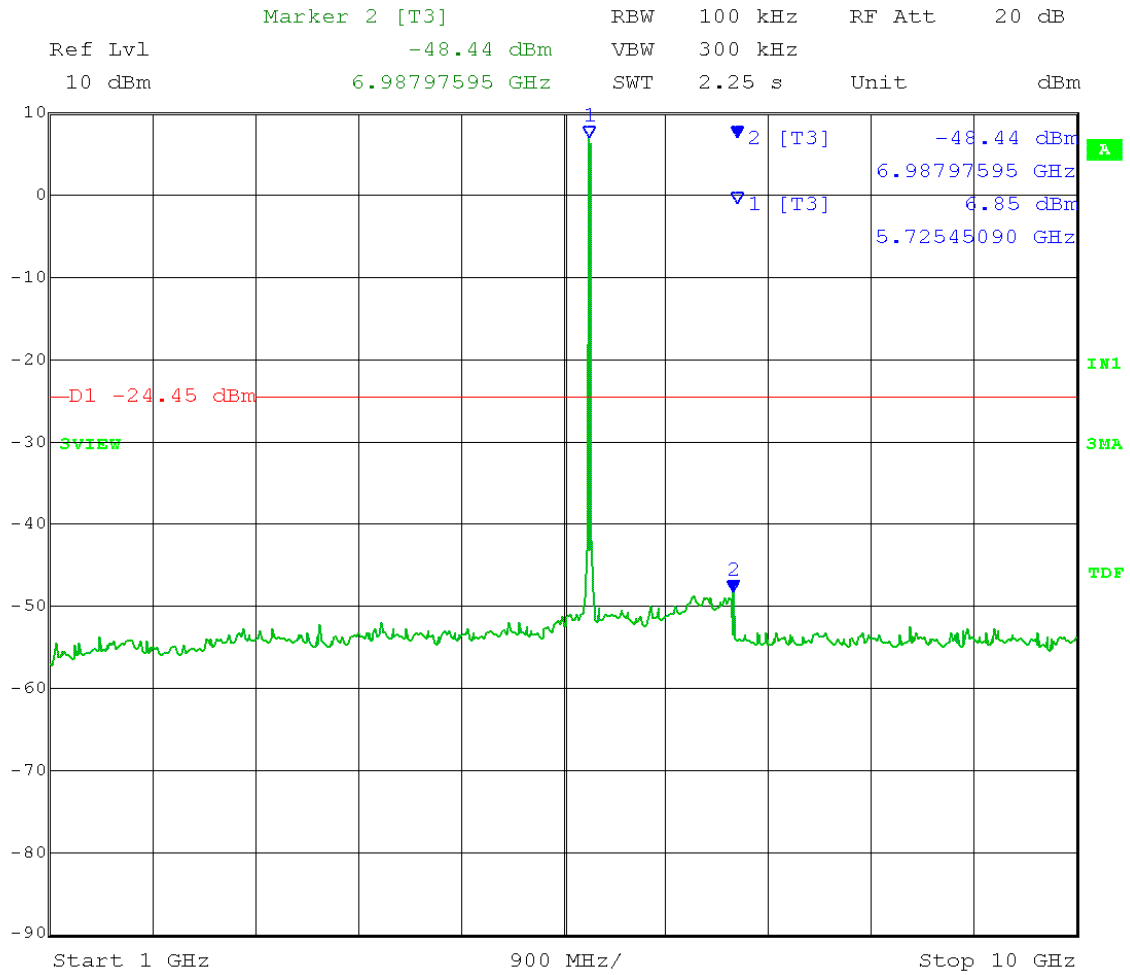
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 5.55 dBm – 30 dB = -24.45 dBm



Date: 25.APR.2012 10:54:52

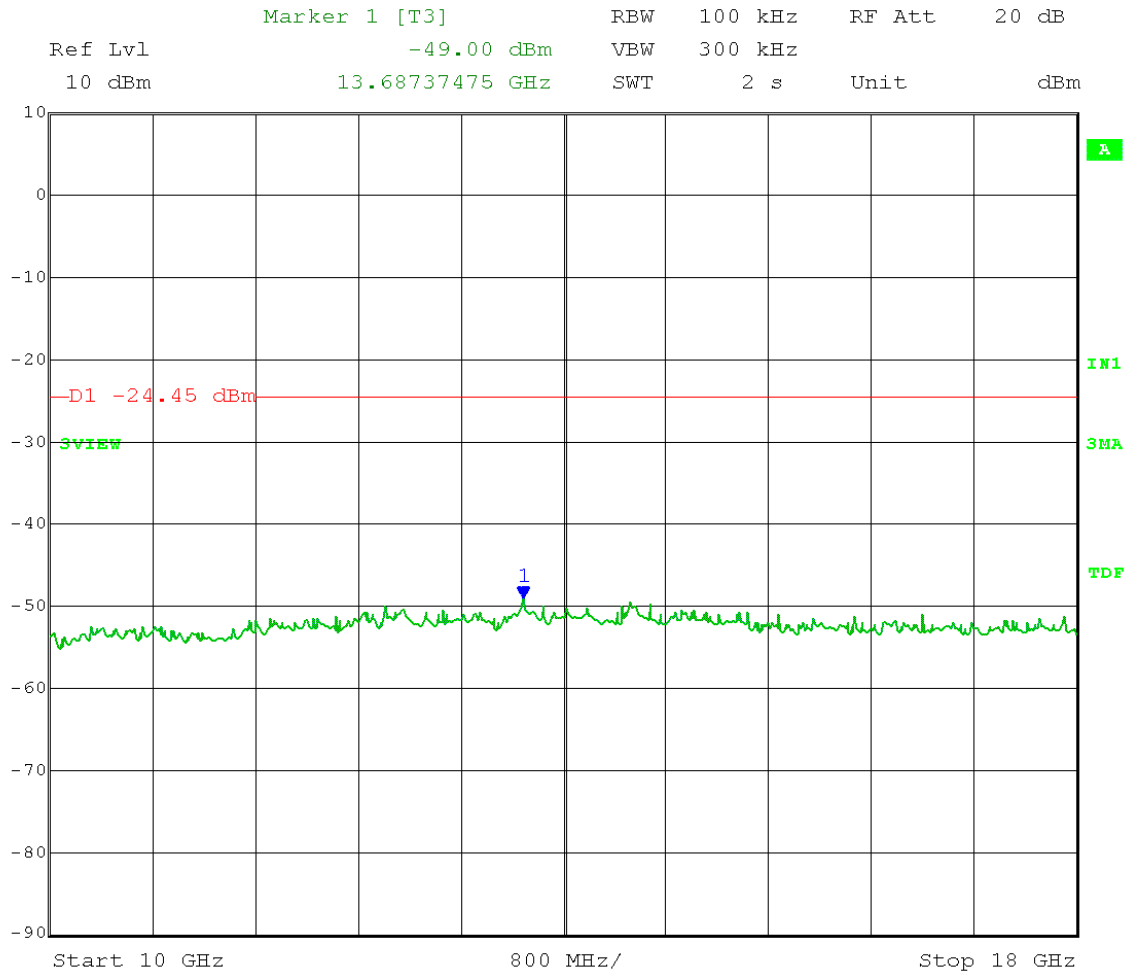
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 5.55 dBm – 30 dB = -24.45 dBm



Date: 25.APR.2012 10:56:22

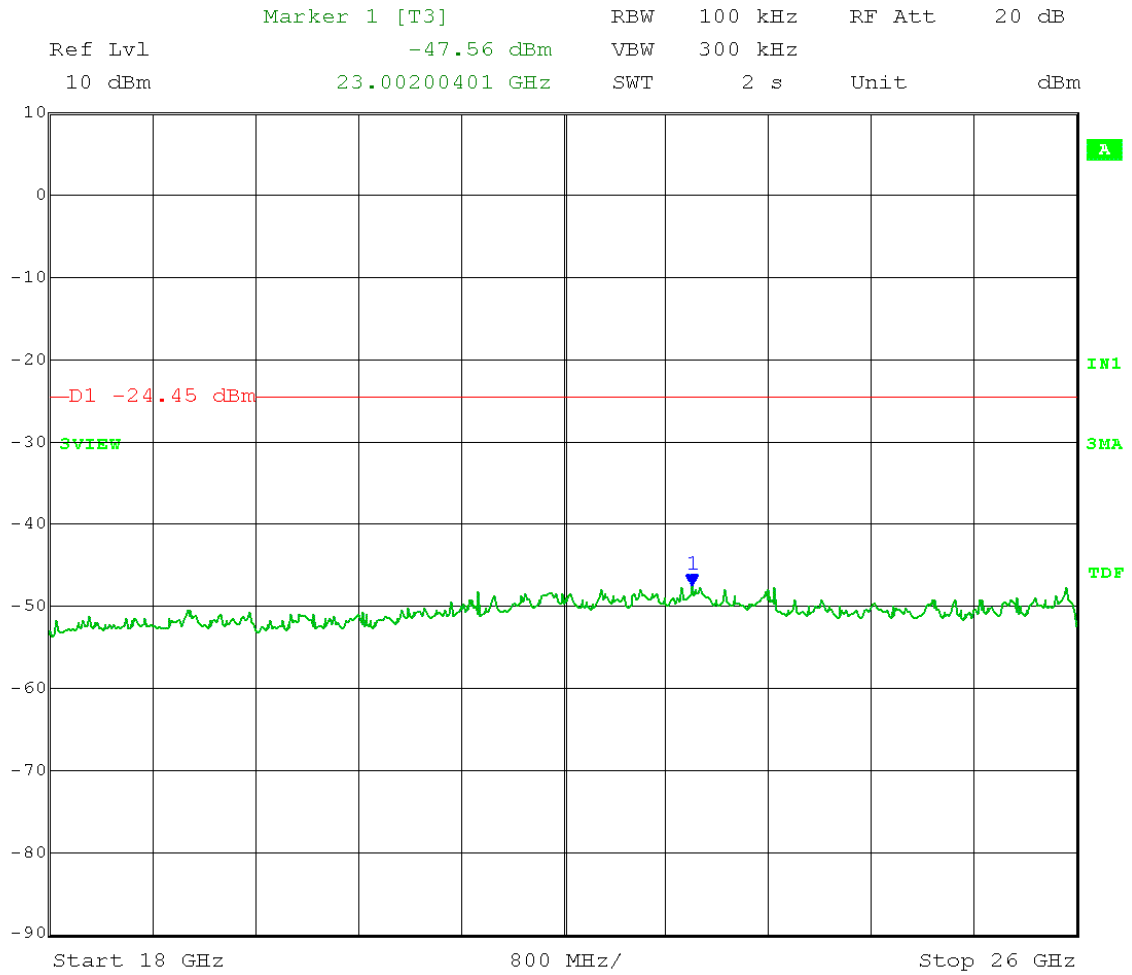
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 5.55 dBm – 30 dB = -24.45 dBm



Date: 25.APR.2012 10:57:55

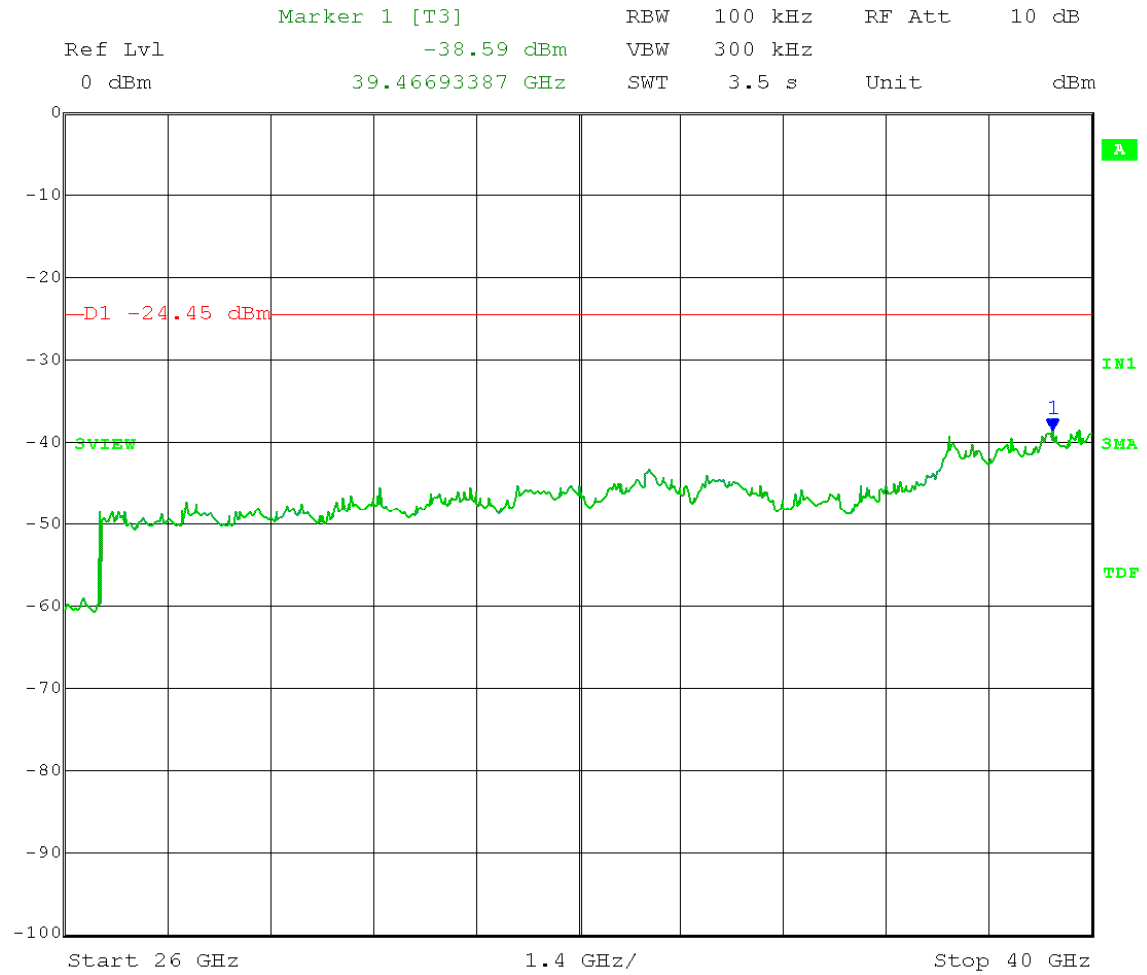
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 5.55 dBm – 30 dB = -24.45 dBm



Date: 25.APR.2012 11:01:35

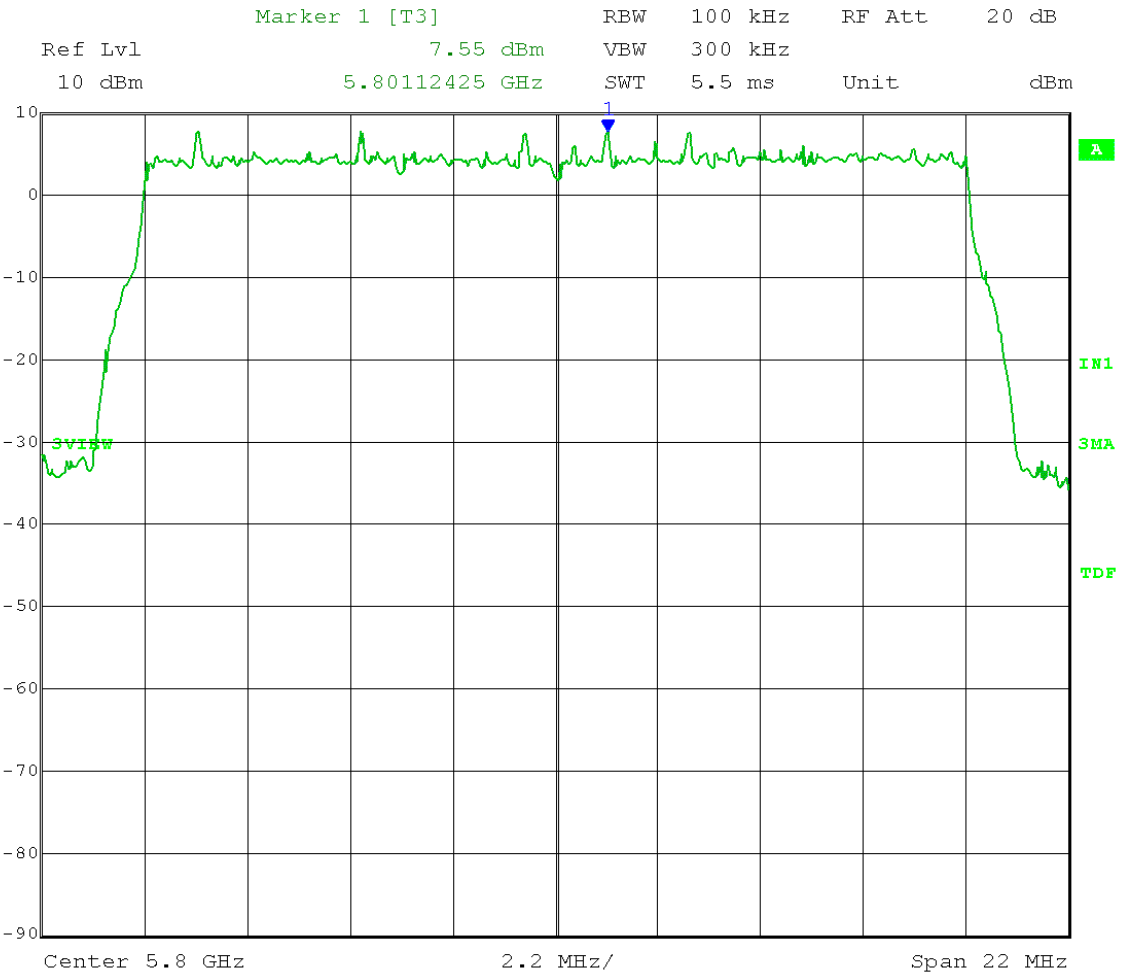
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 7.55 dBm – 30 dB = -22.45 dBm



Date: 25.APR.2012 11:51:04

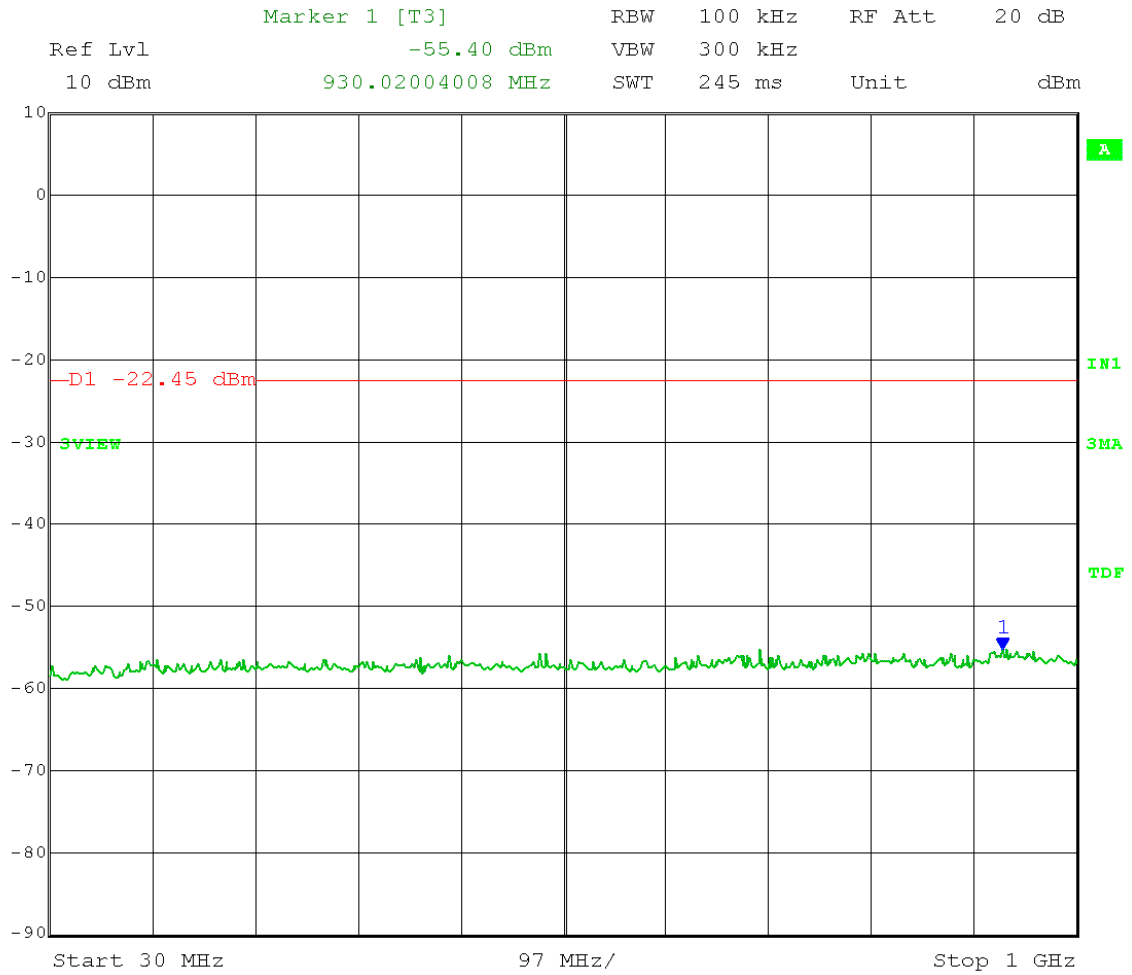
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 7.55 dBm – 30 dB = -22.45 dBm



Date: 25.APR.2012 11:59:02

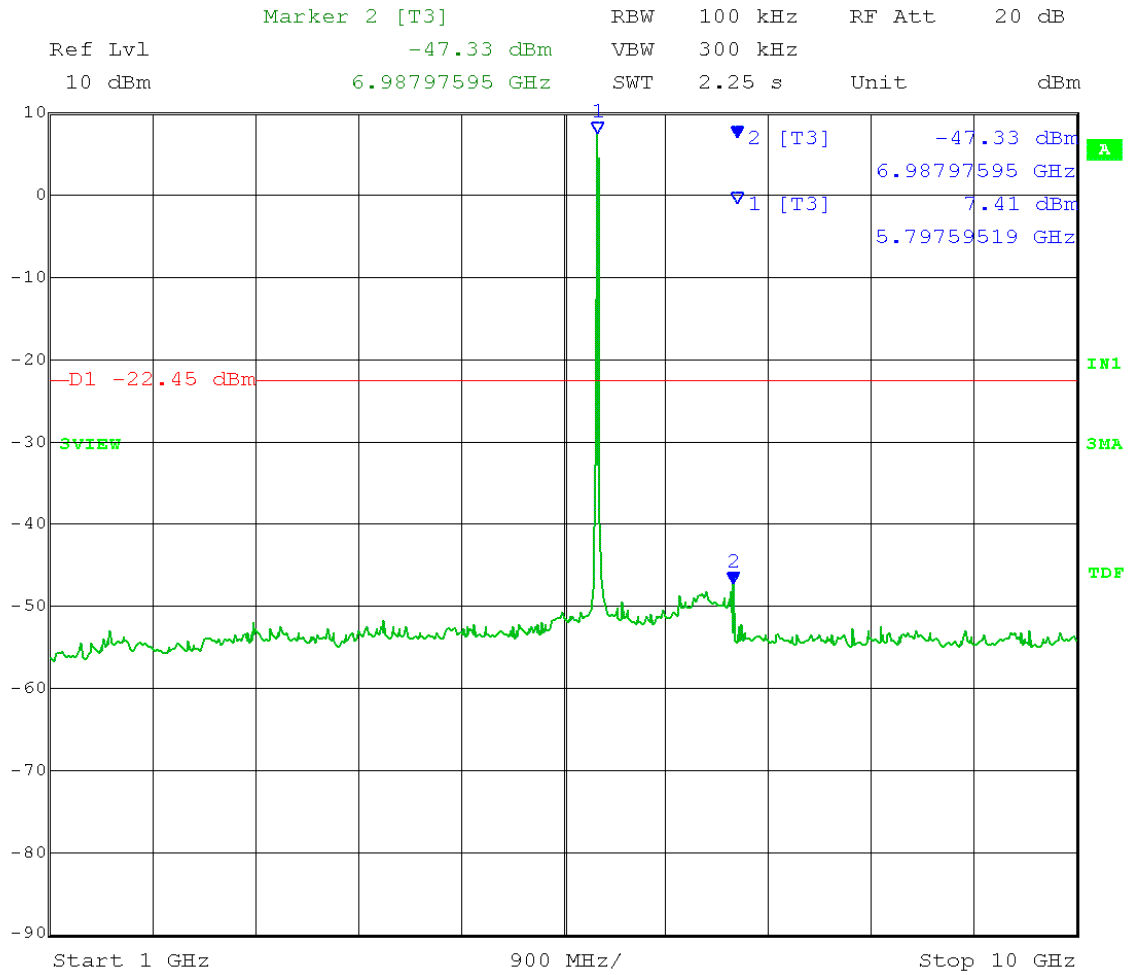
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 7.55 dBm – 30 dB = -22.45 dBm



Date: 25.APR.2012 11:54:14

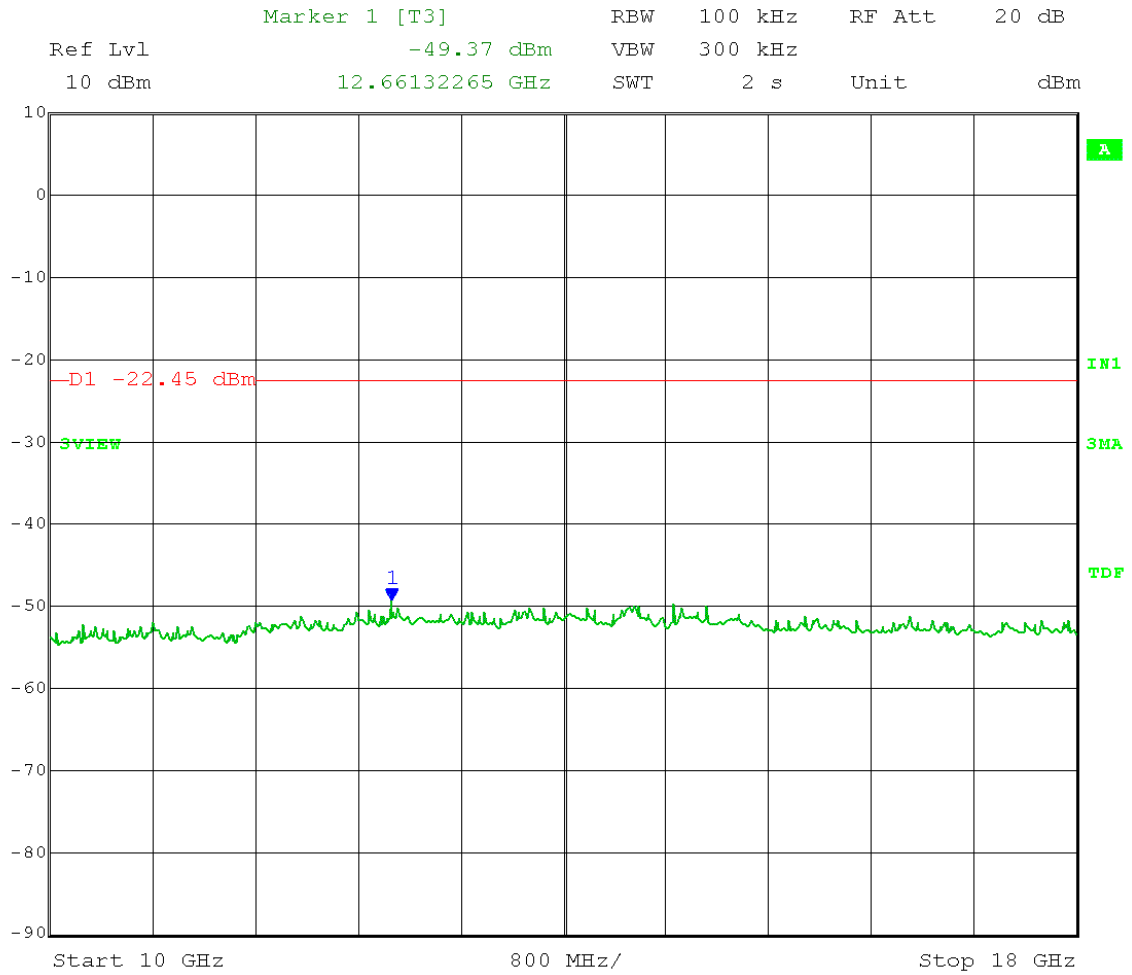
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 7.55 dBm – 30 dB = -22.45 dBm



Date: 25.APR.2012 11:55:43

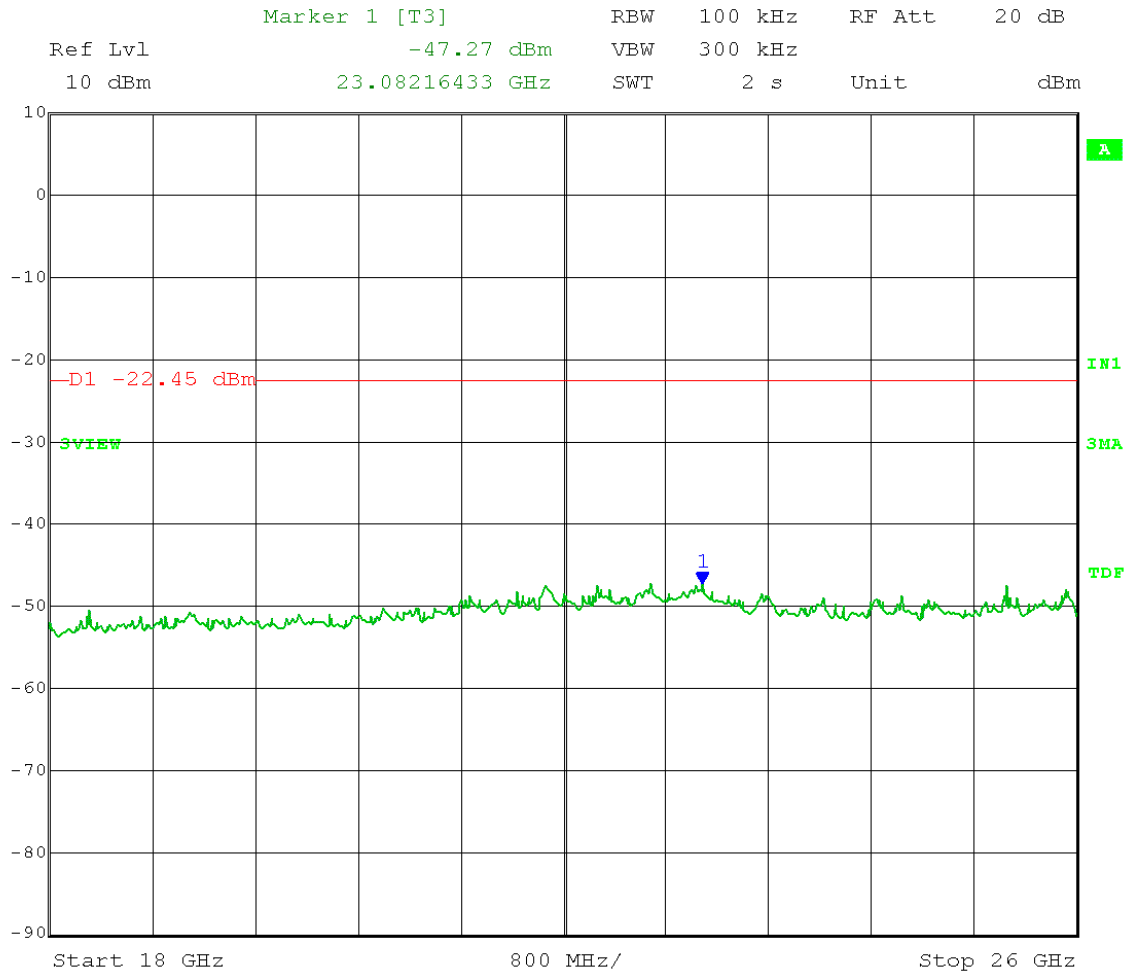
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 7.55 dBm – 30 dB = -22.45 dBm



Date: 25.APR.2012 11:57:28

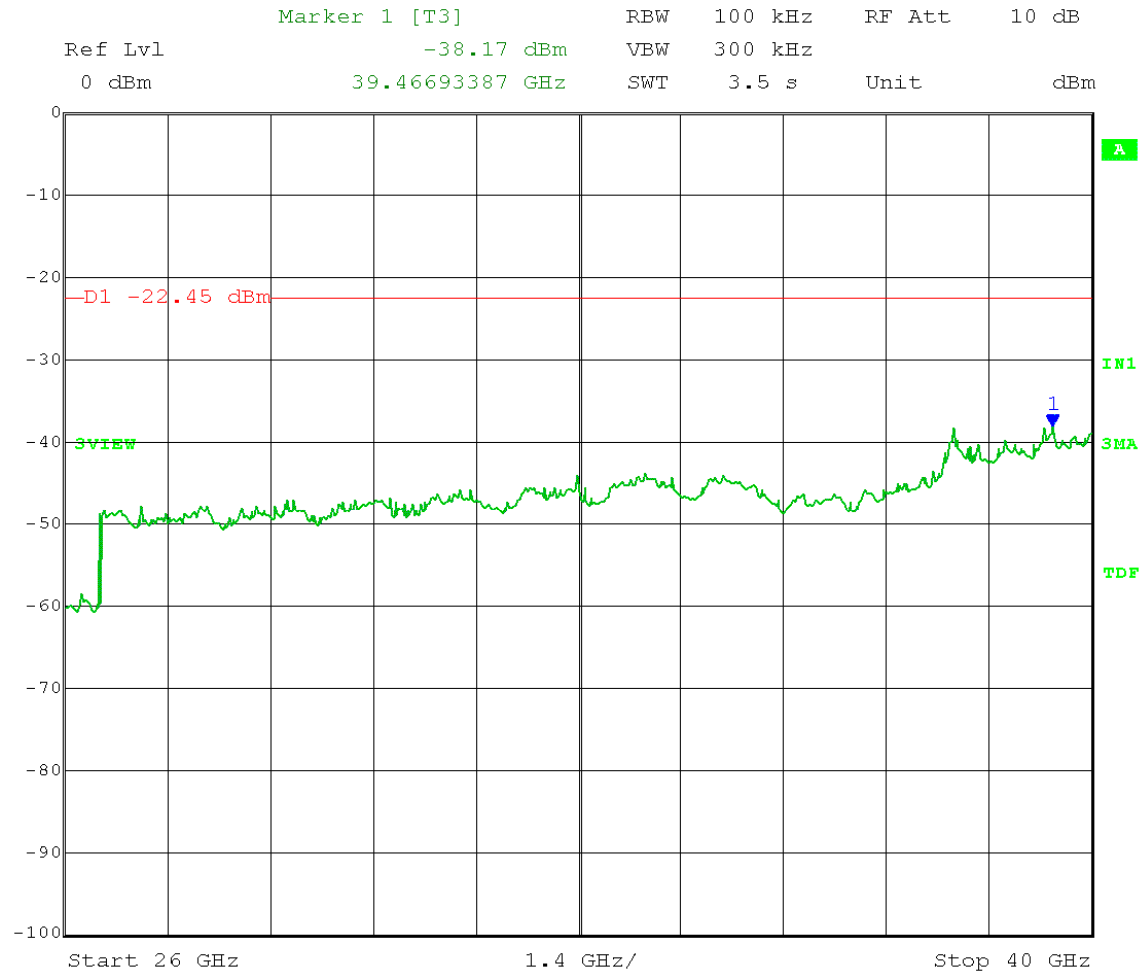
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 7.55 dBm – 30 dB = -22.45 dBm



Date: 25.APR.2012 12:00:52

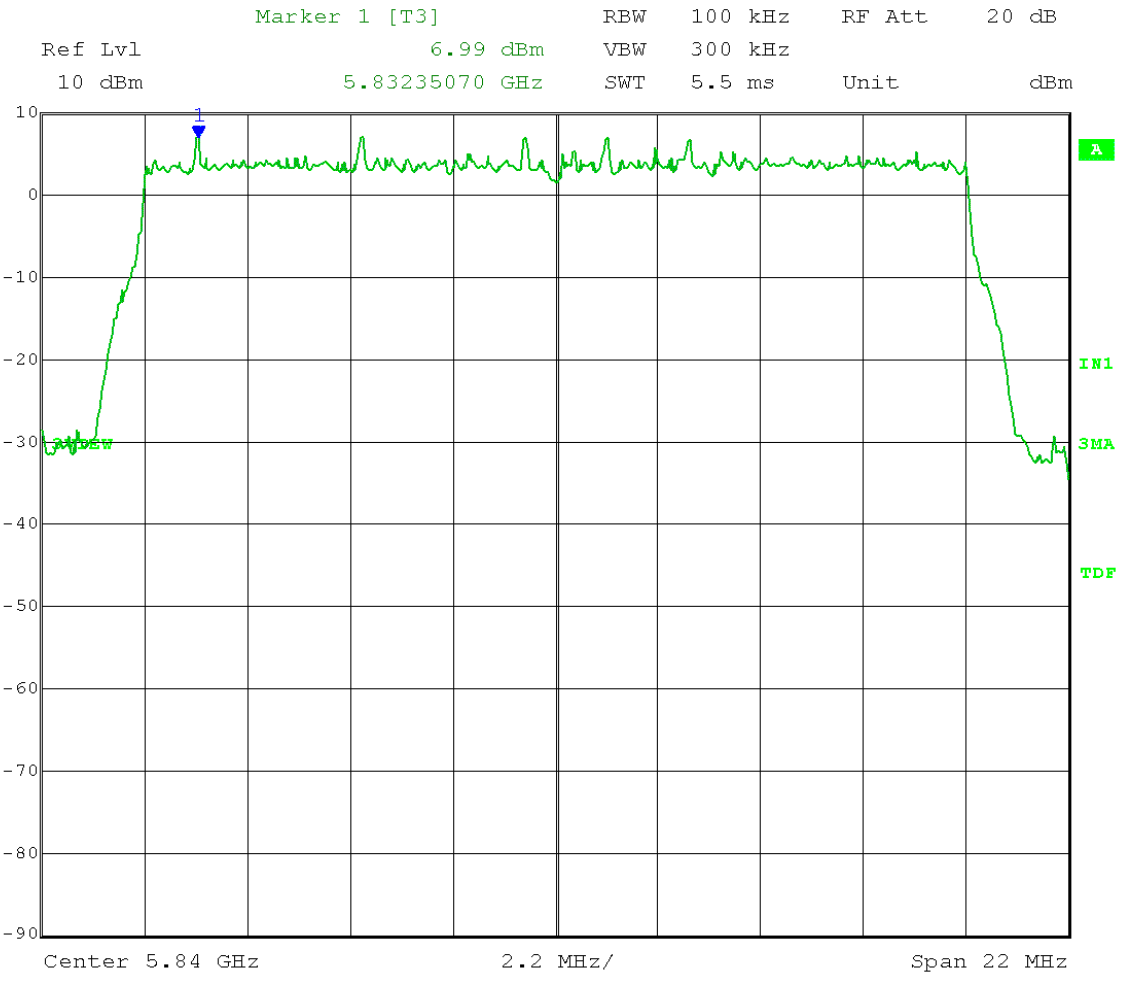
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.99 dBm – 30 dB = -23.01 dBm



Date: 23.APR.2012 12:39:08

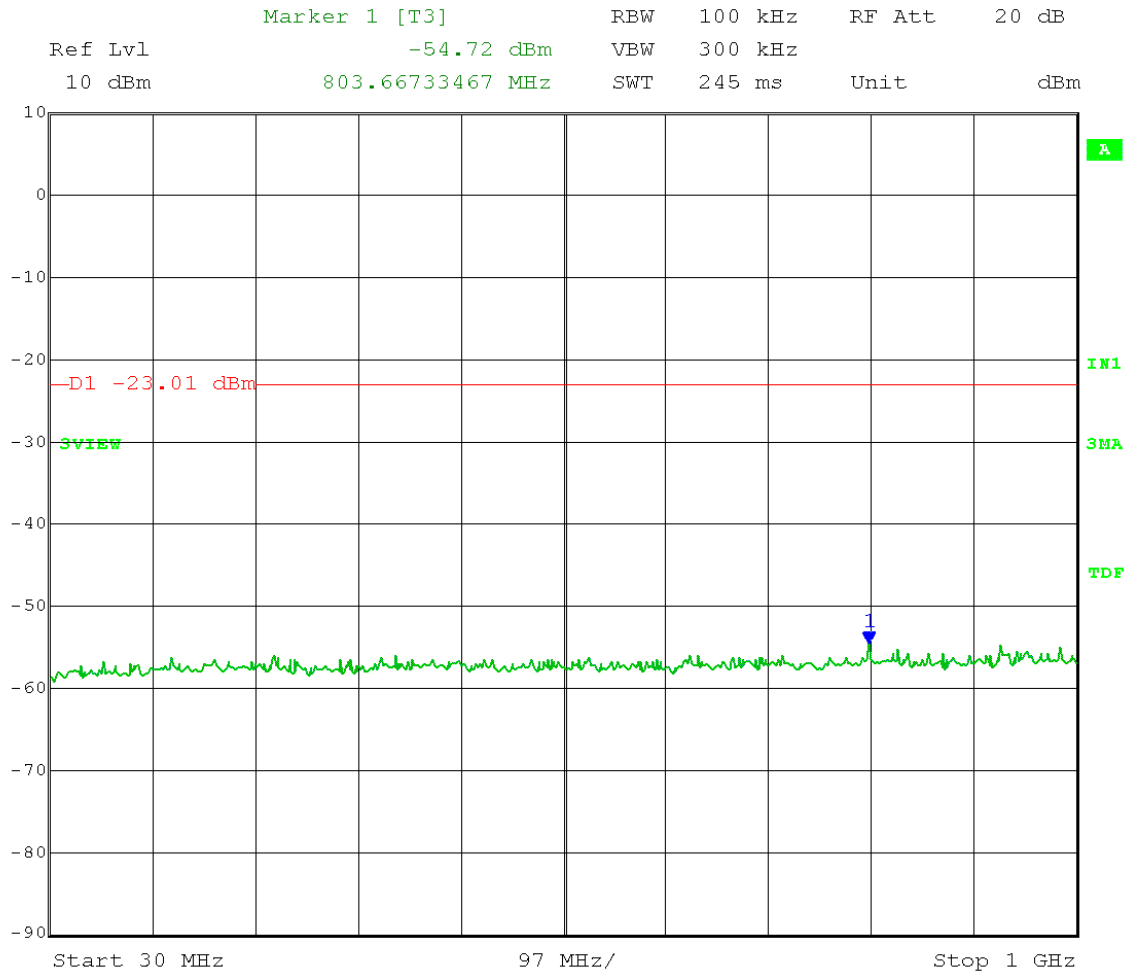
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 6.99 dBm – 30 dB = -23.01 dBm



Date: 25.APR.2012 12:08:54

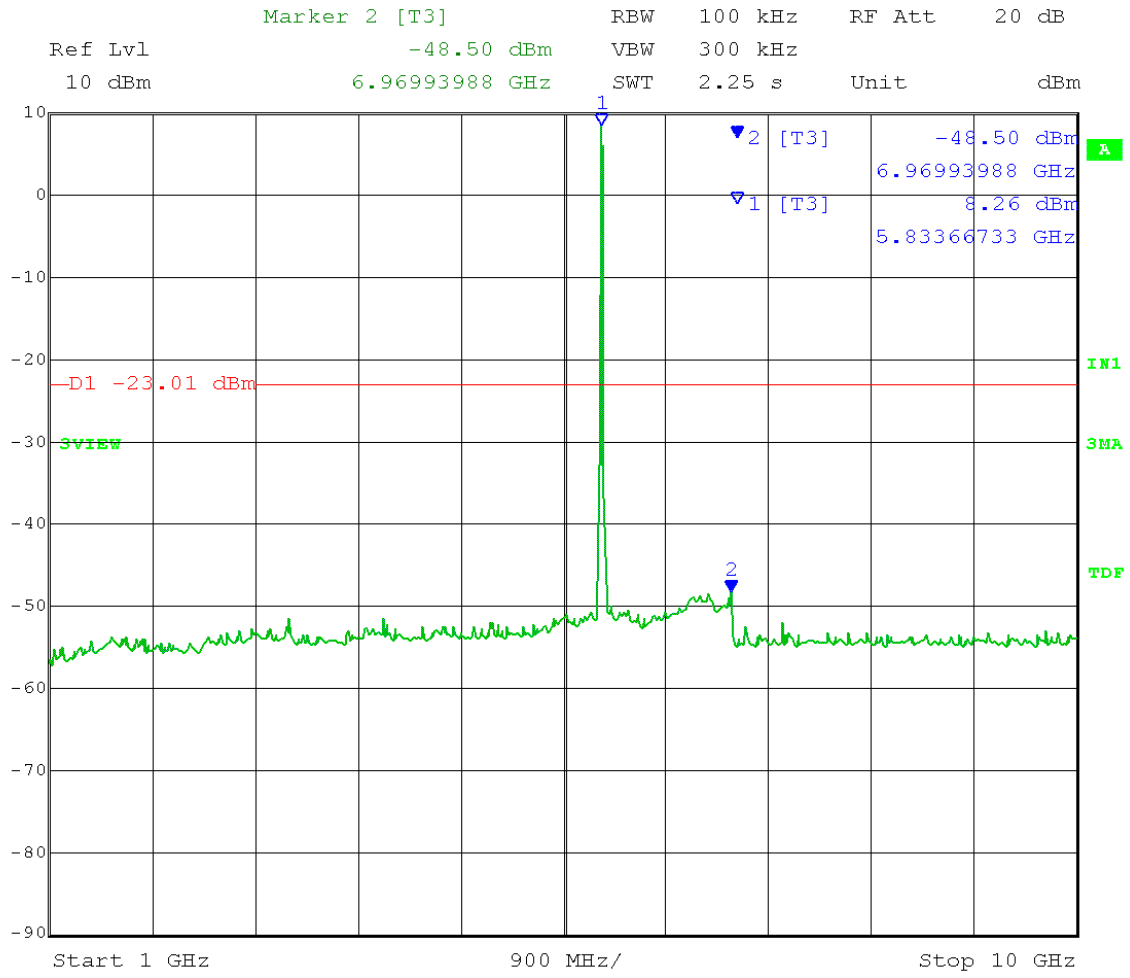
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 6.99 dBm – 30 dB = -23.01 dBm



Date: 25.APR.2012 12:04:06

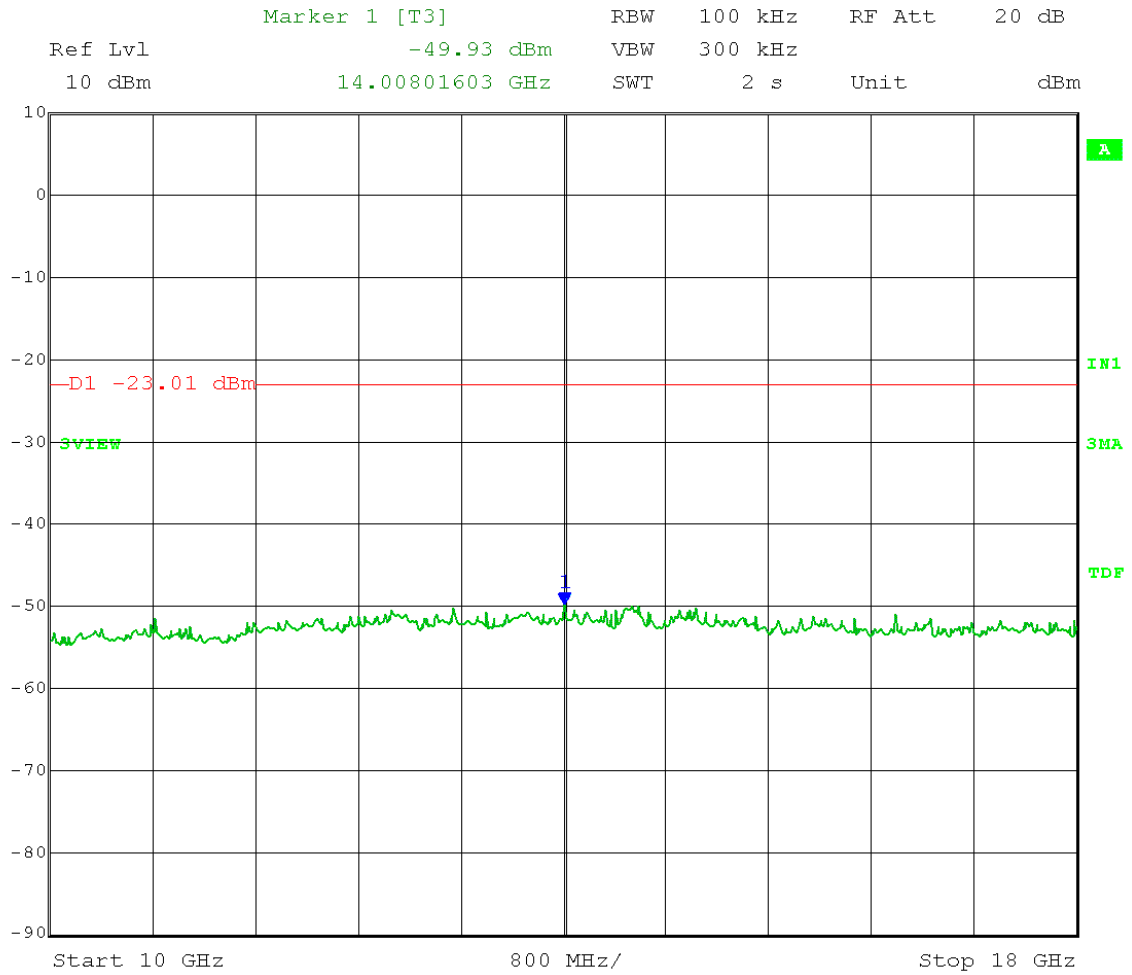
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 6.99 dBm – 30 dB = -23.01 dBm



Date: 25.APR.2012 12:05:48

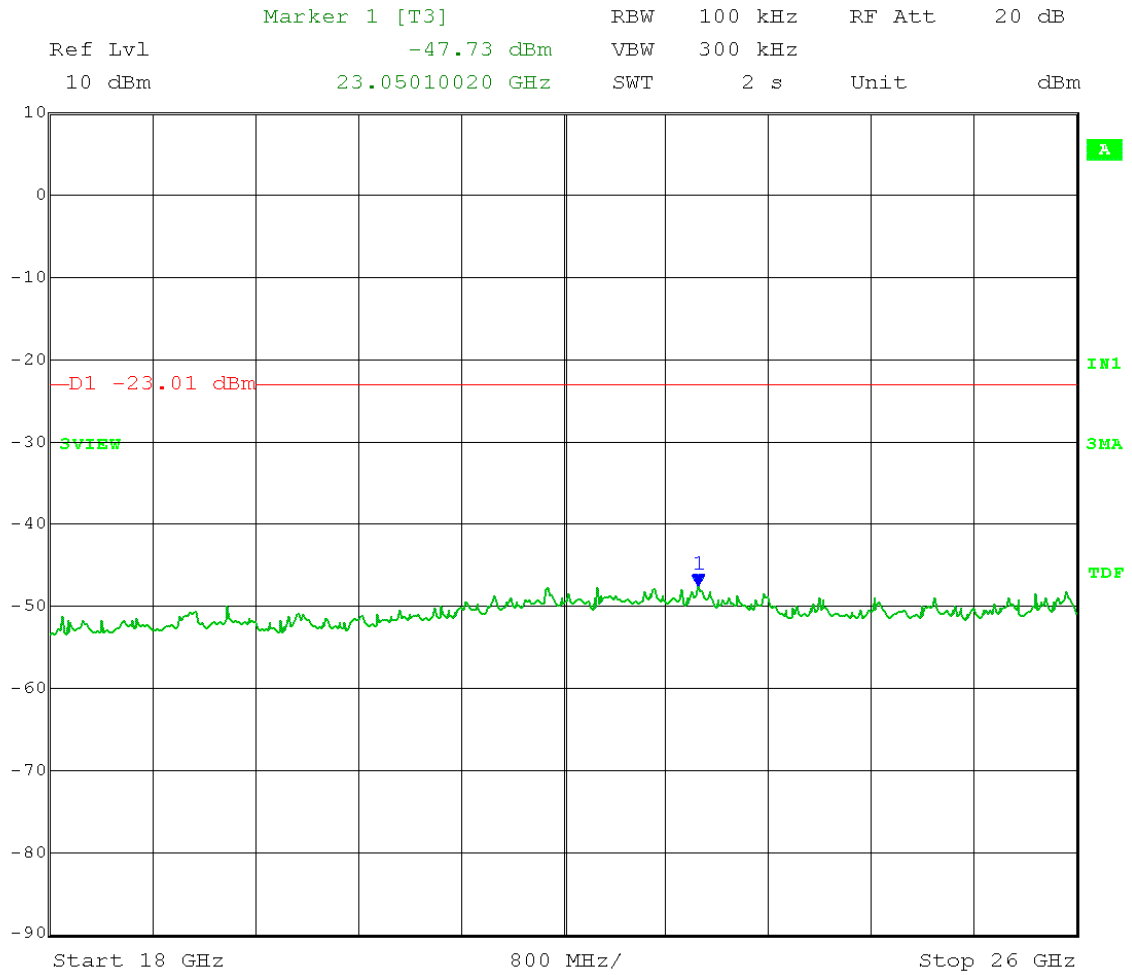
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 6.99 dBm – 30 dB = -23.01 dBm



Date: 25.APR.2012 12:07:21

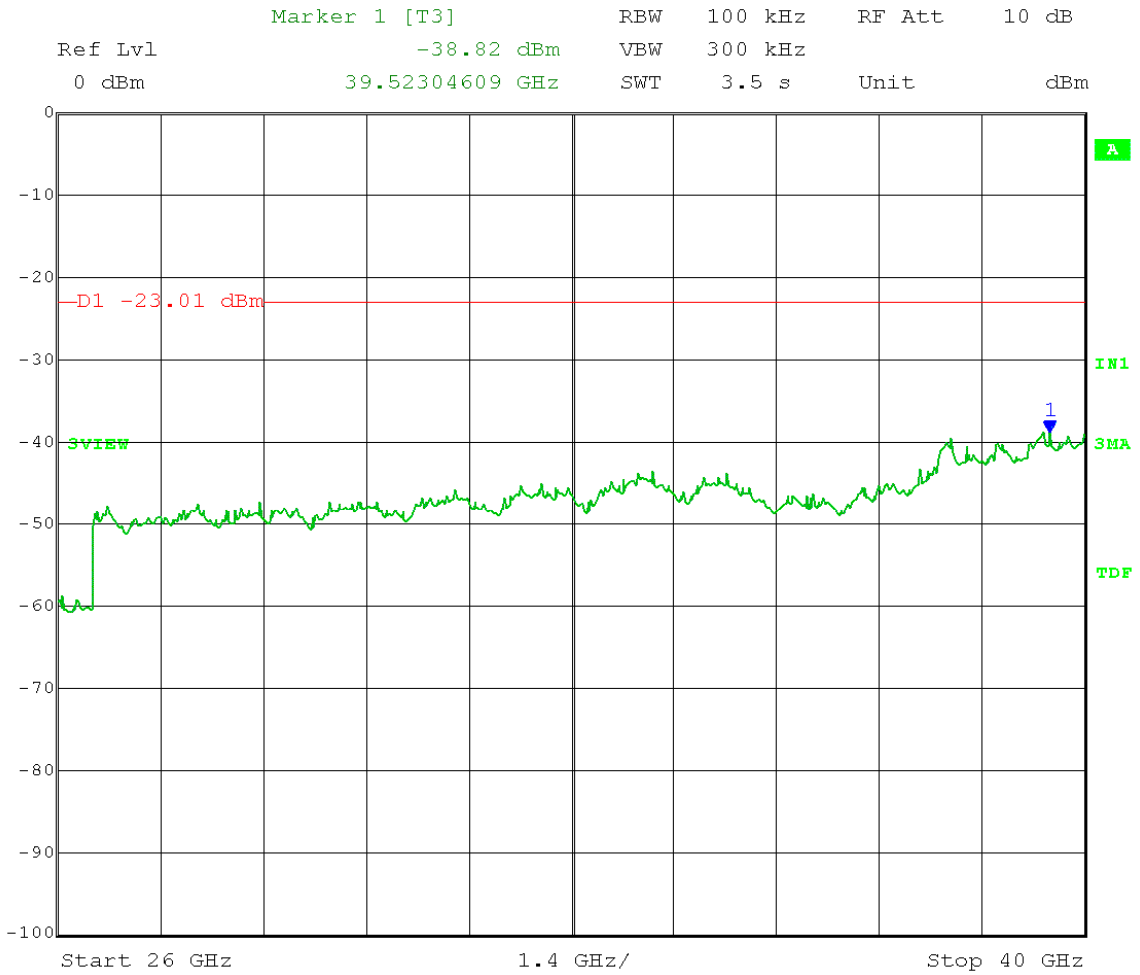
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 6.99 dBm – 30 dB = -23.01 dBm



Date: 25.APR.2012 12:10:18

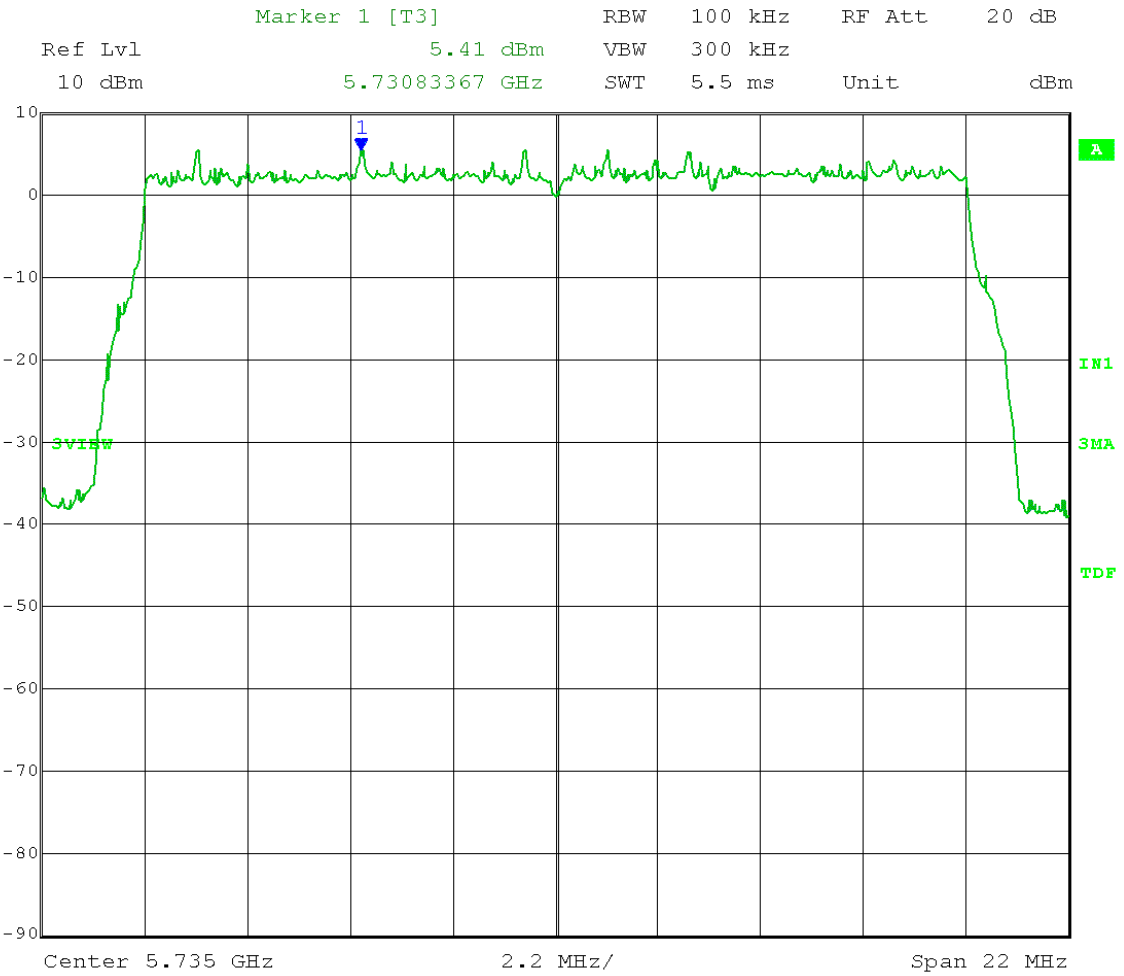
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.41 dBm – 30 dB = -24.59 dBm



Date: 23.APR.2012 13:11:58

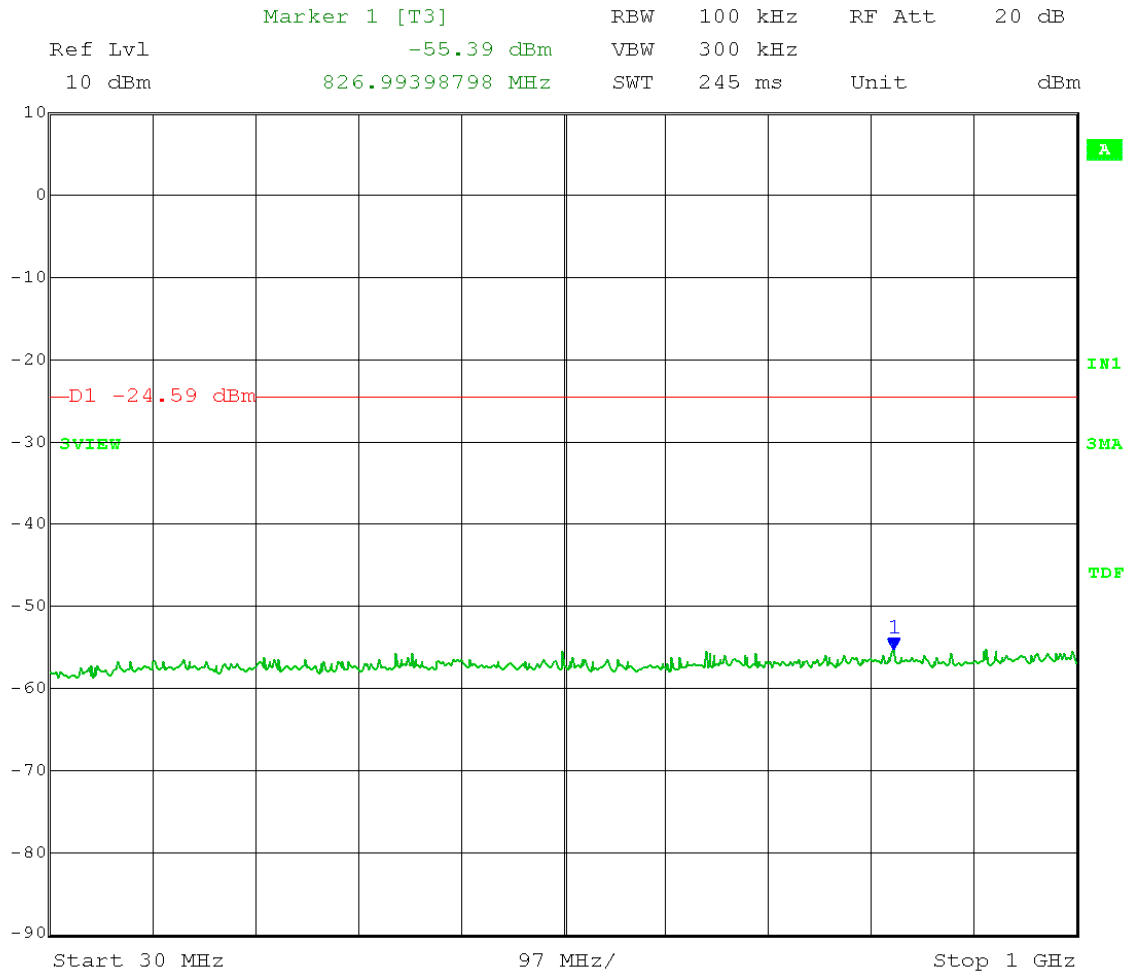
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 5.41 dBm – 30 dB = -24.59 dBm



Date: 25.APR.2012 09:25:37

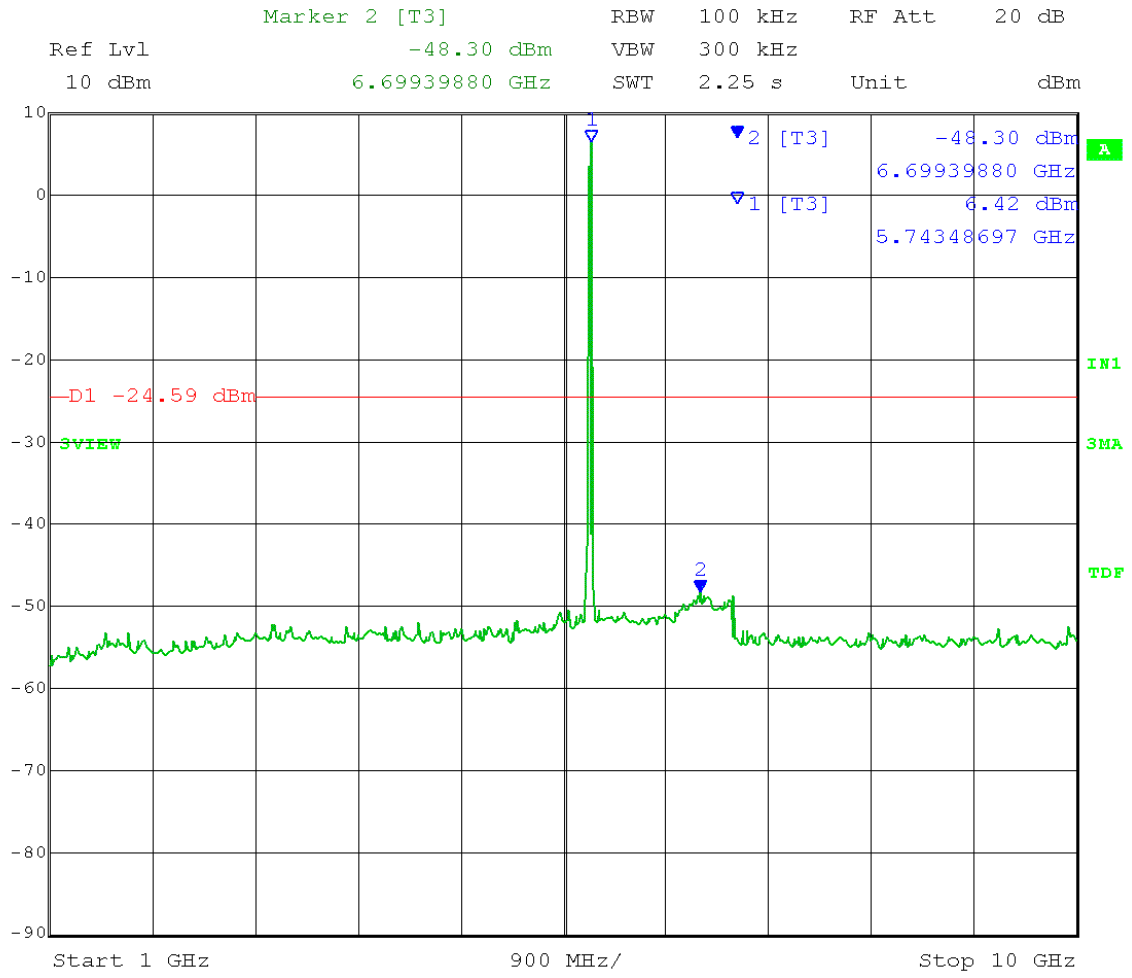
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 5.41 dBm – 30 dB = -24.59 dBm



Date: 25.APR.2012 09:20:06

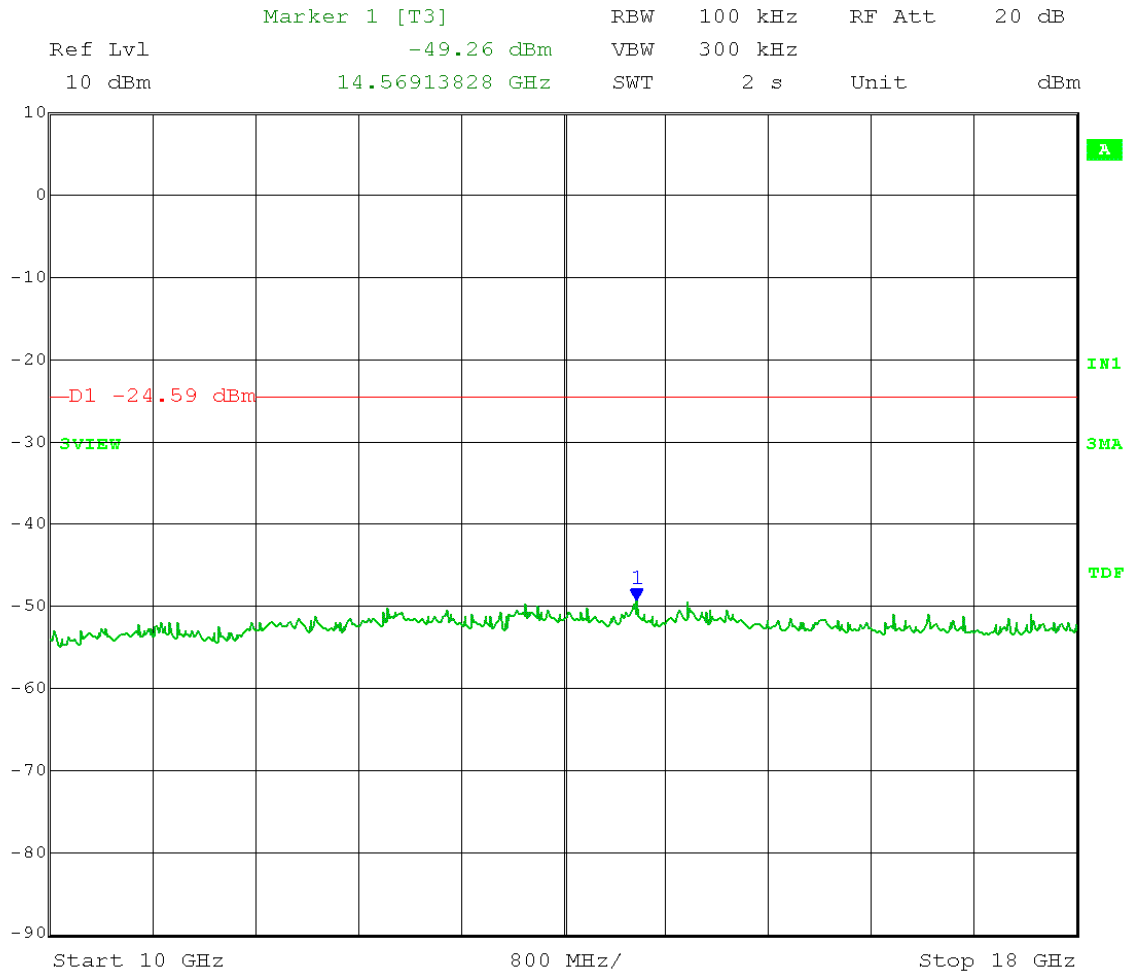
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 5.41 dBm – 30 dB = -24.59 dBm



Date: 25.APR.2012 09:21:43

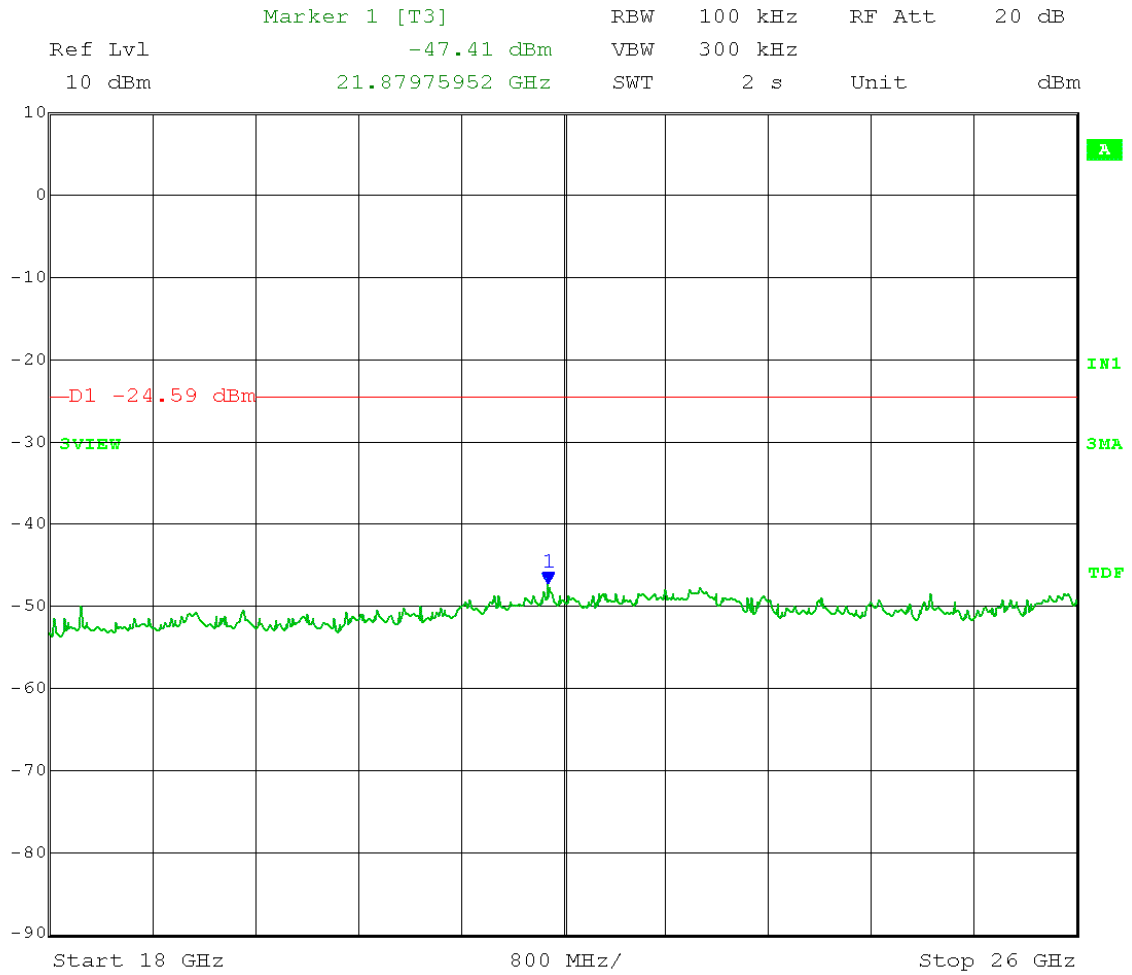
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 5.41 dBm – 30 dB = -24.59 dBm



Date: 25.APR.2012 09:23:29

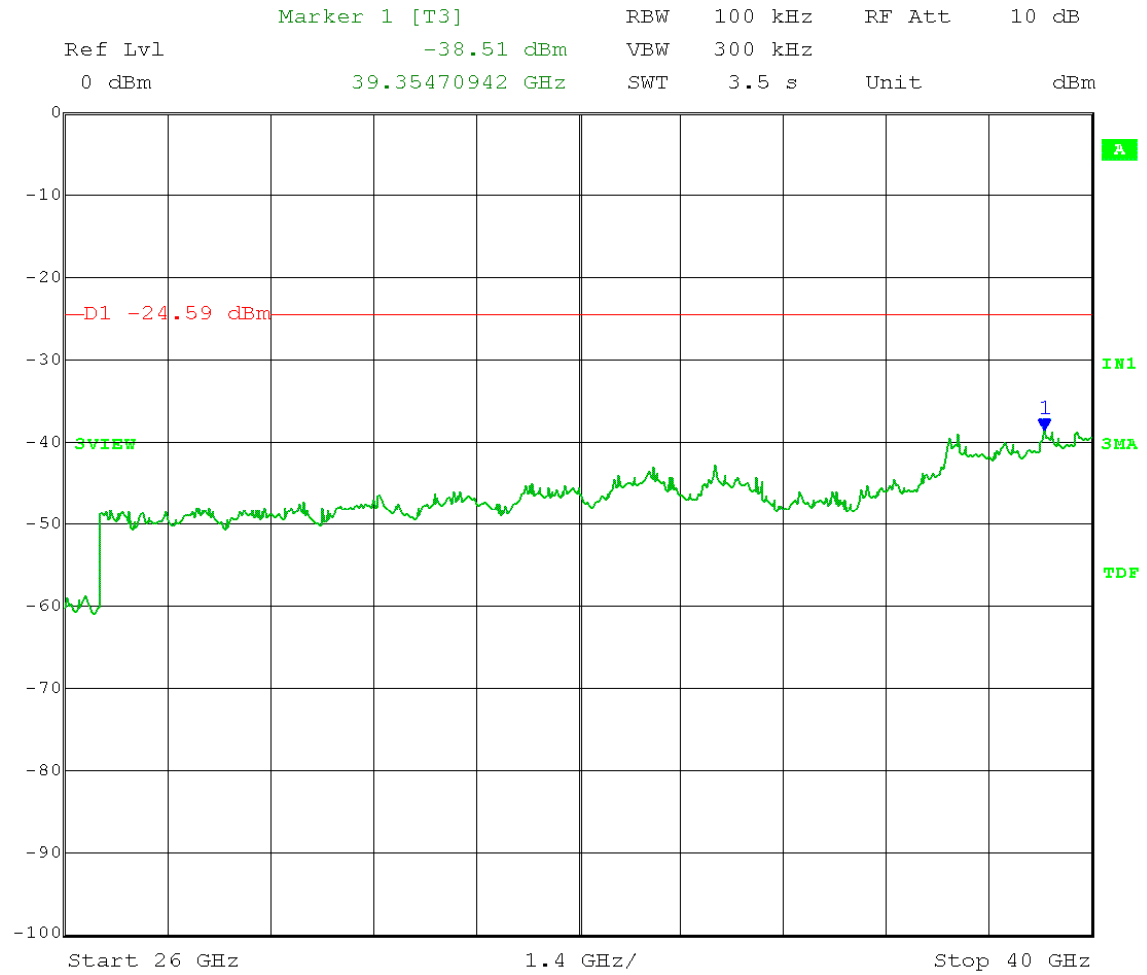
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 5.41 dBm – 30 dB = -24.59 dBm



Date: 25.APR.2012 09:27:07

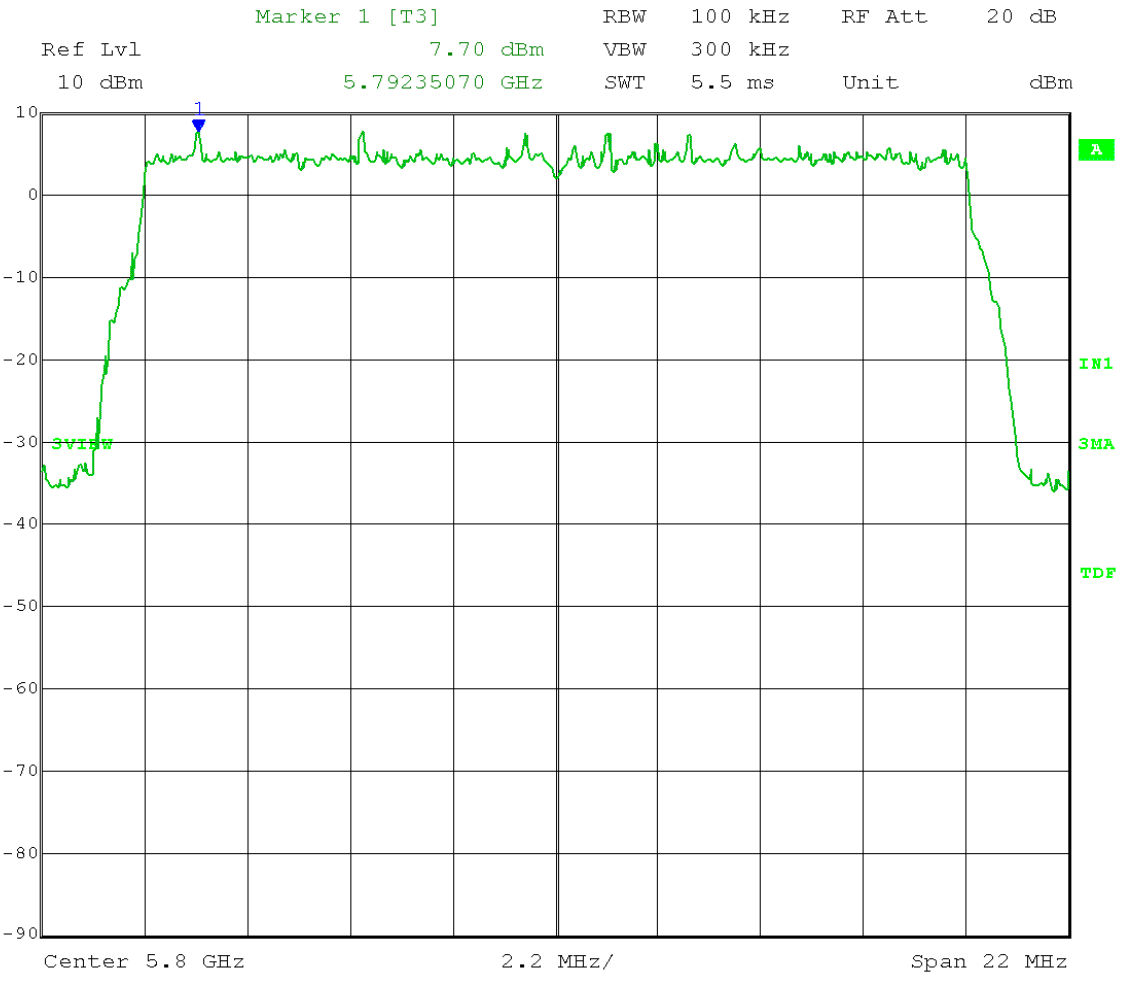
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 7.70 dBm – 30 dB = -22.30 dBm



Date: 25.APR.2012 09:51:13

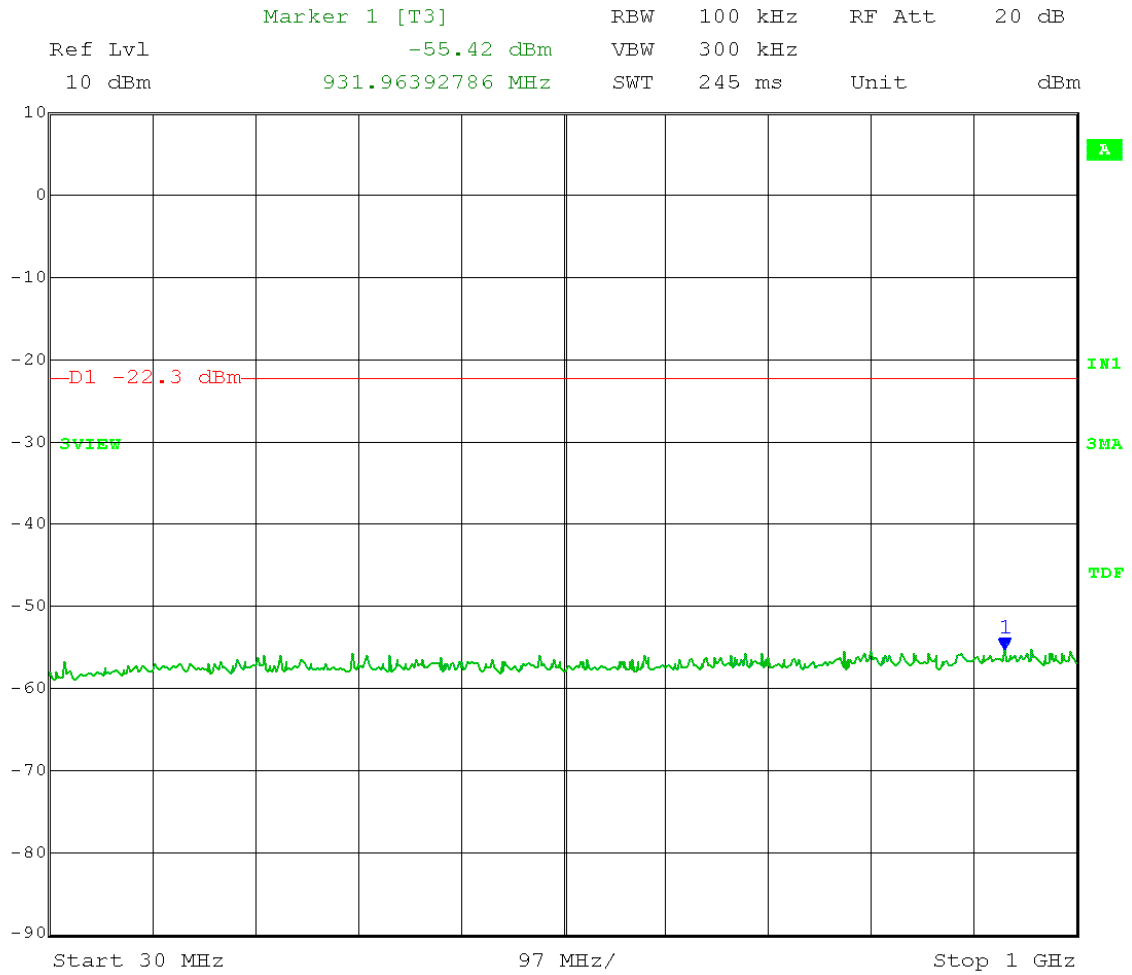
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 7.70 dBm – 30 dB = -22.30 dBm



Date: 25.APR.2012 09:58:31

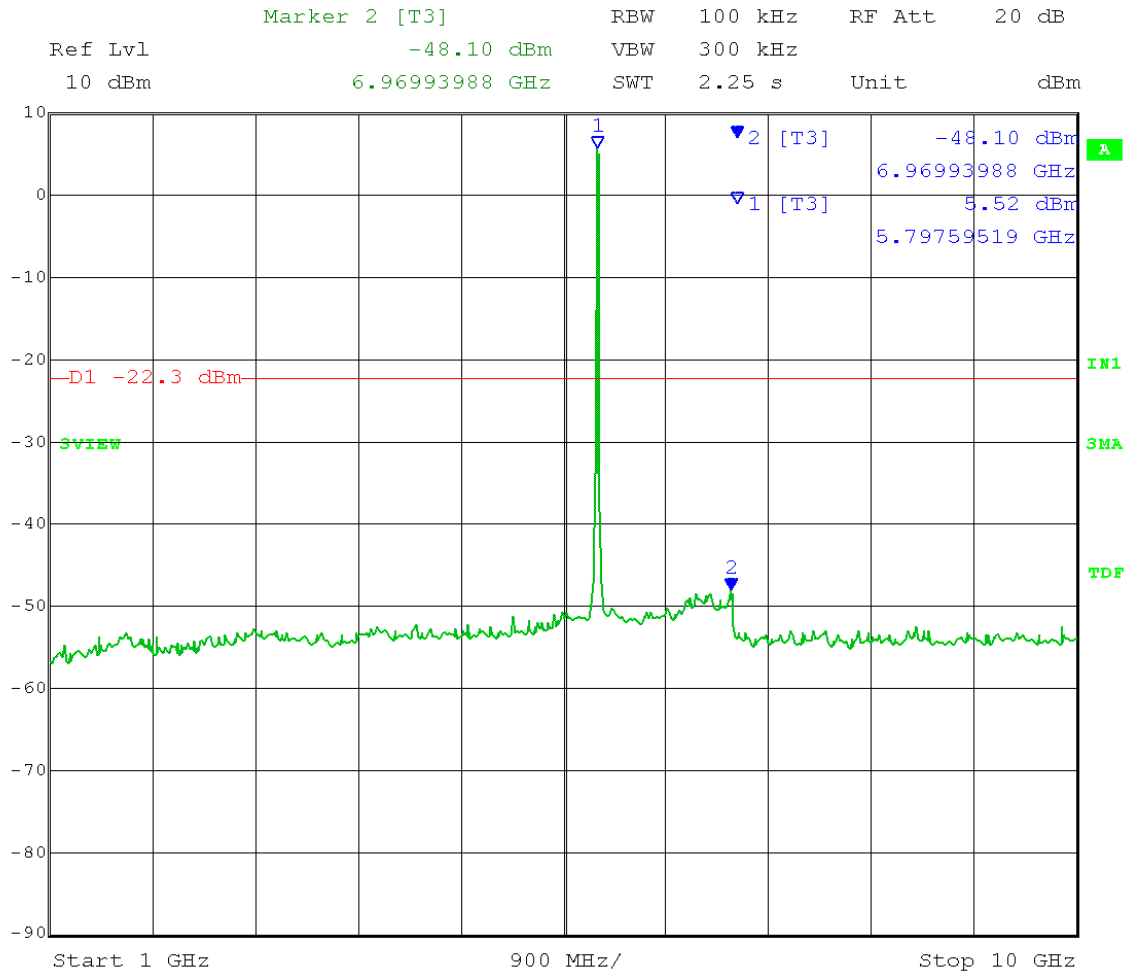
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 7.70 dBm – 30 dB = -22.30 dBm



Date: 25.APR.2012 09:54:17

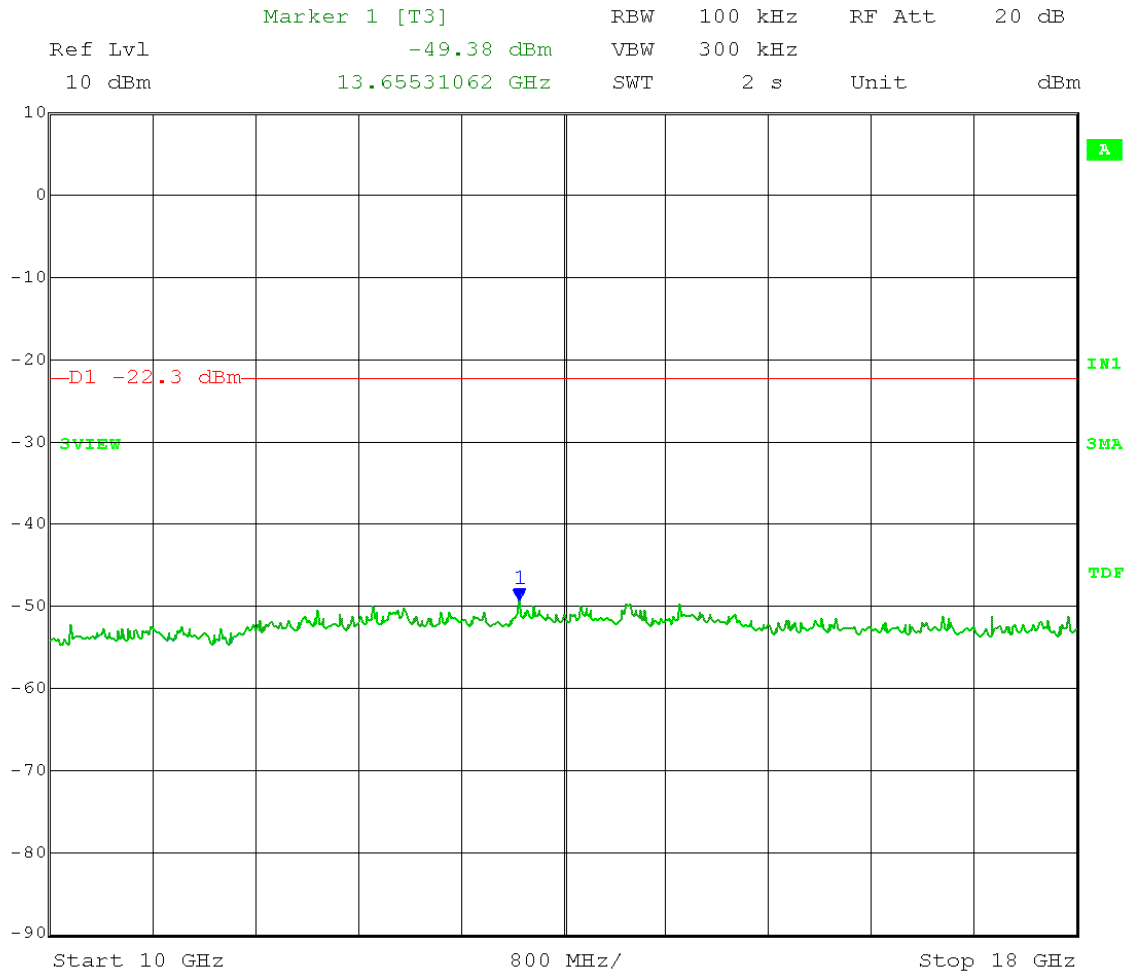
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 7.70 dBm – 30 dB = -22.30 dBm



Date: 25.APR.2012 09:55:40

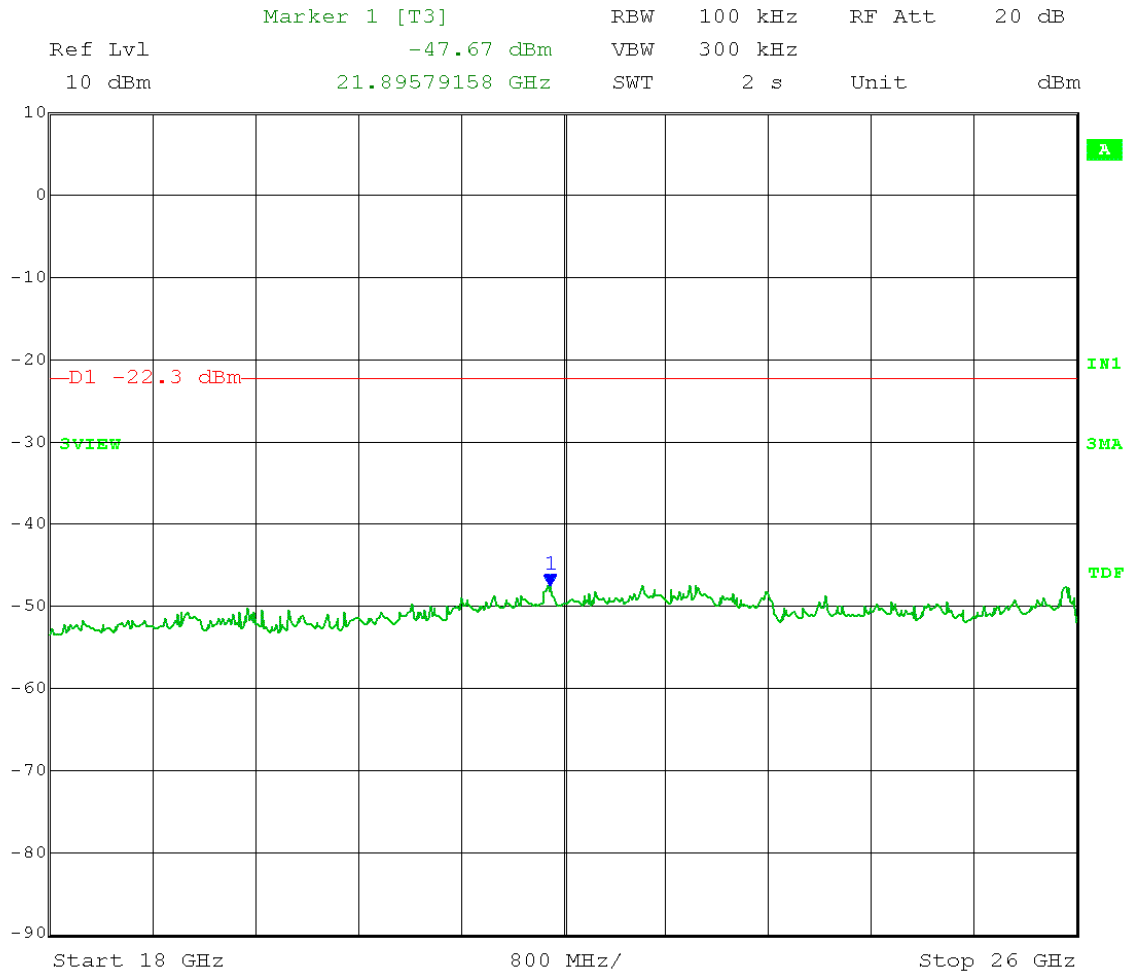
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 7.70 dBm – 30 dB = -22.30 dBm



Date: 25.APR.2012 09:57:00

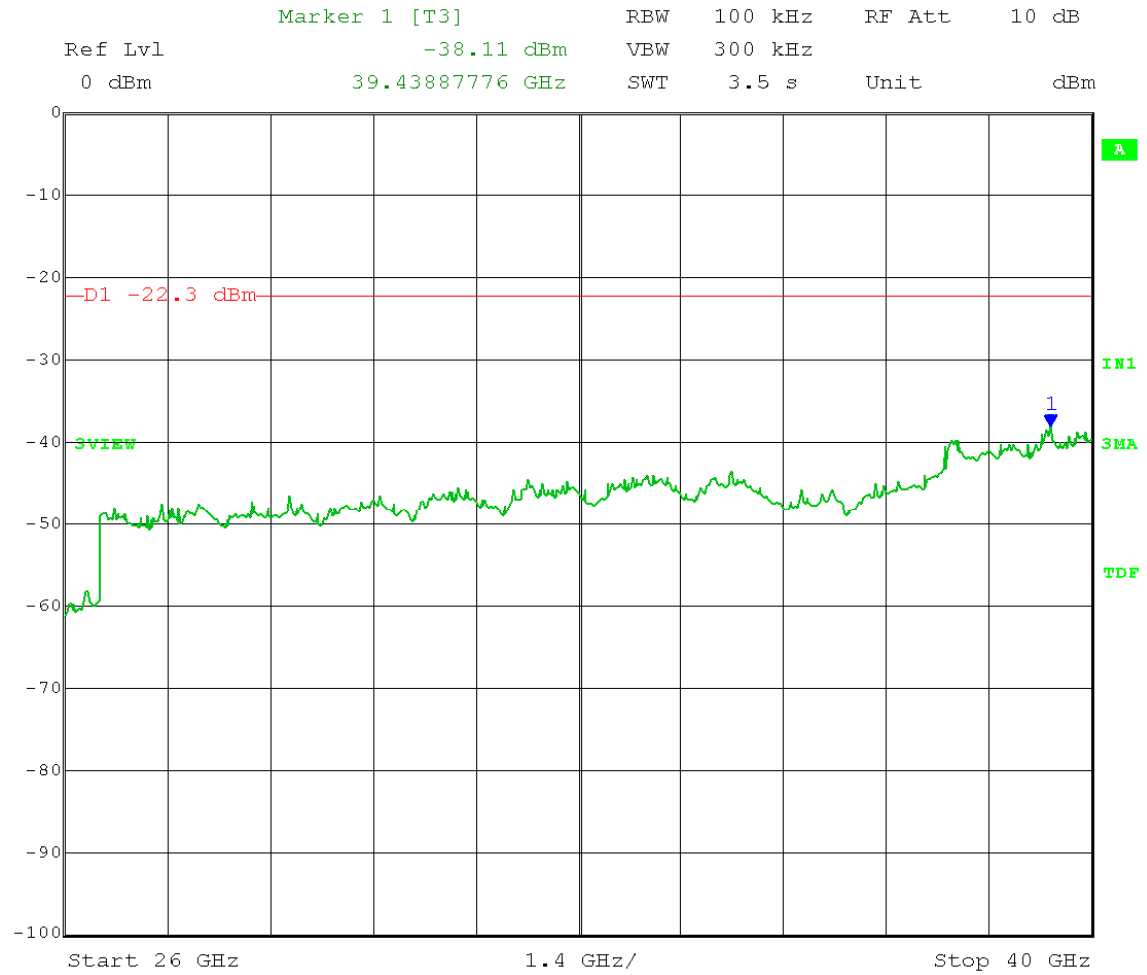
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 7.70 dBm – 30 dB = -22.30 dBm



Date: 25.APR.2012 10:00:19

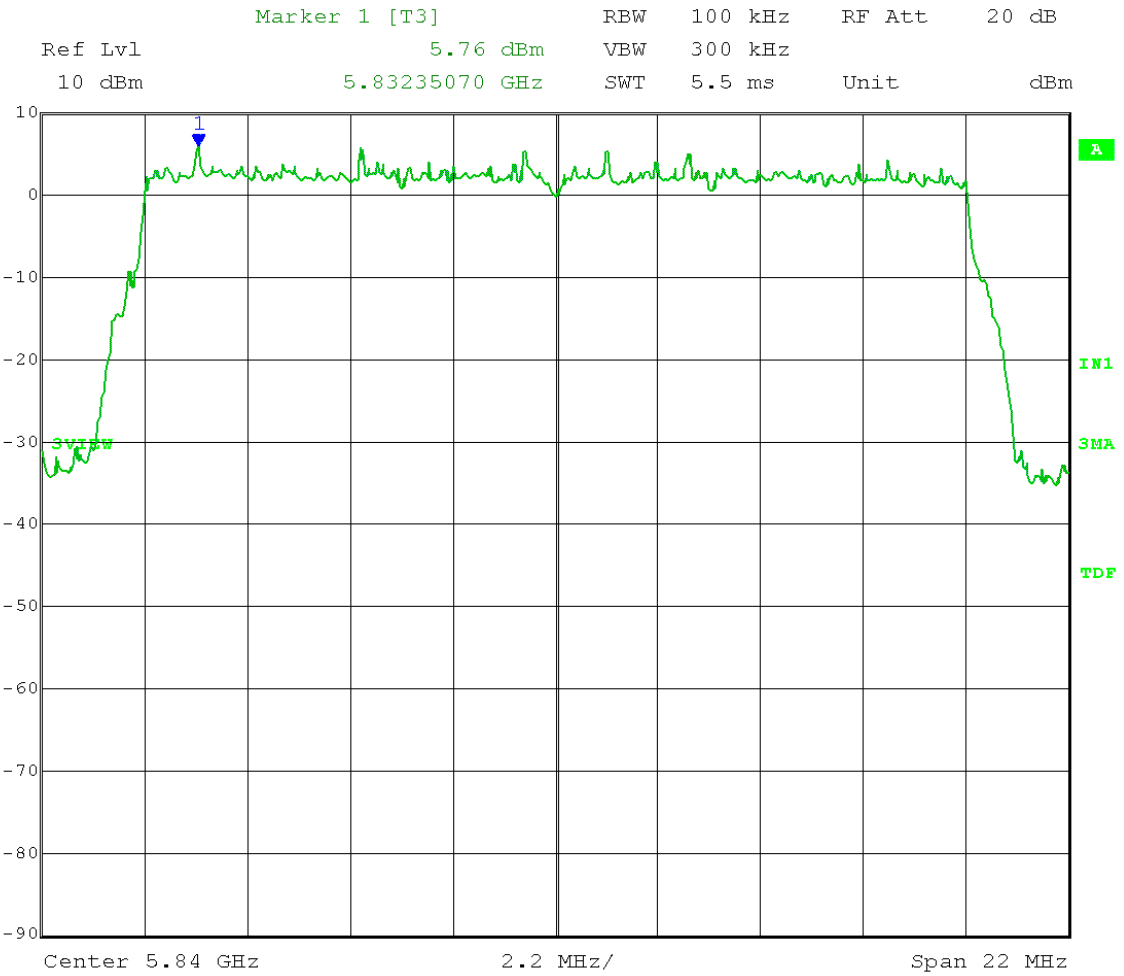
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.76 dBm – 30 dB = -24.24 dBm



Date: 23.APR.2012 12:59:09

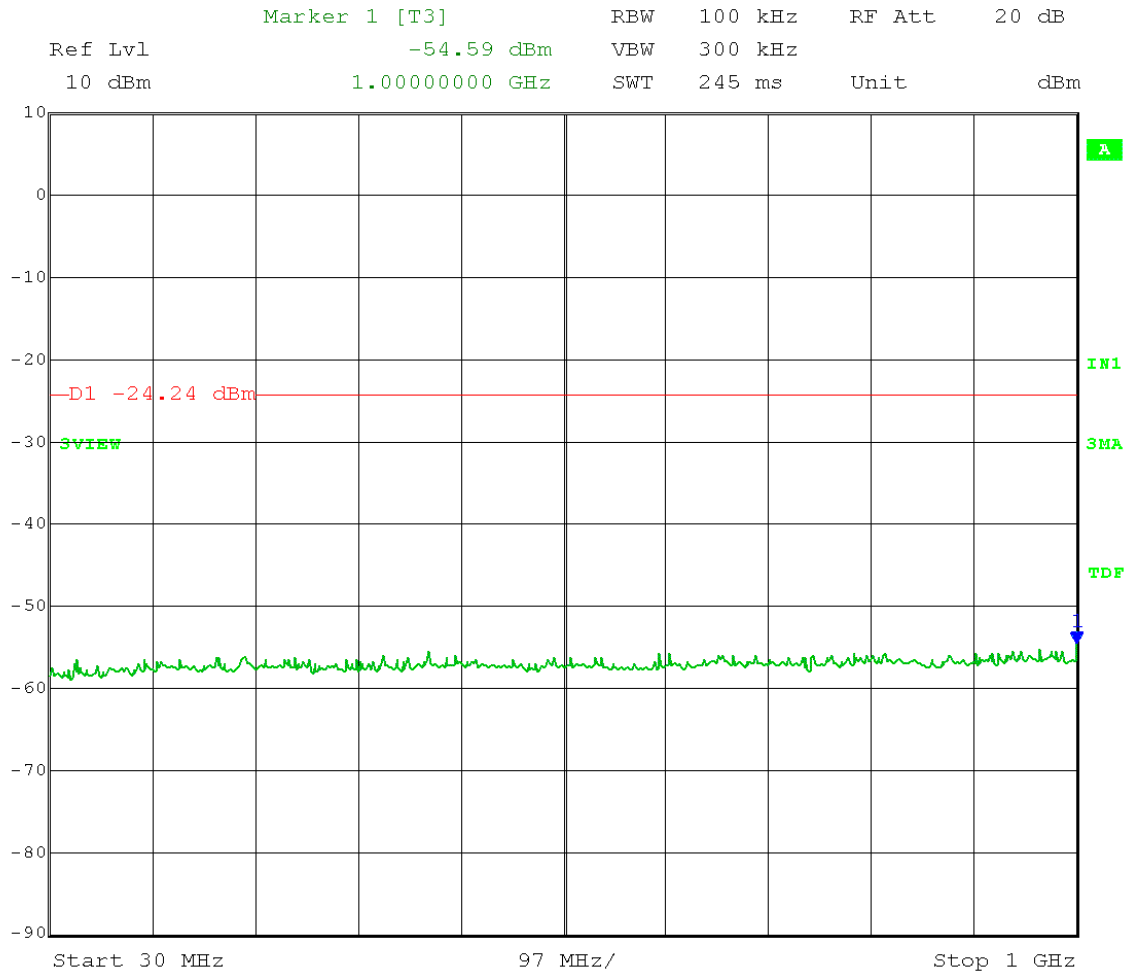
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 5.76 dBm – 30 dB = -24.24 dBm



Date: 25.APR.2012 10:28:58

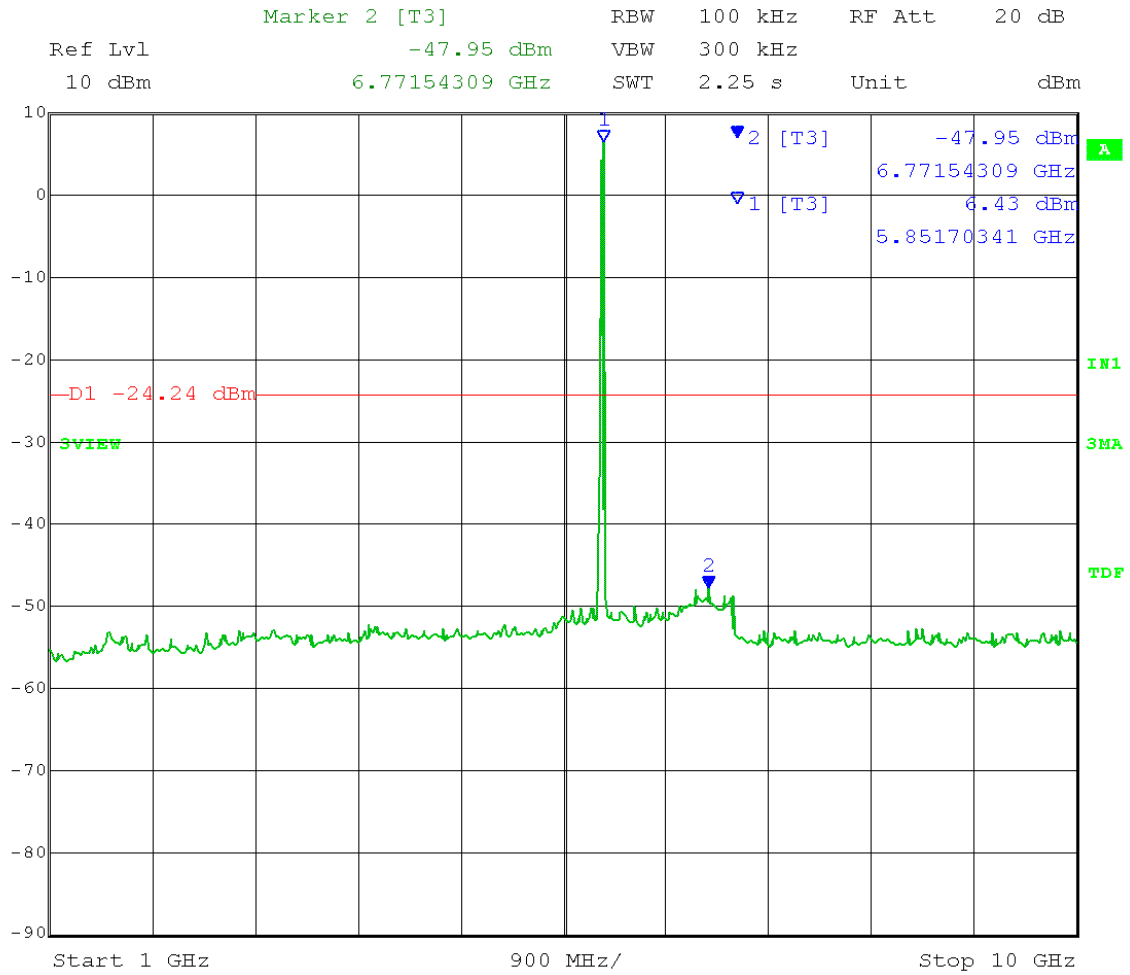
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 5.76 dBm – 30 dB = -24.24 dBm



Date: 25.APR.2012 10:24:21

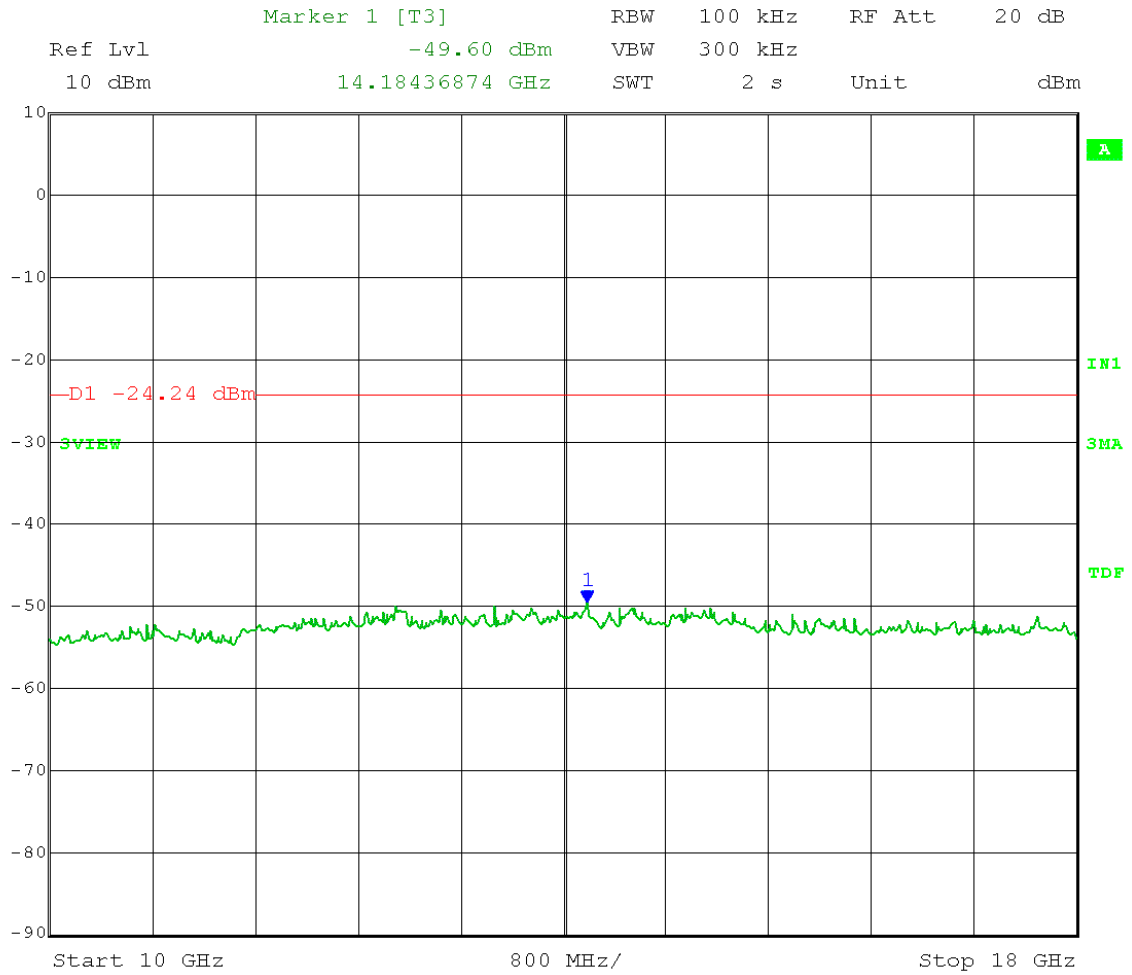
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 5.76 dBm – 30 dB = -24.24 dBm



Date: 25.APR.2012 10:25:40

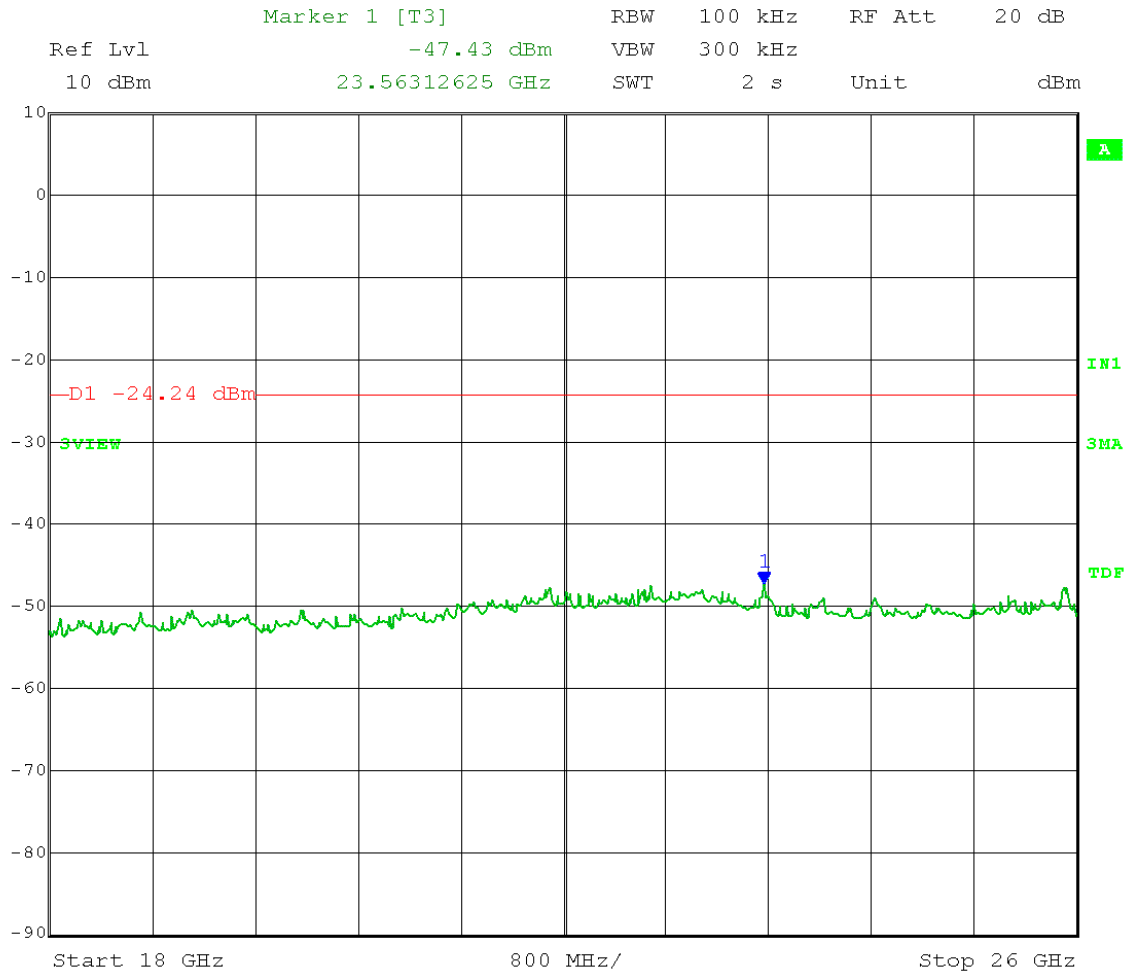
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 5.76 dBm – 30 dB = -24.24 dBm



Date: 25.APR.2012 10:27:01

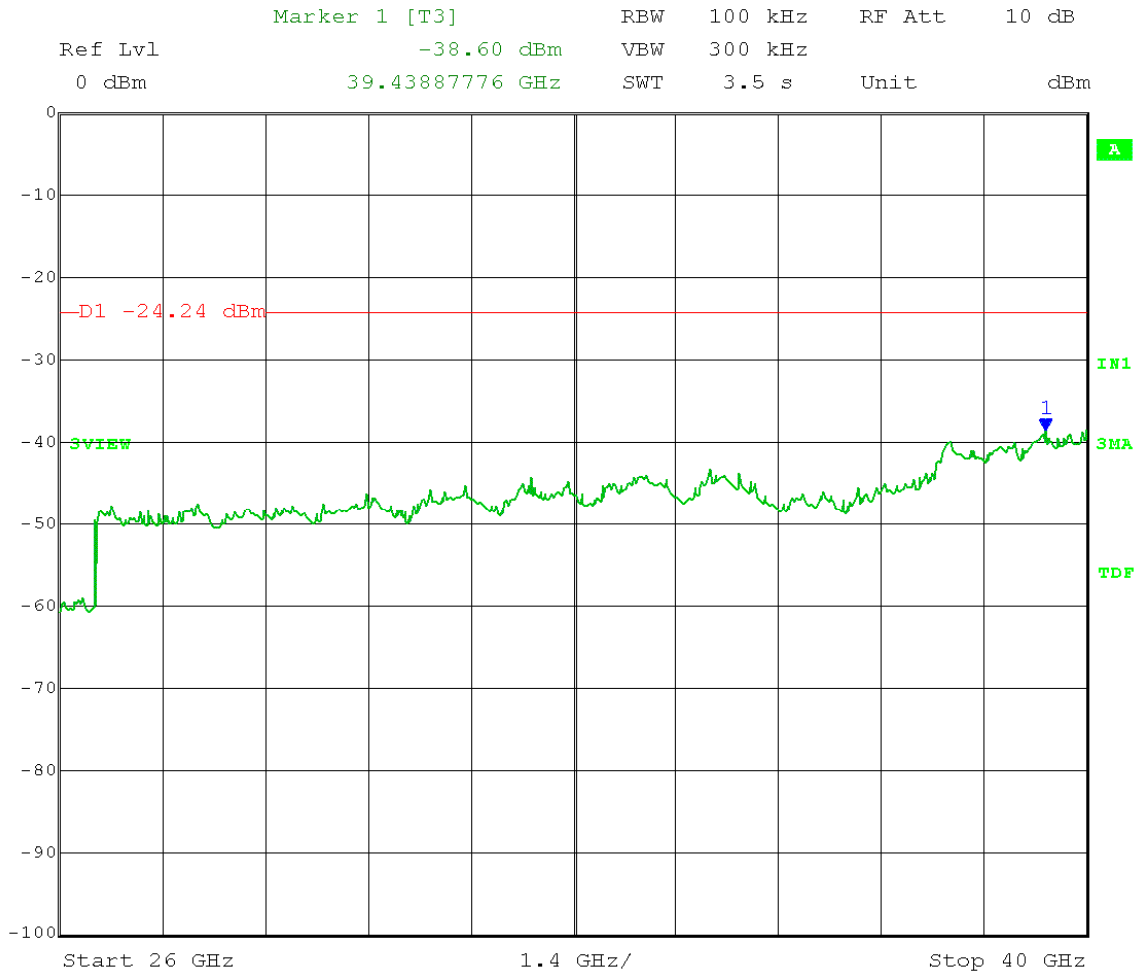
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 5.76 dBm – 30 dB = -24.24 dBm



Date: 25.APR.2012 10:30:33

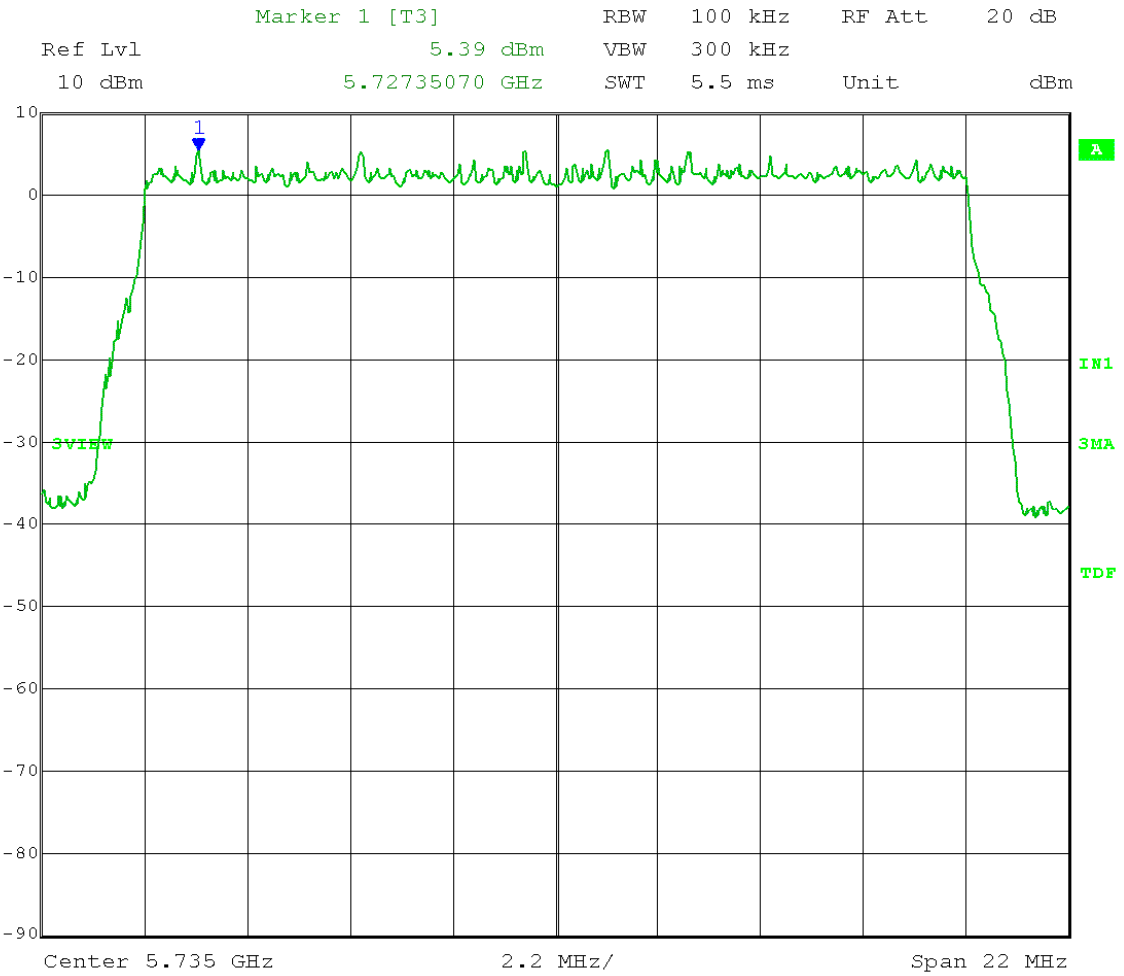
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.39 dBm – 30 dB = -24.61 dBm



Date: 23.APR.2012 13:07:27

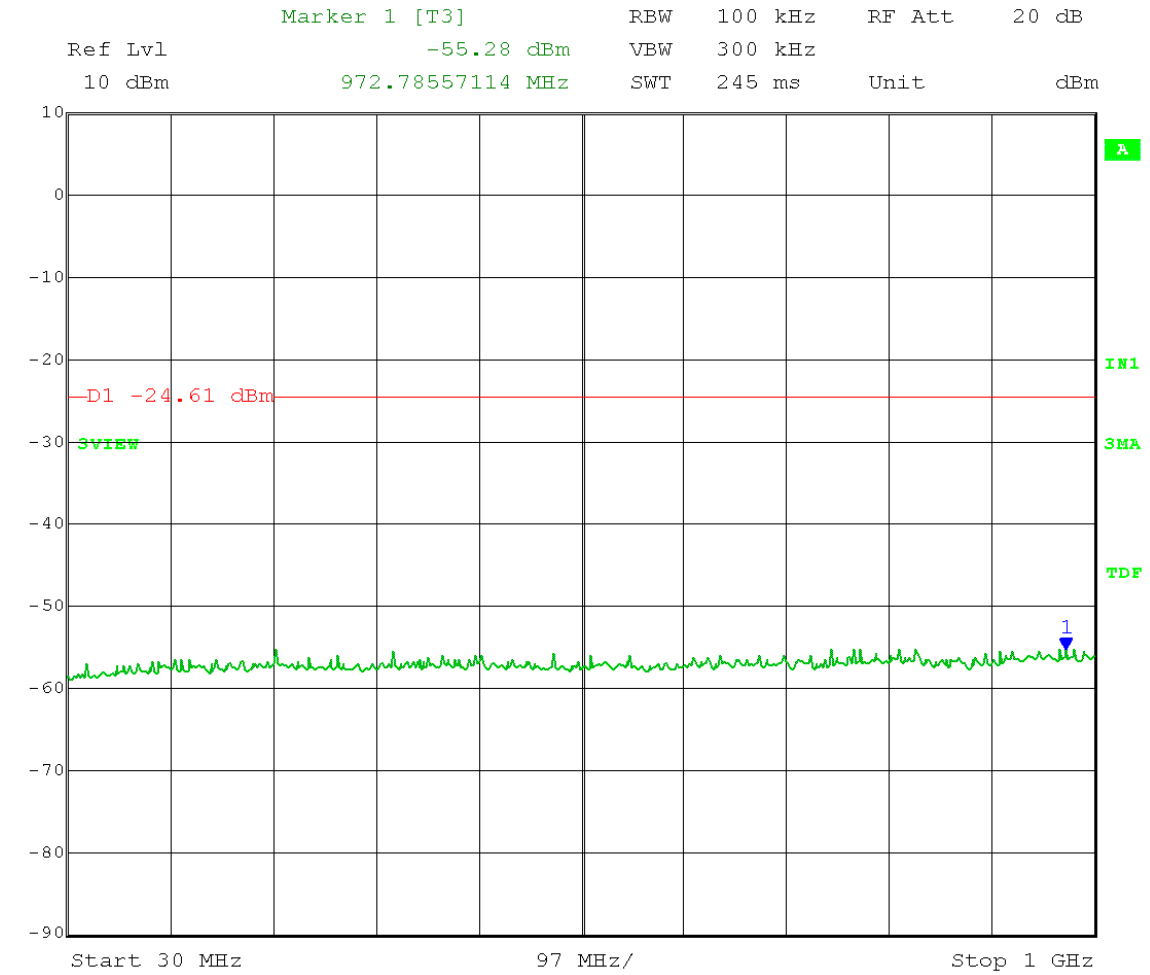
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 5.39 dBm – 30 dB = -24.61 dBm



Date: 25.APR.2012 09:34:52

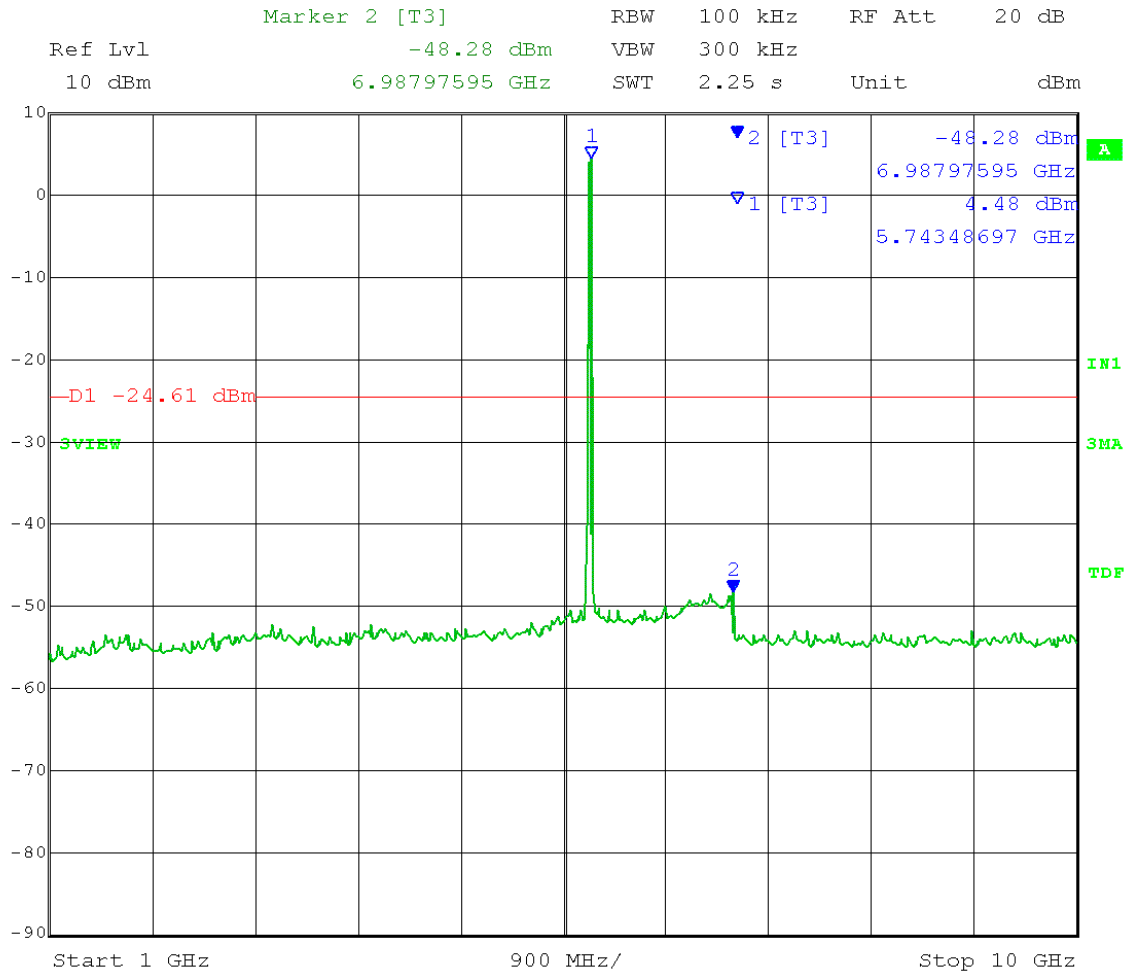
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 5.39 dBm – 30 dB = -24.61 dBm



Date: 25.APR.2012 09:30:12

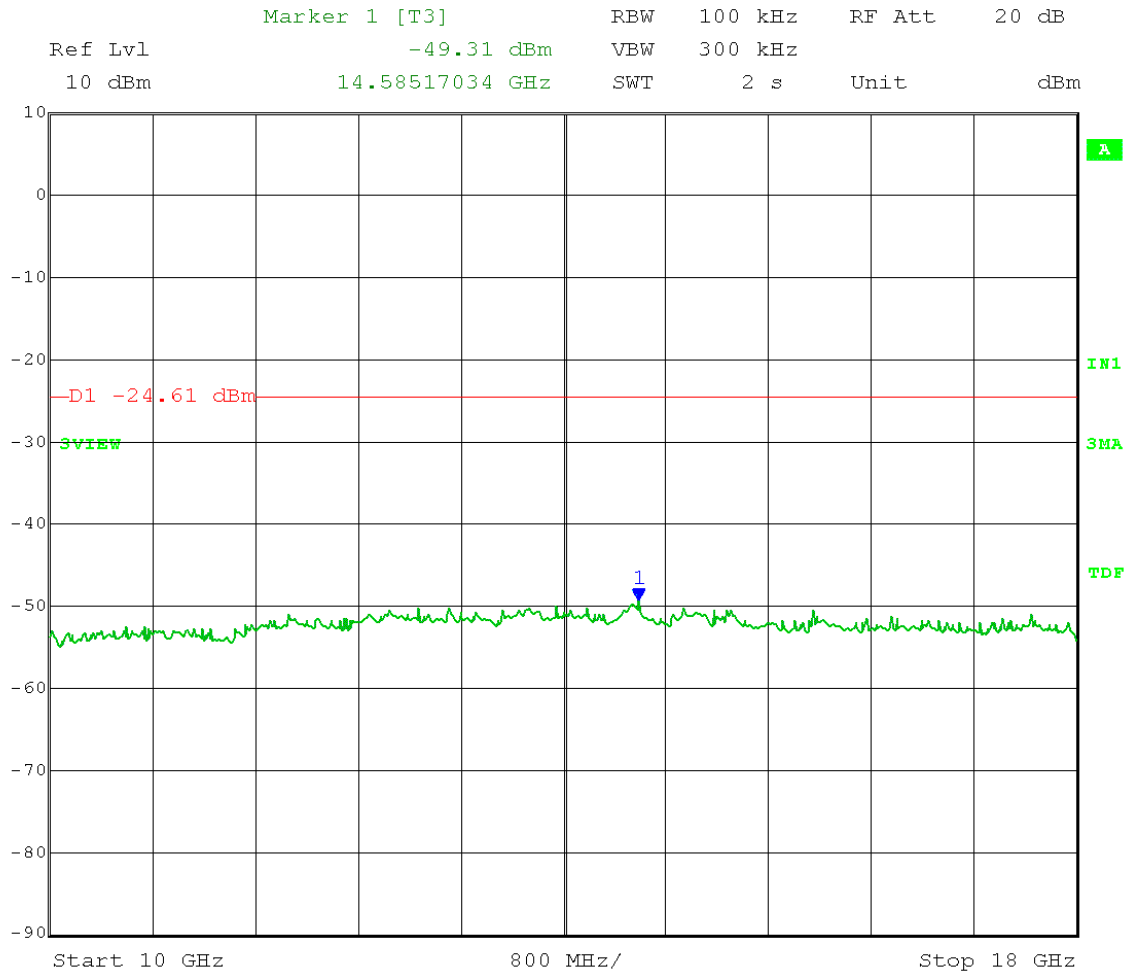
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 5.39 dBm – 30 dB = -24.61 dBm



Date: 25.APR.2012 09:31:48

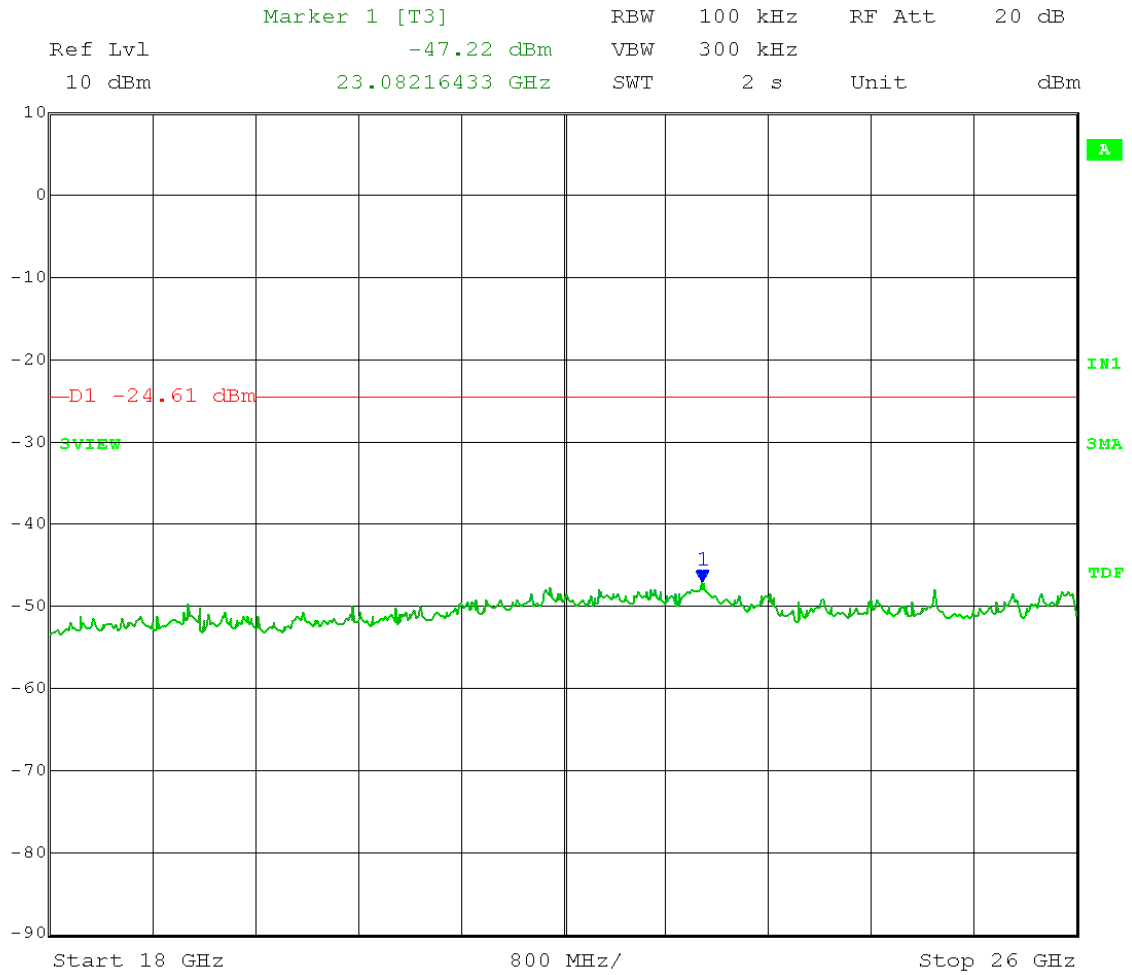
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 5.39 dBm – 30 dB = -24.61 dBm



Date: 25.APR.2012 09:33:11

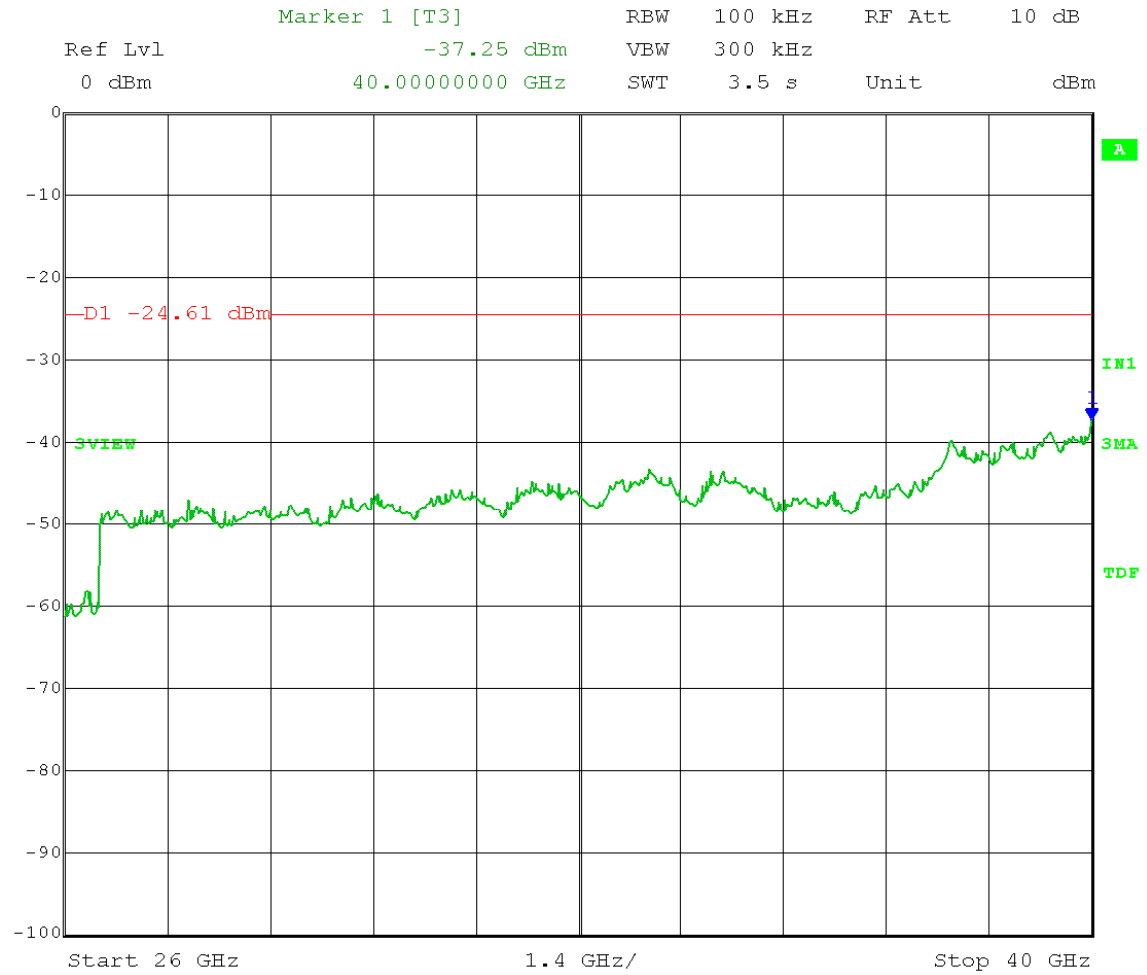
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 5.39 dBm – 30 dB = -24.61 dBm



Date: 25.APR.2012 09:36:20

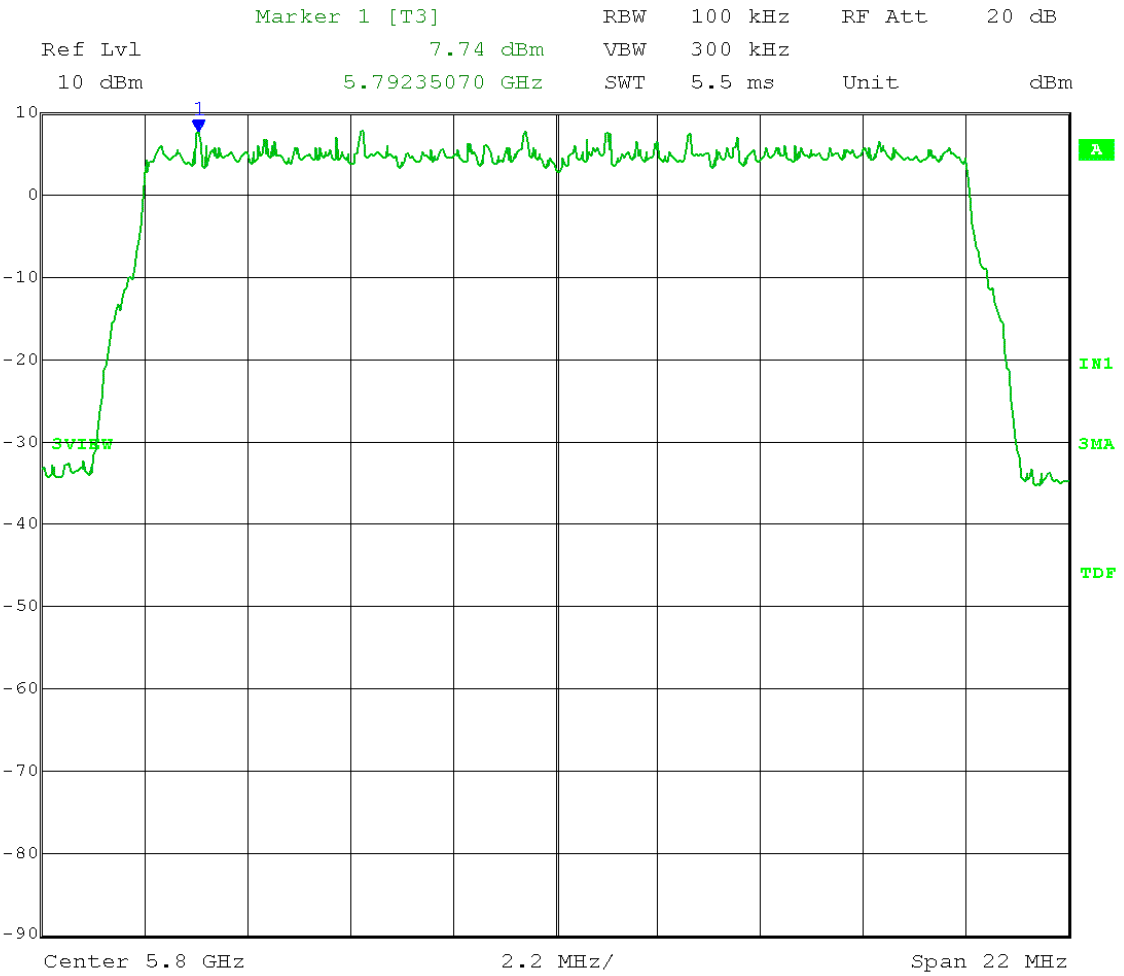
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 7.74 dBm – 30 dB = -22.26 dBm



Date: 25.APR.2012 09:38:51

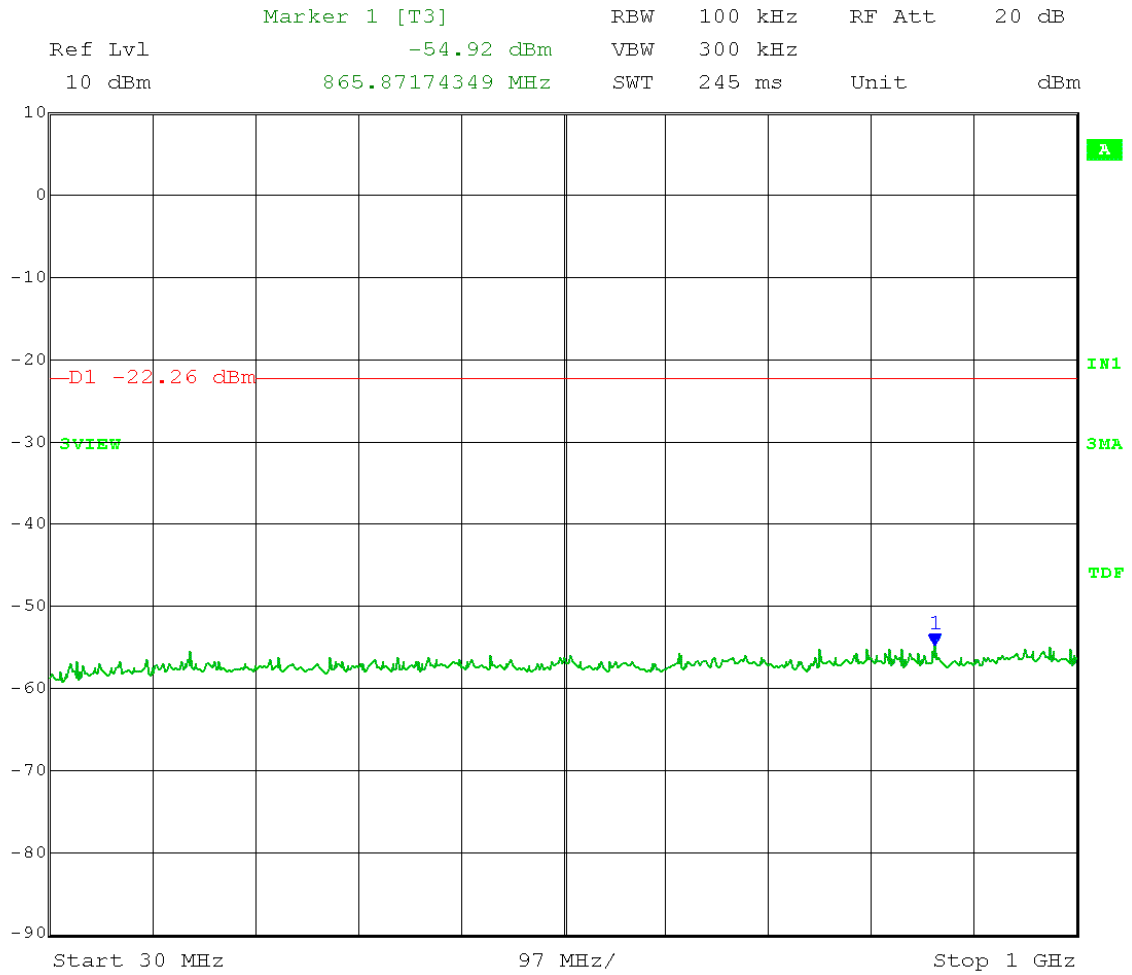
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 7.74 dBm – 30 dB = -22.26 dBm



Date: 25.APR.2012 09:46:53

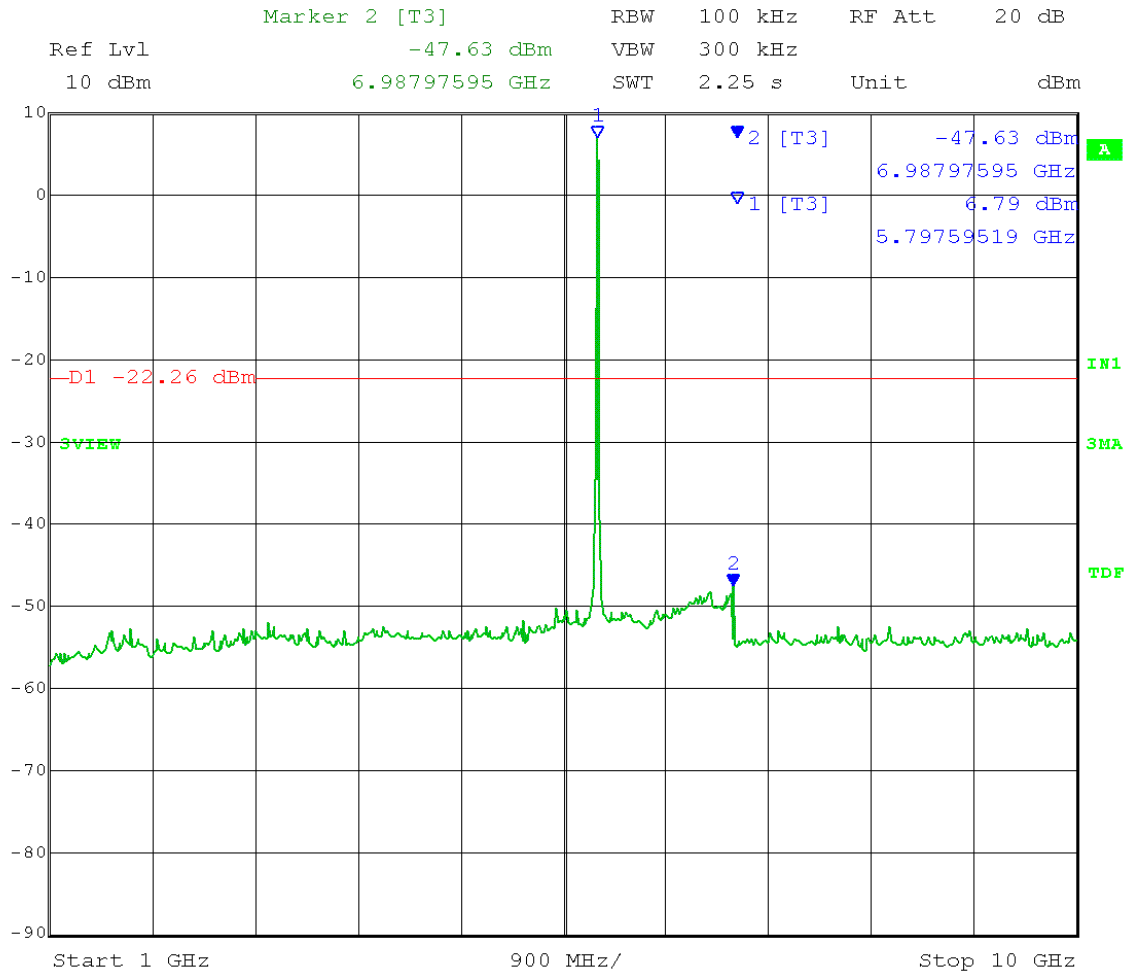
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 7.74 dBm – 30 dB = -22.26 dBm



Date: 25.APR.2012 09:41:36

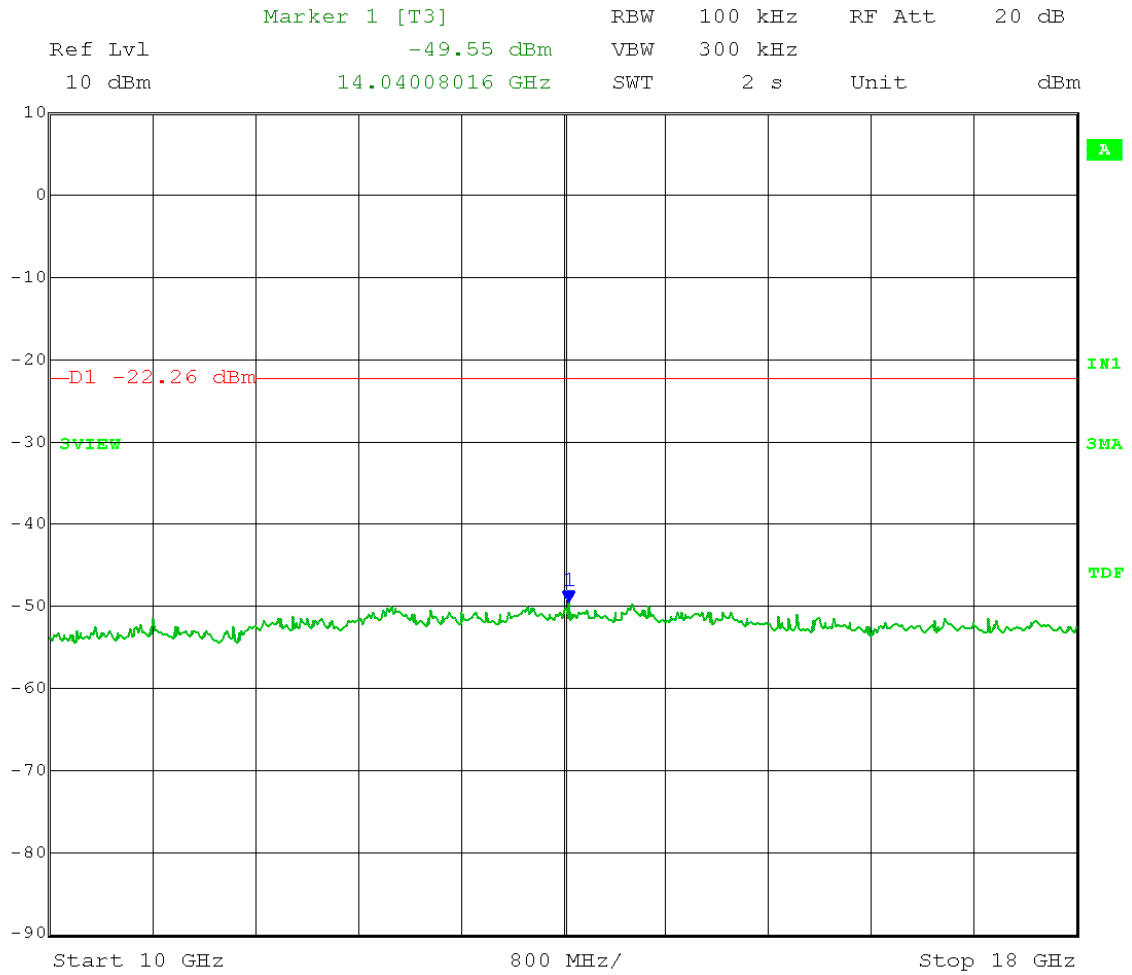
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 7.74 dBm – 30 dB = -22.26 dBm



Date: 25.APR.2012 09:43:28

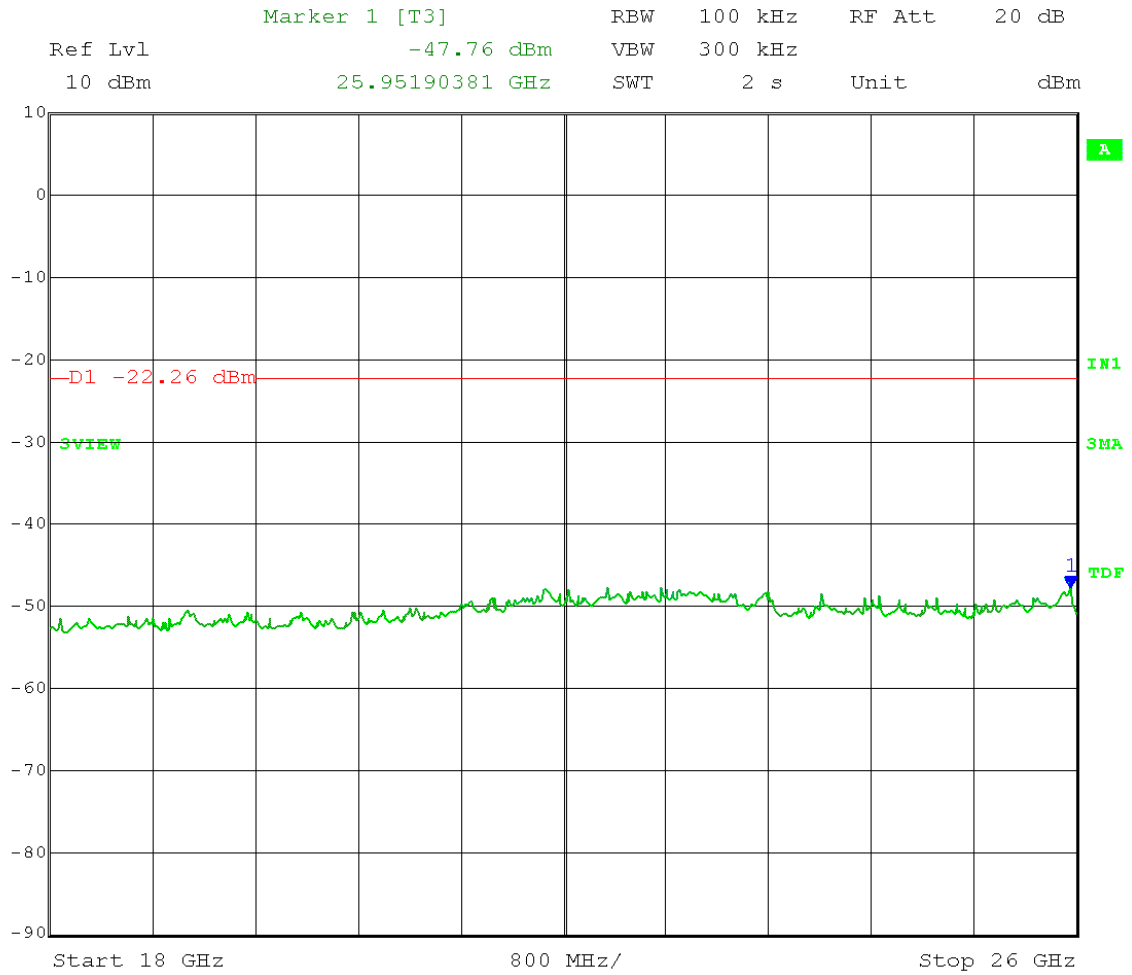
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 7.74 dBm – 30 dB = -22.26 dBm



Date: 25.APR.2012 09:45:11

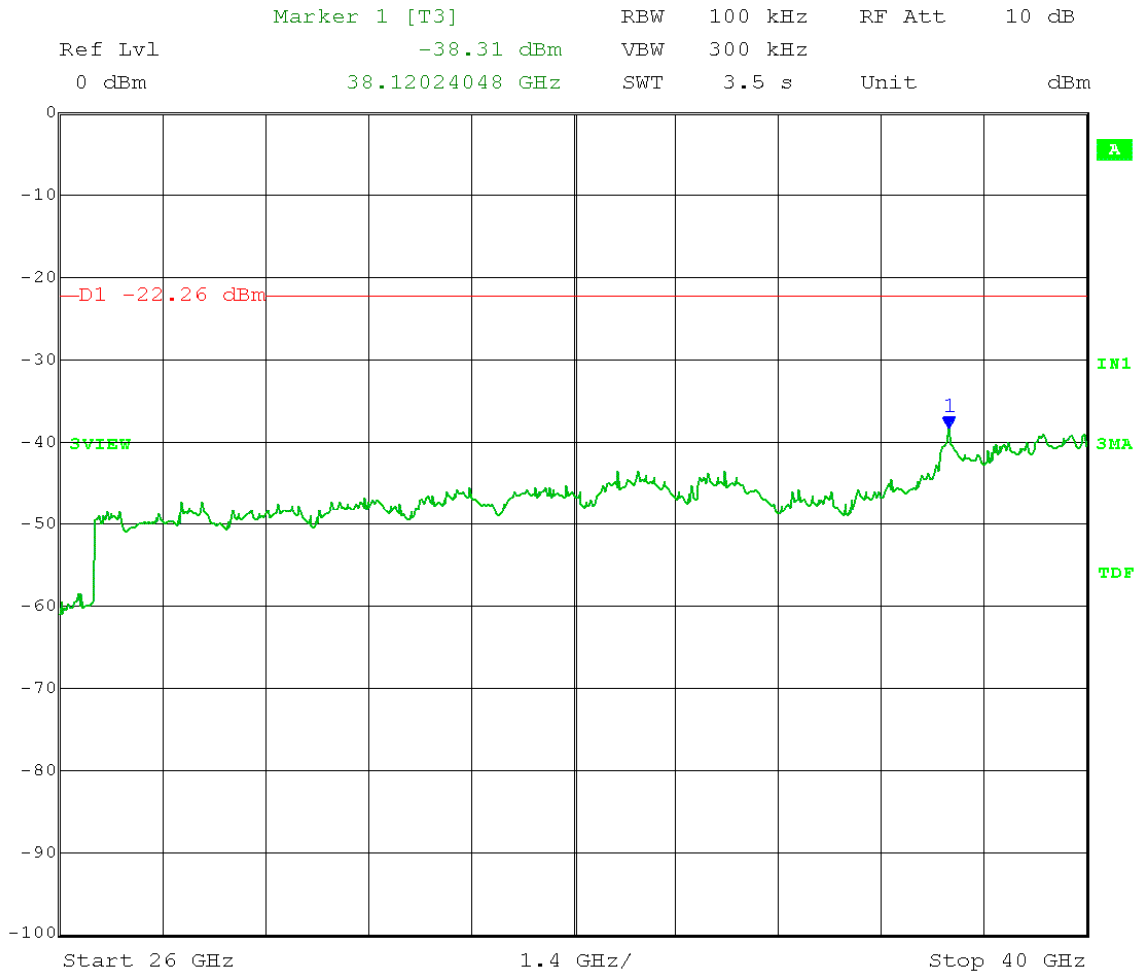
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 7.74 dBm – 30 dB = -22.26 dBm



Date: 25.APR.2012 09:48:34

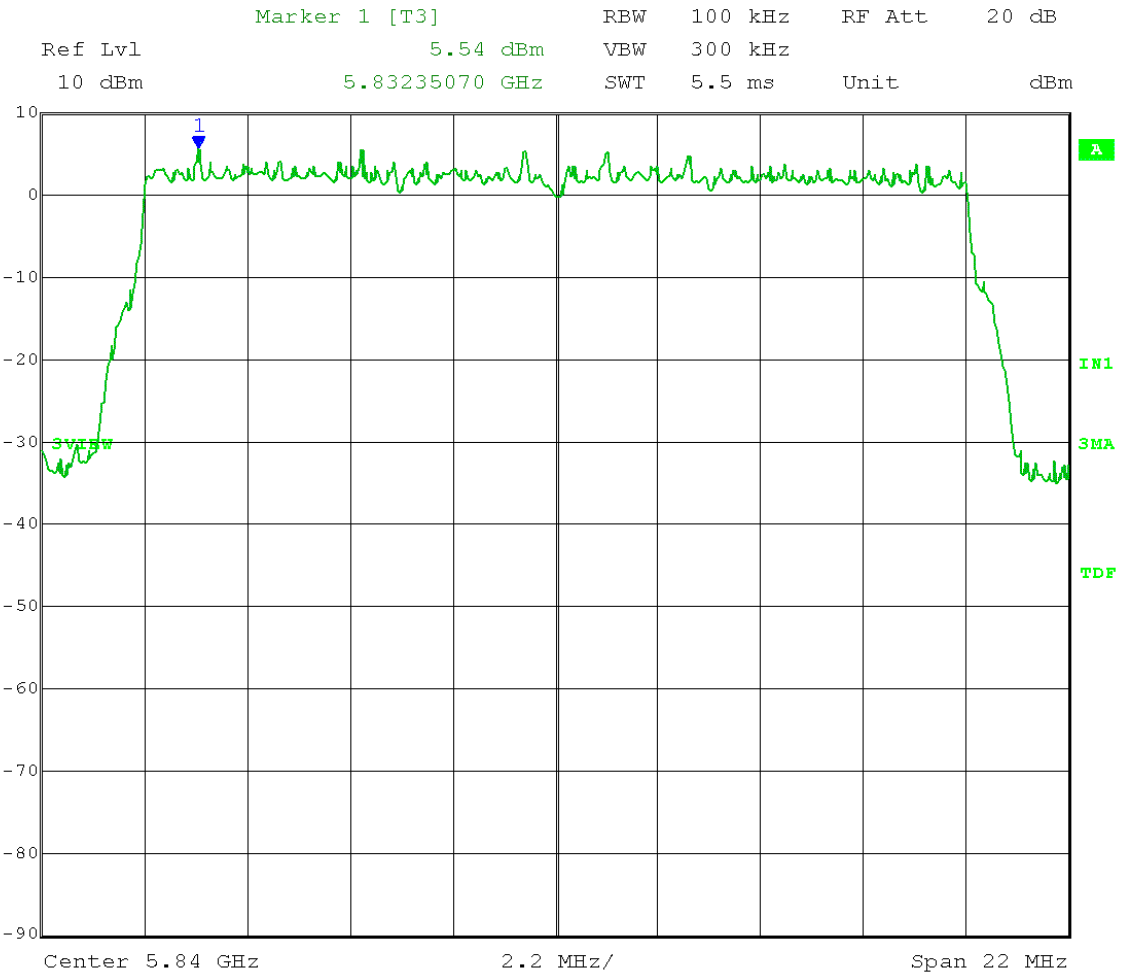
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.54 dBm – 30 dB = -24.46 dBm



Date: 23.APR.2012 13:03:17

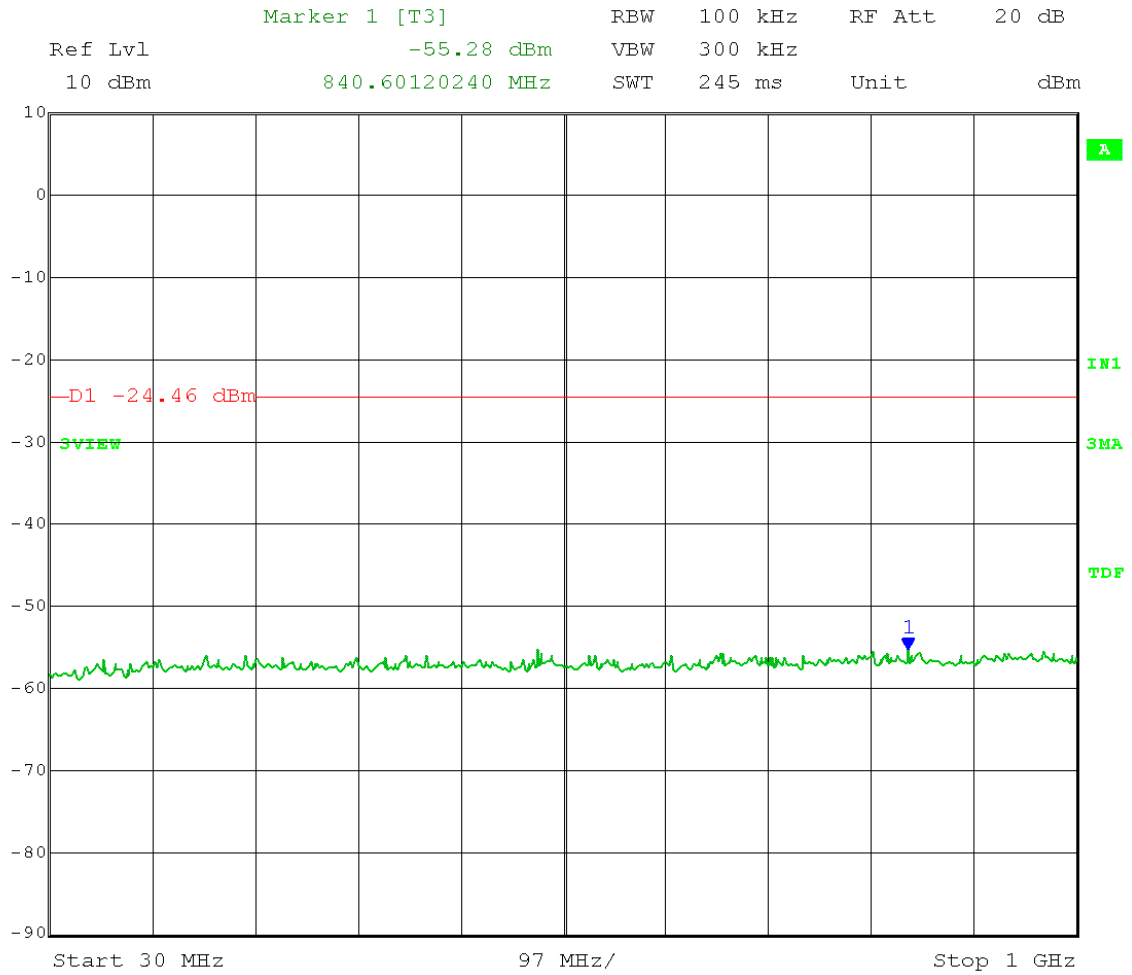
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 5.54 dBm – 30 dB = -24.46 dBm



Date: 25.APR.2012 10:38:29

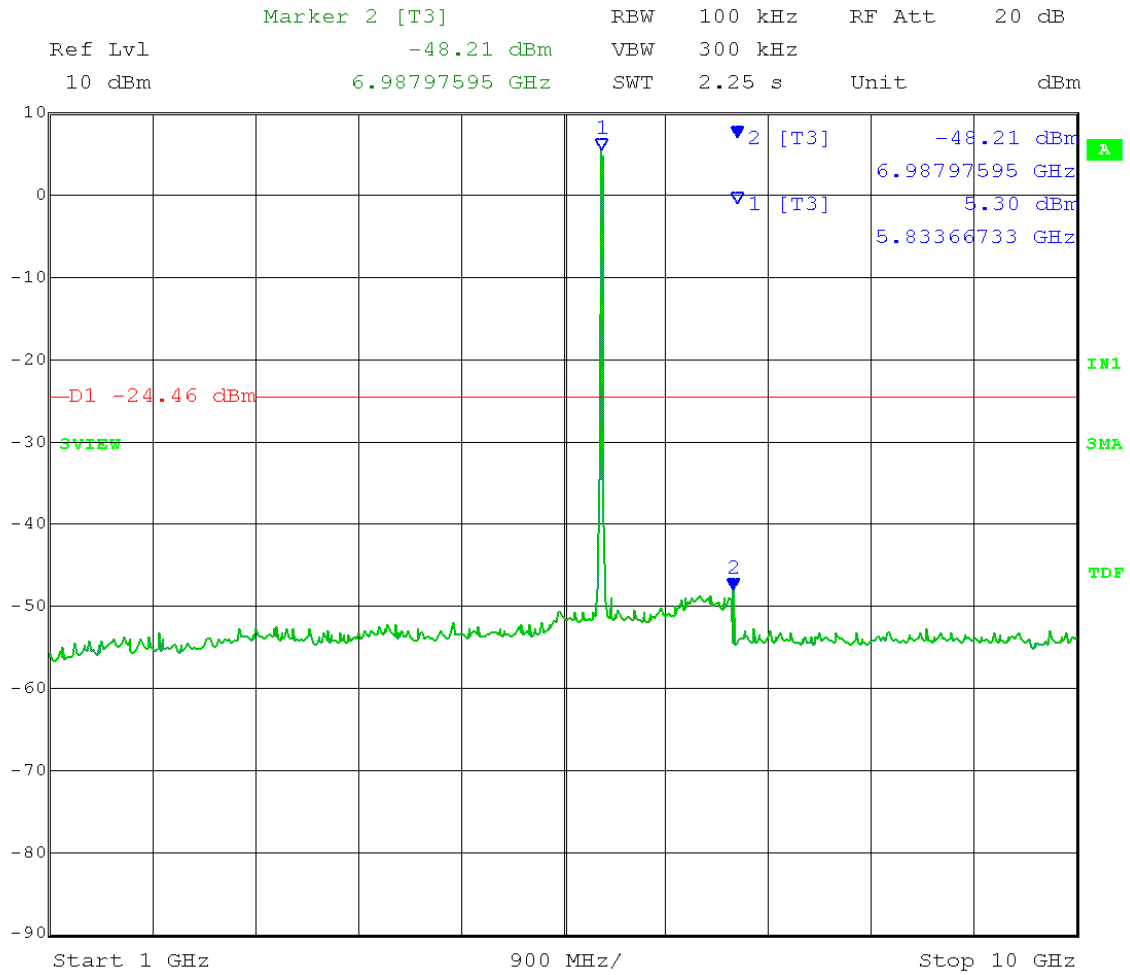
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 5.54 dBm – 30 dB = -24.46 dBm



Date: 25.APR.2012 10:33:25

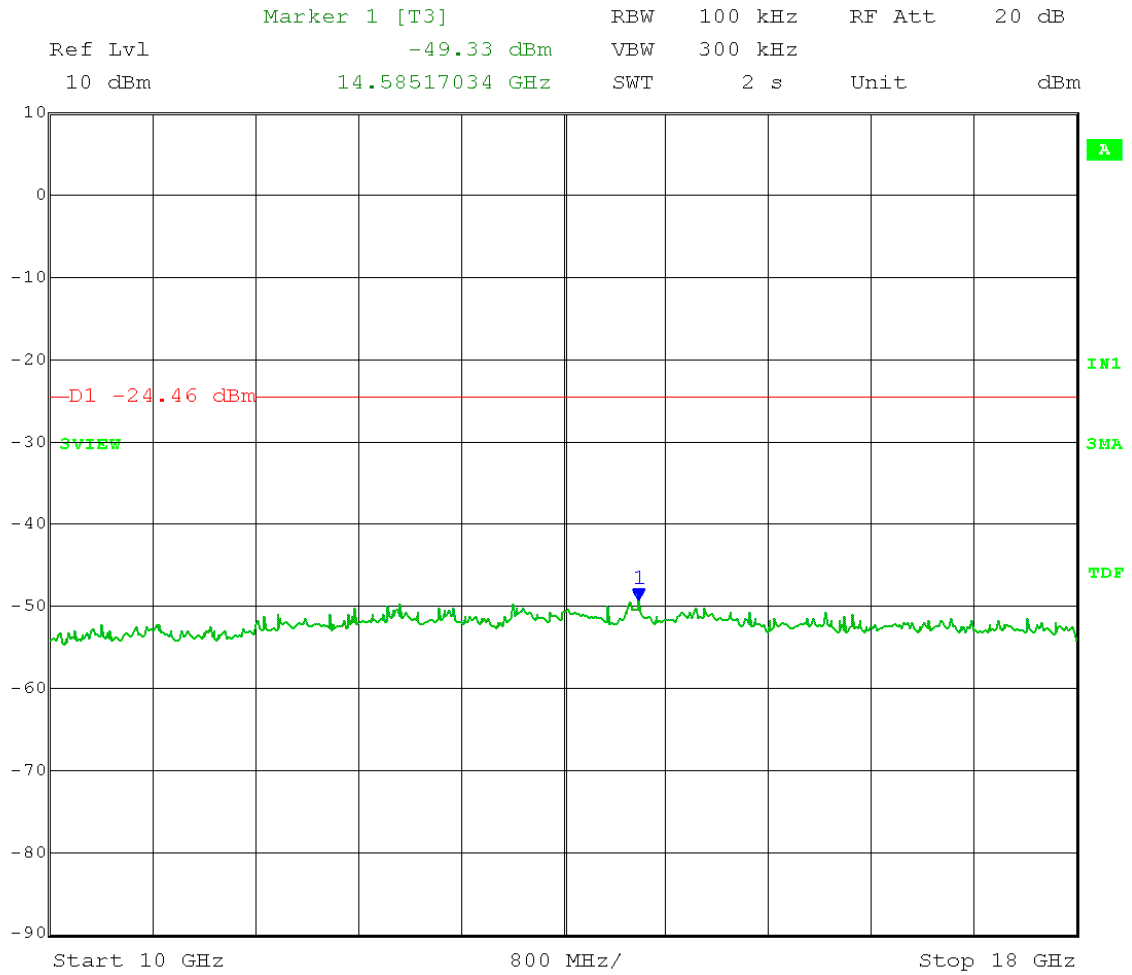
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 5.54 dBm – 30 dB = -24.46 dBm



Date: 25.APR.2012 10:35:10

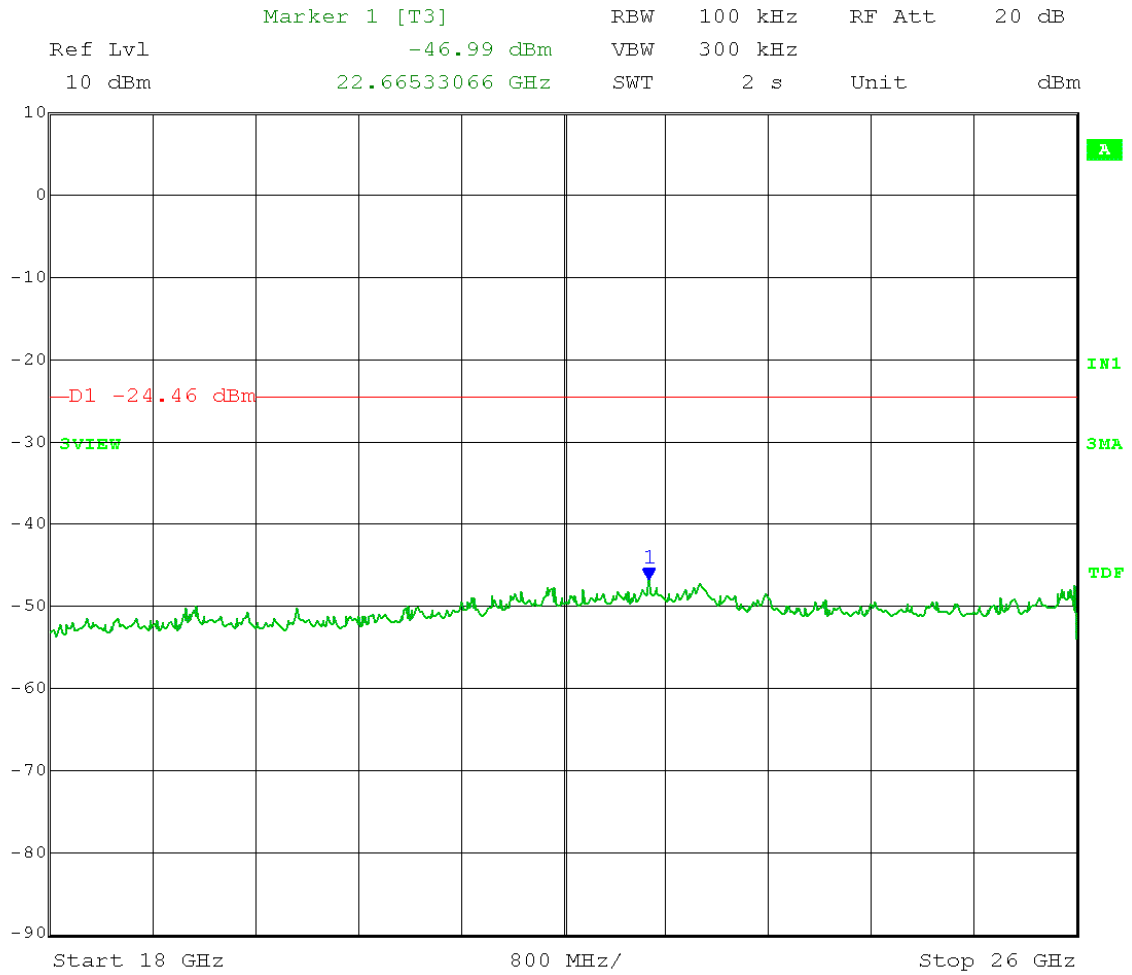
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 5.54 dBm – 30 dB = -24.46 dBm



Date: 25.APR.2012 10:36:44

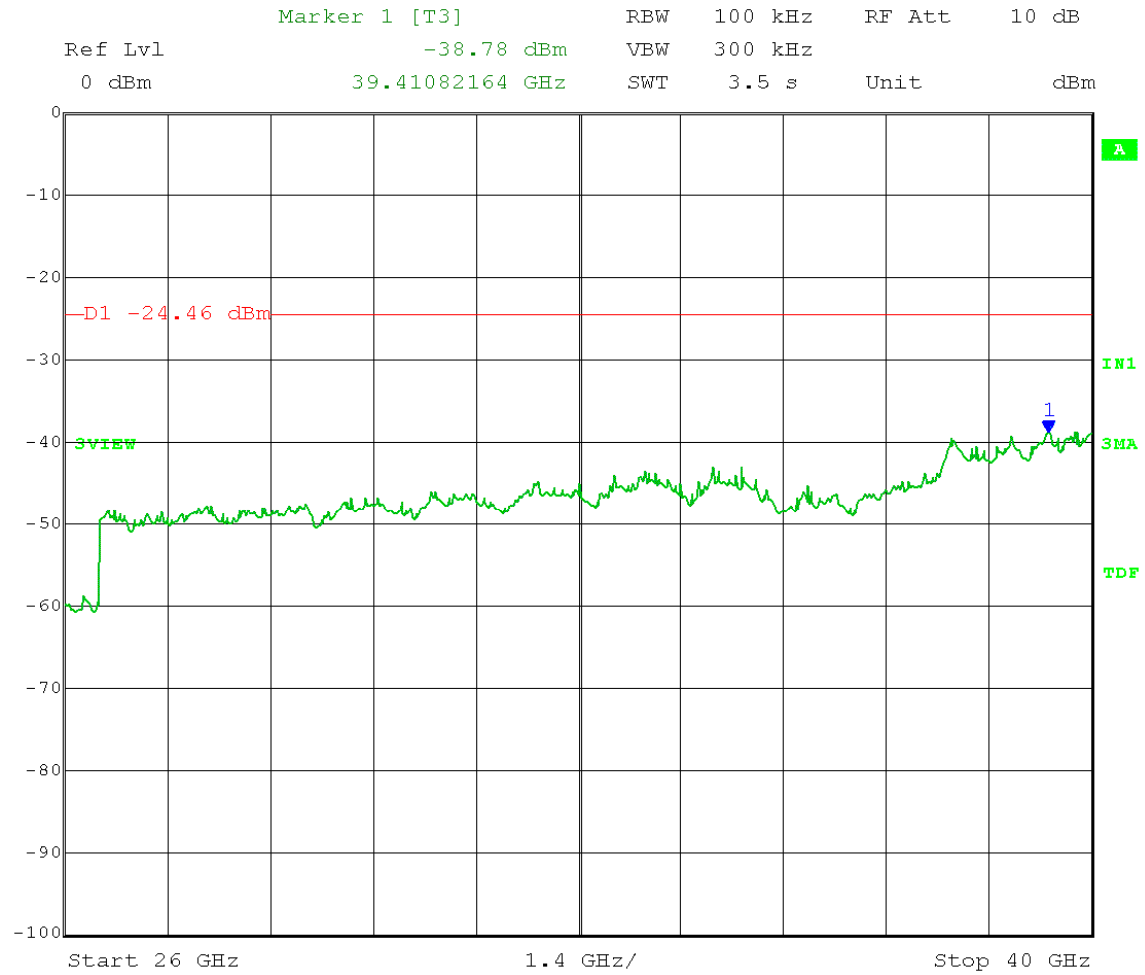
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 5.54 dBm – 30 dB = -24.46 dBm



Date: 25.APR.2012 10:40:10

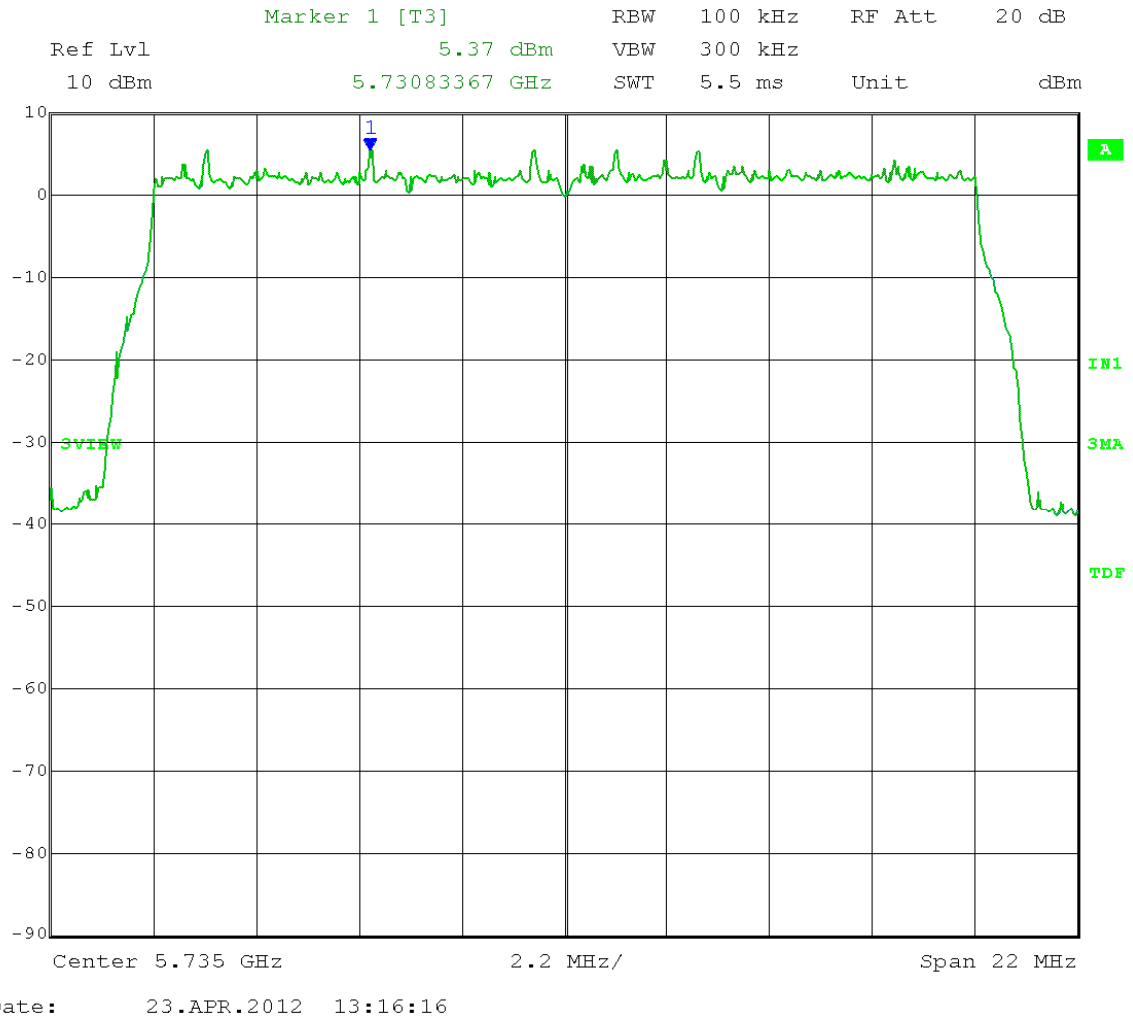
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.37 dBm – 30 dB = -24.63 dBm



Date: 23.APR.2012 13:16:16

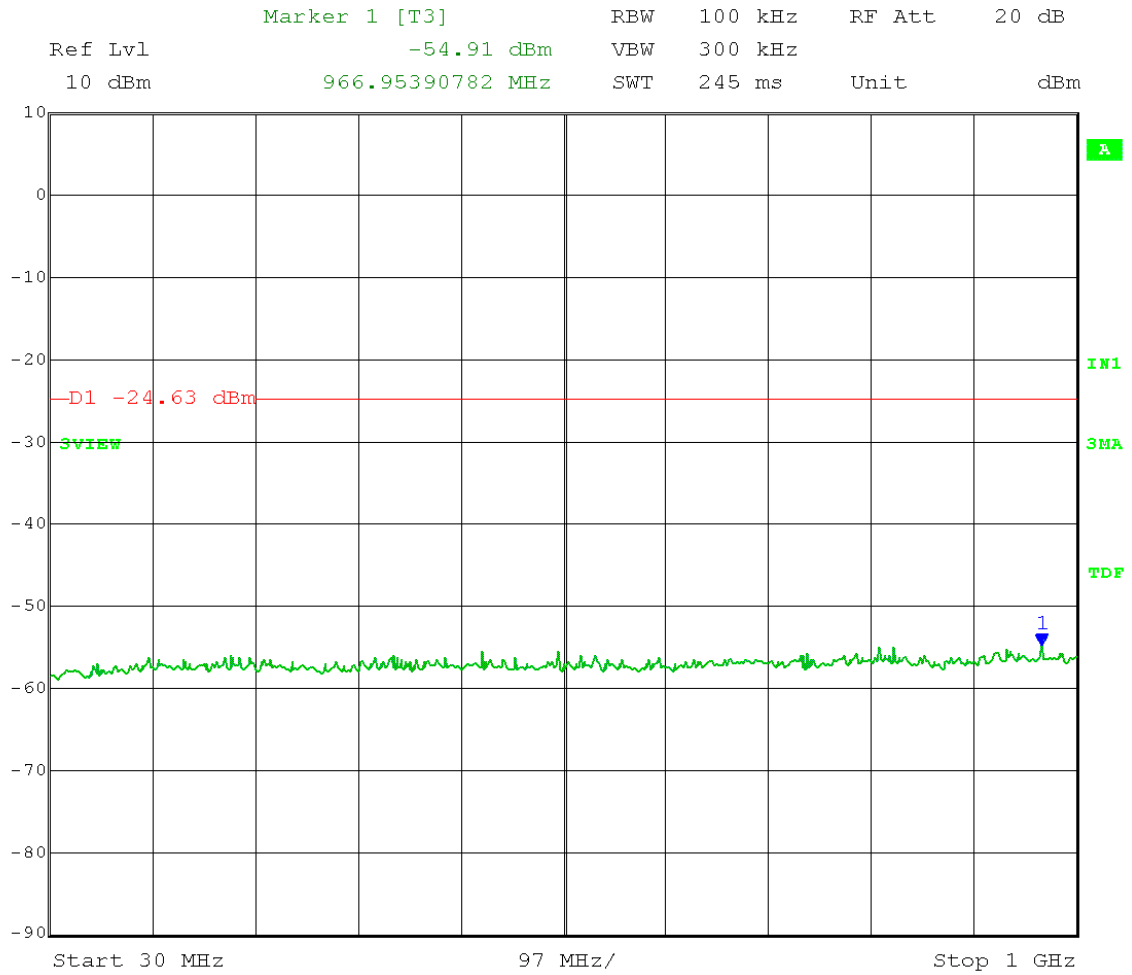
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 5.37 dBm – 30 dB = -24.63 dBm



Date: 25.APR.2012 09:15:28

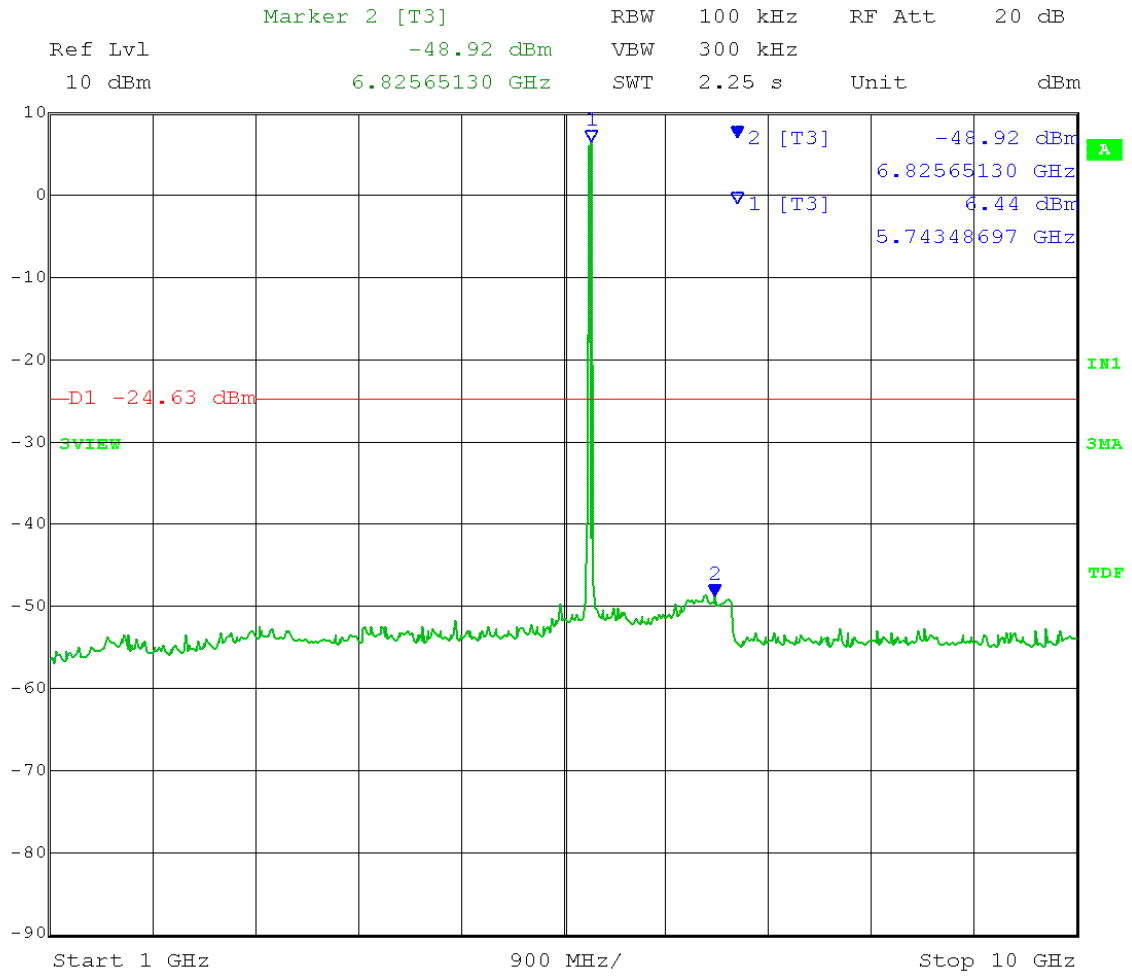
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 5.37 dBm – 30 dB = -24.63 dBm



Date: 25.APR.2012 09:10:54

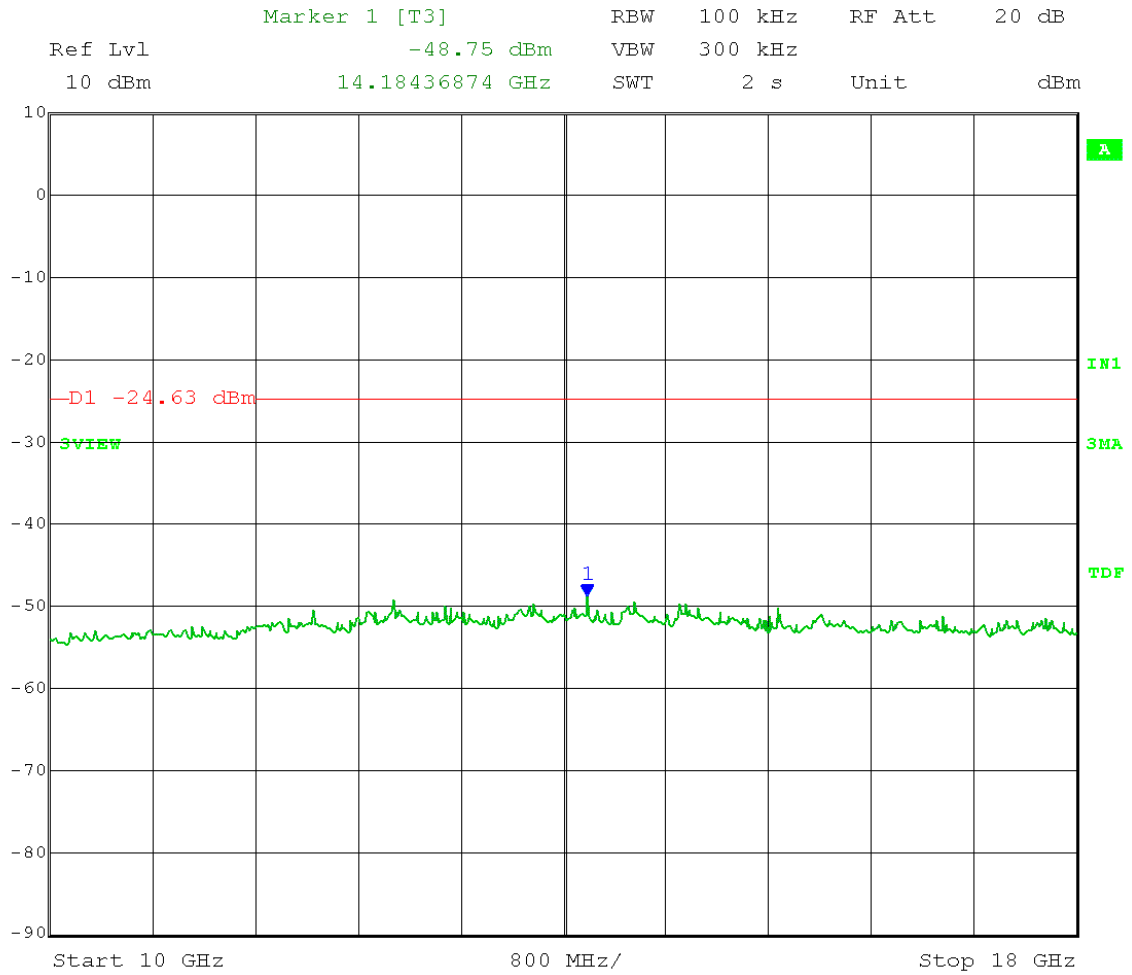
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 5.37 dBm – 30 dB = -24.63 dBm



Date: 25.APR.2012 09:12:22

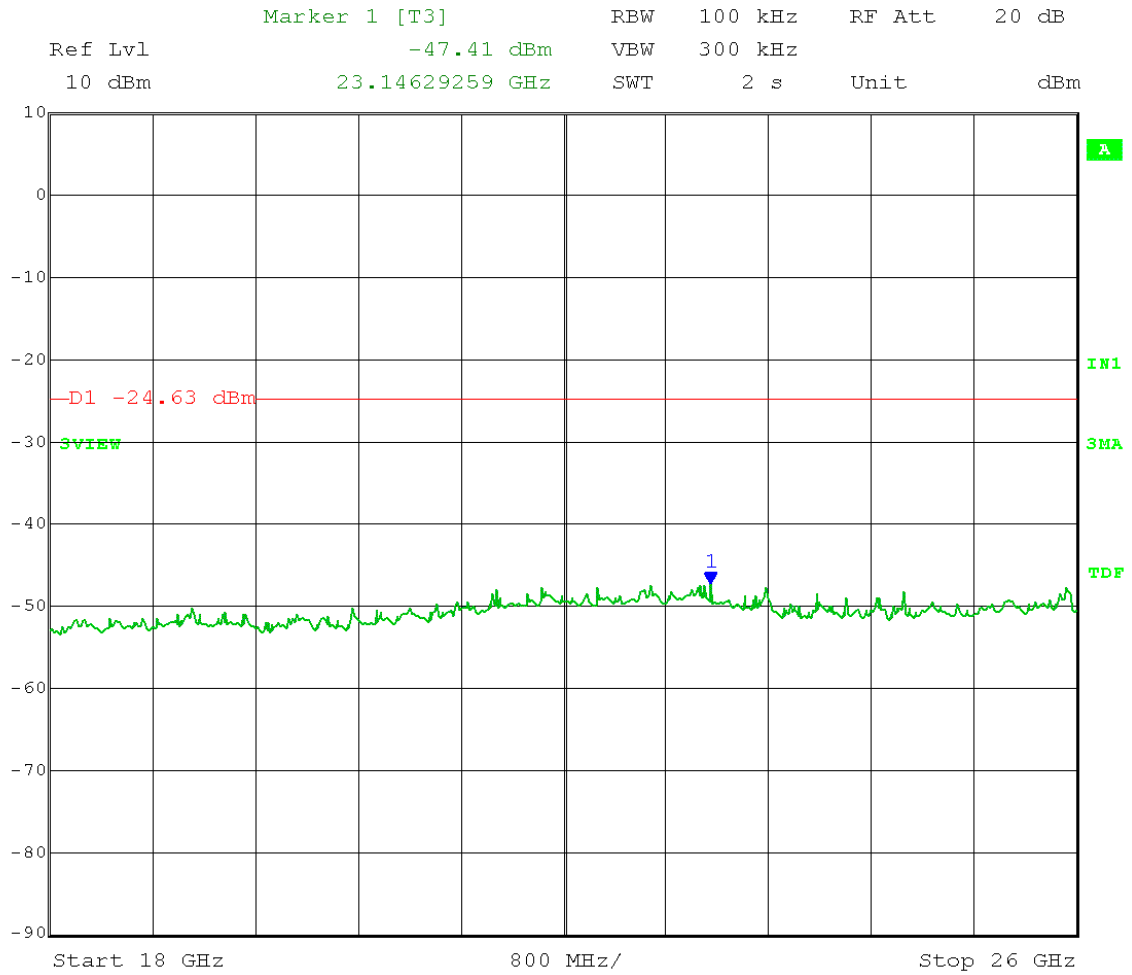
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 5.37 dBm – 30 dB = -24.63 dBm



Date: 25.APR.2012 09:13:52

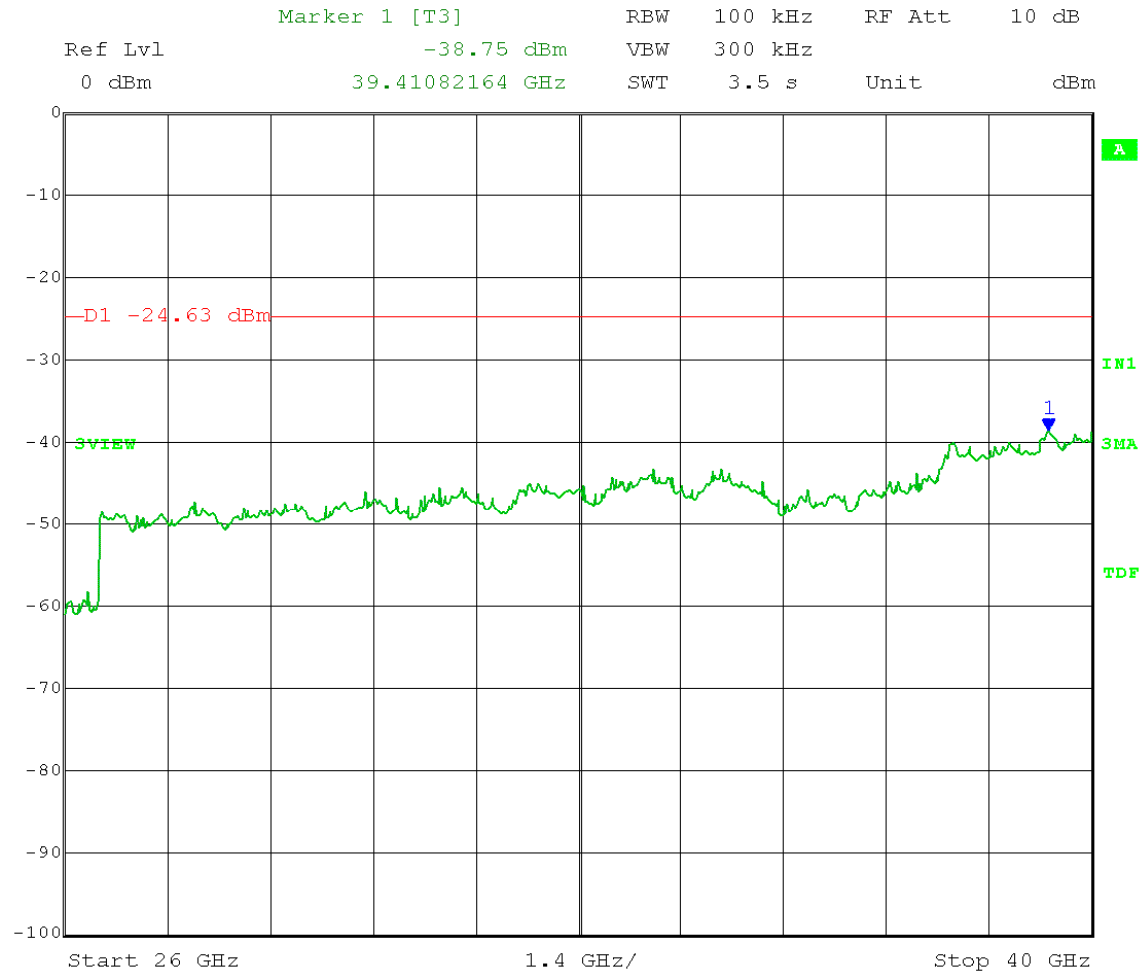
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 5.37 dBm – 30 dB = -24.63 dBm



Date: 25.APR.2012 09:17:00

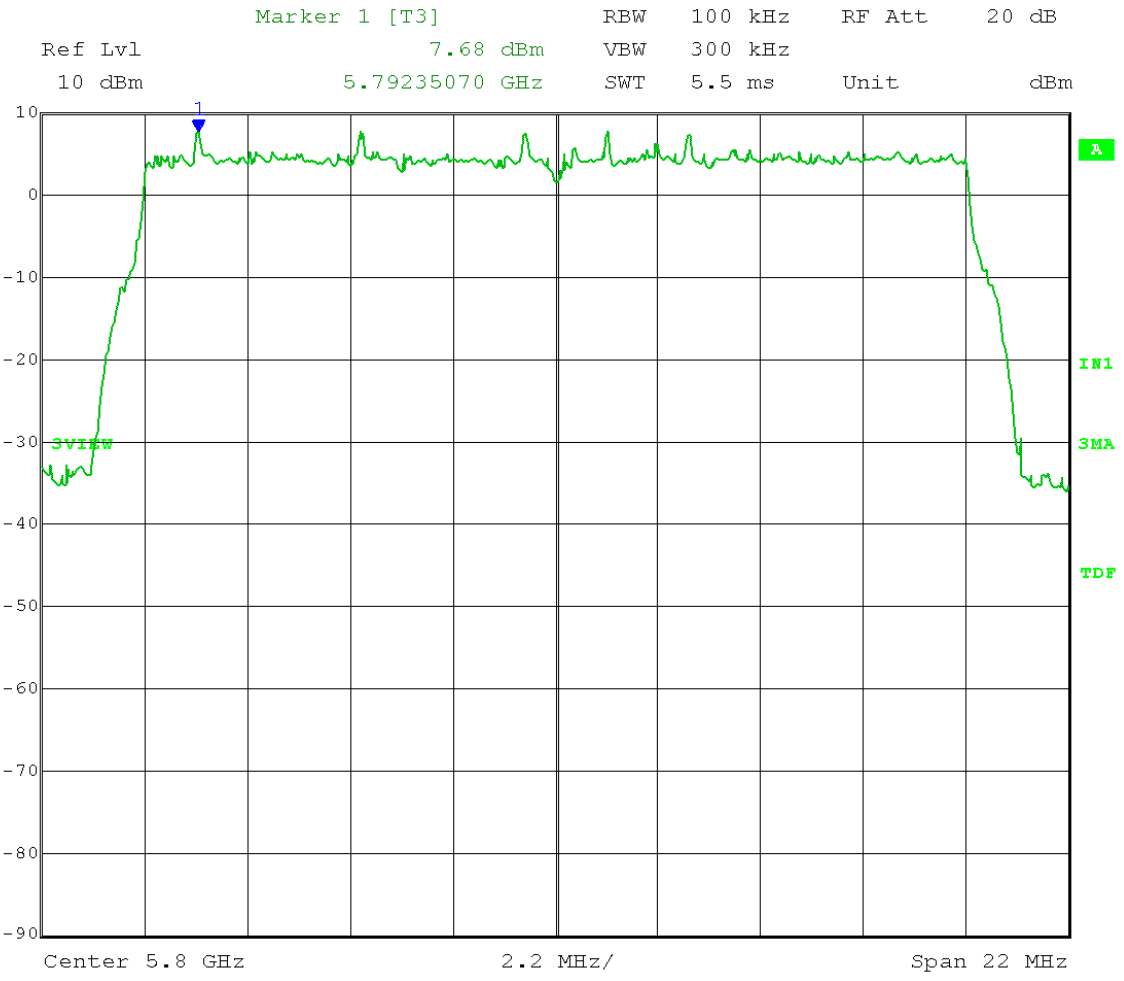
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 7.68 dBm – 30 dB = -22.32 dBm



Date: 25.APR.2012 10:02:49

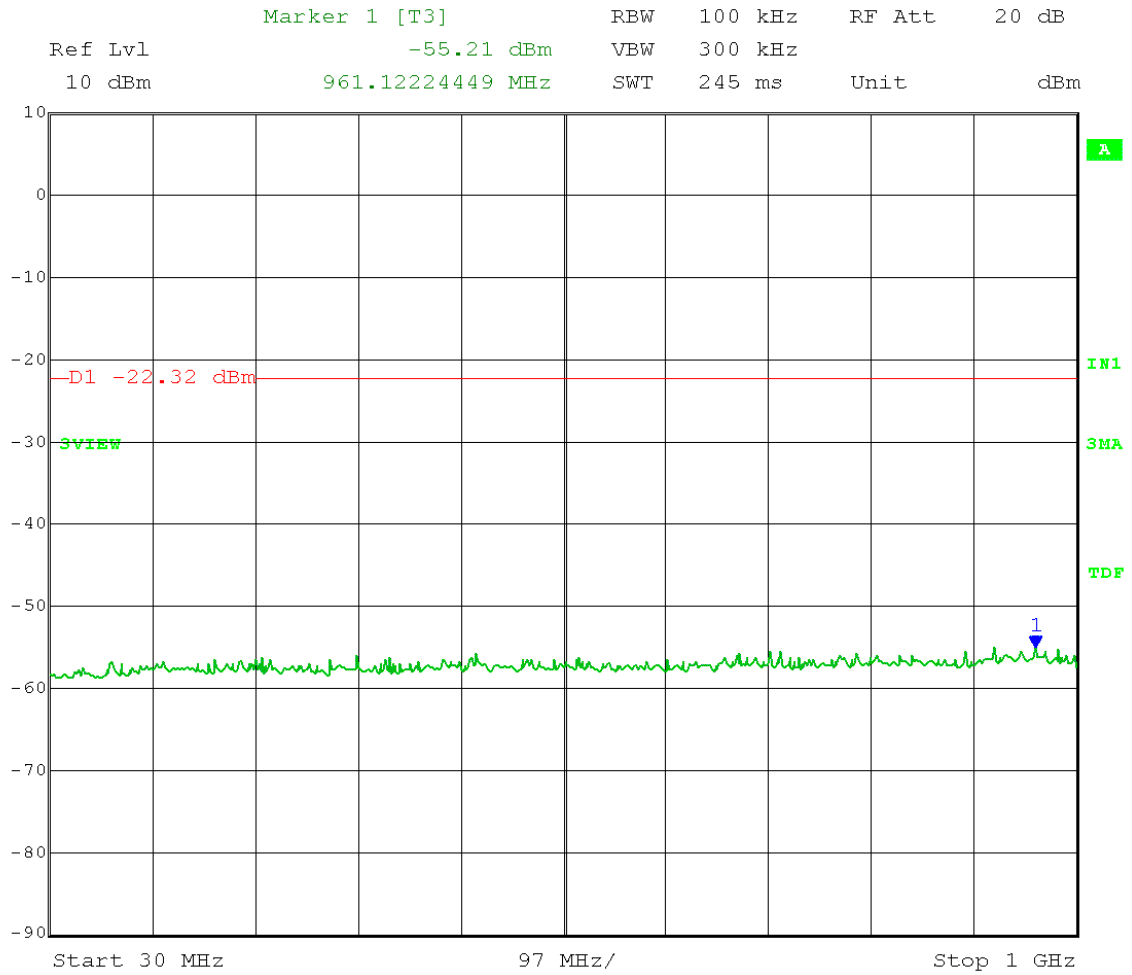
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 7.68 dBm – 30 dB = -22.32 dBm



Date: 25.APR.2012 10:10:31

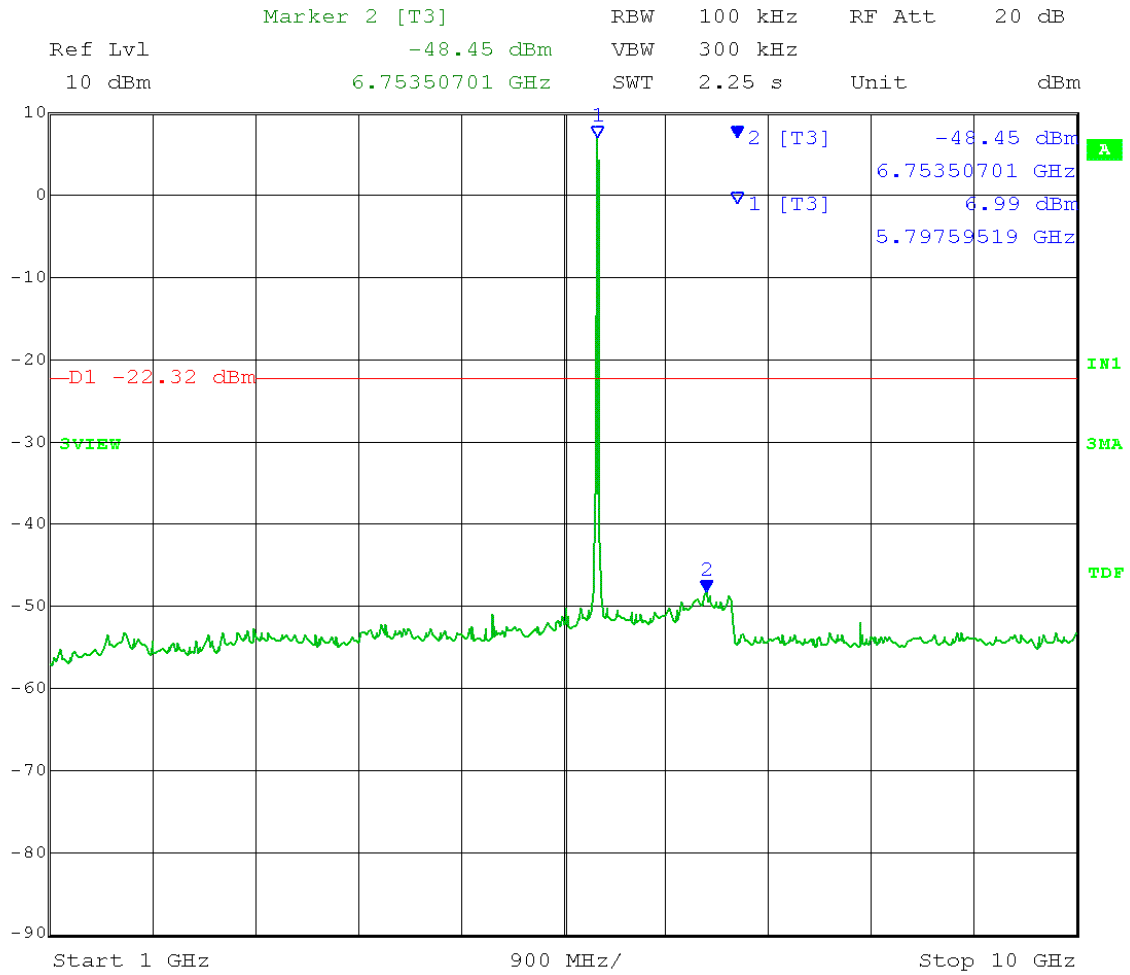
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 7.68 dBm – 30 dB = -22.32 dBm



Date: 25.APR.2012 10:05:38

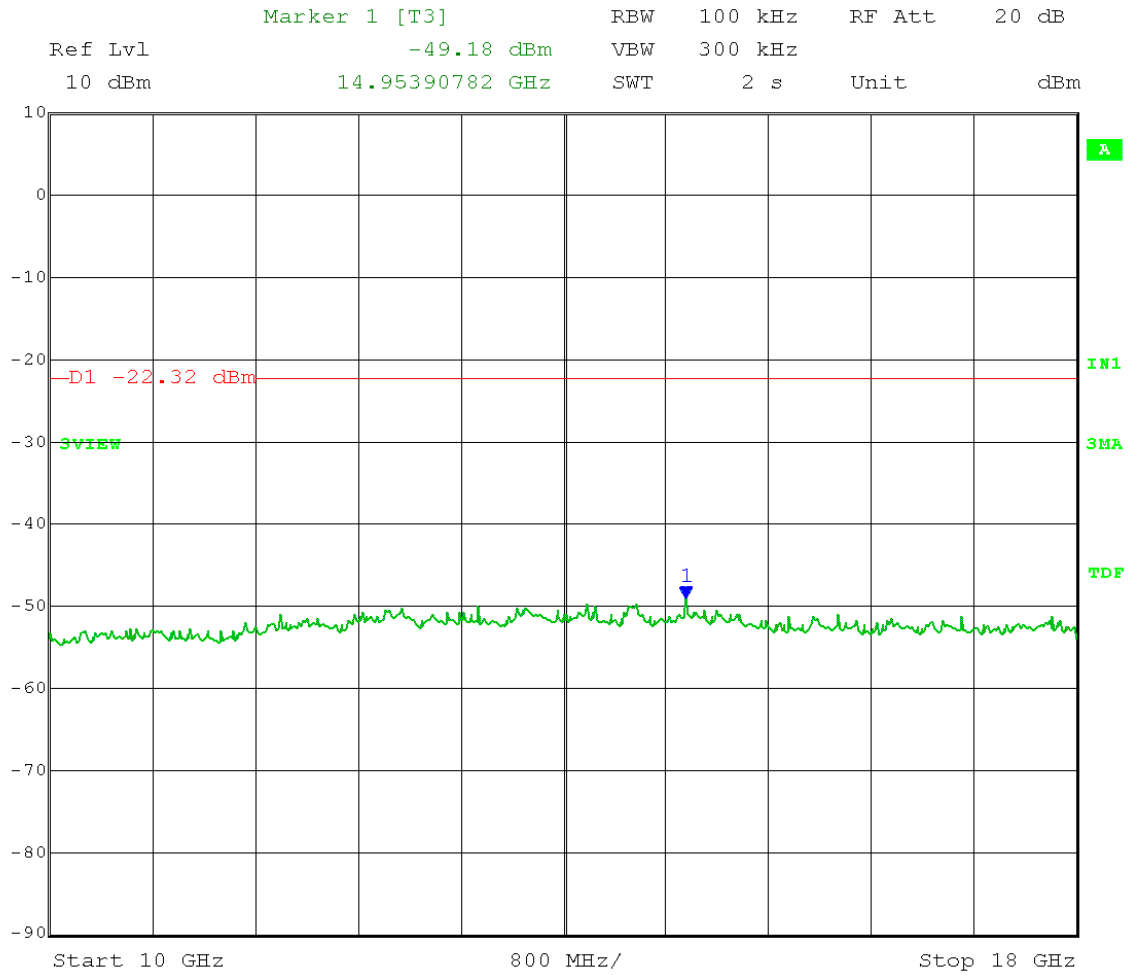
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 7.68 dBm – 30 dB = -22.32 dBm



Date: 25.APR.2012 10:07:32

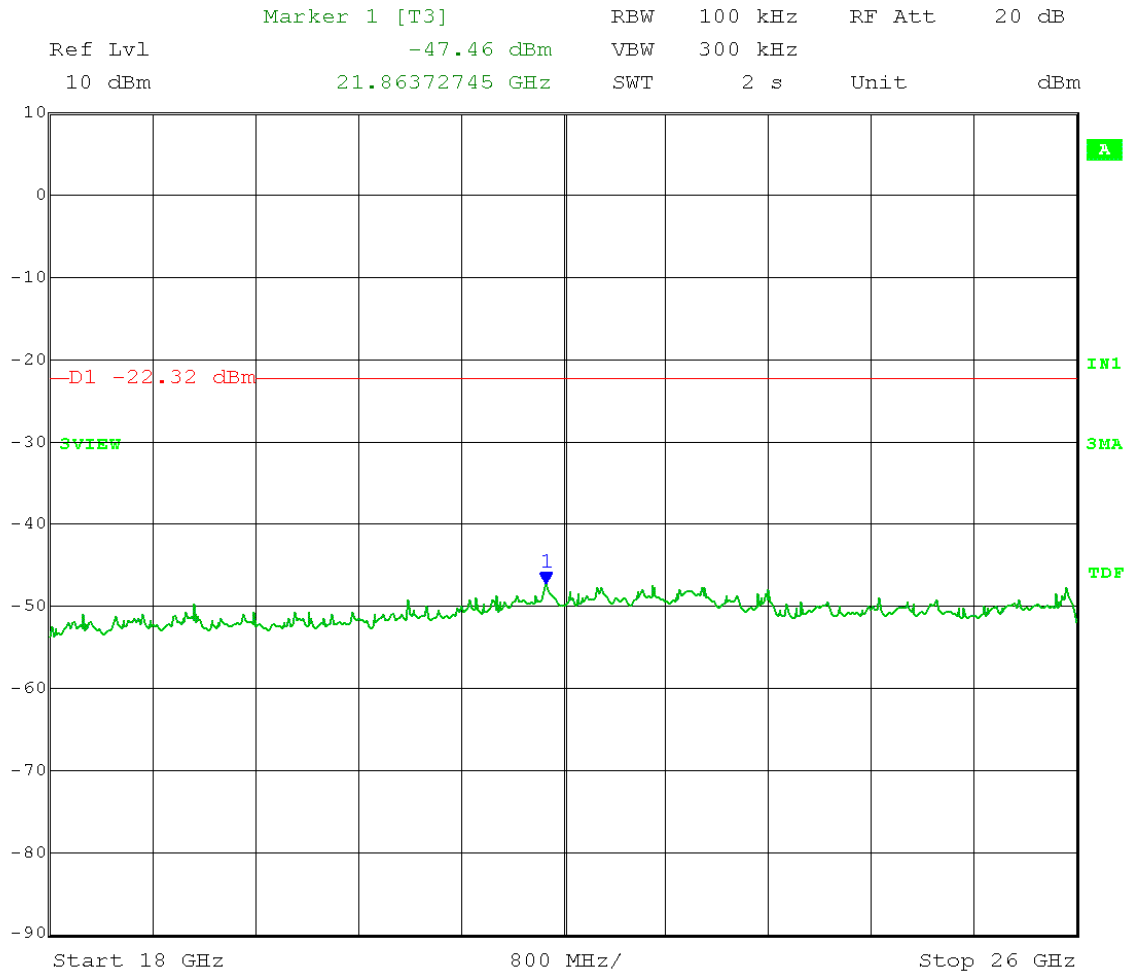
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 7.68 dBm – 30 dB = -22.32 dBm



Date: 25.APR.2012 10:09:09

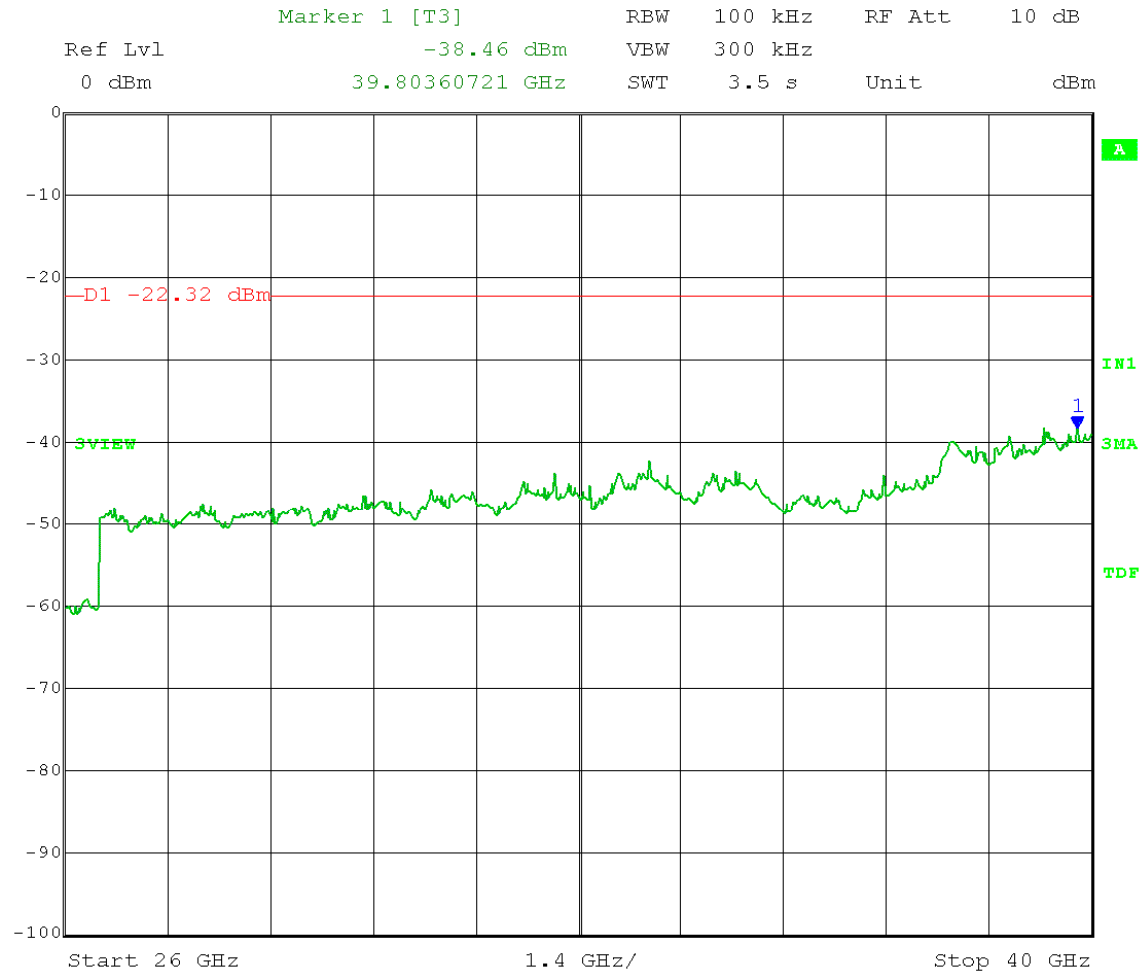
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 7.68 dBm – 30 dB = -22.32 dBm



Date: 25.APR.2012 10:12:24

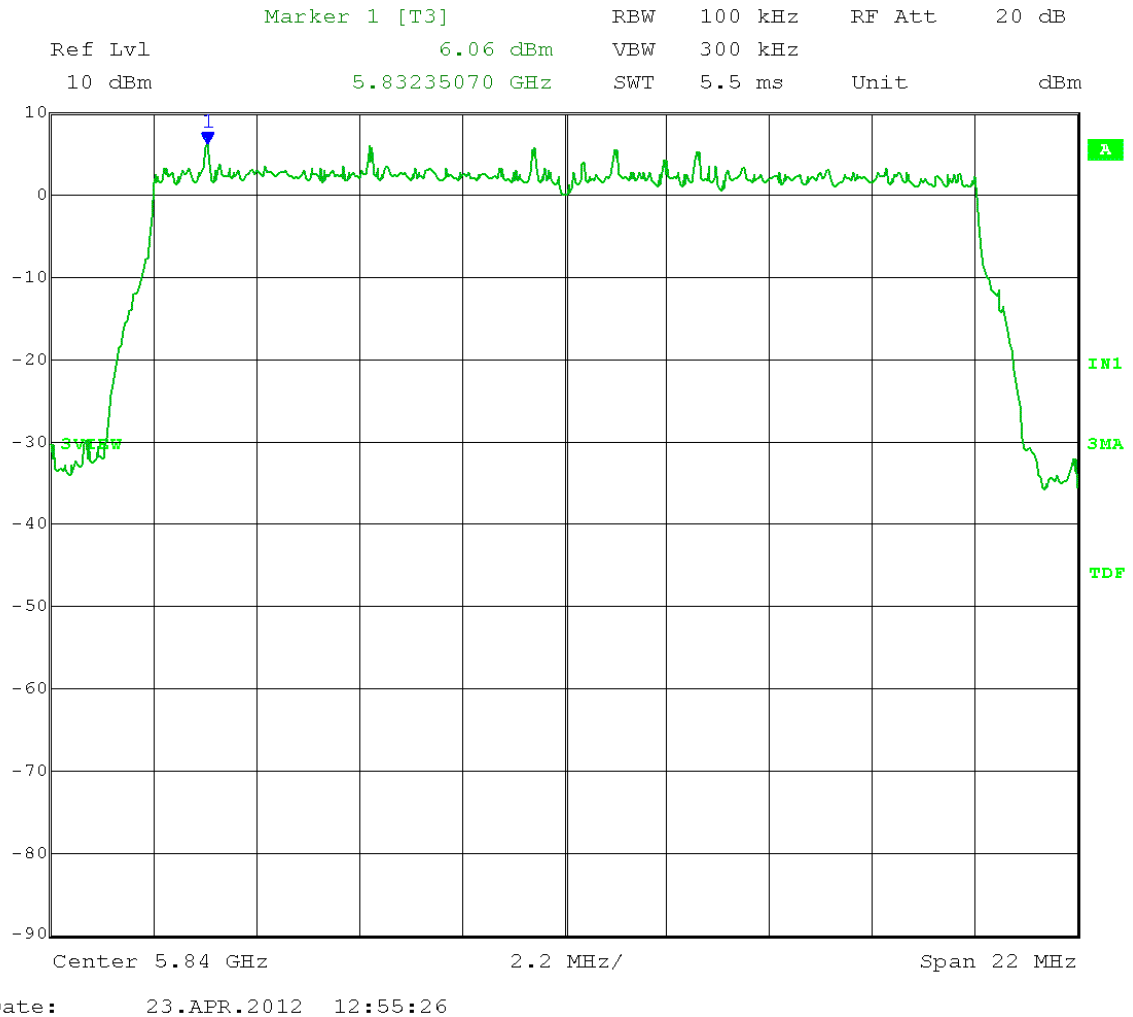
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.06 dBm – 30 dB = -23.94 dBm



Date: 23.APR.2012 12:55:26

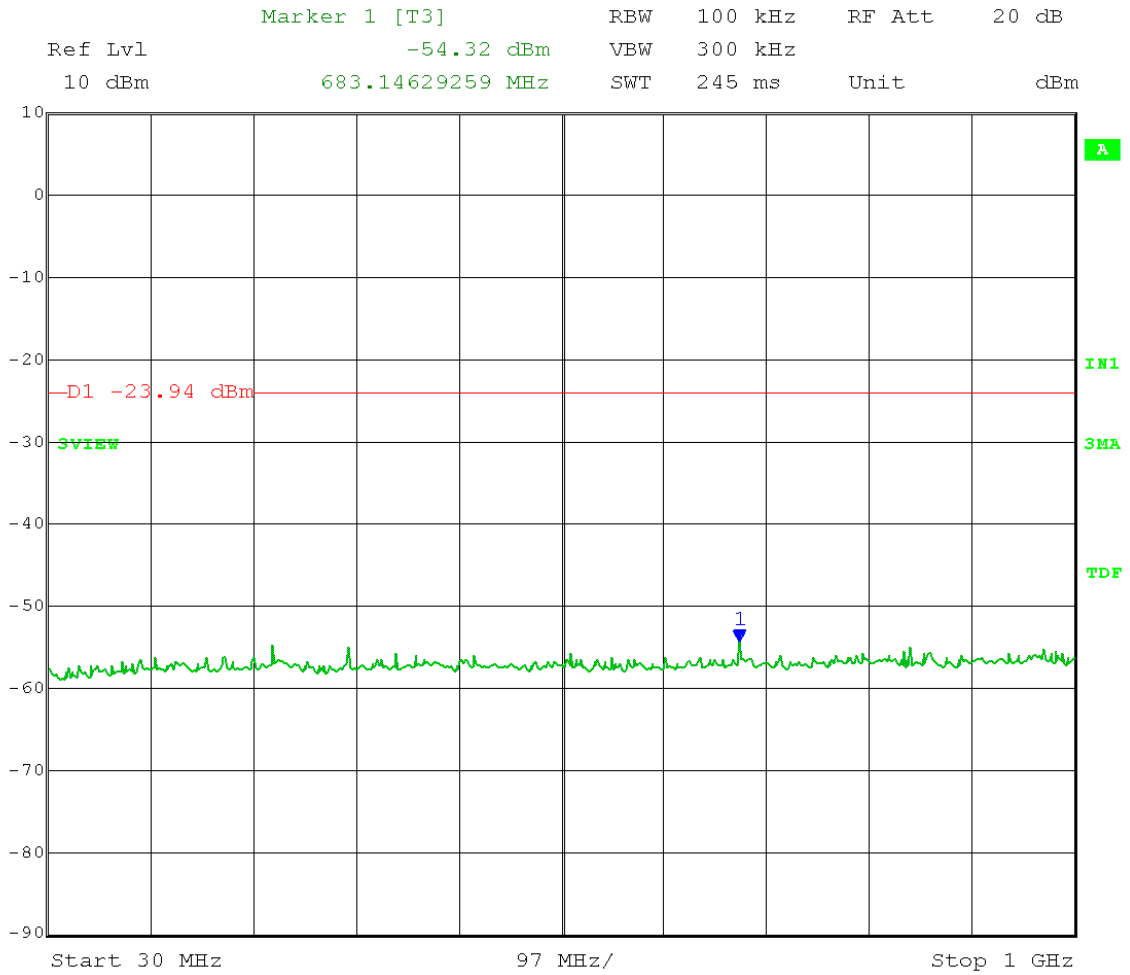
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 30 – 1000 MHz
Limit = 6.06 dBm – 30 dB = -23.94 dBm



Date: 25.APR.2012 10:19:43

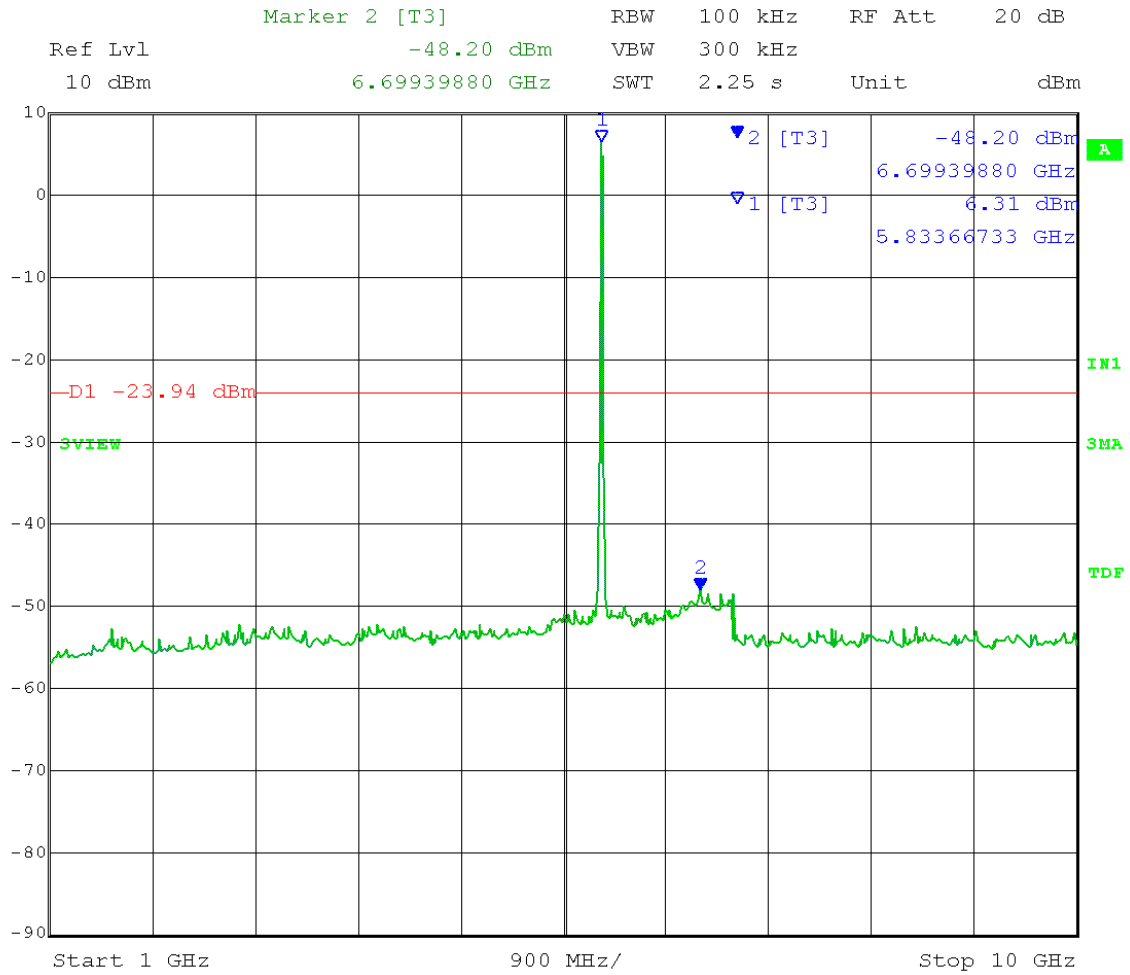
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 1 – 10 GHz
Limit = 6.06 dBm – 30 dB = -23.94 dBm



Date: 25.APR.2012 10:15:08

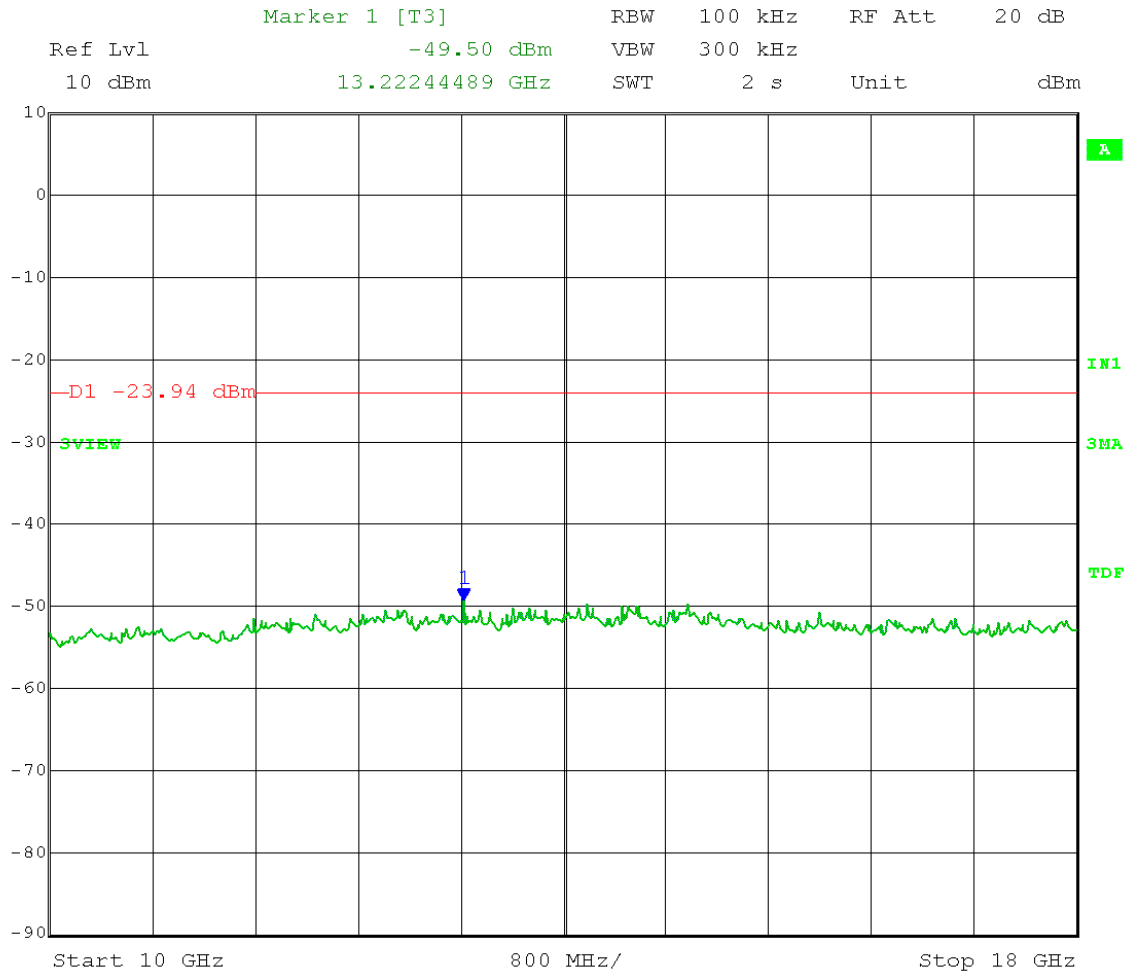
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 10 – 18 GHz
Limit = 6.06 dBm – 30 dB = -23.94 dBm



Date: 25.APR.2012 10:16:35

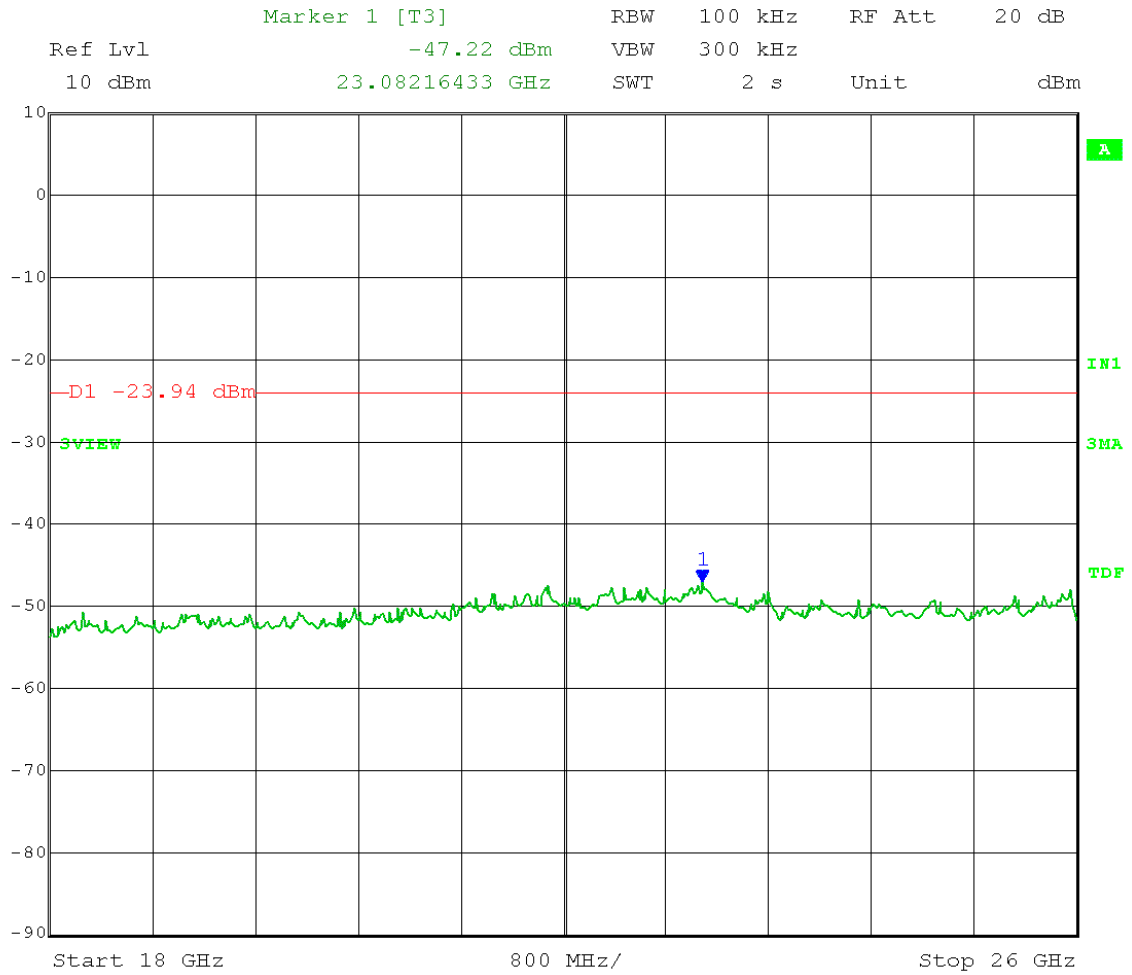
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 18 – 26 GHz
Limit = 6.06 dBm – 30 dB = -23.94 dBm



Date: 25.APR.2012 10:18:07

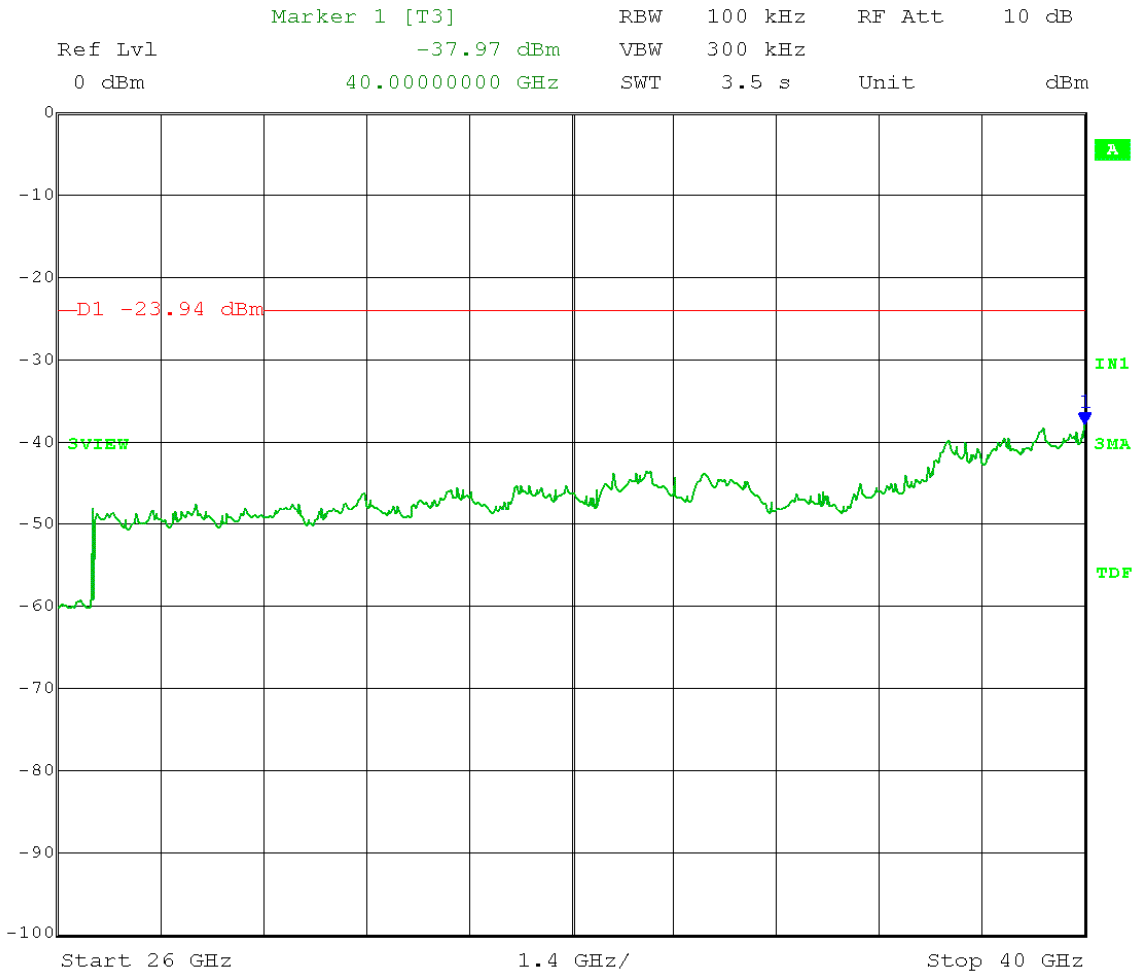
Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Frequency Range: 26 – 40 GHz
Limit = 6.06 dBm – 30 dB = -23.94 dBm



Date: 25.APR.2012 10:21:19

166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

A6.0 Maximum Unwanted Emission Levels into Restricted Frequency Bands – Radiated

Rule Section: Section 15.247(d)
RSS-210 A8.5
RSS-Gen 7.2.2

Test Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 – *Guidance for Performing Gompliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247*

Section 5.4.2 – Unwanted Emissions into Restricted Frequency Bands

ANSI C63.10:2009 – Sections 6.5 and 6.6

Description: This test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. Canada: RSS-Gen 7.2.2 Table 3.

Measurements were taken for QPSK, 16-QAM, and 64-QAM modulation types, and at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously (power setting 19 dBm) with 98% duty cycle.

Limit: FCC Part 15.209, Canada: RSS-Gen 7.2.5 Table 5

Results: Passed

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 35% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 10 and 20 MHz channel bandwidth; Low, Mid, and High channels; with patch, cassegrain, and dish
Date: 04-30-2012

TEXT: "Horz 3 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

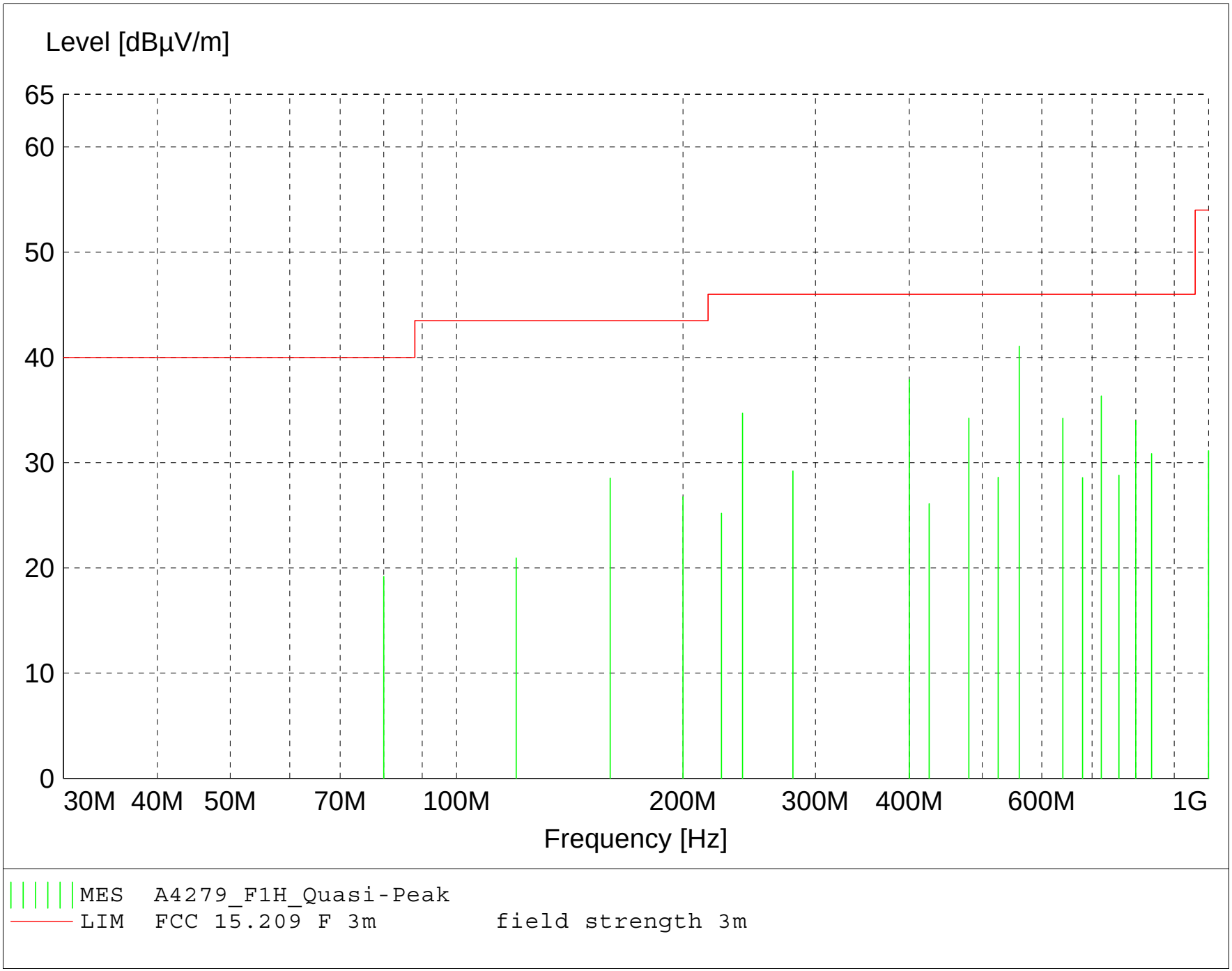
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector


Level [dBµV/m]
65
60
50
40
30
20
10
0
30M
40M
50M
70M
100M
200M
300M
400M
600M
1G
Frequency [Hz]
MES A4279_F1H_Quasi-Peak
LIM FCC 15.209 F 3m field strength 3m

MEASUREMENT RESULT: "A4279_F1H_Final"

5/1/2012 8:36AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
560.010000	42.23	18.50	-19.7	41.1	46.0	4.9	1.50	125	QUASI-PEAK	None
400.010000	44.08	14.50	-20.7	37.9	46.0	8.1	1.00	225	QUASI-PEAK	None
720.010000	33.41	21.80	-18.9	36.3	46.0	9.7	1.10	135	QUASI-PEAK	None
240.010000	45.21	11.00	-21.5	34.7	46.0	11.3	1.00	225	QUASI-PEAK	None
480.010000	37.00	17.60	-20.4	34.2	46.0	11.8	1.30	315	QUASI-PEAK	None
640.010000	34.19	19.30	-19.3	34.2	46.0	11.8	1.30	135	QUASI-PEAK	None
800.020000	30.66	21.00	-17.7	34.0	46.0	12.0	1.50	315	QUASI-PEAK	None
160.010000	37.07	13.50	-22.0	28.5	43.5	15.0	1.30	260	QUASI-PEAK	None
840.010000	26.48	21.50	-17.1	30.9	46.0	15.1	1.30	270	QUASI-PEAK	None
200.000000	30.98	17.40	-21.6	26.8	43.5	16.7	1.60	90	QUASI-PEAK	None
280.010000	37.27	13.40	-21.5	29.2	46.0	16.8	1.00	250	QUASI-PEAK	None
760.010000	26.29	20.40	-17.9	28.8	46.0	17.2	1.50	315	QUASI-PEAK	None
525.010000	31.19	17.20	-19.8	28.6	46.0	17.4	1.50	135	QUASI-PEAK	None
680.010000	26.18	21.40	-19.0	28.6	46.0	17.4	1.20	225	QUASI-PEAK	None
425.010000	30.83	15.70	-20.4	26.1	46.0	19.9	1.00	125	QUASI-PEAK	None
225.010000	36.21	10.60	-21.6	25.2	46.0	20.8	1.30	75	QUASI-PEAK	None
80.005000	35.74	6.20	-22.8	19.2	40.0	20.8	2.50	125	QUASI-PEAK	None
120.015000	30.14	13.00	-22.2	21.0	43.5	22.5	2.60	270	QUASI-PEAK	None
1000.000000	23.38	24.00	-16.2	31.1	54.0	22.9	1.20	210	QUASI-PEAK	None

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 35% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 10 and 20 MHz channel bandwidth; Low, Mid, and High channels; with patch, cassegrain, and dish
Date: 04-30-2012

TEXT: "Vert 3 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

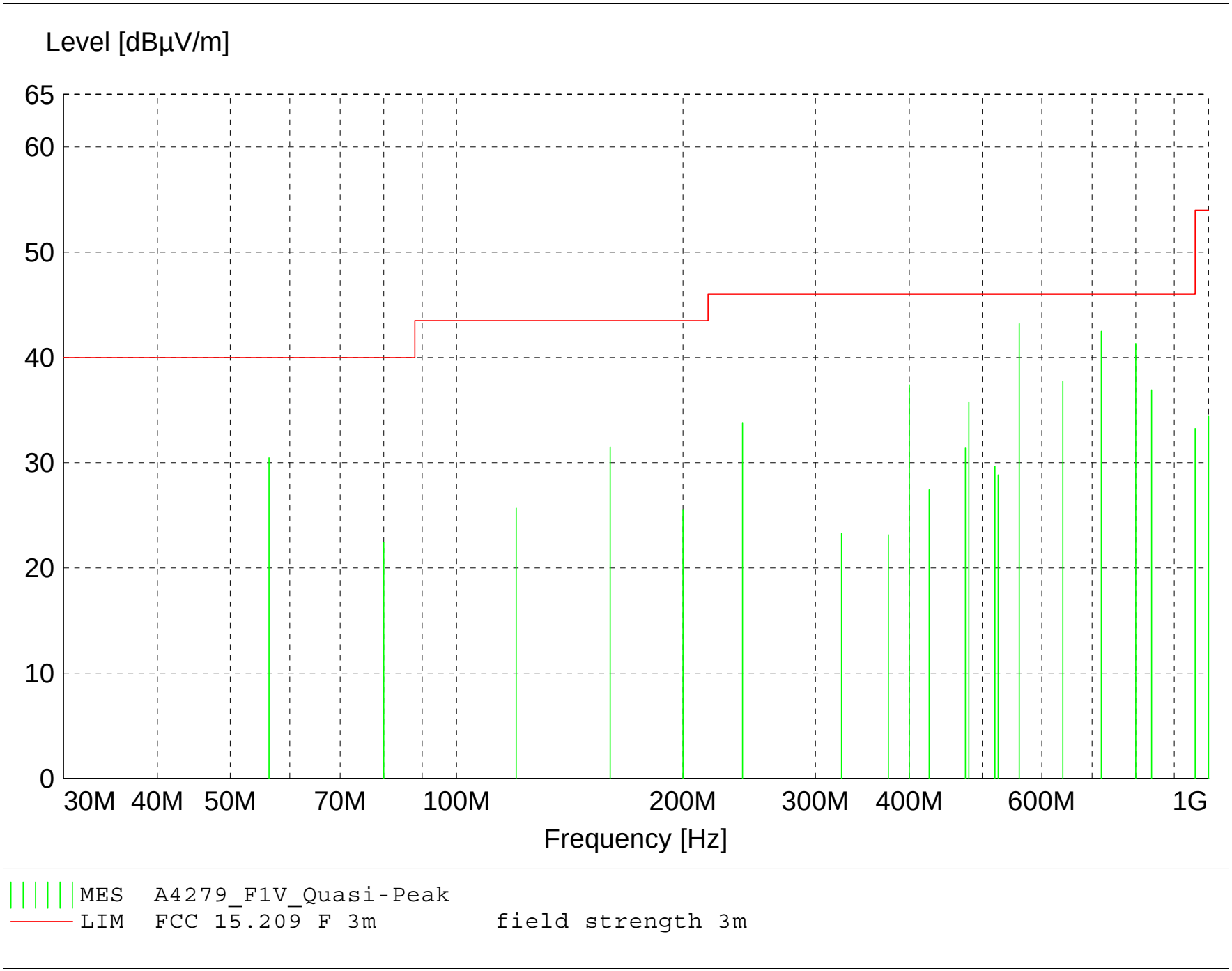
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector


Level [dBµV/m]
65
60
50
40
30
20
10
0
30M
40M
50M
70M
100M
200M
300M
400M
600M
1G
Frequency [Hz]
MES A4279_F1V_Quasi-Peak
LIM FCC 15.209 F 3m field strength 3m

MEASUREMENT RESULT: "A4279_F1V_Final"

5/1/2012 8:38AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
560.010000	44.33	18.50	-19.7	43.2	46.0	2.8	1.00	135	QUASI-PEAK	None
720.010000	39.56	21.80	-18.9	42.5	46.0	3.5	1.00	0	QUASI-PEAK	None
800.020000	38.01	21.00	-17.7	41.3	46.0	4.7	1.00	0	QUASI-PEAK	None
640.020000	37.71	19.30	-19.3	37.7	46.0	8.3	1.00	225	QUASI-PEAK	None
400.010000	43.59	14.50	-20.7	37.4	46.0	8.6	1.40	270	QUASI-PEAK	None
840.010000	32.53	21.50	-17.1	36.9	46.0	9.1	1.50	0	QUASI-PEAK	None
56.300000	42.96	10.48	-23.0	30.5	40.0	9.5	1.00	10	QUASI-PEAK	None
480.010000	38.54	17.60	-20.4	35.8	46.0	10.2	1.00	125	QUASI-PEAK	None
160.015000	40.03	13.50	-22.0	31.5	43.5	12.0	1.00	175	QUASI-PEAK	None
240.010000	44.25	11.00	-21.5	33.8	46.0	12.2	1.00	90	QUASI-PEAK	None
475.010000	34.24	17.60	-20.4	31.5	46.0	14.5	1.00	135	QUASI-PEAK	None
520.010000	31.62	17.80	-19.7	29.7	46.0	16.3	1.00	225	QUASI-PEAK	None
525.020000	31.42	17.20	-19.8	28.8	46.0	17.2	1.00	135	QUASI-PEAK	None
80.015000	38.99	6.20	-22.8	22.4	40.0	17.6	1.00	350	QUASI-PEAK	None
120.015000	34.86	13.00	-22.2	25.7	43.5	17.8	1.00	350	QUASI-PEAK	None
200.000000	29.78	17.40	-21.6	25.5	43.5	18.0	1.00	0	QUASI-PEAK	None
425.010000	32.15	15.70	-20.4	27.4	46.0	18.6	1.30	100	QUASI-PEAK	None
1000.000000	26.65	24.00	-16.2	34.4	54.0	19.6	1.00	160	QUASI-PEAK	None
960.020000	26.92	23.00	-16.7	33.2	54.0	20.8	1.00	180	QUASI-PEAK	None
325.010000	30.21	14.20	-21.1	23.3	46.0	22.7	1.00	90	QUASI-PEAK	None
375.020000	29.06	14.70	-20.6	23.2	46.0	22.8	1.30	110	QUASI-PEAK	None

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 35% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; with Cassegrain
Date: 04-26-2012

TEXT: "Horz 3 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

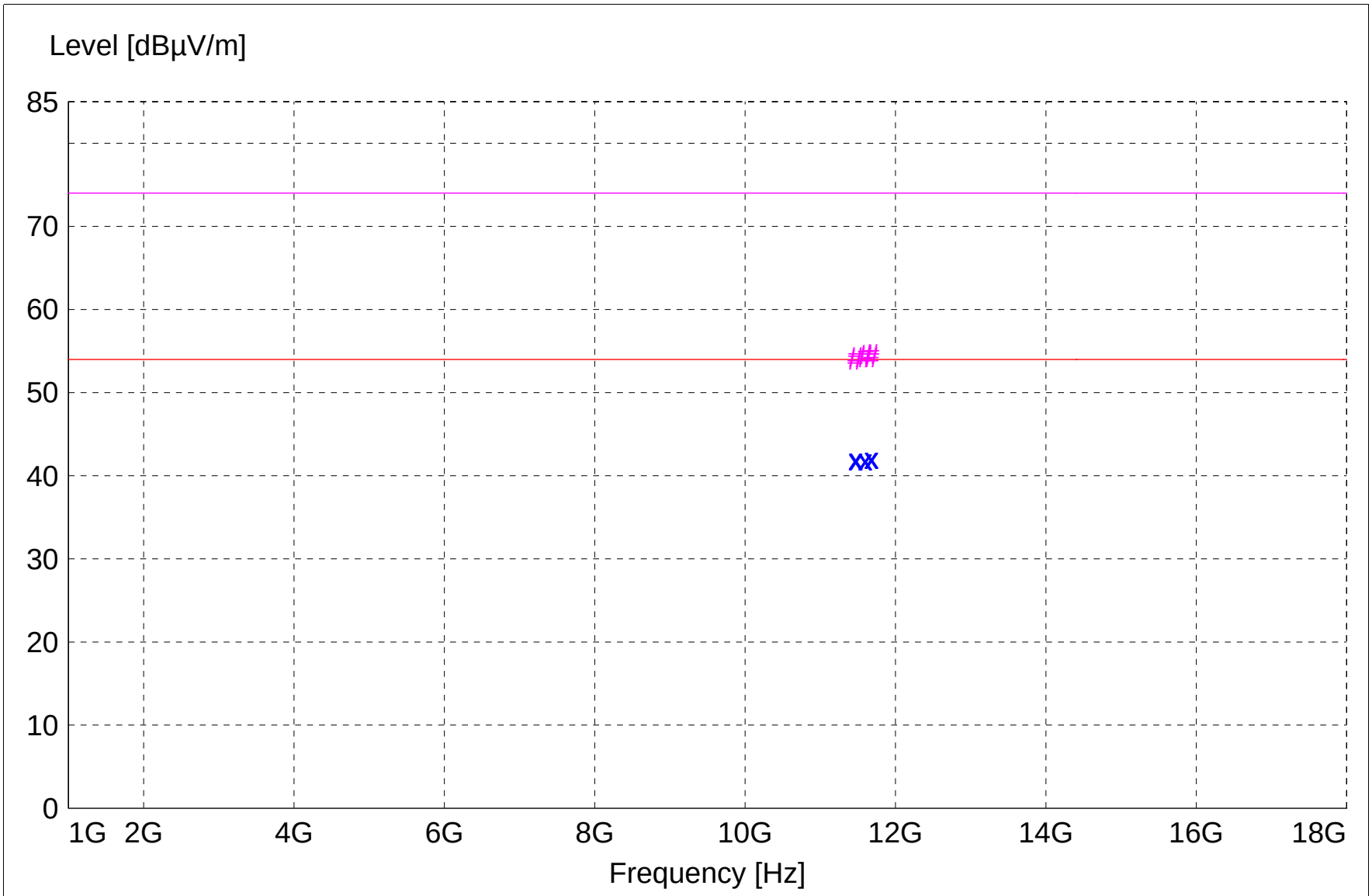
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x :MES A4265_sh_Average
:MES A4265_sh_Peak
——— LIM FCC 15.209 F 3m AVG Field Strength AVG Limit 3m
——— LIM FCC 15.209 F 3m PK Field Strength PEAK Limit 3m

MEASUREMENT RESULT: "A4265_sh_Final"

4/27/2012 11:12AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
11469.970000	35.50	40.66	-34.3	41.8	54.0	12.2	1.20	350	AVERAGE	Low ch; 16QAM
11469.980000	35.57	40.66	-34.3	41.9	54.0	12.1	1.20	350	AVERAGE	Low ch; 64QAM
11470.000000	35.65	40.66	-34.3	42.0	54.0	12.0	1.20	350	AVERAGE	Low ch; QPSK
11599.960000	35.42	40.64	-34.1	42.0	54.0	12.0	1.20	350	AVERAGE	Mid ch; 64QAM
11600.020000	35.26	40.64	-34.1	41.8	54.0	12.2	1.20	350	AVERAGE	Mid ch; QPSK
11600.020000	35.26	40.64	-34.1	41.8	54.0	12.2	1.20	350	AVERAGE	Mid ch; 16QAM
11679.970000	36.09	40.51	-34.5	42.1	54.0	11.9	1.20	350	AVERAGE	High ch; 64QAM
11679.980000	36.09	40.51	-34.5	42.1	54.0	11.9	1.20	350	AVERAGE	High ch; QPSK
11679.990000	36.02	40.51	-34.5	42.0	54.0	12.0	1.20	350	AVERAGE	High ch; 16QAM
11469.970000	47.95	40.66	-34.3	54.3	74.0	19.7	1.20	350	MAX PEAK	Low ch; 16QAM
11469.980000	47.95	40.66	-34.3	54.3	74.0	19.7	1.20	350	MAX PEAK	Low ch; 64QAM
11470.000000	47.67	40.66	-34.3	54.0	74.0	20.0	1.20	350	MAX PEAK	Low ch; QPSK
11599.960000	47.95	40.64	-34.1	54.5	74.0	19.5	1.20	350	MAX PEAK	Mid ch; 64QAM
11600.020000	47.67	40.64	-34.1	54.2	74.0	19.8	1.20	350	MAX PEAK	Mid ch; QPSK
11600.020000	47.67	40.64	-34.1	54.2	74.0	19.8	1.20	350	MAX PEAK	Mid ch; 16QAM
11679.970000	48.21	40.51	-34.5	54.2	74.0	19.8	1.20	350	MAX PEAK	High ch; 64QAM
11679.980000	48.62	40.51	-34.5	54.6	74.0	19.4	1.20	350	MAX PEAK	High ch; QPSK
11679.990000	48.62	40.51	-34.5	54.6	74.0	19.4	1.20	350	MAX PEAK	High ch; 16QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 35% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; with Cassegrain
Date: 04-26-2012

TEXT: "Vert 3 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

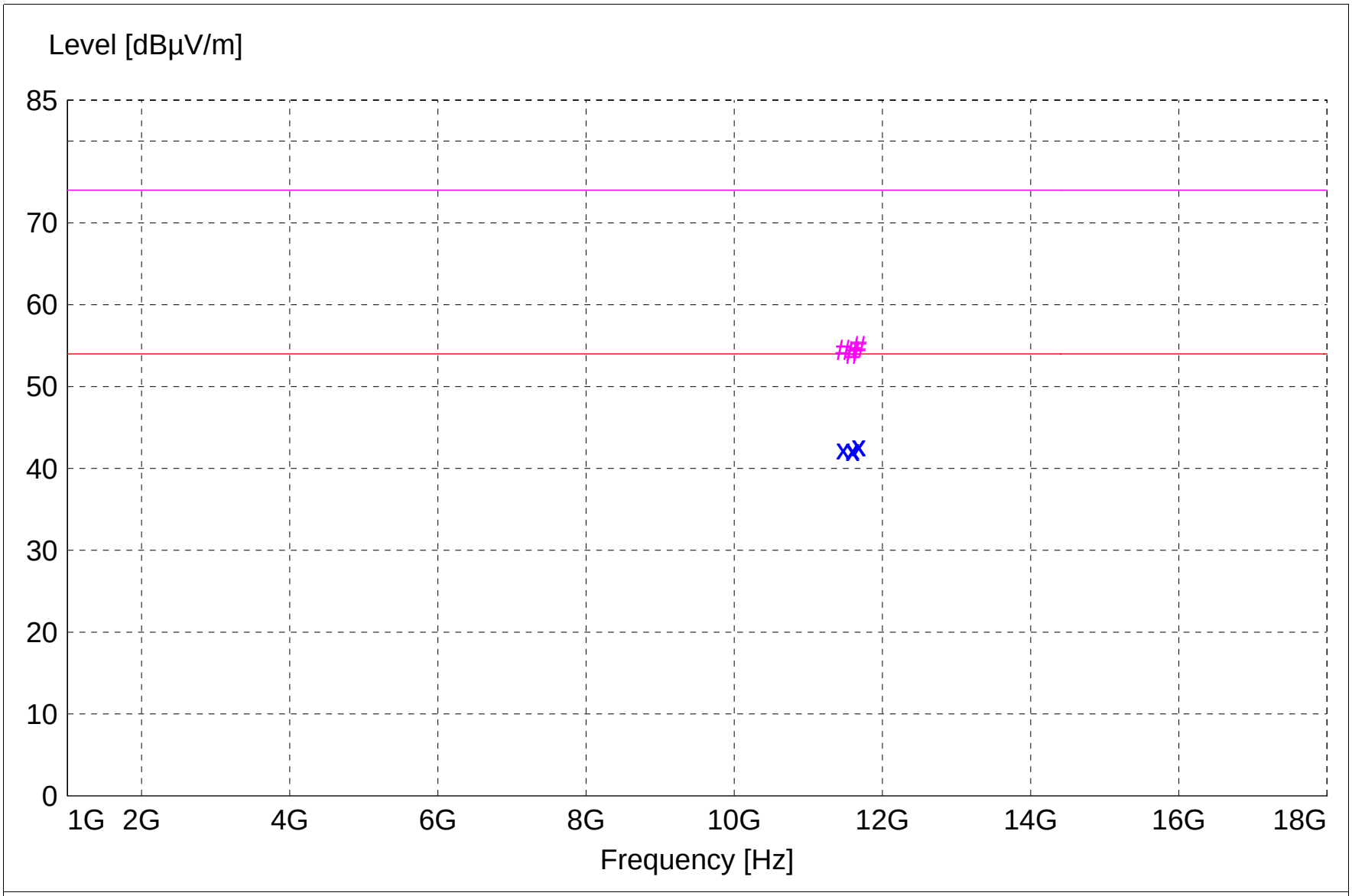
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x :MES A4265_sv_Average
:MES A4265_sv_Peak
——— LIM FCC 15.209 F 3m AVG Field Strength AVG Limit 3m
——— LIM FCC 15.209 F 3m PK Field Strength PEAK Limit 3m

MEASUREMENT RESULT: "A4265_sv_Final"

4/27/2012 11:12AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
11470.000000	36.02	40.66	-34.3	42.4	54.0	11.6	1.00	35	AVERAGE	Low ch; 64QAM
11470.000000	35.95	40.66	-34.3	42.3	54.0	11.7	1.00	35	AVERAGE	Low ch; QPSK
11470.010000	36.02	40.66	-34.3	42.4	54.0	11.6	1.00	35	AVERAGE	Low ch; 16QAM
11599.990000	35.72	40.64	-34.1	42.3	54.0	11.7	1.10	30	AVERAGE	Mid ch; QPSK
11600.010000	35.72	40.64	-34.1	42.3	54.0	11.7	1.10	30	AVERAGE	Mid ch; 64QAM
11600.030000	35.57	40.64	-34.1	42.1	54.0	11.9	1.10	30	AVERAGE	Mid ch; 16QAM
11679.970000	36.71	40.51	-34.5	42.7	54.0	11.3	1.20	30	AVERAGE	High ch; QPSK
11680.000000	36.71	40.51	-34.5	42.7	54.0	11.3	1.20	30	AVERAGE	High ch; 64QAM
11680.010000	36.65	40.51	-34.5	42.7	54.0	11.3	1.20	30	AVERAGE	High ch; 16QAM
11470.000000	48.21	40.66	-34.3	54.6	74.0	19.4	1.00	35	MAX PEAK	Low ch; QPSK
11470.000000	48.08	40.66	-34.3	54.4	74.0	19.6	1.00	35	MAX PEAK	Low ch; 64QAM
11470.010000	48.21	40.66	-34.3	54.6	74.0	19.4	1.00	35	MAX PEAK	Low ch; 16QAM
11599.990000	47.81	40.64	-34.1	54.3	74.0	19.7	1.10	30	MAX PEAK	Mid ch; QPSK
11600.010000	47.53	40.64	-34.1	54.1	74.0	19.9	1.10	30	MAX PEAK	Mid ch; 64QAM
11600.030000	47.39	40.64	-34.1	53.9	74.0	20.1	1.10	30	MAX PEAK	Mid ch; 16QAM
11679.970000	49.02	40.51	-34.5	55.0	74.0	19.0	1.20	30	MAX PEAK	High ch; QPSK
11680.000000	48.75	40.51	-34.5	54.8	74.0	19.2	1.20	30	MAX PEAK	High ch; 64QAM
11680.010000	49.02	40.51	-34.5	55.0	74.0	19.0	1.20	30	MAX PEAK	High ch; 16QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; with dish
Date: 04-27-2012

TEXT: "Horz 3 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

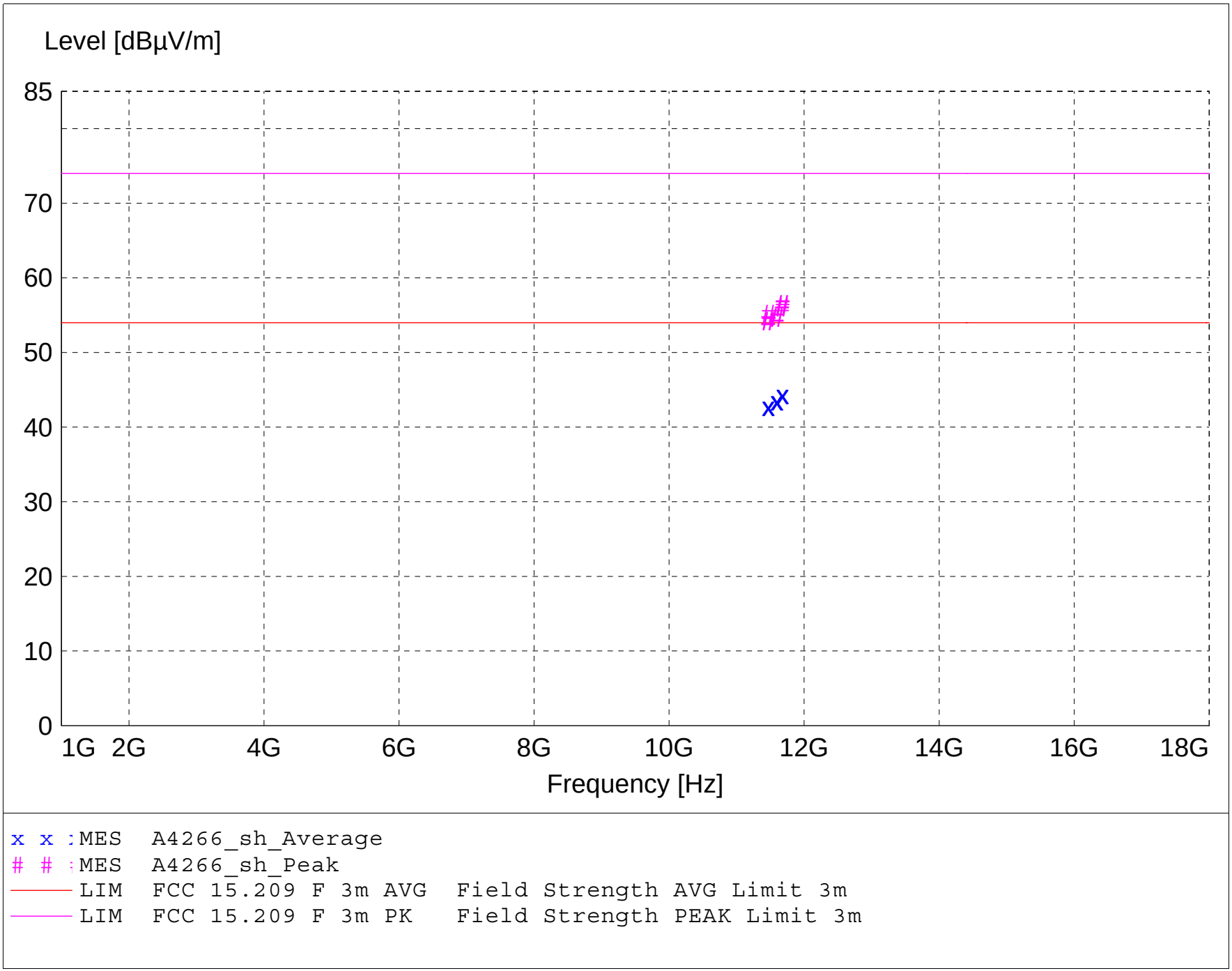
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x :MES A4266_sh_Average
:MES A4266_sh_Peak
——— LIM FCC 15.209 F 3m AVG Field Strength AVG Limit 3m
——— LIM FCC 15.209 F 3m PK Field Strength PEAK Limit 3m

MEASUREMENT RESULT: "A4266_sh_Final"

4/27/2012 11:13AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
11469.990000	36.37	40.66	-34.3	42.7	54.0	11.3	1.50	0	AVERAGE	Low ch; 16QAM
11469.990000	36.37	40.66	-34.3	42.7	54.0	11.3	1.50	0	AVERAGE	Low ch; 64QAM
11470.000000	36.30	40.66	-34.3	42.6	54.0	11.4	1.50	0	AVERAGE	Low ch; QPSK
11600.000000	36.91	40.64	-34.1	43.4	54.0	10.6	1.70	0	AVERAGE	Mid ch; 64QAM
11600.000000	36.91	40.64	-34.1	43.4	54.0	10.6	1.70	0	AVERAGE	Mid ch; QPSK
11600.010000	36.98	40.64	-34.1	43.5	54.0	10.5	1.70	0	AVERAGE	Mid ch; 16QAM
11679.990000	38.30	40.51	-34.5	44.3	54.0	9.7	1.60	0	AVERAGE	High ch; 64QAM
11679.990000	38.24	40.51	-34.5	44.3	54.0	9.7	1.60	0	AVERAGE	High ch; 16QAM
11679.990000	38.24	40.51	-34.5	44.3	54.0	9.7	1.60	0	AVERAGE	High ch; QPSK
11469.990000	48.86	40.66	-34.3	55.2	74.0	18.8	1.50	0	MAX PEAK	Low ch; 16QAM
11469.990000	47.92	40.66	-34.3	54.3	74.0	19.7	1.50	0	MAX PEAK	Low ch; 64QAM
11470.000000	47.79	40.66	-34.3	54.1	74.0	19.9	1.50	0	MAX PEAK	Low ch; QPSK
11600.000000	48.19	40.64	-34.1	54.7	74.0	19.3	1.70	0	MAX PEAK	Mid ch; QPSK
11600.000000	48.06	40.64	-34.1	54.6	74.0	19.4	1.70	0	MAX PEAK	Mid ch; 64QAM
11600.010000	48.06	40.64	-34.1	54.6	74.0	19.4	1.70	0	MAX PEAK	Mid ch; 16QAM
11679.990000	50.48	40.51	-34.5	56.5	74.0	17.5	1.60	0	MAX PEAK	High ch; 16QAM
11679.990000	50.35	40.51	-34.5	56.4	74.0	17.6	1.60	0	MAX PEAK	High ch; QPSK
11679.990000	49.97	40.51	-34.5	56.0	74.0	18.0	1.60	0	MAX PEAK	High ch; 64QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; with dish
Date: 04-27-2012

TEXT: "Vert 3 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

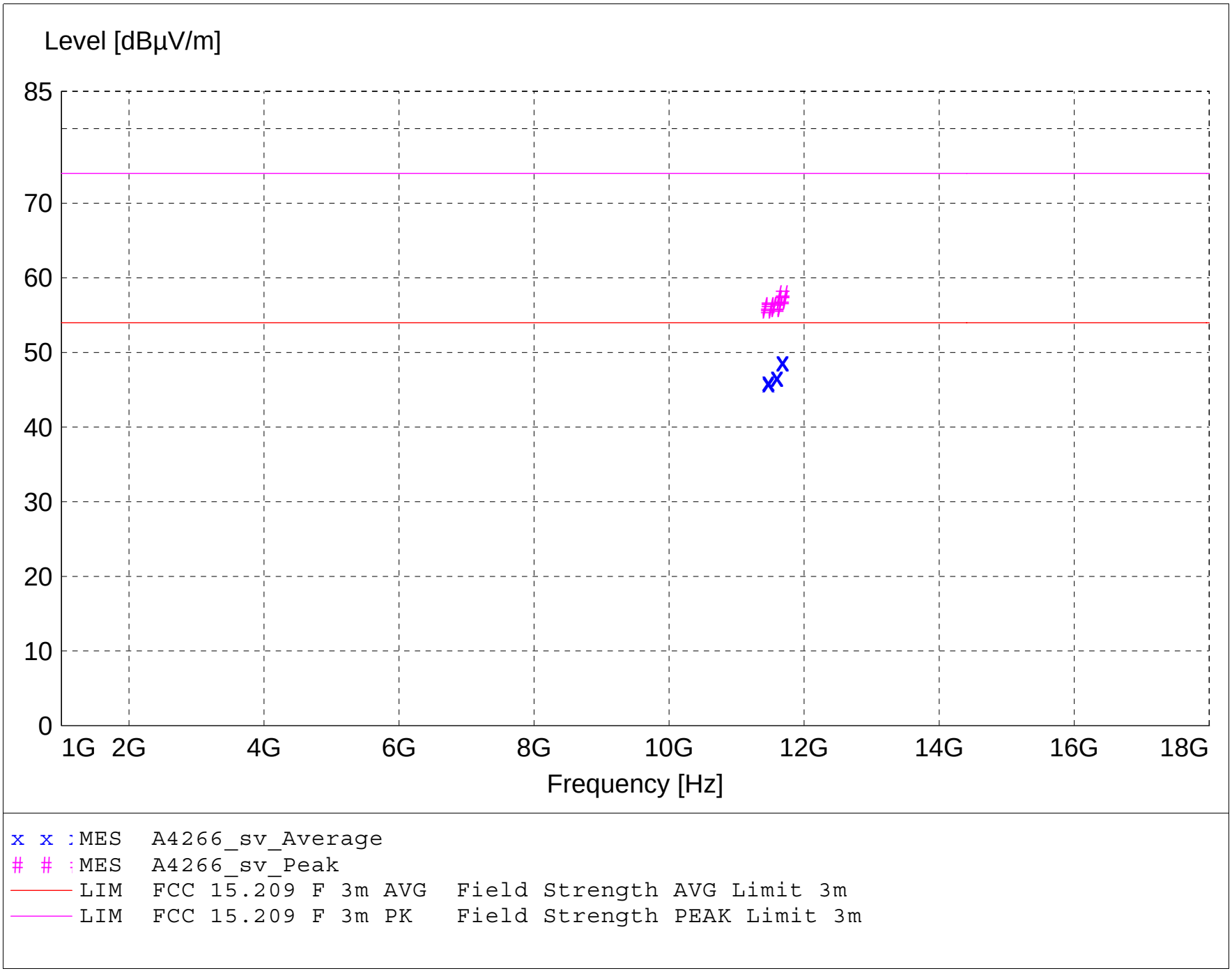
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x :MES A4266_sv_Average
:MES A4266_sv_Peak
——— LIM FCC 15.209 F 3m AVG Field Strength AVG Limit 3m
——— LIM FCC 15.209 F 3m PK Field Strength PEAK Limit 3m

MEASUREMENT RESULT: "A4266_sv_Final"

4/27/2012 11:13AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
11469.990000	39.73	40.66	-34.3	46.1	54.0	7.9	1.80	0	AVERAGE	Low ch; QPSK
11469.990000	39.64	40.66	-34.3	46.0	54.0	8.0	1.80	0	AVERAGE	Low ch; 64QAM
11470.000000	39.54	40.66	-34.3	45.9	54.0	8.1	1.80	0	AVERAGE	Low ch; 16QAM
11599.970000	40.10	40.64	-34.1	46.6	54.0	7.4	1.80	0	AVERAGE	Mid ch; QPSK
11600.010000	40.19	40.64	-34.1	46.7	54.0	7.3	1.80	0	AVERAGE	Mid ch; 64QAM
11600.010000	40.06	40.64	-34.1	46.6	54.0	7.4	1.80	0	AVERAGE	Mid ch; 16QAM
11680.000000	42.77	40.51	-34.5	48.8	54.0	5.2	1.80	0	AVERAGE	High ch; 16QAM
11680.000000	42.73	40.51	-34.5	48.7	54.0	5.3	1.80	0	AVERAGE	High ch; 64QAM
11680.000000	42.67	40.51	-34.5	48.7	54.0	5.3	1.80	0	AVERAGE	High ch; QPSK
11469.990000	49.83	40.66	-34.3	56.2	74.0	17.8	1.80	0	MAX PEAK	Low ch; 64QAM
11469.990000	49.69	40.66	-34.3	56.0	74.0	18.0	1.80	0	MAX PEAK	Low ch; QPSK
11470.000000	49.41	40.66	-34.3	55.8	74.0	18.2	1.80	0	MAX PEAK	Low ch; 16QAM
11599.970000	49.41	40.64	-34.1	55.9	74.0	18.1	1.80	0	MAX PEAK	Mid ch; QPSK
11600.010000	49.69	40.64	-34.1	56.2	74.0	17.8	1.80	0	MAX PEAK	Mid ch; 16QAM
11600.010000	49.55	40.64	-34.1	56.1	74.0	17.9	1.80	0	MAX PEAK	Mid ch; 64QAM
11680.000000	51.77	40.51	-34.5	57.8	74.0	16.2	1.80	0	MAX PEAK	High ch; 64QAM
11680.000000	51.11	40.51	-34.5	57.1	74.0	16.9	1.80	0	MAX PEAK	High ch; 16QAM
11680.000000	50.98	40.51	-34.5	57.0	74.0	17.0	1.80	0	MAX PEAK	High ch; QPSK

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 35% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; patch antenna
Date: 04-26-2012

TEXT: "Horz 3 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

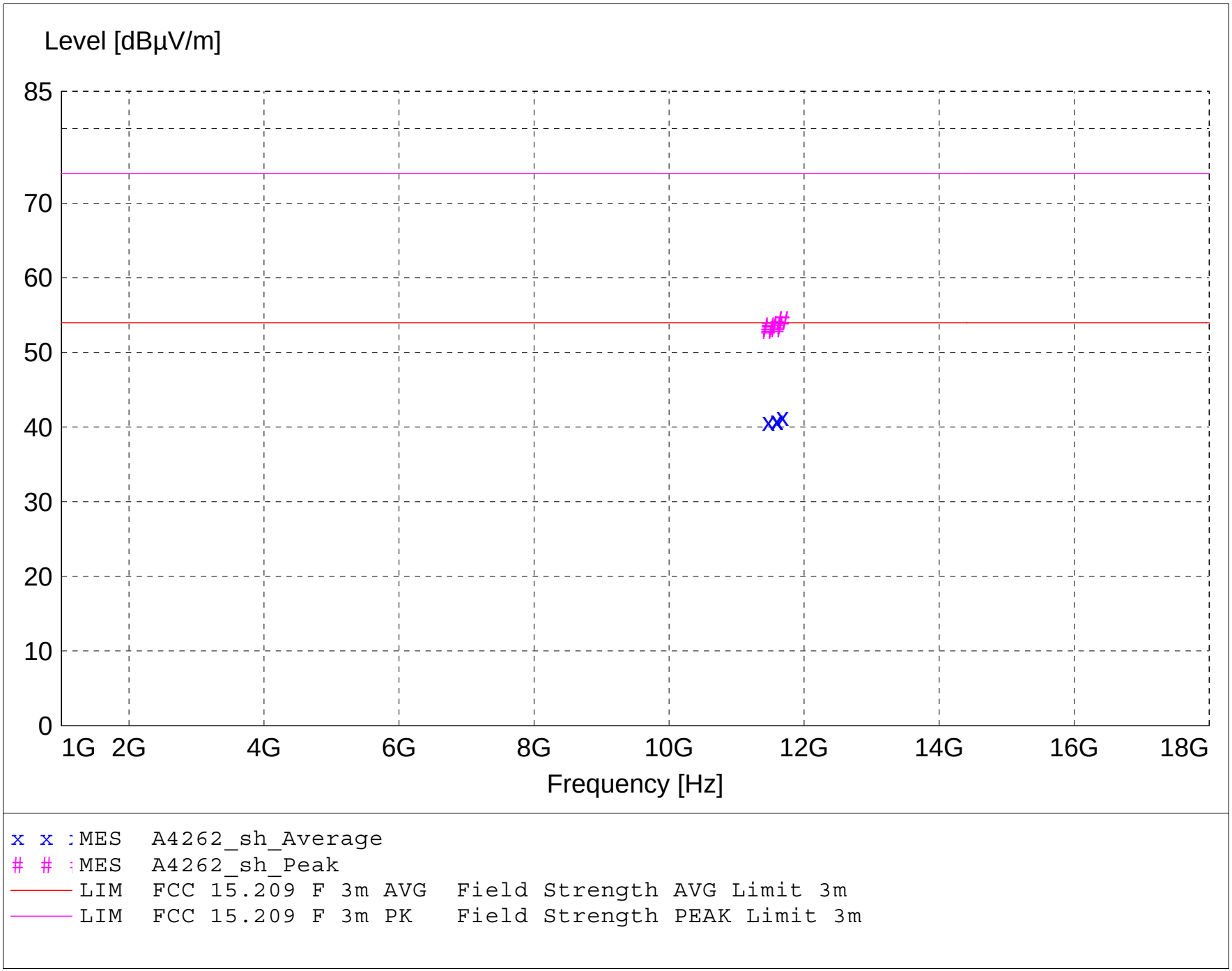
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x :MES A4262_sh_Average
:MES A4262_sh_Peak
——— LIM FCC 15.209 F 3m AVG Field Strength AVG Limit 3m
——— LIM FCC 15.209 F 3m PK Field Strength PEAK Limit 3m

MEASUREMENT RESULT: "A4262_sh_Final"

4/27/2012 11:09AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
11469.958000	34.35	40.66	-34.3	40.7	54.0	13.3	1.10	260	AVERAGE	Low ch; QPSK
11469.998000	34.35	40.66	-34.3	40.7	54.0	13.3	1.10	260	AVERAGE	Low ch; 16QAM
11470.018000	34.35	40.66	-34.3	40.7	54.0	13.3	1.10	260	AVERAGE	Low ch; 64QAM
11600.000000	34.35	40.64	-34.1	40.9	54.0	13.1	1.10	260	AVERAGE	Mid ch; 16QAM
11600.000000	34.26	40.64	-34.1	40.8	54.0	13.2	1.10	260	AVERAGE	Mid ch; 64QAM
11600.070000	34.35	40.64	-34.1	40.9	54.0	13.1	1.10	260	AVERAGE	Mid ch; QPSK
11680.050000	35.34	40.51	-34.5	41.4	54.0	12.6	1.10	270	AVERAGE	High ch; 16QAM
11680.100000	35.34	40.51	-34.5	41.4	54.0	12.6	1.10	260	AVERAGE	High ch; 64QAM
11680.100000	35.34	40.51	-34.5	41.4	54.0	12.6	1.10	270	AVERAGE	High ch; QPSK
11469.958000	46.84	40.66	-34.3	53.2	74.0	20.8	1.10	260	MAX PEAK	Low ch; QPSK
11469.998000	47.12	40.66	-34.3	53.5	74.0	20.5	1.10	260	MAX PEAK	Low ch; 16QAM
11470.018000	46.69	40.66	-34.3	53.0	74.0	21.0	1.10	260	MAX PEAK	Low ch; 64QAM
11600.000000	46.69	40.64	-34.1	53.2	74.0	20.8	1.10	260	MAX PEAK	Mid ch; 16QAM
11600.000000	46.98	40.64	-34.1	53.5	74.0	20.5	1.10	260	MAX PEAK	Mid ch; 64QAM
11600.070000	47.12	40.64	-34.1	53.7	74.0	20.3	1.10	260	MAX PEAK	Mid ch; QPSK
11680.050000	48.21	40.51	-34.5	54.2	74.0	19.8	1.10	270	MAX PEAK	High ch; 16QAM
11680.100000	48.21	40.51	-34.5	54.2	74.0	19.8	1.10	260	MAX PEAK	High ch; 64QAM
11680.100000	48.35	40.51	-34.5	54.4	74.0	19.6	1.10	270	MAX PEAK	High ch; QPSK

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 35% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; patch antenna
Date: 04-26-2012

TEXT: "Vert 3 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

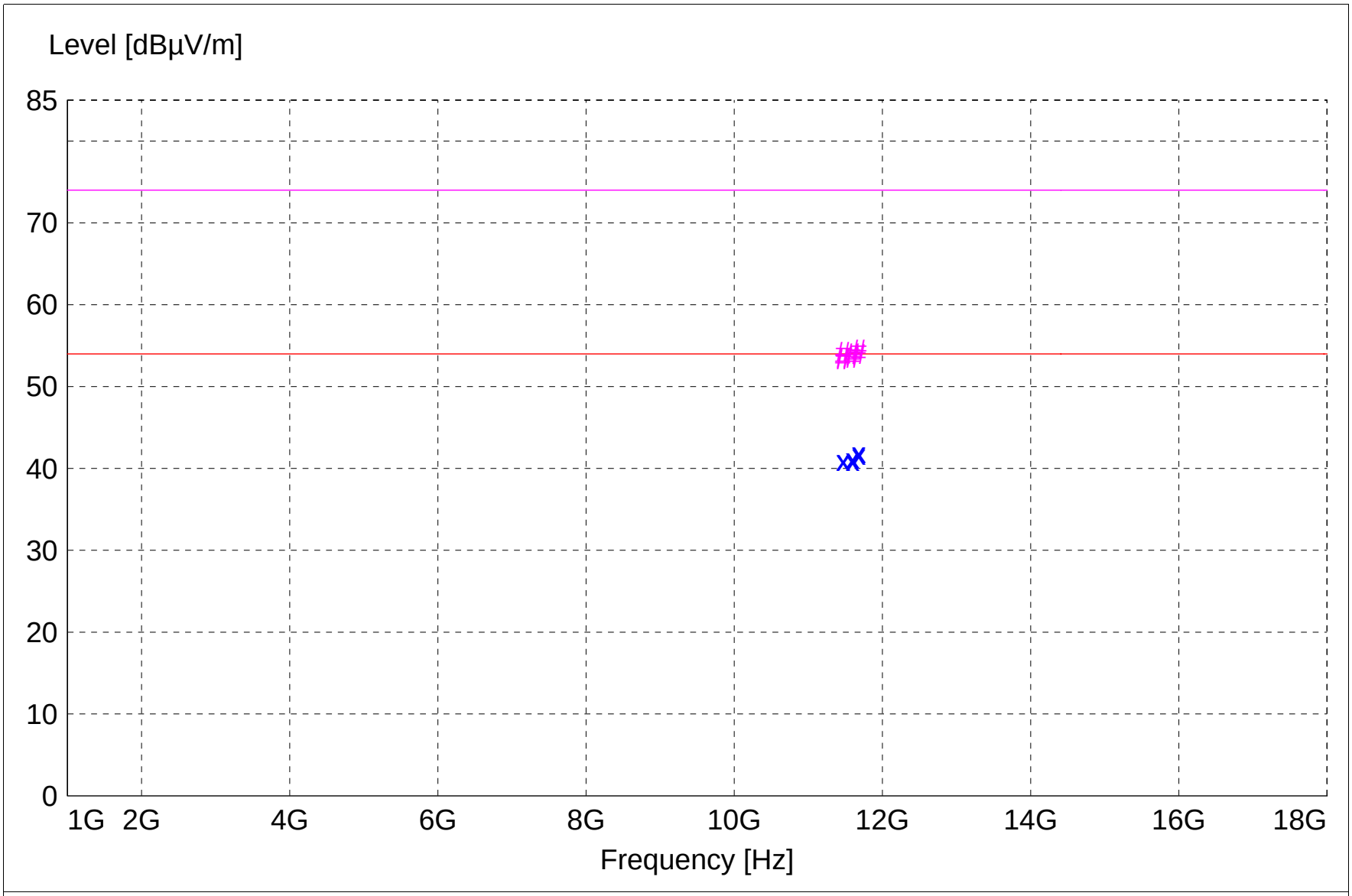
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x :MES A4262_sv_Average
:MES A4262_sv_Peak
——— LIM FCC 15.209 F 3m AVG Field Strength AVG Limit 3m
——— LIM FCC 15.209 F 3m PK Field Strength PEAK Limit 3m

MEASUREMENT RESULT: "A4262_sv_Final"

4/27/2012 11:09AM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
11470.040000	34.52	40.66	-34.3	40.9	54.0	13.1	1.00	190	AVERAGE	Low ch; 16QAM
11470.050000	34.52	40.66	-34.3	40.9	54.0	13.1	1.00	190	AVERAGE	Low ch; 64QAM
11470.060000	34.69	40.66	-34.3	41.0	54.0	13.0	1.00	190	AVERAGE	Low ch; QPSK
11600.020000	34.61	40.64	-34.1	41.1	54.0	12.9	1.20	225	AVERAGE	Mid ch; QPSK
11600.090000	34.35	40.64	-34.1	40.9	54.0	13.1	1.20	225	AVERAGE	Mid ch; 16QAM
11600.120000	34.61	40.64	-34.1	41.1	54.0	12.9	1.00	190	AVERAGE	Mid ch; 64QAM
11680.050000	35.65	40.51	-34.5	41.7	54.0	12.3	1.00	170	AVERAGE	High ch; 16QAM
11680.060000	35.80	40.51	-34.5	41.8	54.0	12.2	1.00	190	AVERAGE	High ch; QPSK
11680.110000	35.87	40.51	-34.5	41.9	54.0	12.1	1.00	190	AVERAGE	High ch; 64QAM
11470.040000	47.12	40.66	-34.3	53.5	74.0	20.5	1.00	190	MAX PEAK	Low ch; 16QAM
11470.050000	46.98	40.66	-34.3	53.3	74.0	20.7	1.00	190	MAX PEAK	Low ch; 64QAM
11470.060000	47.95	40.66	-34.3	54.3	74.0	19.7	1.00	190	MAX PEAK	Low ch; QPSK
11600.020000	47.53	40.64	-34.1	54.1	74.0	19.9	1.20	225	MAX PEAK	Mid ch; QPSK
11600.090000	46.98	40.64	-34.1	53.5	74.0	20.5	1.20	225	MAX PEAK	Mid ch; 16QAM
11600.120000	47.25	40.64	-34.1	53.8	74.0	20.2	1.00	190	MAX PEAK	Mid ch; 64QAM
11680.050000	47.95	40.51	-34.5	54.0	74.0	20.0	1.00	170	MAX PEAK	High ch; 16QAM
11680.060000	47.95	40.51	-34.5	54.0	74.0	20.0	1.00	190	MAX PEAK	High ch; QPSK
11680.110000	48.48	40.51	-34.5	54.5	74.0	19.5	1.00	190	MAX PEAK	High ch; 64QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; with Cassegrain
Date: 04-27-2012

TEXT: "Horz 1 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

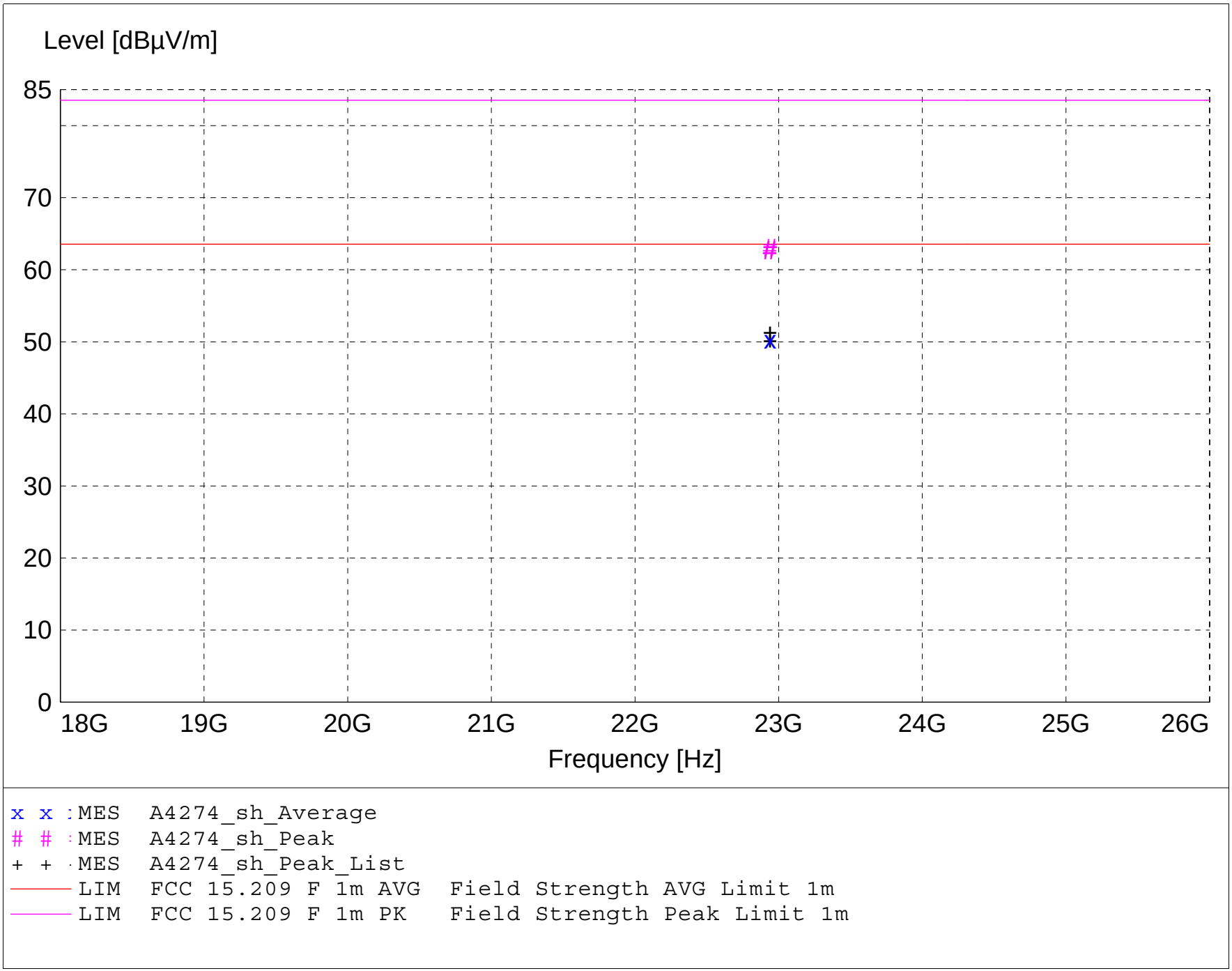
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector


Level [dBµV/m]
85
70
60
50
40
30
20
10
0
18G
19G
20G
21G
22G
23G
24G
25G
26G
Frequency [Hz]
x x : MES A4274_sh_Average
: MES A4274_sh_Peak
+ + : MES A4274_sh_Peak_List
LIM FCC 15.209 F 1m AVG Field Strength AVG Limit 1m
LIM FCC 15.209 F 1m PK Field Strength Peak Limit 1m

MEASUREMENT RESULT: "A4274_sh_Final"

4/27/2012 3:14PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
22940.000000	44.51	46.36	-40.6	50.3	63.5	13.3	1.20	10	AVERAGE	Low ch; 64QAM
22939.990000	44.51	46.36	-40.6	50.3	63.5	13.3	1.20	10	AVERAGE	Low ch; QPSK
22939.990000	44.51	46.36	-40.6	50.3	63.5	13.3	1.20	10	AVERAGE	Low ch; 16QAM
22939.990000	57.25	46.36	-40.6	63.0	83.5	20.5	1.20	10	MAX PEAK	Low ch; QPSK
22940.000000	57.00	46.36	-40.6	62.8	83.5	20.8	1.20	10	MAX PEAK	Low ch; 64QAM
22939.990000	56.87	46.36	-40.6	62.6	83.5	20.9	1.20	10	MAX PEAK	Low ch; 16QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; with Cassegrain
Date: 04-27-2012

TEXT: "Vert 1 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

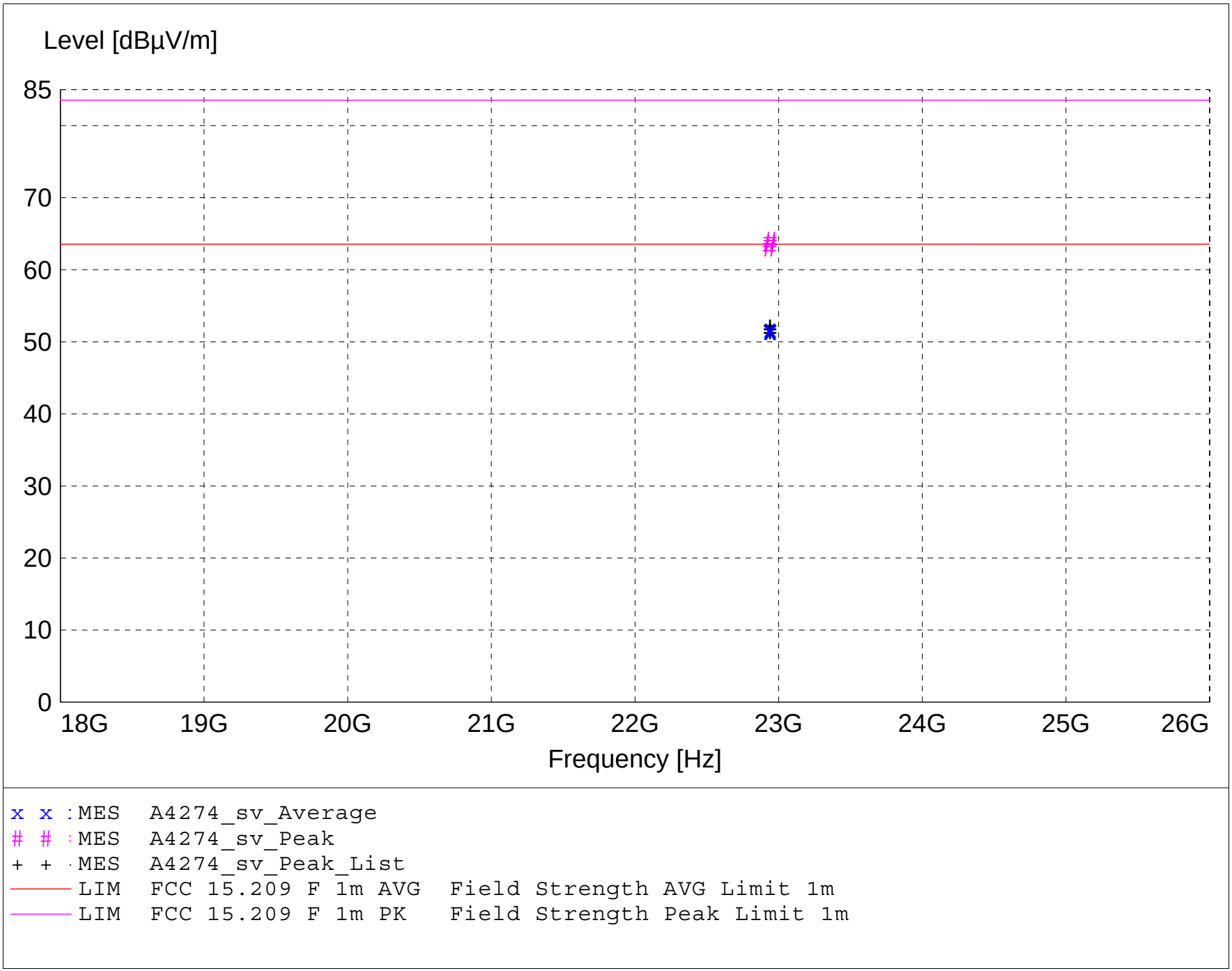
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector


Level [dBµV/m]
85
70
60
50
40
30
20
10
0
18G
19G
20G
21G
22G
23G
24G
25G
26G
Frequency [Hz]
x x :MES A4274_sv_Average
:MES A4274_sv_Peak
+ + :MES A4274_sv_Peak_List
LIM FCC 15.209 F 1m AVG Field Strength AVG Limit 1m
LIM FCC 15.209 F 1m PK Field Strength Peak Limit 1m

MEASUREMENT RESULT: "A4274_sv_Final"

4/27/2012 3:06PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
22939.990000	46.05	46.36	-40.6	51.8	63.5	11.7	1.10	10	AVERAGE	Low ch; 16QAM
22939.990000	45.92	46.36	-40.6	51.7	63.5	11.9	1.10	10	AVERAGE	Low ch; 64QAM
22939.990000	45.66	46.36	-40.6	51.4	63.5	12.1	1.10	10	AVERAGE	Low ch; QPSK
22939.990000	58.27	46.36	-40.6	64.0	83.5	19.5	1.10	10	MAX PEAK	Low ch; QPSK
22939.990000	57.88	46.36	-40.6	63.7	83.5	19.9	1.10	10	MAX PEAK	Low ch; 16QAM
22939.990000	57.25	46.36	-40.6	63.0	83.5	20.5	1.10	10	MAX PEAK	Low ch; 64QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; with dish
Date: 04-27-2012

TEXT: "Horz 1 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

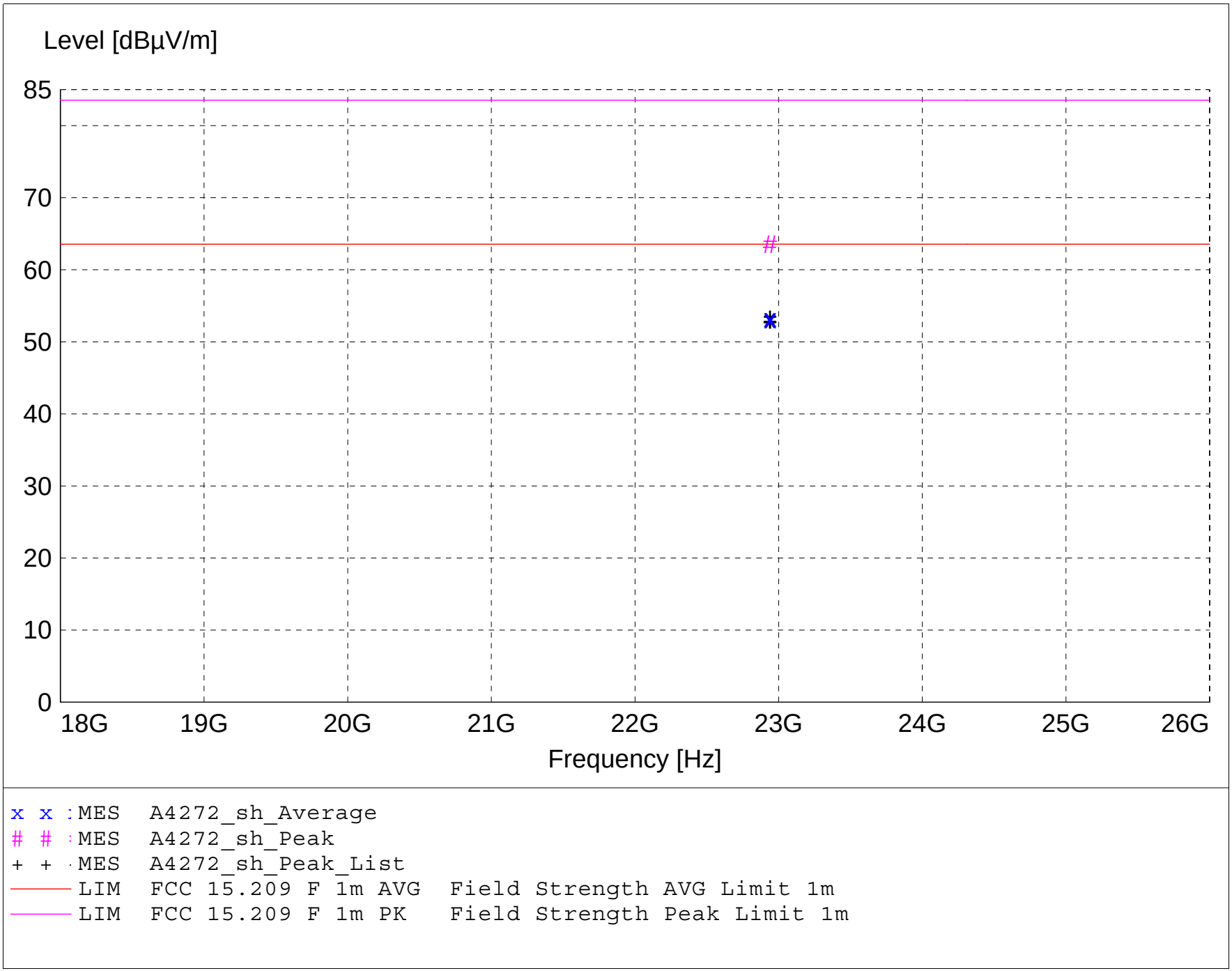
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector


Level [dBµV/m]
85
70
60
50
40
30
20
10
0
18G
19G
20G
21G
22G
23G
24G
25G
26G
Frequency [Hz]
x x :MES A4272_sh_Average
:MES A4272_sh_Peak
+ + :MES A4272_sh_Peak_List
LIM FCC 15.209 F 1m AVG Field Strength AVG Limit 1m
LIM FCC 15.209 F 1m PK Field Strength Peak Limit 1m

MEASUREMENT RESULT: "A4272_sh_Final"

4/27/2012 2:15PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
22940.000000	47.56	46.36	-40.6	53.3	63.5	10.2	1.60	0	AVERAGE	Low ch; 64QAM
22939.990000	47.52	46.36	-40.6	53.3	63.5	10.3	1.60	0	AVERAGE	Low ch; 16QAM
22940.010000	47.36	46.36	-40.6	53.1	63.5	10.4	1.60	0	AVERAGE	Low ch; QPSK
22940.010000	57.75	46.36	-40.6	63.5	83.5	20.0	1.60	0	MAX PEAK	Low ch; QPSK
22940.000000	57.75	46.36	-40.6	63.5	83.5	20.0	1.60	0	MAX PEAK	Low ch; 64QAM
22939.990000	57.75	46.36	-40.6	63.5	83.5	20.0	1.60	0	MAX PEAK	Low ch; 16QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; with dish
Date: 04-27-2012

TEXT: "Vert 1 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

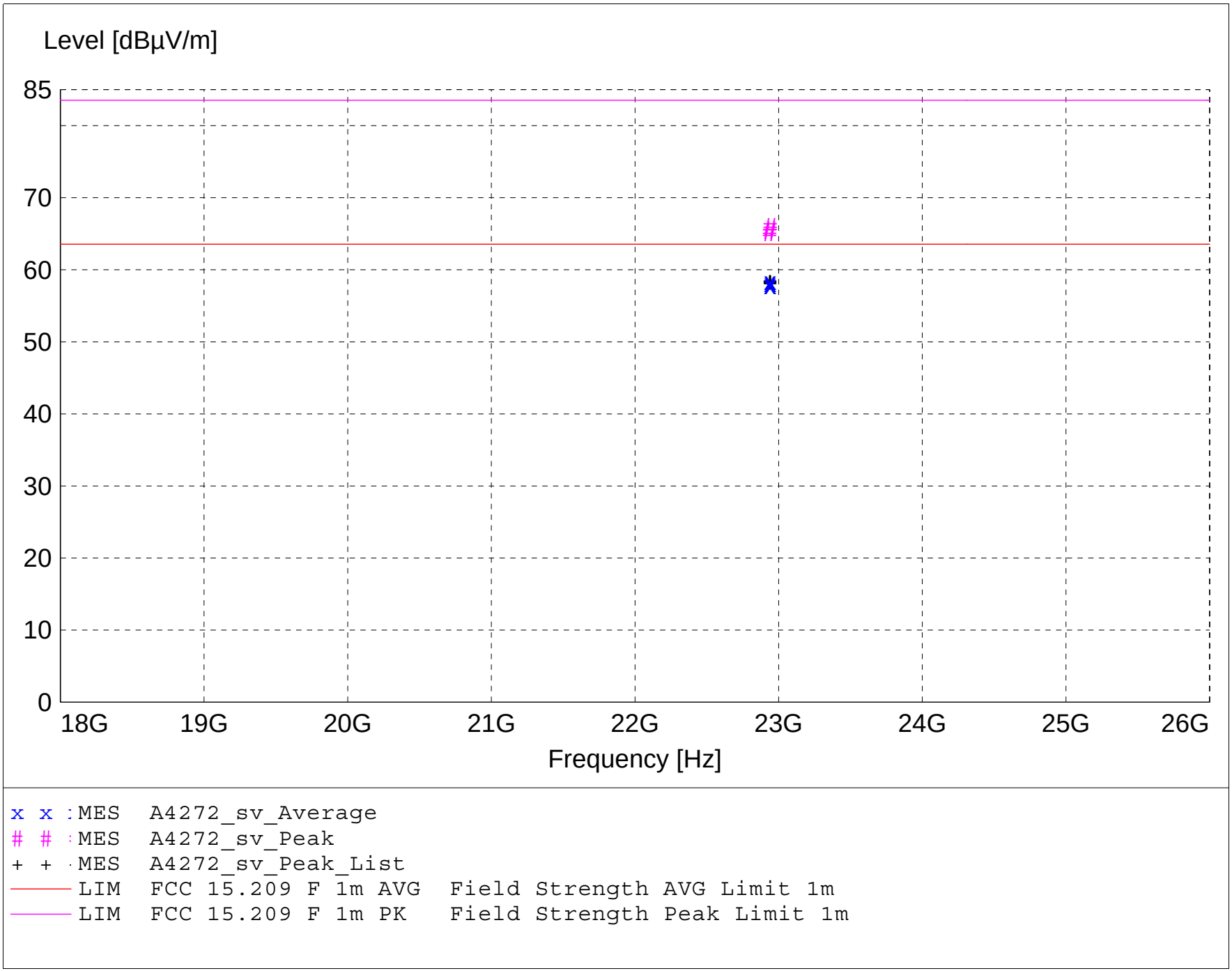
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x :MES A4272_sv_Average
:MES A4272_sv_Peak
+ + :MES A4272_sv_Peak_List
——— LIM FCC 15.209 F 1m AVG Field Strength AVG Limit 1m
——— LIM FCC 15.209 F 1m PK Field Strength Peak Limit 1m

MEASUREMENT RESULT: "A4272_sv_Final"

4/27/2012 2:03PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
22939.990000	52.68	46.36	-40.6	58.5	63.5	5.1	1.60	0	AVERAGE	Low ch; QPSK
22940.000000	52.37	46.36	-40.6	58.1	63.5	5.4	1.60	0	AVERAGE	Low ch; 16QAM
22940.000000	52.03	46.36	-40.6	57.8	63.5	5.7	1.60	0	AVERAGE	Low ch; 64QAM
22940.000000	60.17	46.36	-40.6	65.9	83.5	17.6	1.60	0	MAX PEAK	Low ch; 16QAM
22939.990000	59.68	46.36	-40.6	65.4	83.5	18.1	1.60	0	MAX PEAK	Low ch; QPSK
22940.000000	59.43	46.36	-40.6	65.2	83.5	18.3	1.60	0	MAX PEAK	Low ch; 64QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; patch antenna
Date: 04-27-2012

TEXT: "Horz 1 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

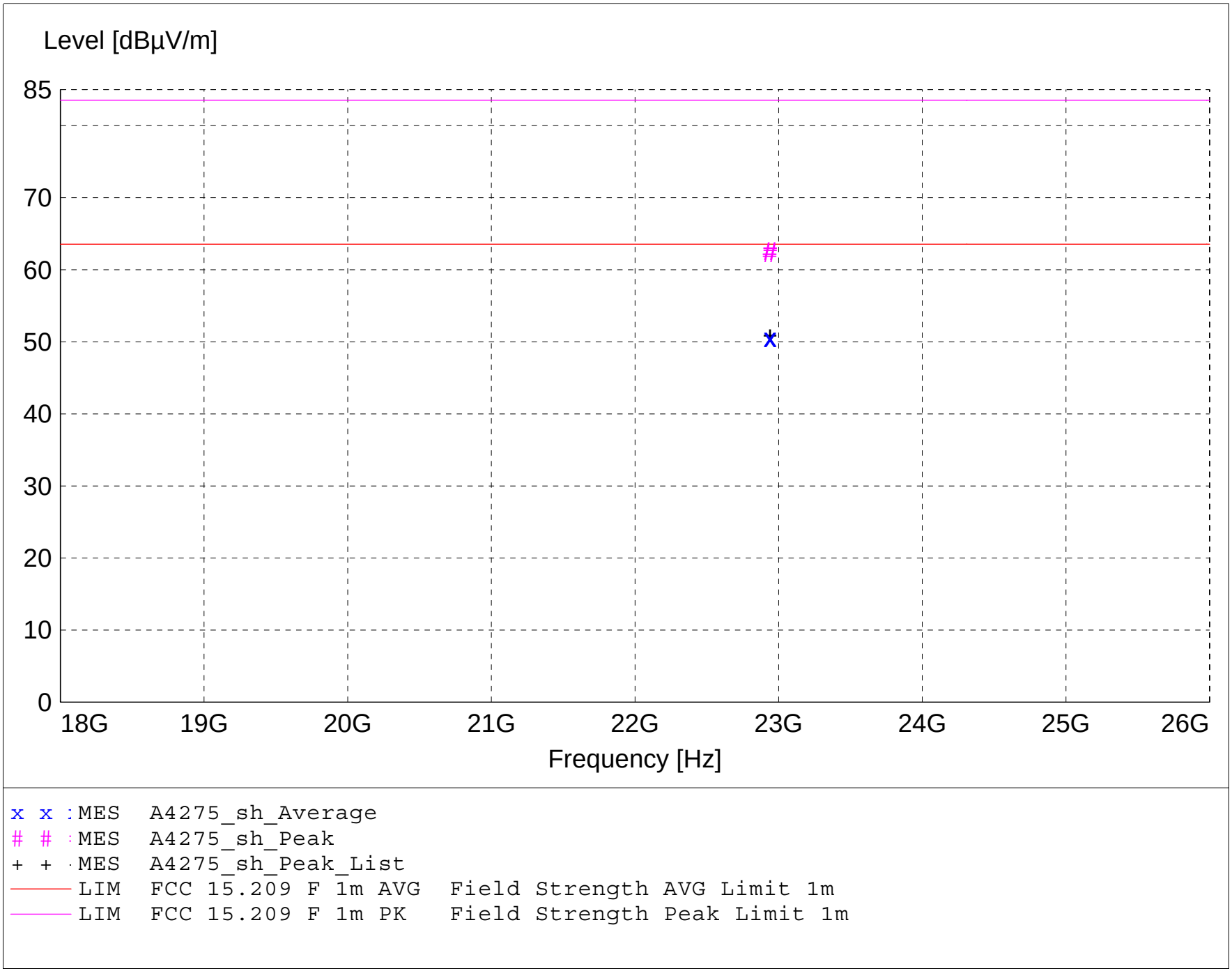
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector


Level [dBµV/m]
85
70
60
50
40
30
20
10
0
18G
19G
20G
21G
22G
23G
24G
25G
26G
Frequency [Hz]
x x :MES A4275_sh_Average
:MES A4275_sh_Peak
+ + :MES A4275_sh_Peak_List
LIM FCC 15.209 F 1m AVG Field Strength AVG Limit 1m
LIM FCC 15.209 F 1m PK Field Strength Peak Limit 1m

MEASUREMENT RESULT: "A4275_sh_Final"

4/27/2012 3:24PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
22939.990000	44.86	46.36	-40.6	50.6	63.5	12.9	1.00	60	AVERAGE	Low ch; 64QAM
22939.990000	44.83	46.36	-40.6	50.6	63.5	12.9	1.00	60	AVERAGE	Low ch; 16QAM
22939.990000	44.75	46.36	-40.6	50.5	63.5	13.0	1.00	60	AVERAGE	Low ch; QPSK
22939.990000	56.74	46.36	-40.6	62.5	83.5	21.0	1.00	60	MAX PEAK	Low ch; 64QAM
22939.990000	56.74	46.36	-40.6	62.5	83.5	21.0	1.00	60	MAX PEAK	Low ch; QPSK
22939.990000	56.48	46.36	-40.6	62.3	83.5	21.3	1.00	60	MAX PEAK	Low ch; 16QAM

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 20 MHz channel bandwidth; Low, Mid, and High channels; patch antenna
Date: 04-27-2012

TEXT: "Vert 1 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

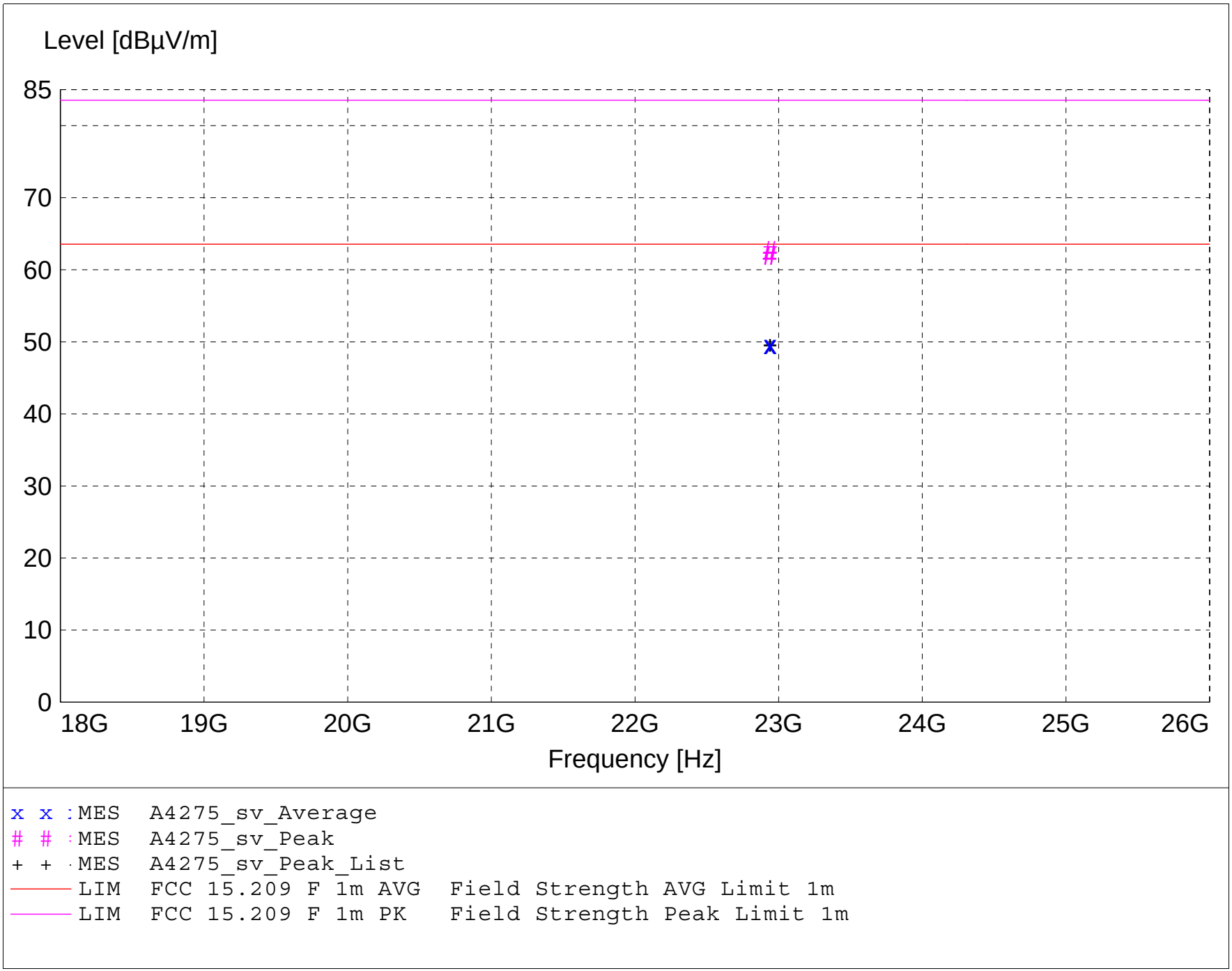
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector


Level [dBµV/m]
85
70
60
50
40
30
20
10
0
18G
19G
20G
21G
22G
23G
24G
25G
26G
Frequency [Hz]
x x :MES A4275_sv_Average
:MES A4275_sv_Peak
+ + :MES A4275_sv_Peak_List
LIM FCC 15.209 F 1m AVG Field Strength AVG Limit 1m
LIM FCC 15.209 F 1m PK Field Strength Peak Limit 1m

MEASUREMENT RESULT: "A4275_sv_Final"

4/27/2012 3:31PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
22939.990000	43.80	46.36	-40.6	49.6	63.5	14.0	1.00	160	AVERAGE	Low ch; 16QAM
22939.990000	43.77	46.36	-40.6	49.5	63.5	14.0	1.00	160	AVERAGE	Low ch; 64QAM
22939.990000	43.74	46.36	-40.6	49.5	63.5	14.0	1.00	160	AVERAGE	Low ch; QPSK
22939.990000	57.00	46.36	-40.6	62.8	83.5	20.8	1.00	160	MAX PEAK	Low ch; 64QAM
22939.990000	56.22	46.36	-40.6	62.0	83.5	21.5	1.00	160	MAX PEAK	Low ch; 16QAM
22939.990000	56.09	46.36	-40.6	61.9	83.5	21.7	1.00	160	MAX PEAK	Low ch; QPSK

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 10 and 20 MHz channel bandwidth; Low, Mid, and High channels; with patch, cassegrain, and dish
Date: 04-27-2012

TEXT: "Horz 1 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

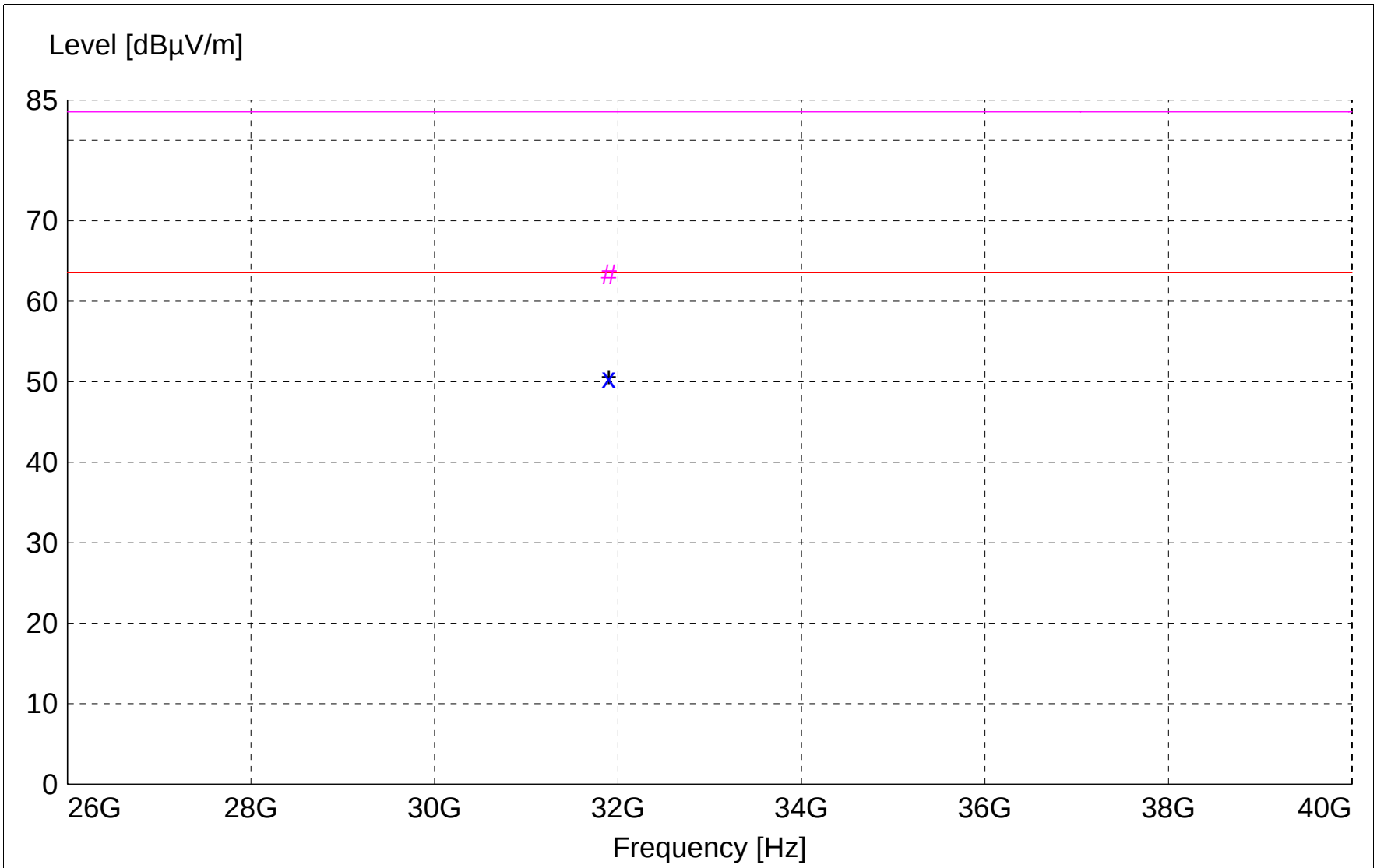
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x	MES	A4273_sh_Average
# #	MES	A4273_sh_Peak
+ +	MES	A4273_sh_Peak_List
———	LIM	FCC 15.209 F 1m AVG Field Strength AVG Limit 1m
———	LIM	FCC 15.209 F 1m PK Field Strength Peak Limit 1m

MEASUREMENT RESULT: "A4273_sh_Final"

4/27/2012 2:42PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
31900.800000	52.86	48.01	-50.4	50.4	63.5	13.1	1.20	0	AVERAGE	noise floor
31900.800000	65.80	48.01	-50.4	63.4	83.5	20.2	1.20	0	MAX PEAK	noise floor

FCC Part 15.205/15.209 Spurious Emissions in Restricted Bands

Electric Field Strength

EUT: PMP450SM 5.7 GHz MIMO OFDM
Manufacturer: Cambium Networks
Operating Condition: 68 deg. F; 33% R.H.
Test Site: DLS O.F. Site 2
Operator: Craig B
Test Specification: Continuous transmit; Power setting 19; Both channel A and B turned ON
Comment: 10 and 20 MHz channel bandwidth; Low, Mid, and High channels; with patch, cassegrain, and dish
Date: 04-27-2012

TEXT: "Vert 1 meters"

Short Description: Test Set-up

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

Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)

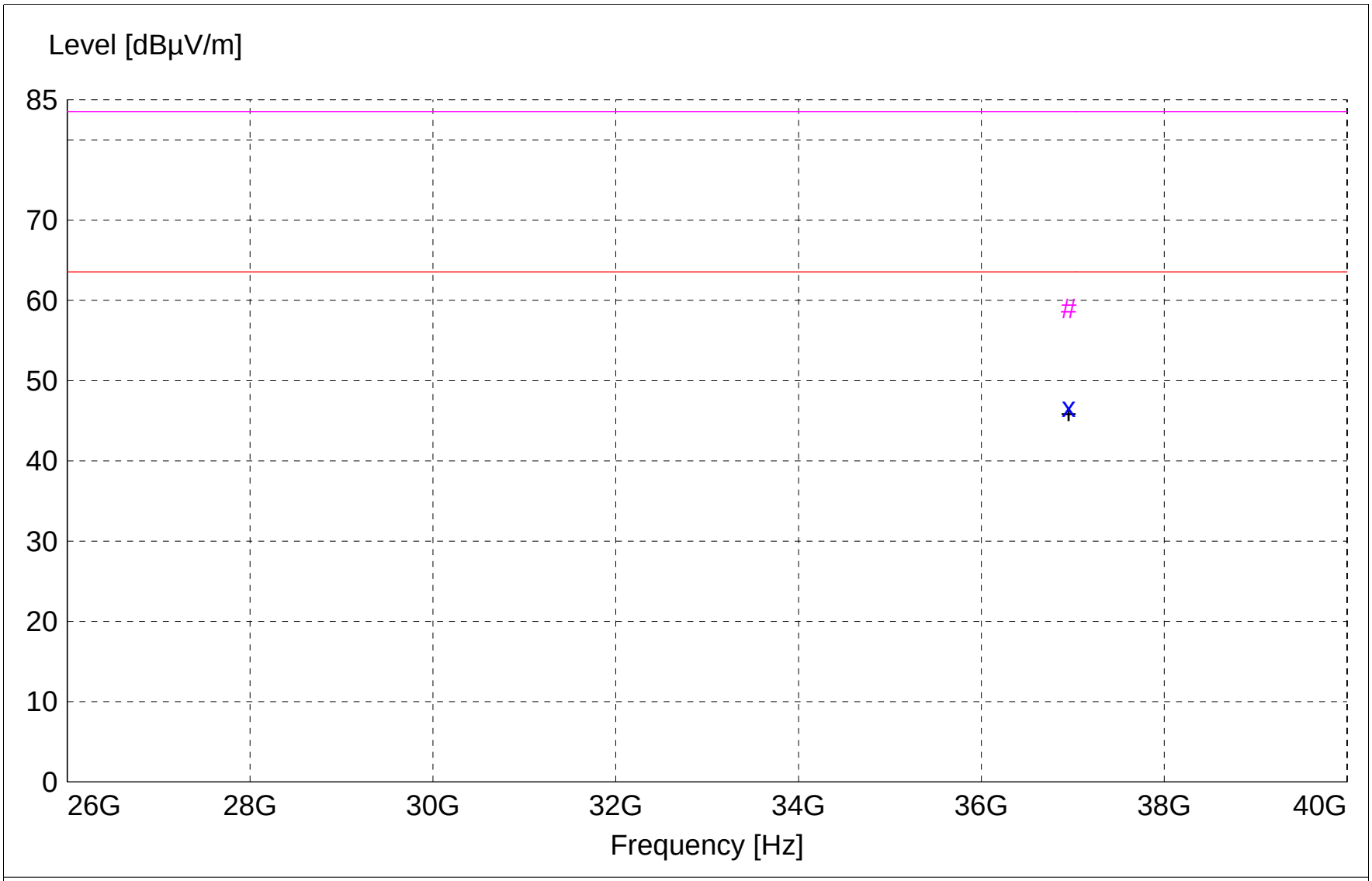
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)

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 dector

Final maximized level using Peak detector



x x : MES A4273_sv_Average
: MES A4273_sv_Peak
+ + : MES A4273_sv_Peak_List
——— LIM FCC 15.209 F 1m AVG Field Strength AVG Limit 1m
——— LIM FCC 15.209 F 1m PK Field Strength Peak Limit 1m

MEASUREMENT RESULT: "A4273_sv_Final"

4/27/2012 2:45PM

Frequency	Level	Antenna Factor	System Loss	Total Level	Limit	Margin	Height Ant.	EuT Angle	Final Detector	Comment
MHz	dBµV	dBµV/m	dB	dBµV/m	dBµV/m	dB	m	deg		
36956.200000	47.69	46.06	-47.0	46.7	63.5	16.8	1.20	0	AVERAGE	noise floor
36956.200000	59.92	46.06	-47.0	59.0	83.5	24.6	1.20	0	MAX PEAK	noise floor

166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

A7.0 Maximum Unwanted Emission Levels – Conducted Band-Edge

Rule Section: Section 15.247(d)
RSS-210 A8.5

Test Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01 – *Guidance for Performing Gompliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247*

Section 5.4.1.1 – Reference Level
Section 5.4.1.2 – Unwanted Emissions

Description: RBW = 100 kHz
VBW ≥ 300 kHz
Span = 5-30% greater than the EBW – (Reference Level)
Span = spectrum to be examined – (Unwanted Emissions)
Detector = peak
Sweep = auto couple
Trace mode = max hold

Measurements were taken for QPSK, 16-QAM, and 64-QAM modulation types, and at the lowest, middle, and highest channels of operation. EUT was set to transmit continuously (power setting 19 dBm) with 98% duty cycle.

Limit: 30 dB below maximum in-band average PSD level (maximum level in any 100 kHz band). Average output power procedure was used to measure the fundamental emission power.

Results: Passed

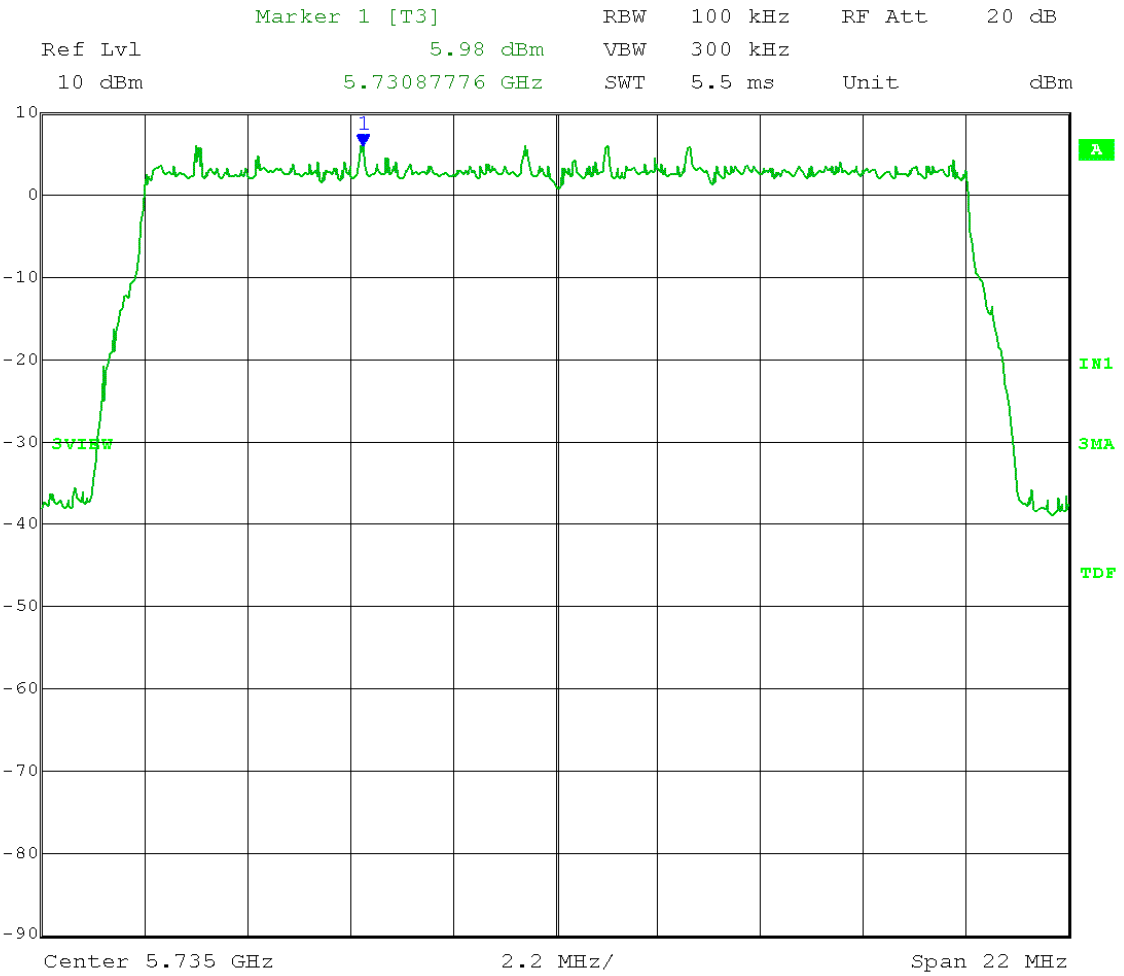
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.98 dBm – 30 dB = -24.02 dBm



Date: 23.APR.2012 12:25:16

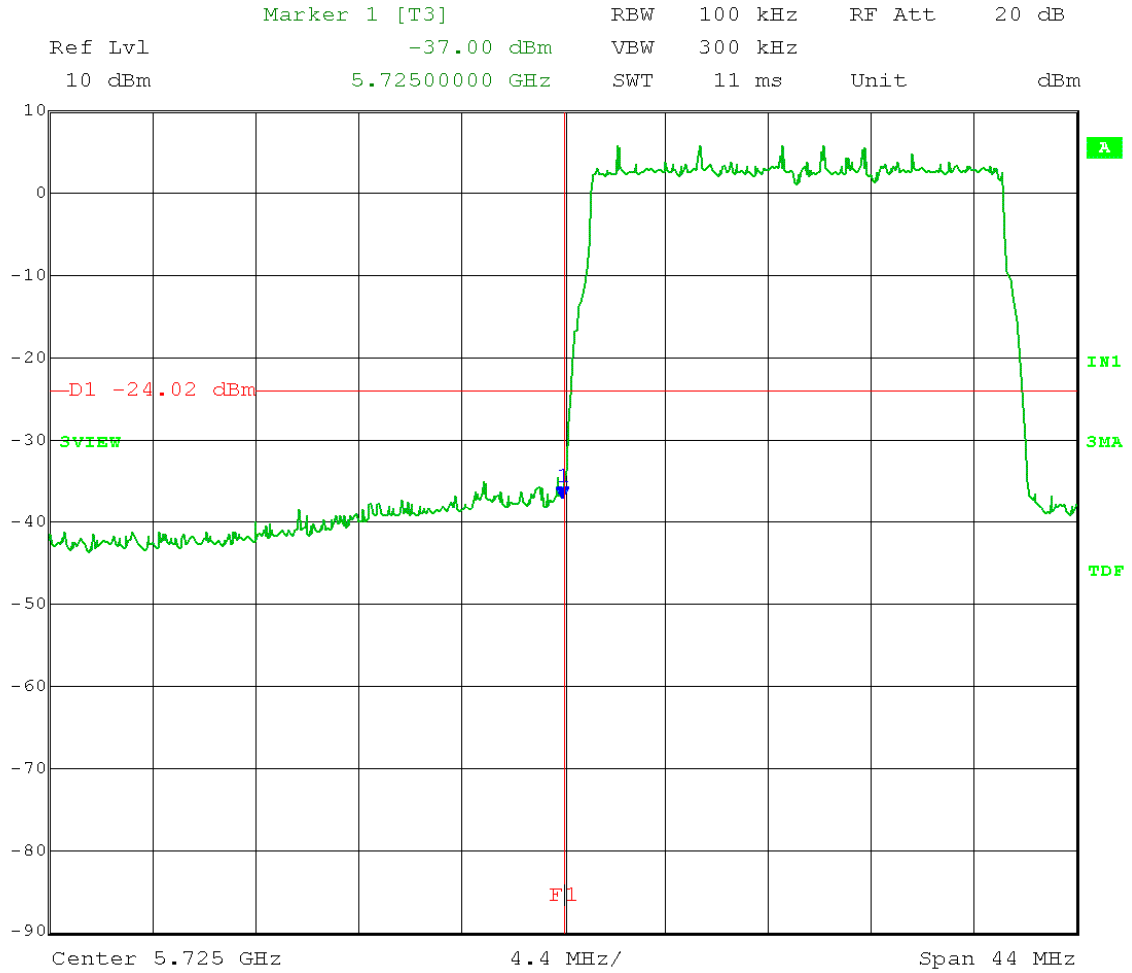
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Band-edge frequency: 5.725 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.98 dBm – 30 dB = -24.02 dBm



Date: 23.APR.2012 12:29:32

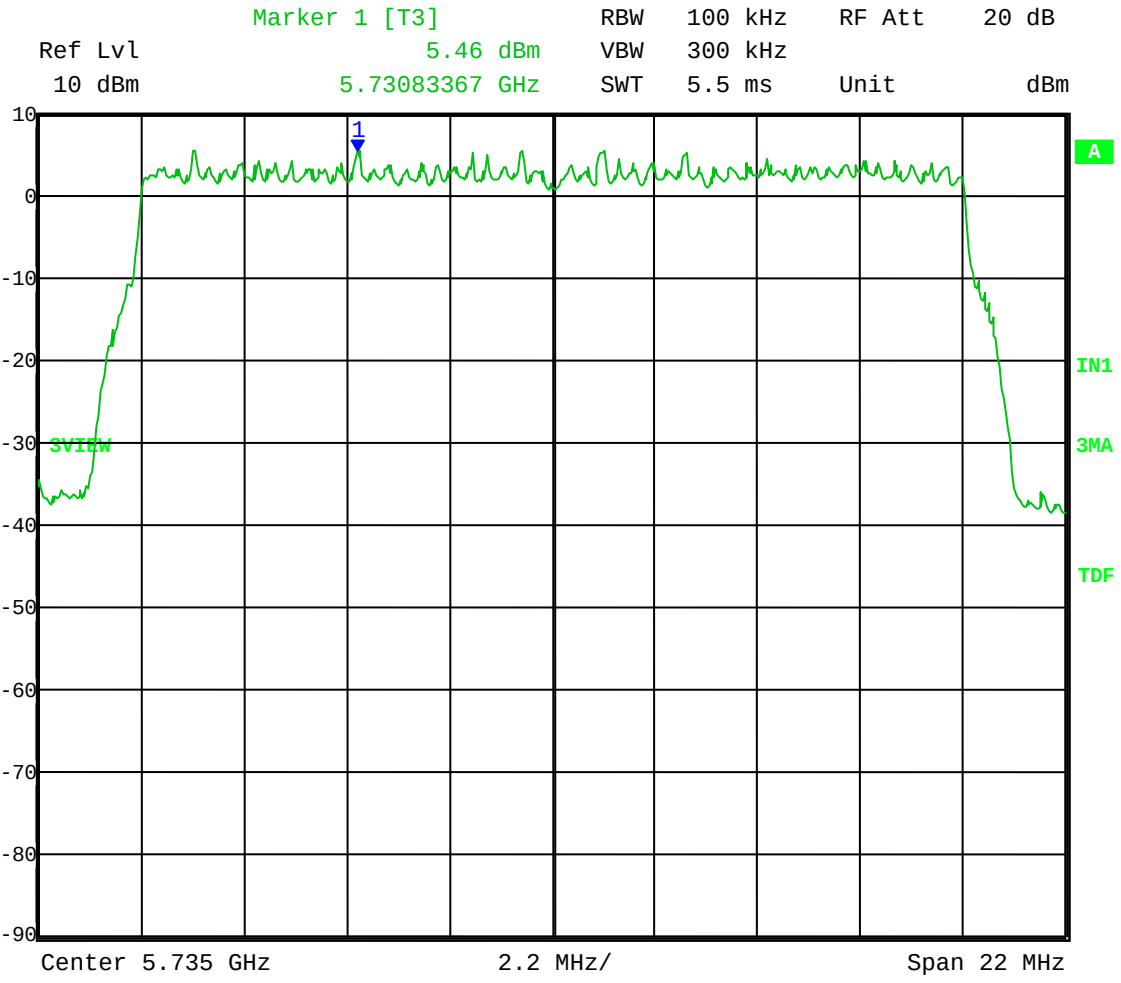
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.46 dBm – 30 dB = -24.54 dBm



Date: 23.APR.2012 11:38:37

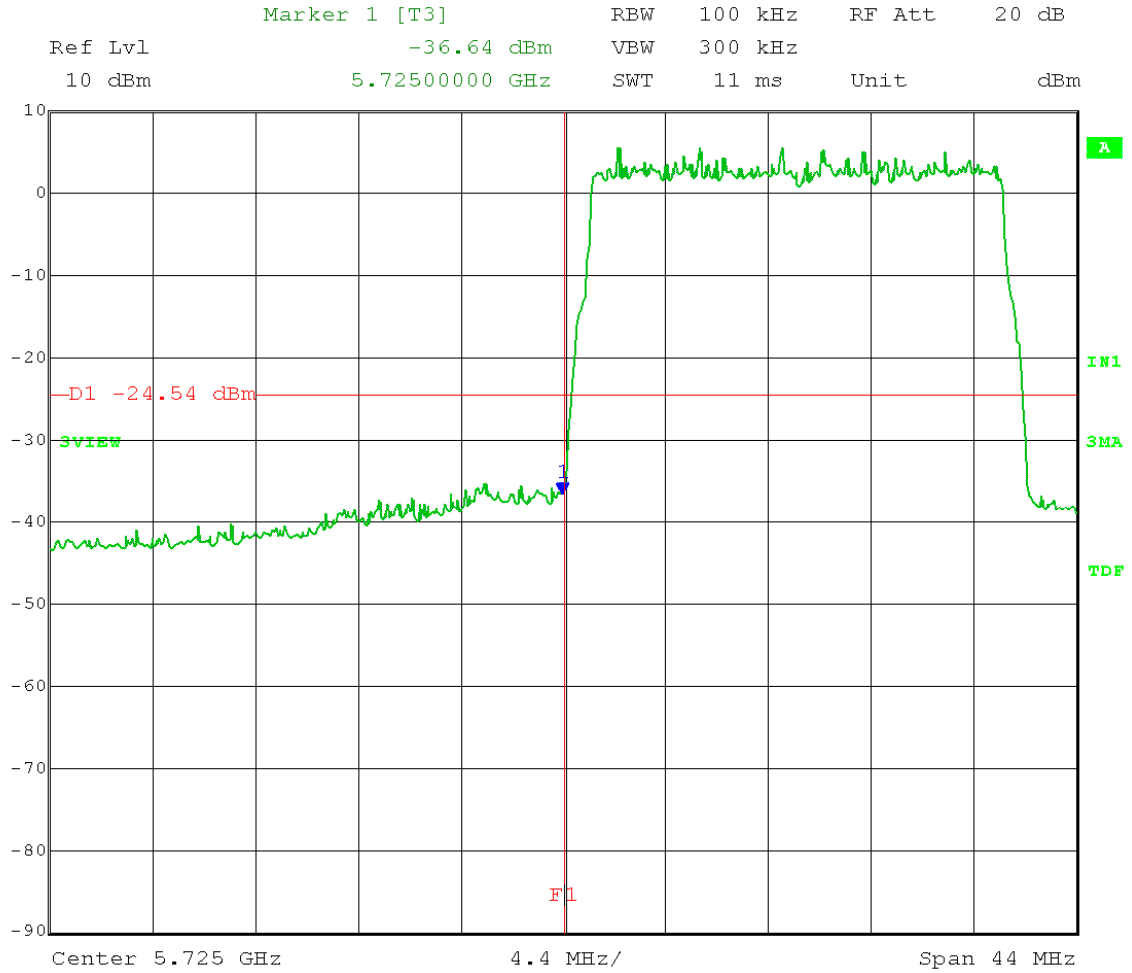
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Band-edge frequency: 5.725 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.46 dBm – 30 dB = -24.54 dBm



Date: 23.APR.2012 11:45:16

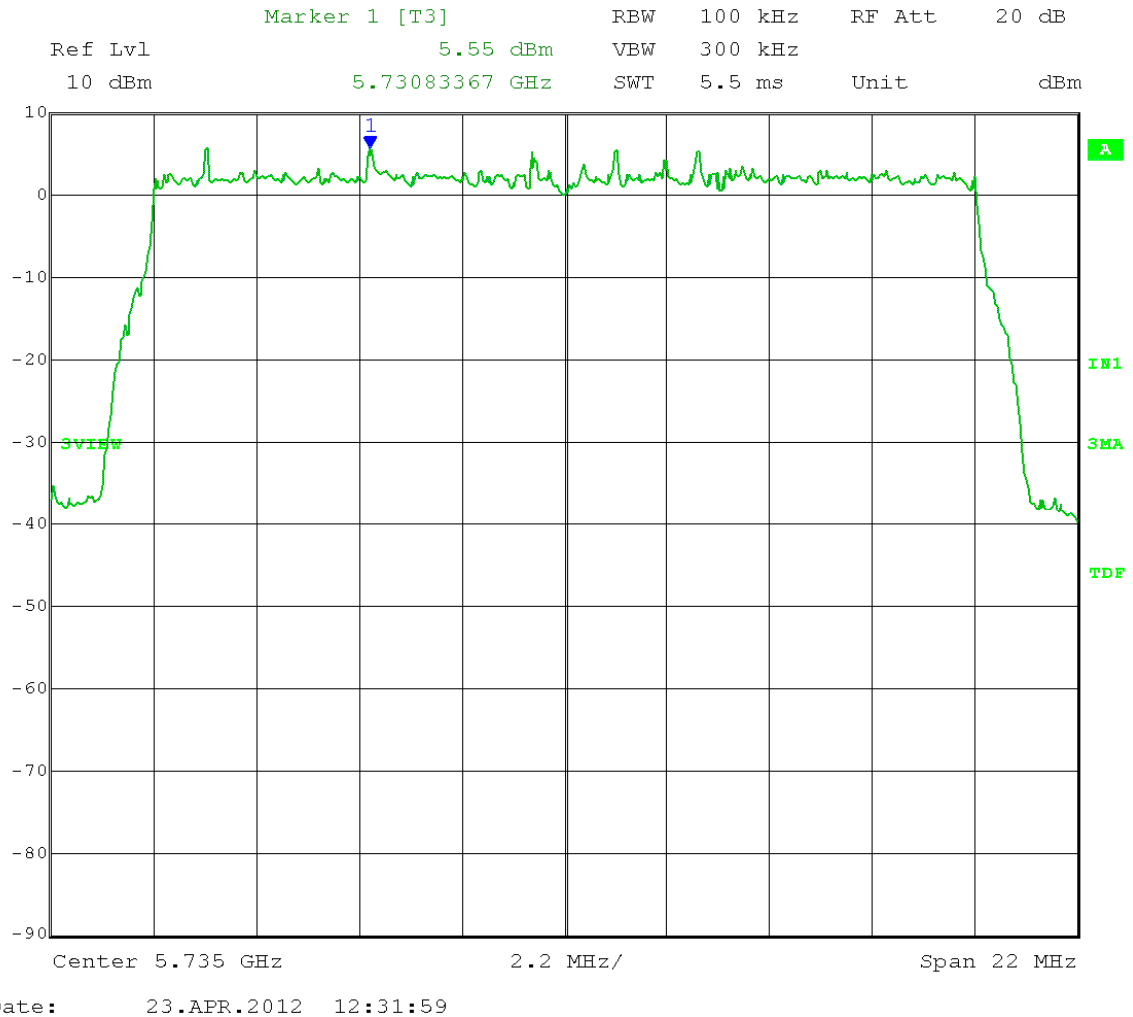
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.55 dBm – 30 dB = -24.45 dBm



Date: 23.APR.2012 12:31:59

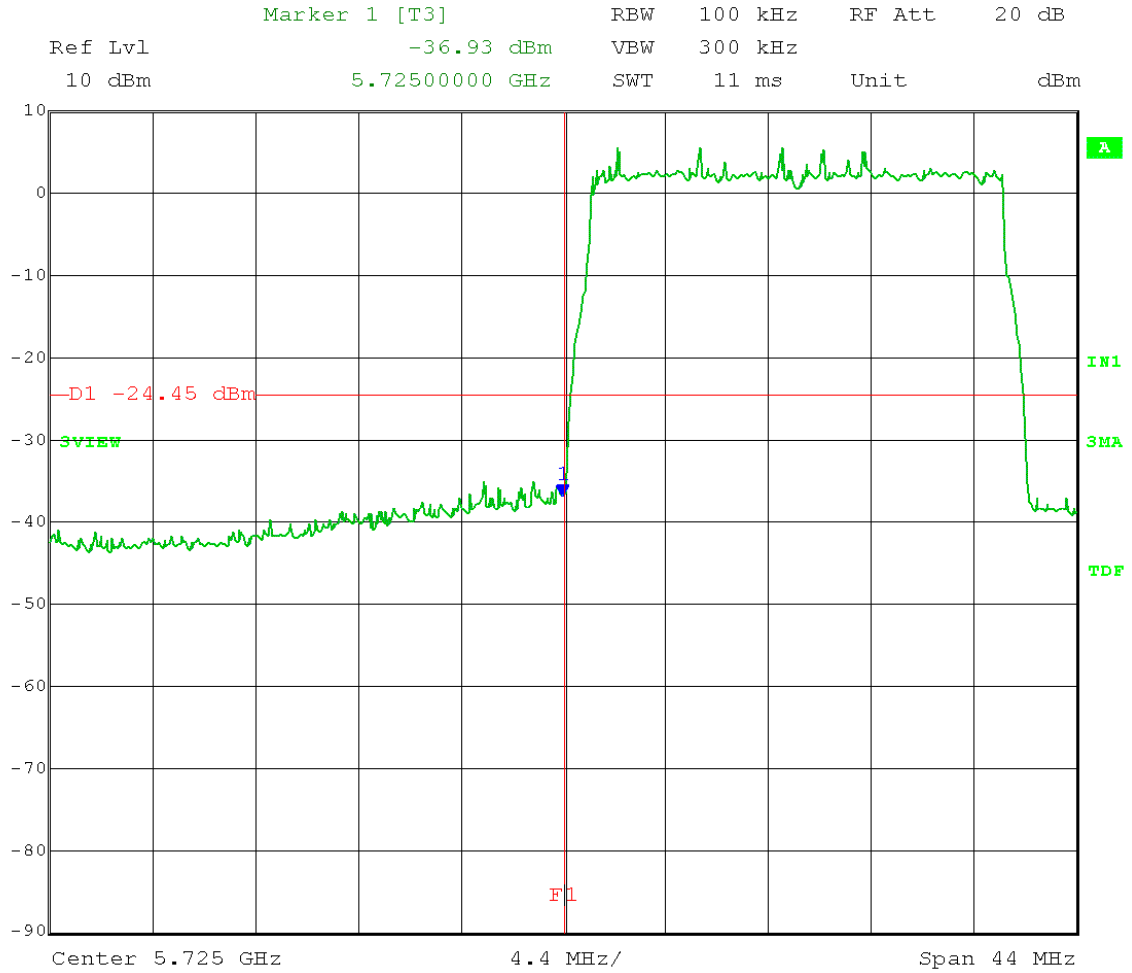
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Band-edge frequency: 5.725 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.55 dBm – 30 dB = -24.45 dBm



Date: 23.APR.2012 12:34:51

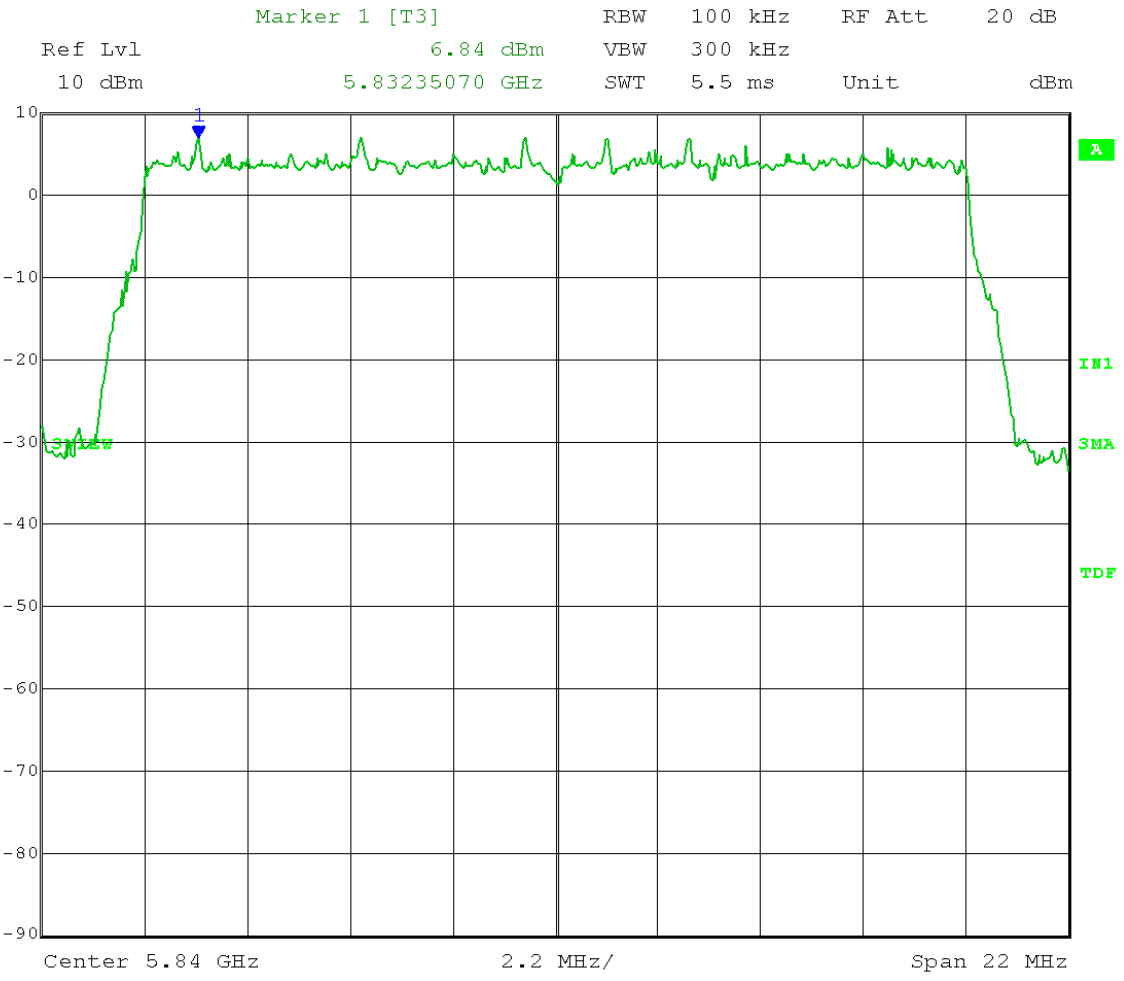
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.84 dBm – 30 dB = -23.16 dBm



Date: 23.APR.2012 12:43:48

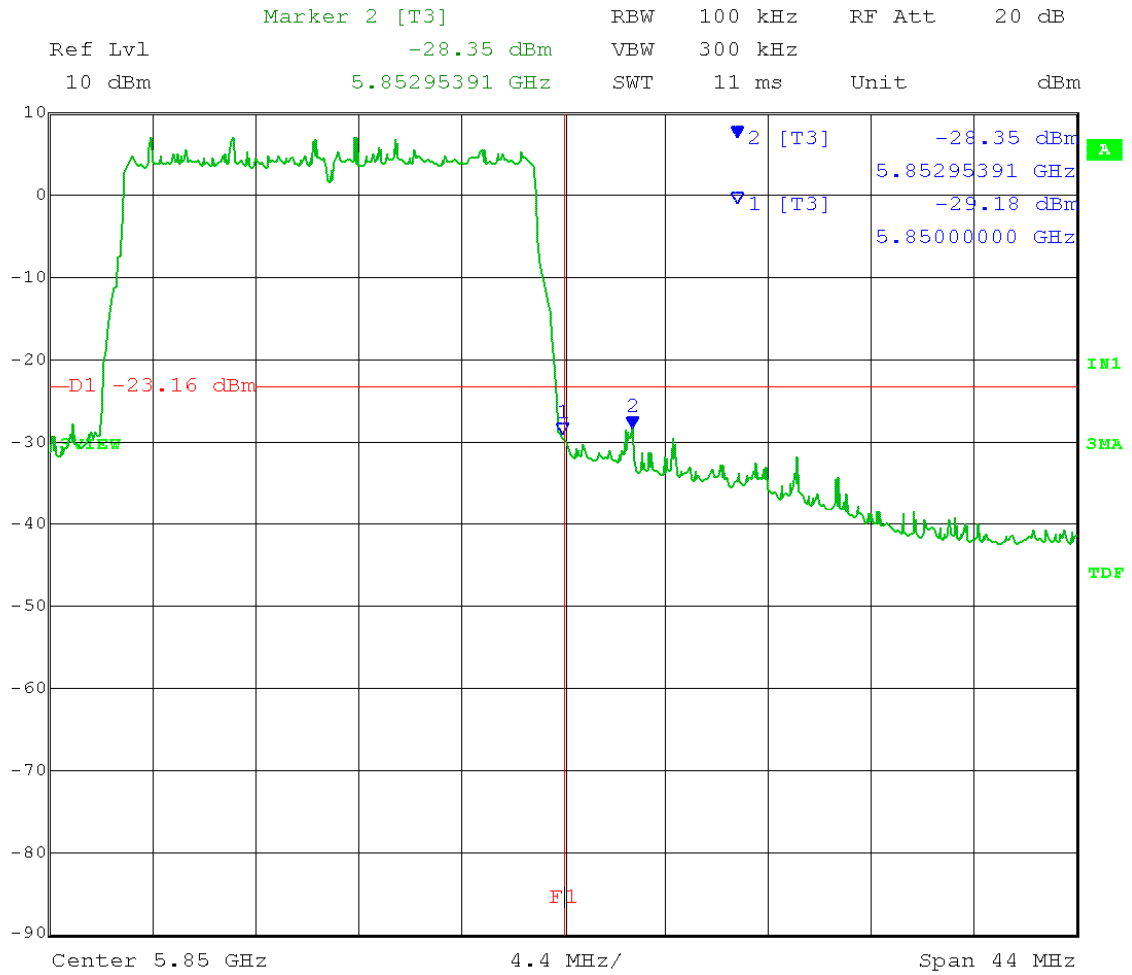
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Band-edge frequency: 5.850 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.84 dBm – 30 dB = -23.16 dBm



Date: 23.APR.2012 12:45:57

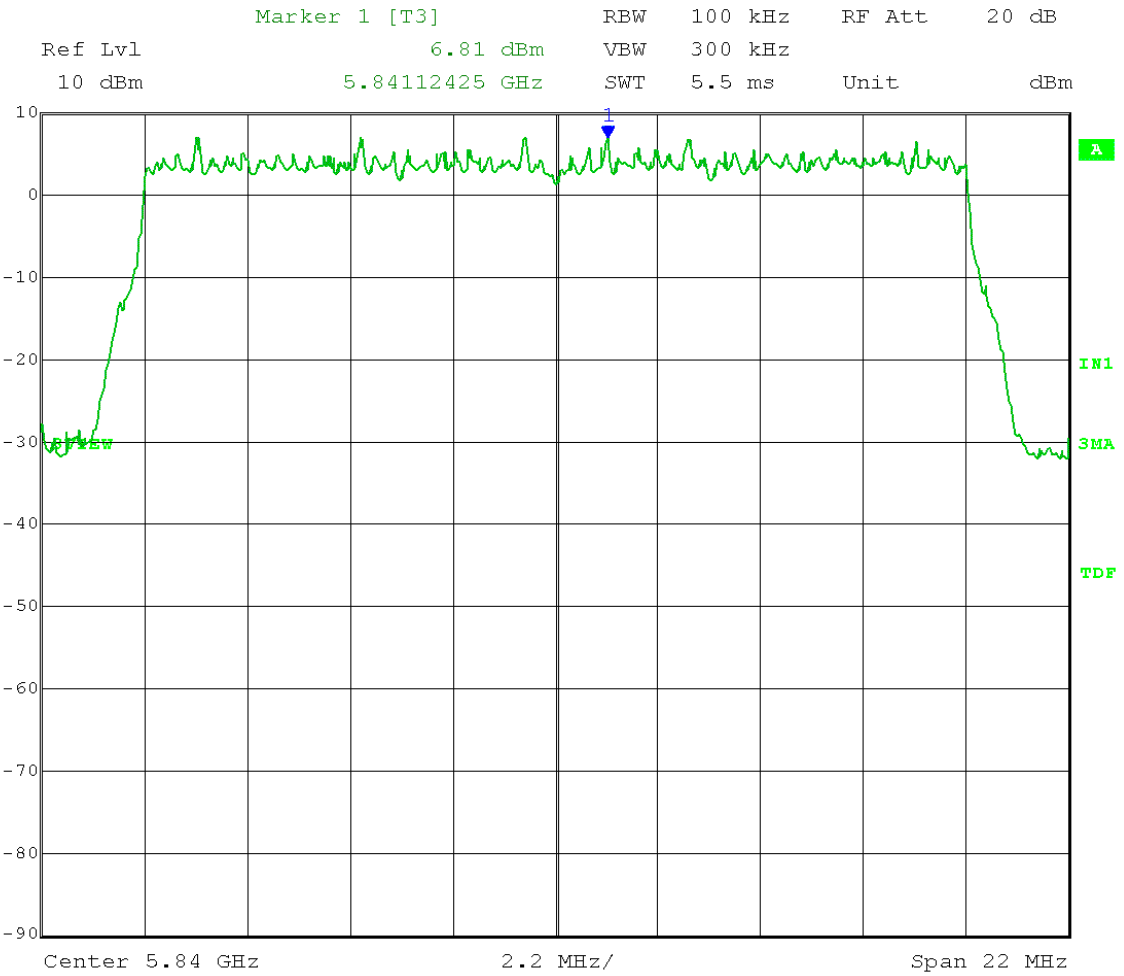
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.81 dBm – 30 dB = -23.19 dBm



Date: 23.APR.2012 12:47:46

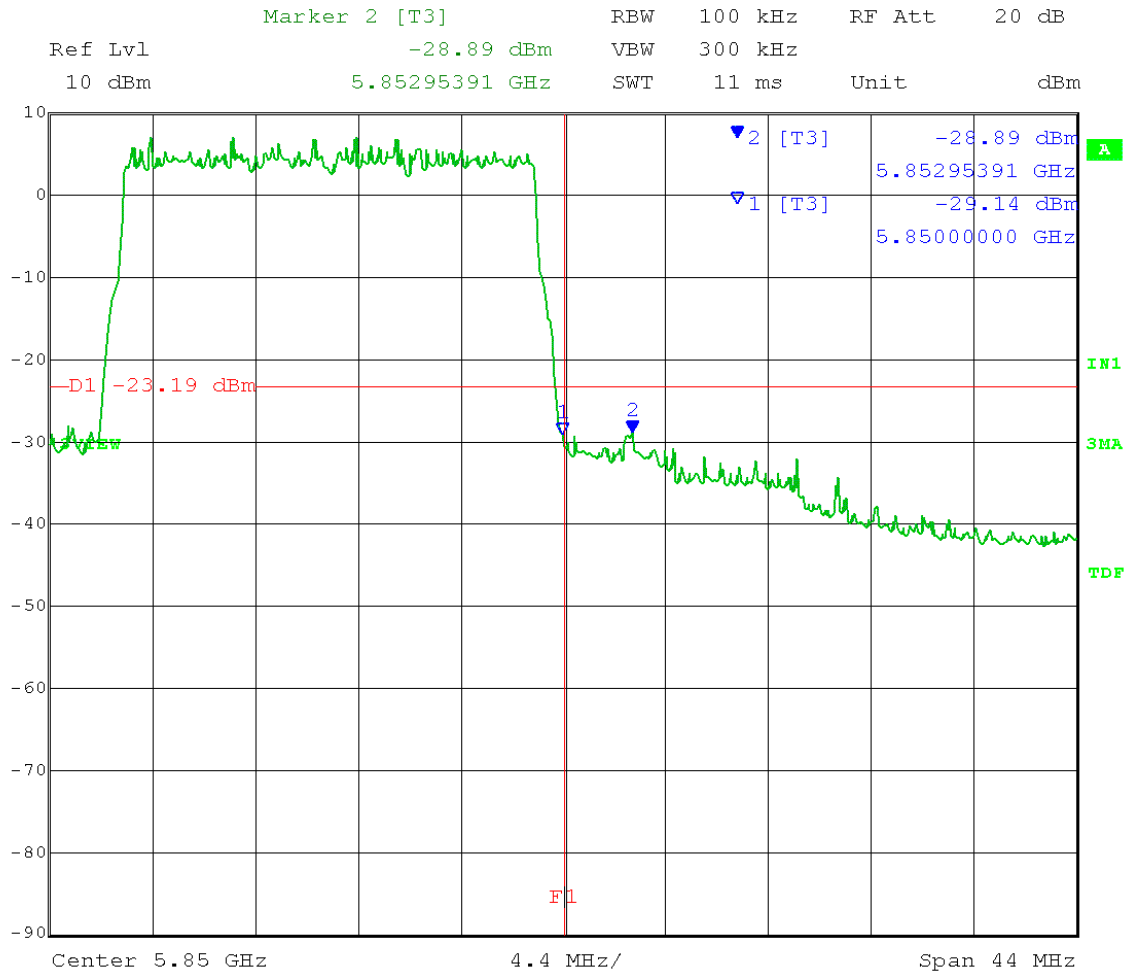
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Band-edge frequency: 5.850 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.81 dBm – 30 dB = -23.19 dBm



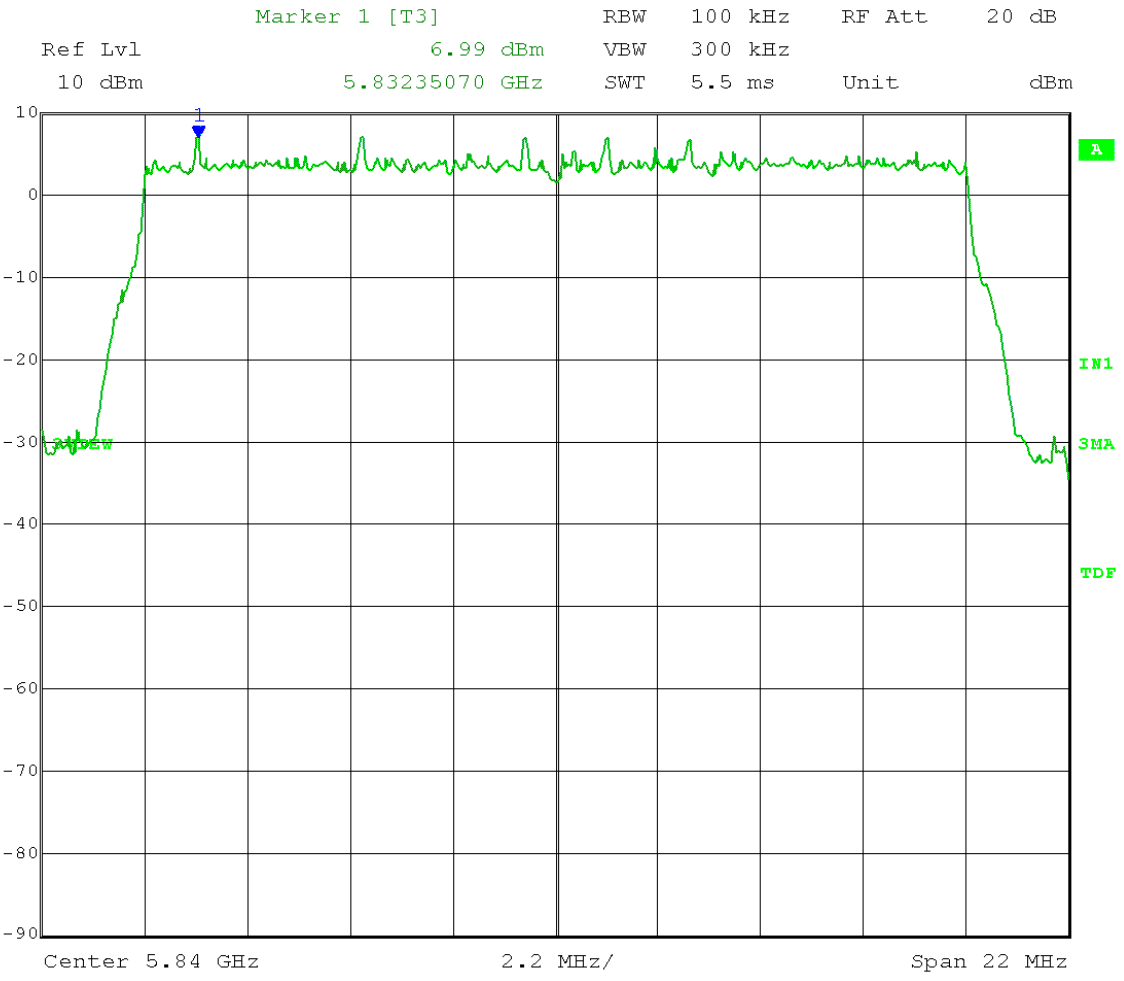
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.99 dBm – 30 dB = -23.01 dBm



Date: 23.APR.2012 12:39:08

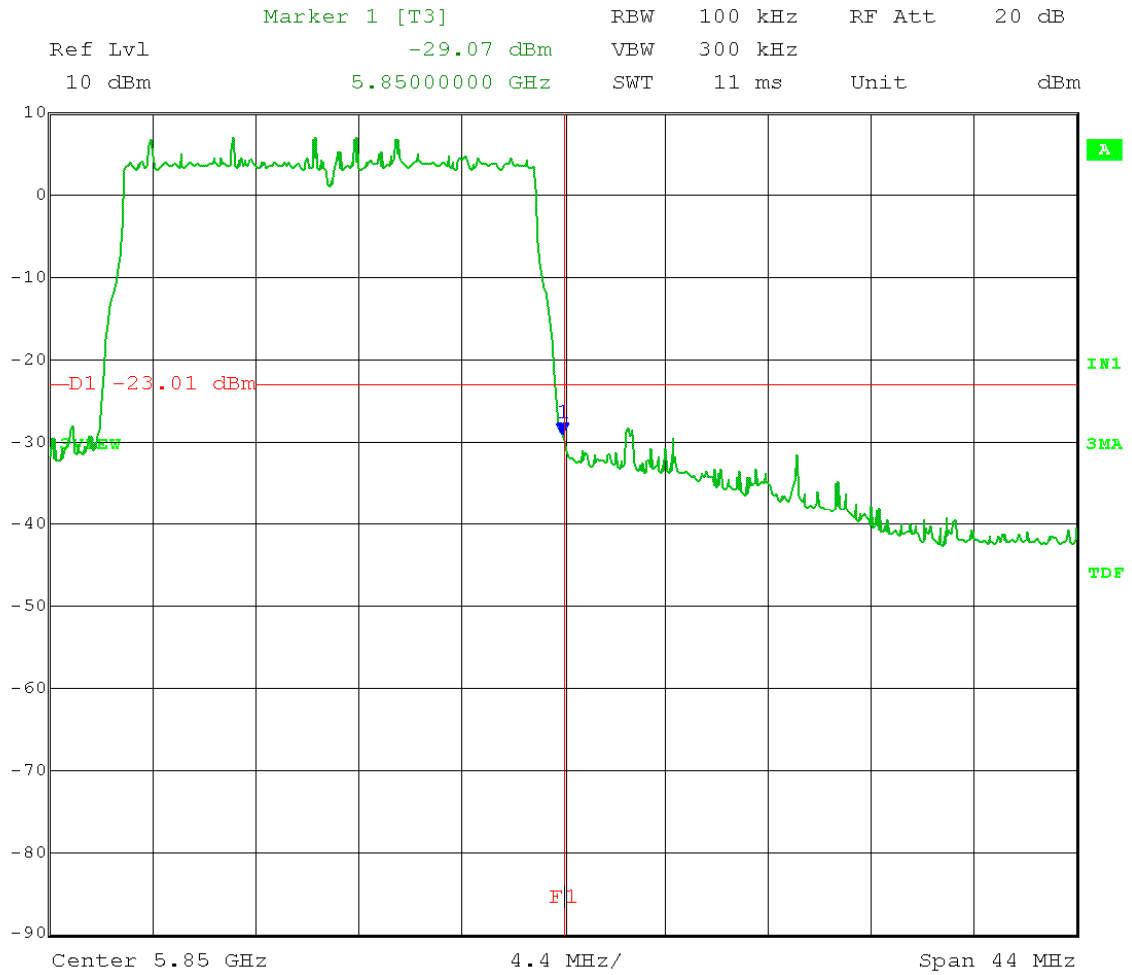
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Band-edge frequency: 5.850 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.99 dBm – 30 dB = -23.01 dBm



Date: 23.APR.2012 12:41:55

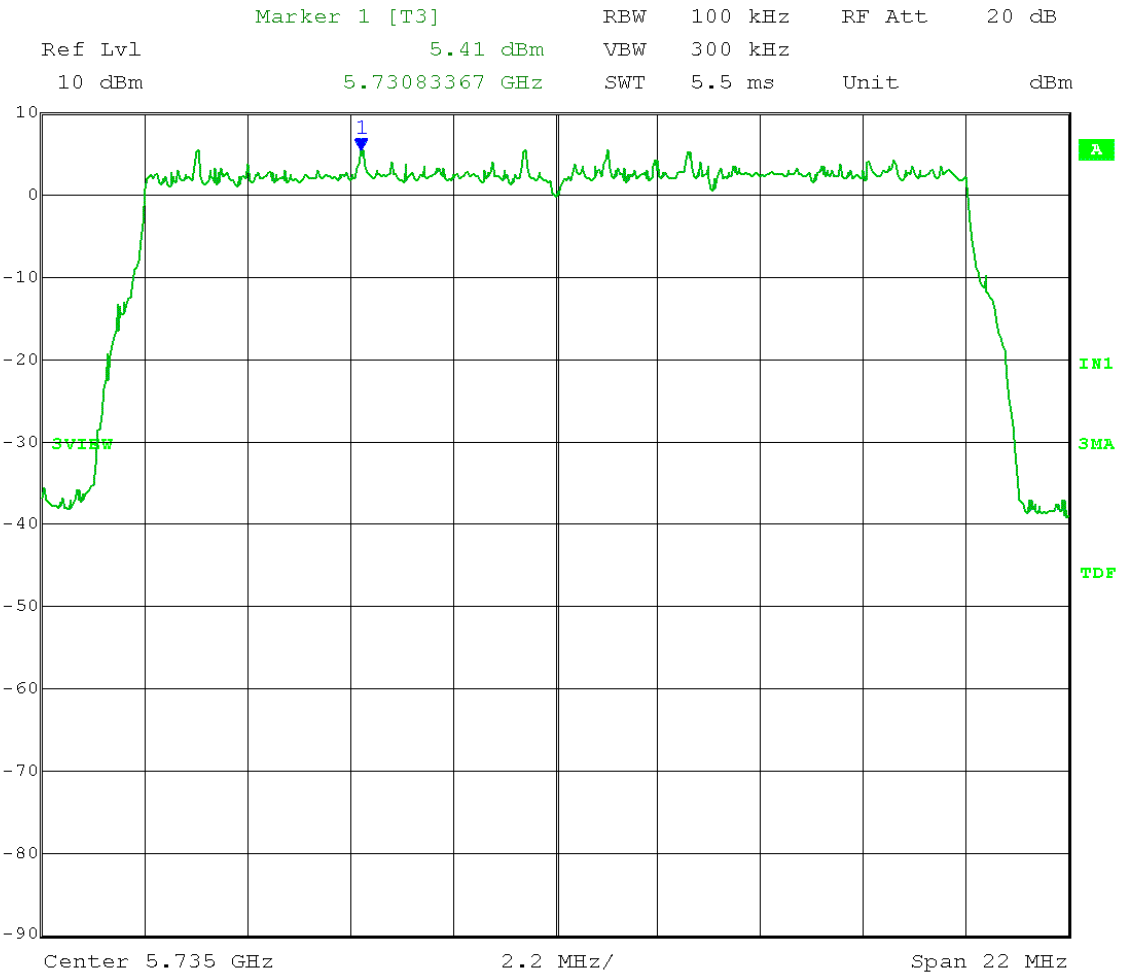
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.41 dBm – 30 dB = -24.59 dBm



Date: 23.APR.2012 13:11:58

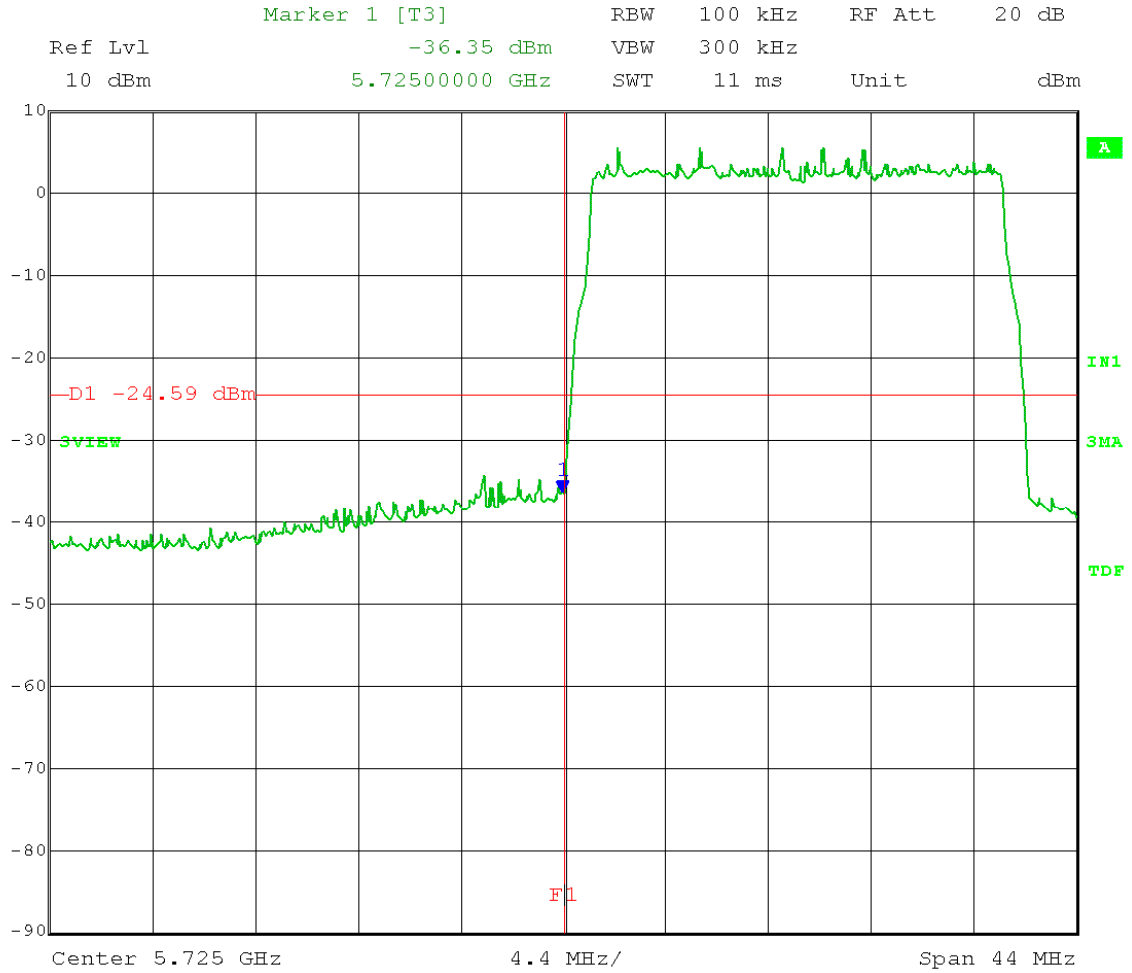
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 16QAM

Band-edge frequency: 5.725 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.41 dBm – 30 dB = -24.59 dBm



Date: 23.APR.2012 13:14:30

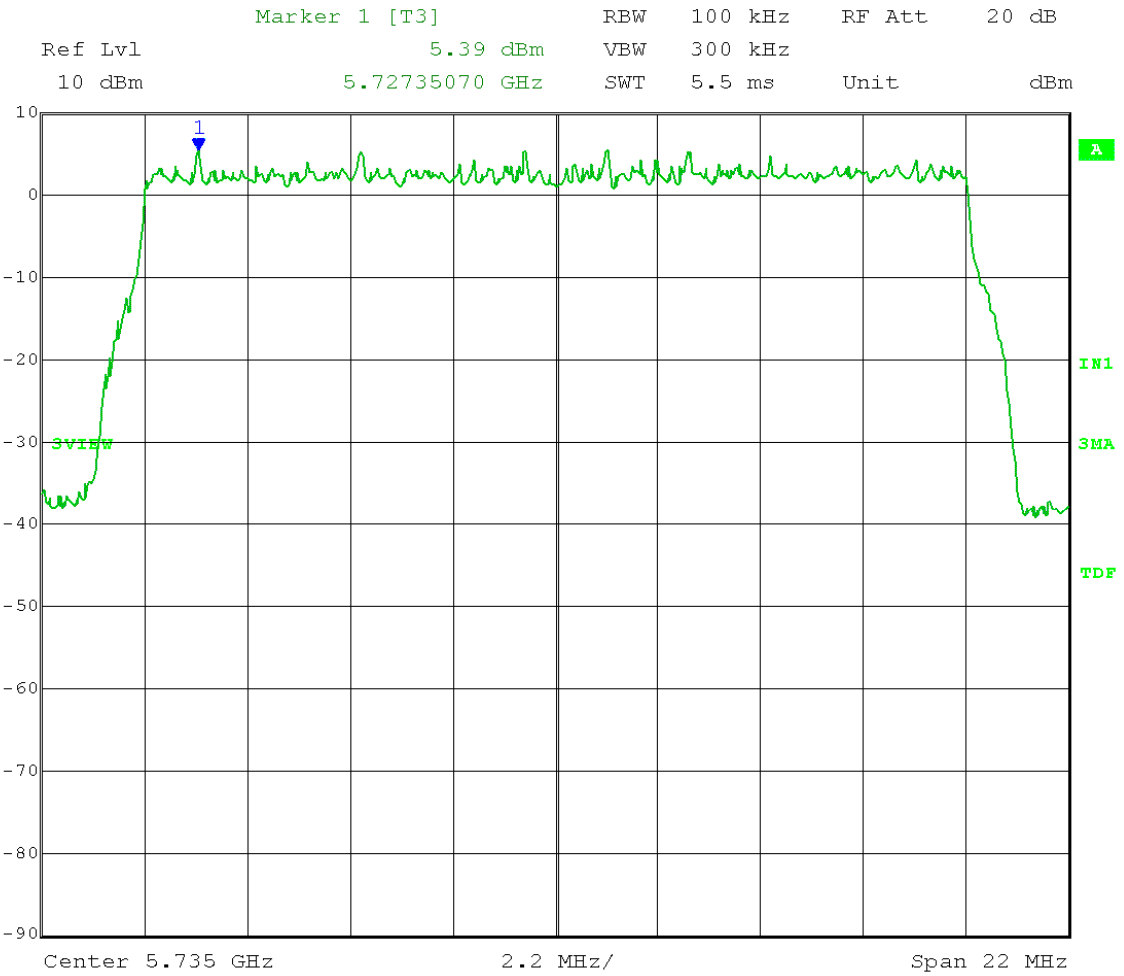
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.39 dBm – 30 dB = -24.61 dBm



Date: 23.APR.2012 13:07:27

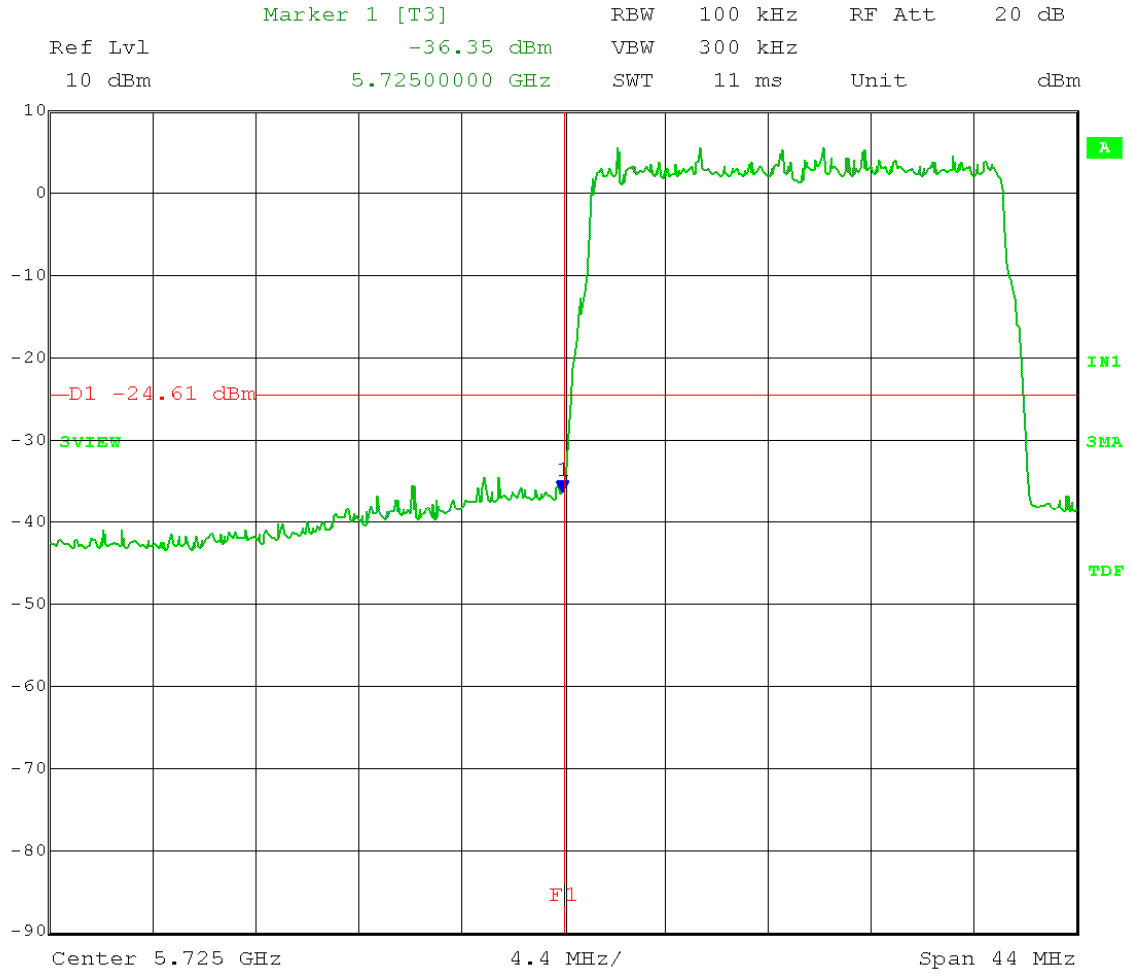
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: 64QAM

Band-edge frequency: 5.725 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.39 dBm – 30 dB = -24.61 dBm



Date: 23.APR.2012 13:10:01

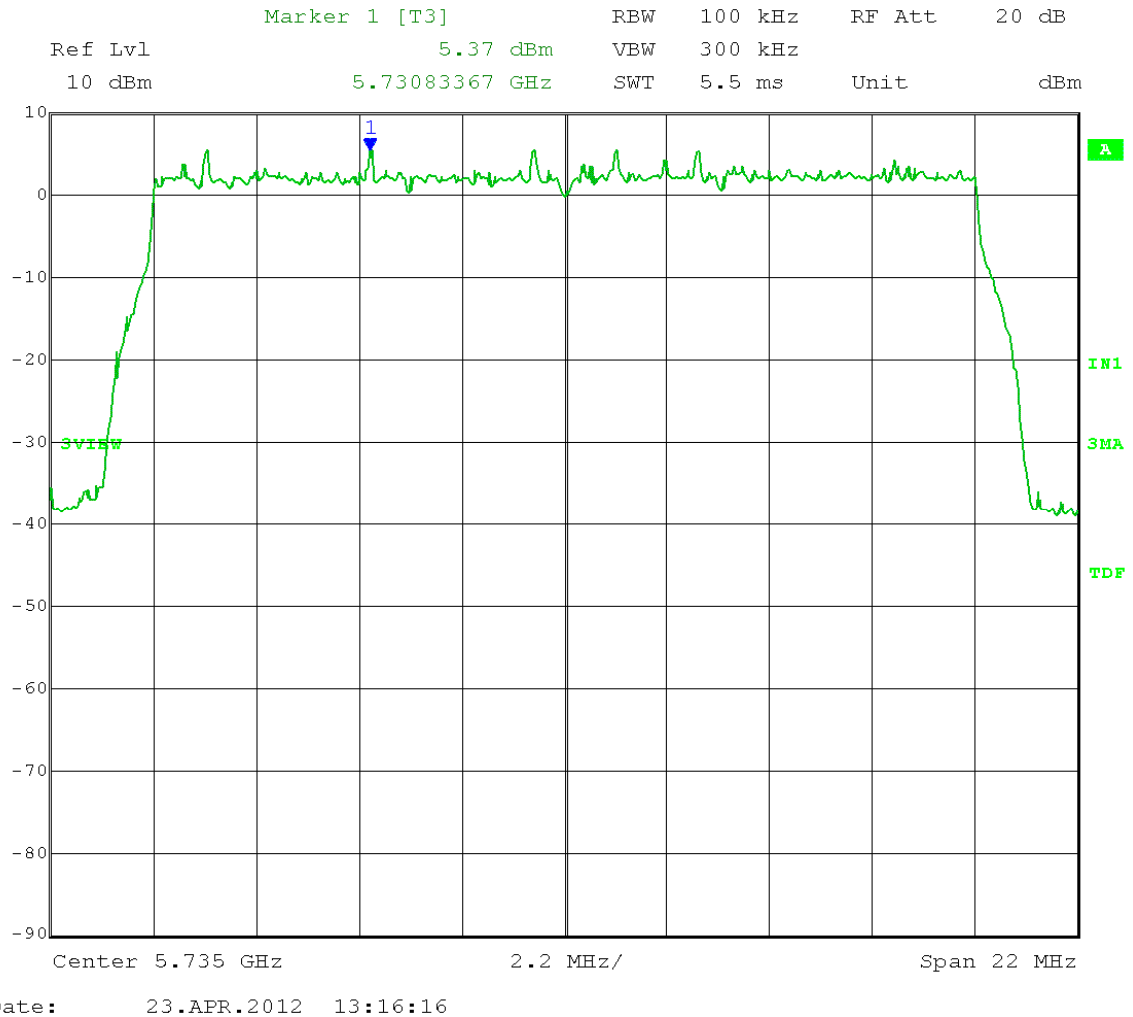
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.37 dBm – 30 dB = -24.63 dBm



Date: 23.APR.2012 13:16:16

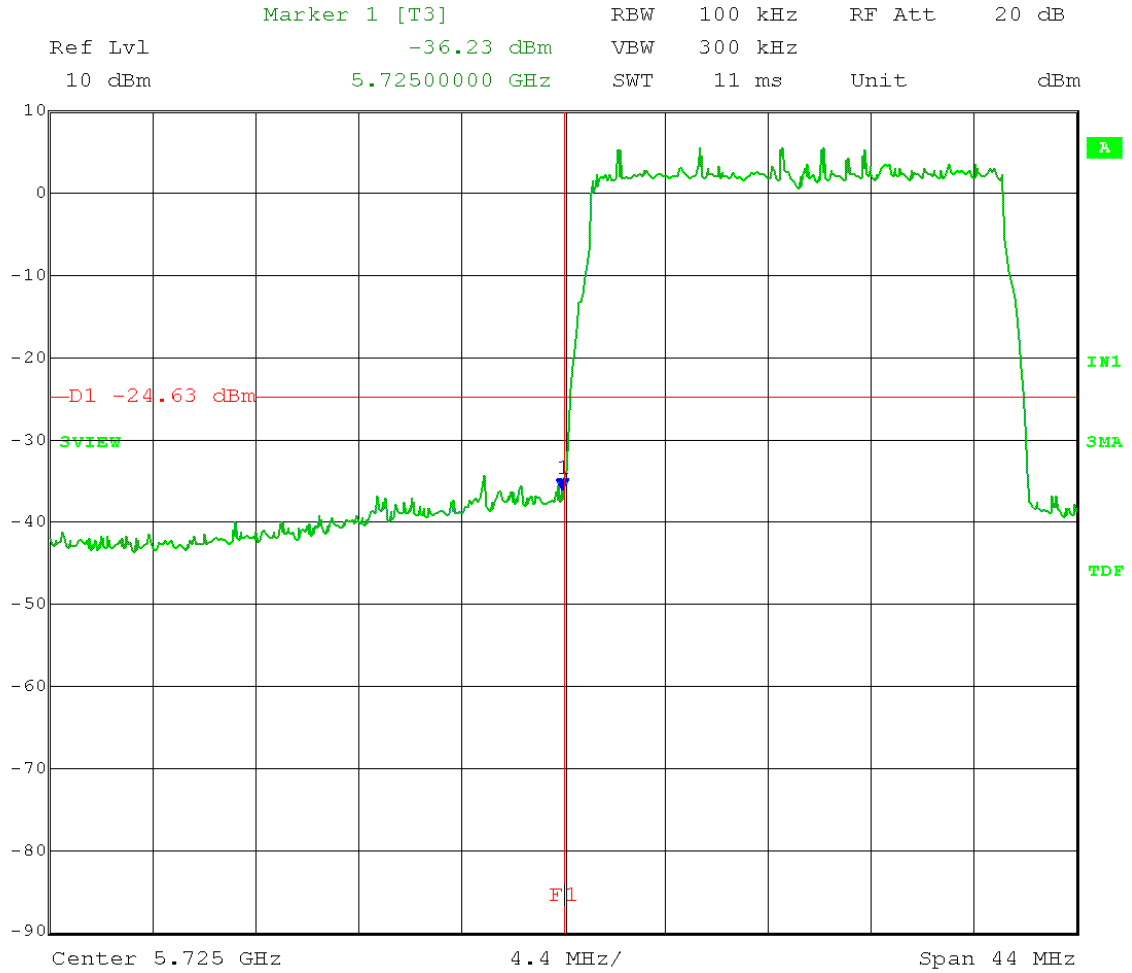
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Low Channel Frequency: 5.735 GHz
Output power setting: 19; Modulation Type: QPSK

Band-edge frequency: 5.725 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.37 dBm – 30 dB = -24.63 dBm



Date: 23.APR.2012 13:18:38

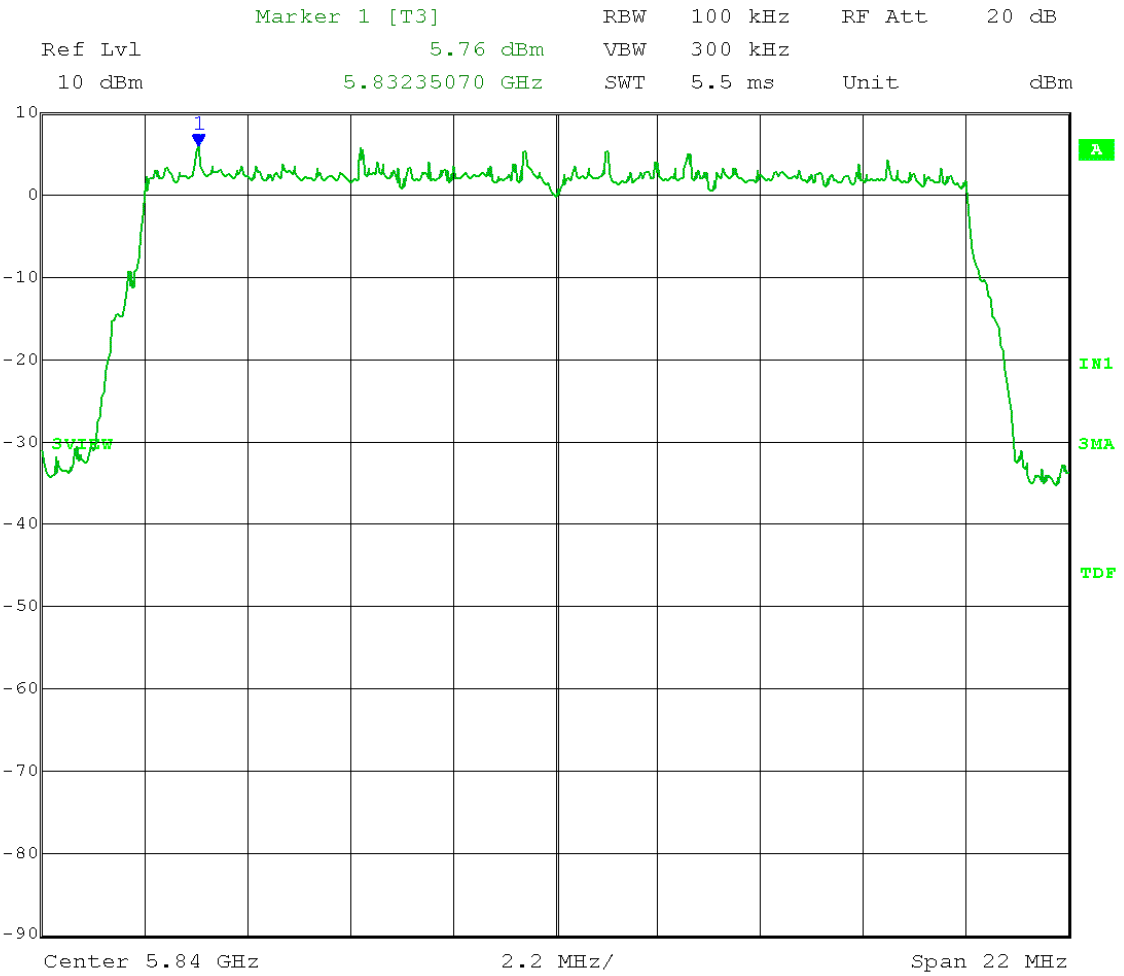
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.76 dBm – 30 dB = -24.24 dBm



Date: 23.APR.2012 12:59:09

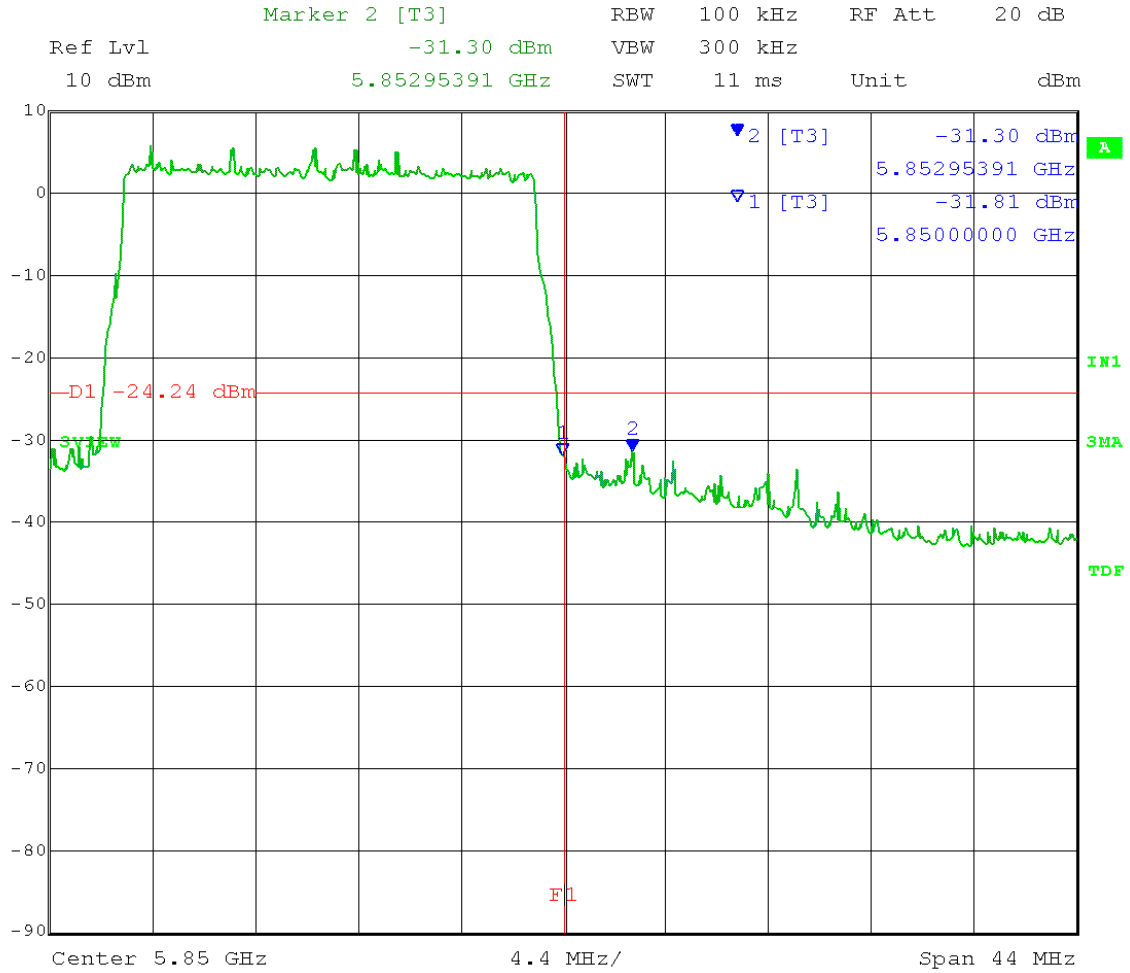
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 16QAM

Band-edge frequency: 5.850 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.76 dBm – 30 dB = -24.24 dBm



Date: 23.APR.2012 13:01:39

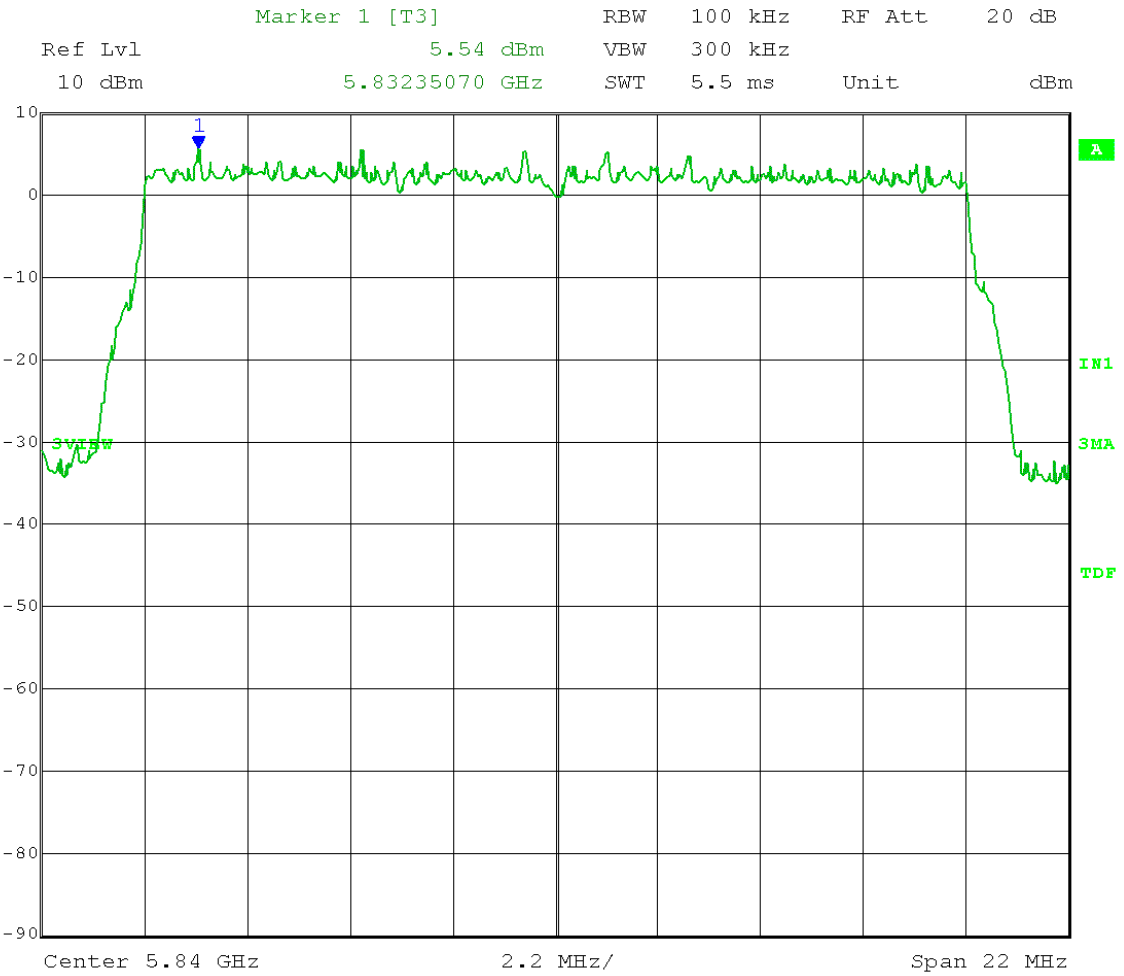
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.54 dBm – 30 dB = -24.46 dBm



Date: 23.APR.2012 13:03:17

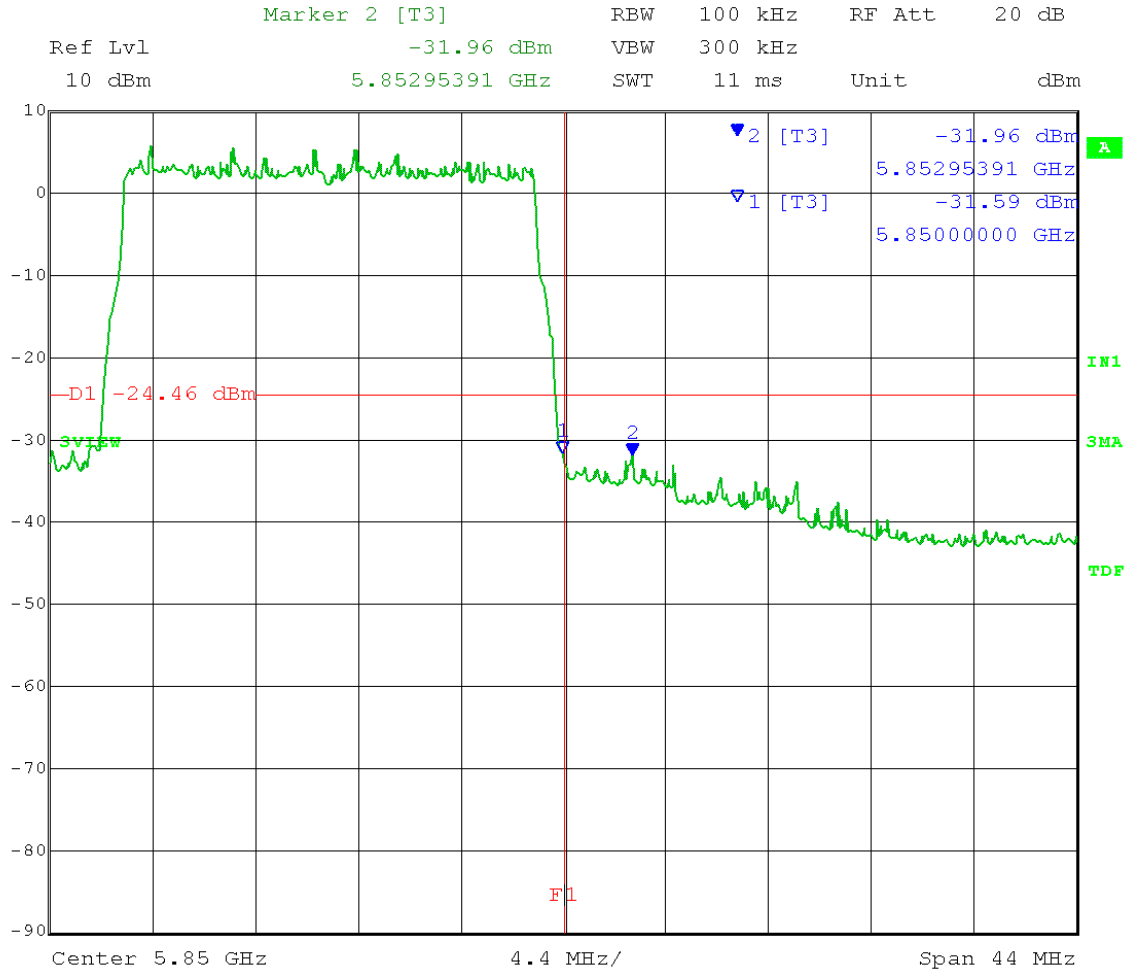
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: 64QAM

Band-edge frequency: 5.850 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 5.54 dBm – 30 dB = -24.46 dBm



Date: 23.APR.2012 13:05:45

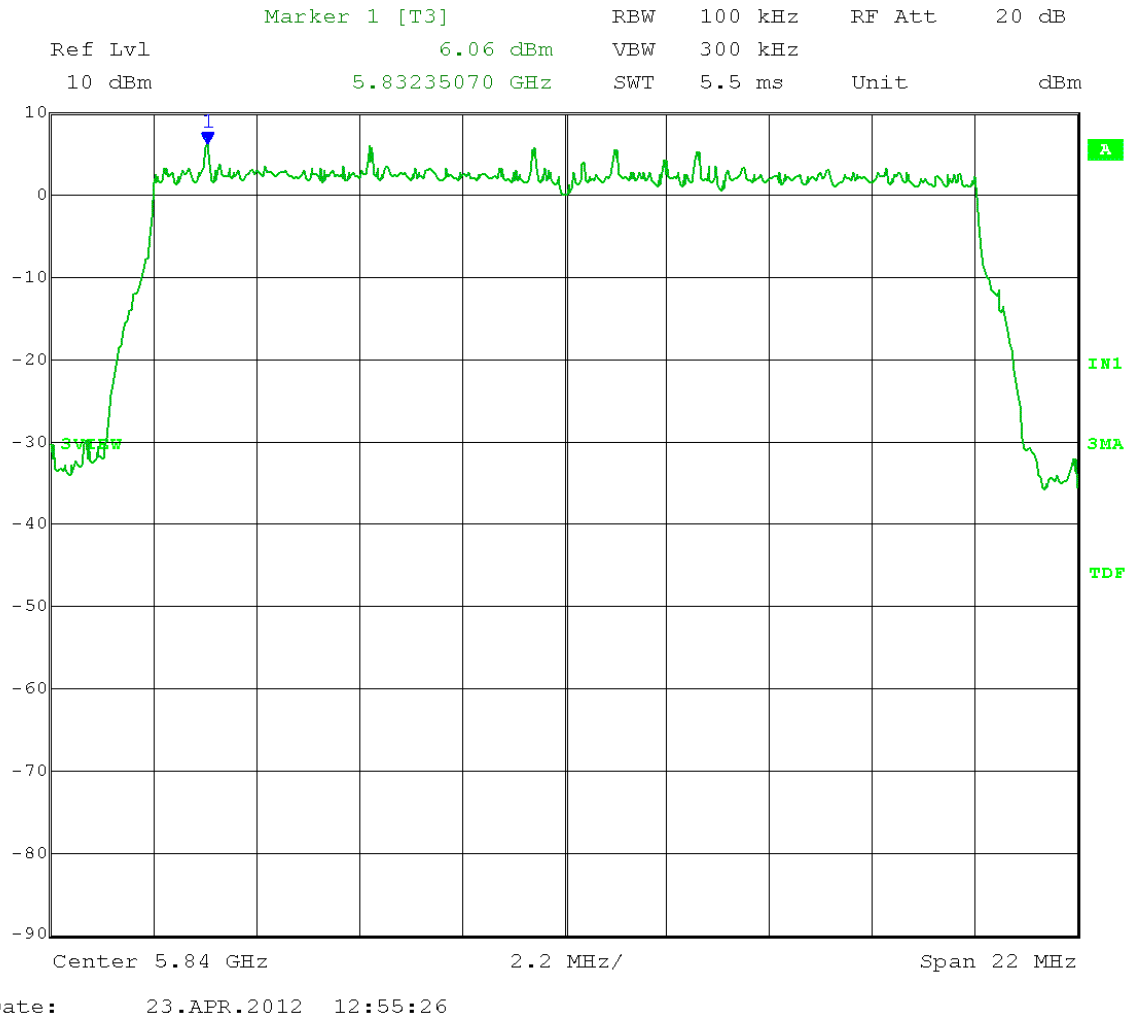
Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.1 – **Reference Level**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = 5-30% greater than EBW; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.06 dBm – 30 dB = -23.94 dBm



Date: 23.APR.2012 12:55:26

Test Date: 04-23-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Maximum Unwanted Emission Levels – Conducted Band-Edge
Procedure: FCC KDB 558074 D01 DTS Meas Guidance v01
Section 5.4.1.2 – **Unwanted Emissions**
Operator: Craig B

RBW = 100 kHz; VBW ≥ 300 kHz
Span = spectrum to be examined; Detector = peak;
Sweep = auto couple; Trace mode = max hold

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; High Channel Frequency: 5.840 GHz
Output power setting: 19; Modulation Type: QPSK

Band-edge frequency: 5.850 GHz
Limit: [15.247(b)(3)]: 30 dB below maximum in-band average PSD level (Average output power procedure was used to measure the fundamental emission power)

Limit = 6.06 dBm – 30 dB = -23.94 dBm

Date: 23.APR.2012 12:57:17

166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

A8.0 Duty Cycle of Test Unit

Rule Part: FCC Section 15.35(c)
RSS-Gen 7.2.3

Test Procedure: ANSI C63.10-2009 Section 7.5

Limits: Informative

Results: EUT is continuously transmitting (duty cycle ≥ 98%).

Sample Equations: None

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

The EUT was transmitting at a minimum duty cycle of 98%.

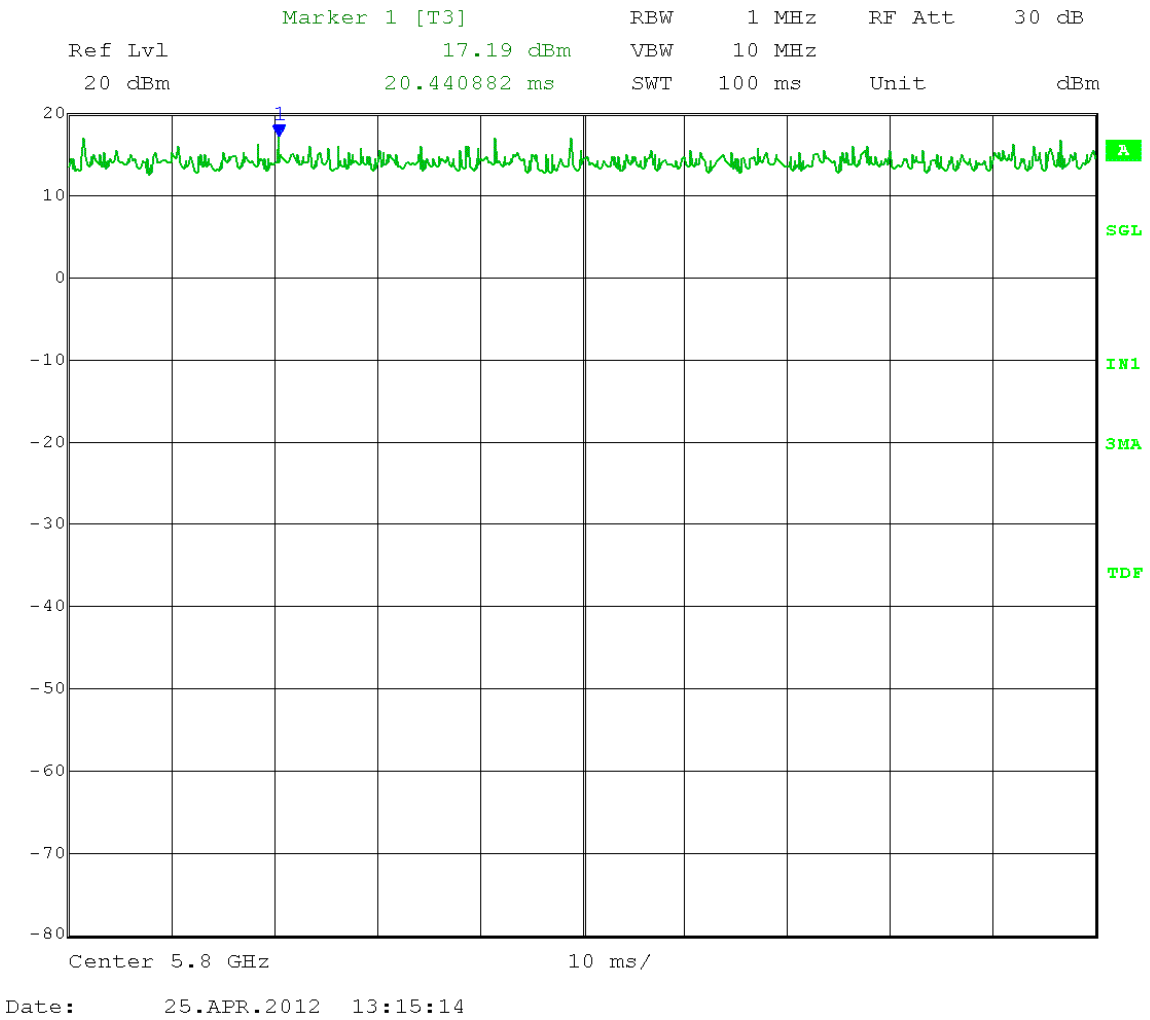
166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Duty Cycle – duty cycle used during testing (special test software)
Operator: Craig B

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Continuous transmit; 100 ms sweep:



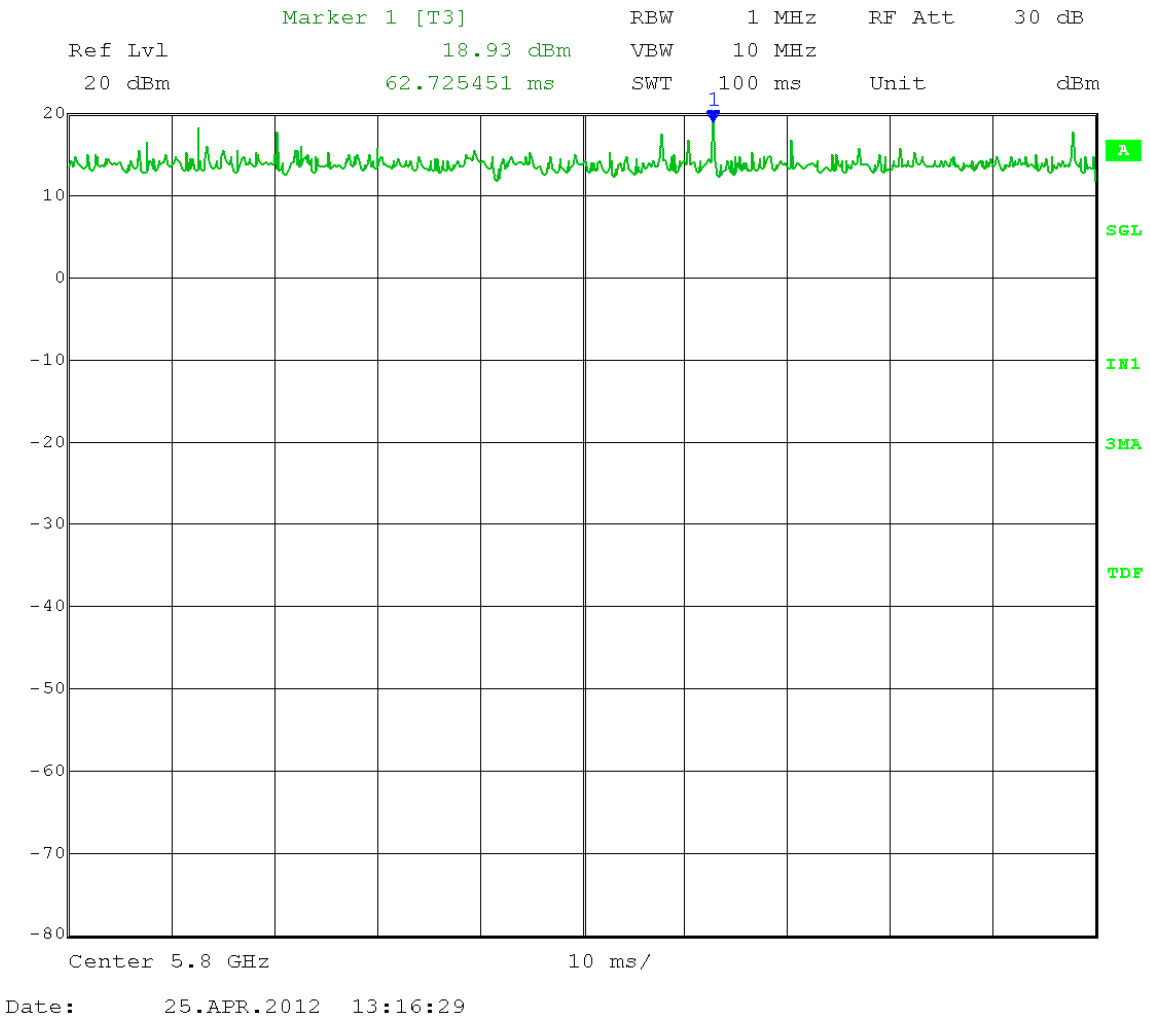
166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Duty Cycle – duty cycle used during testing (special test software)
Operator: Craig B

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Continuous transmit; 100 ms sweep:



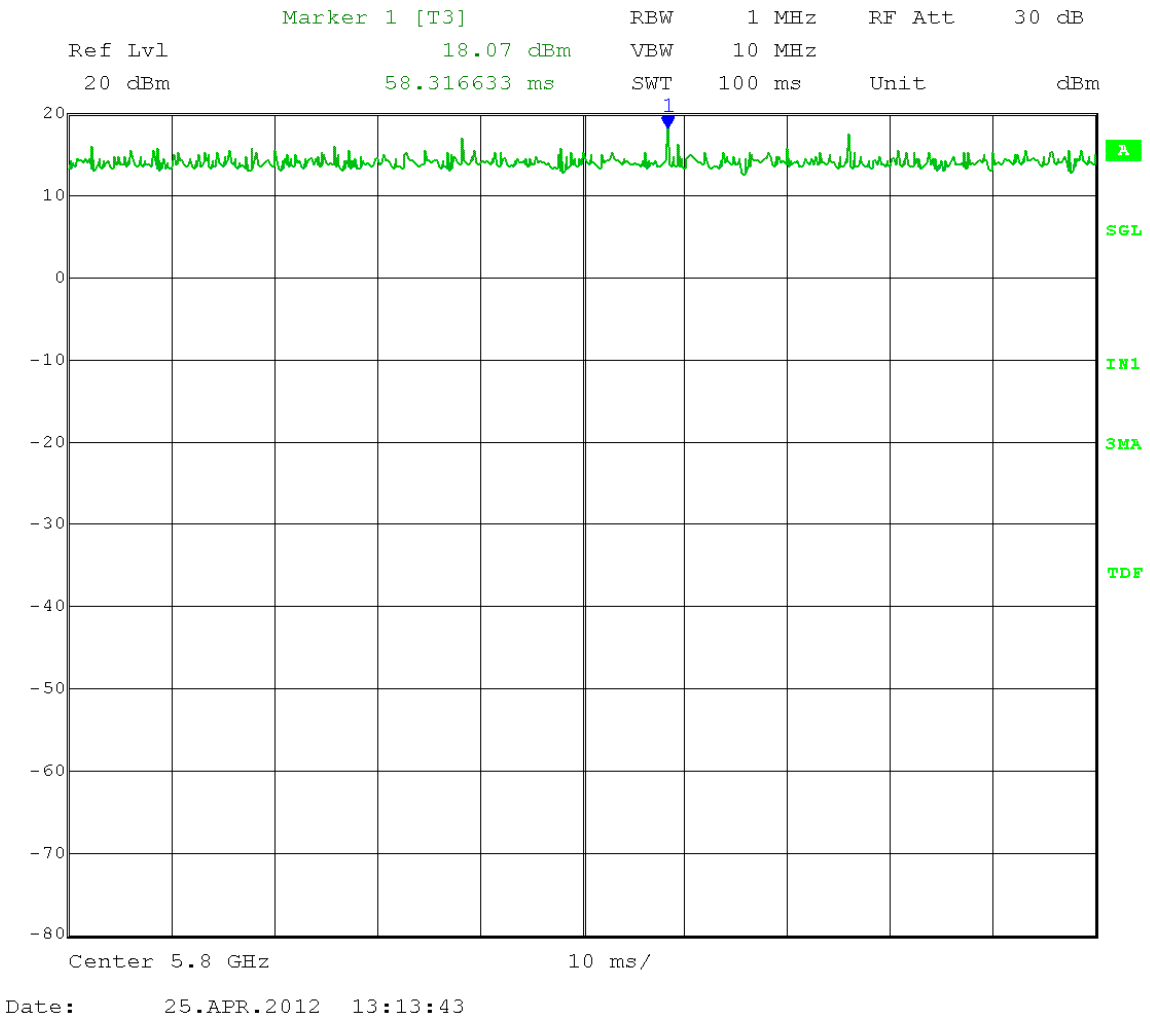
166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Duty Cycle – duty cycle used during testing (special test software)
Operator: Craig B

EUT nominal channel bandwidth: 20 MHz
Output port: Channel A; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Continuous transmit; 100 ms sweep:



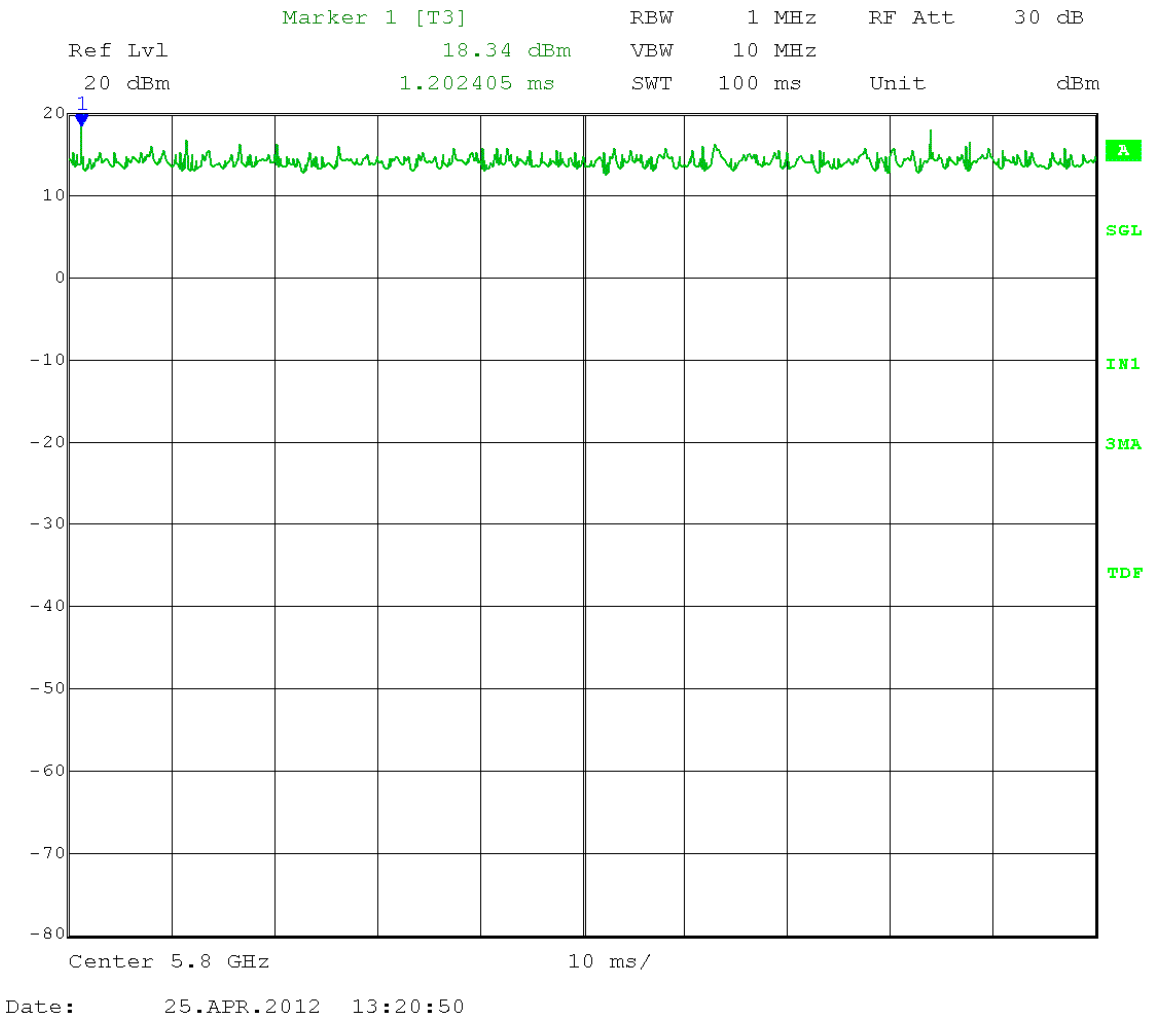
166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Duty Cycle – duty cycle used during testing (special test software)
Operator: Craig B

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 16QAM

Continuous transmit; 100 ms sweep:



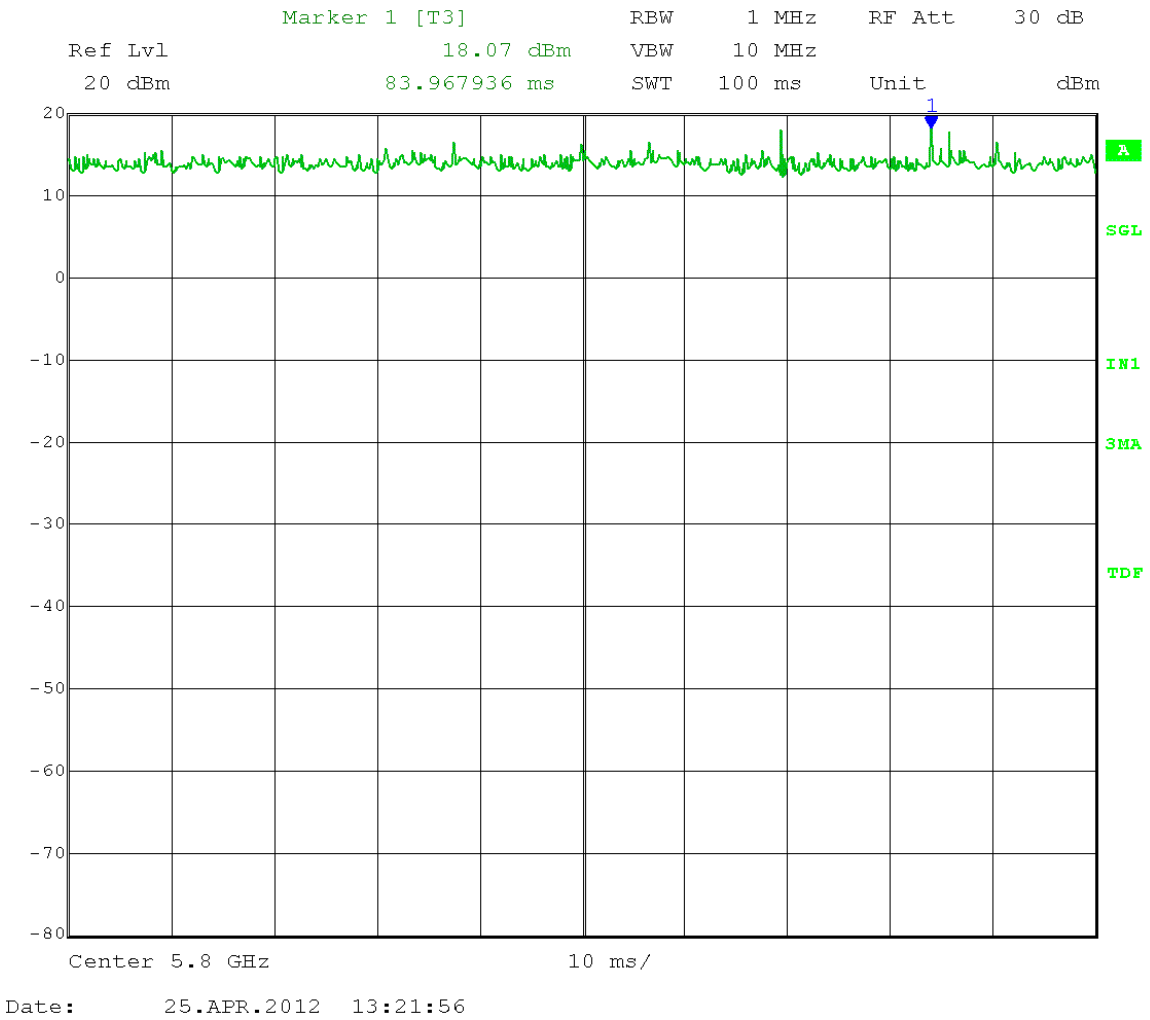
166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Duty Cycle – duty cycle used during testing (special test software)
Operator: Craig B

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: 64QAM

Continuous transmit; 100 ms sweep:



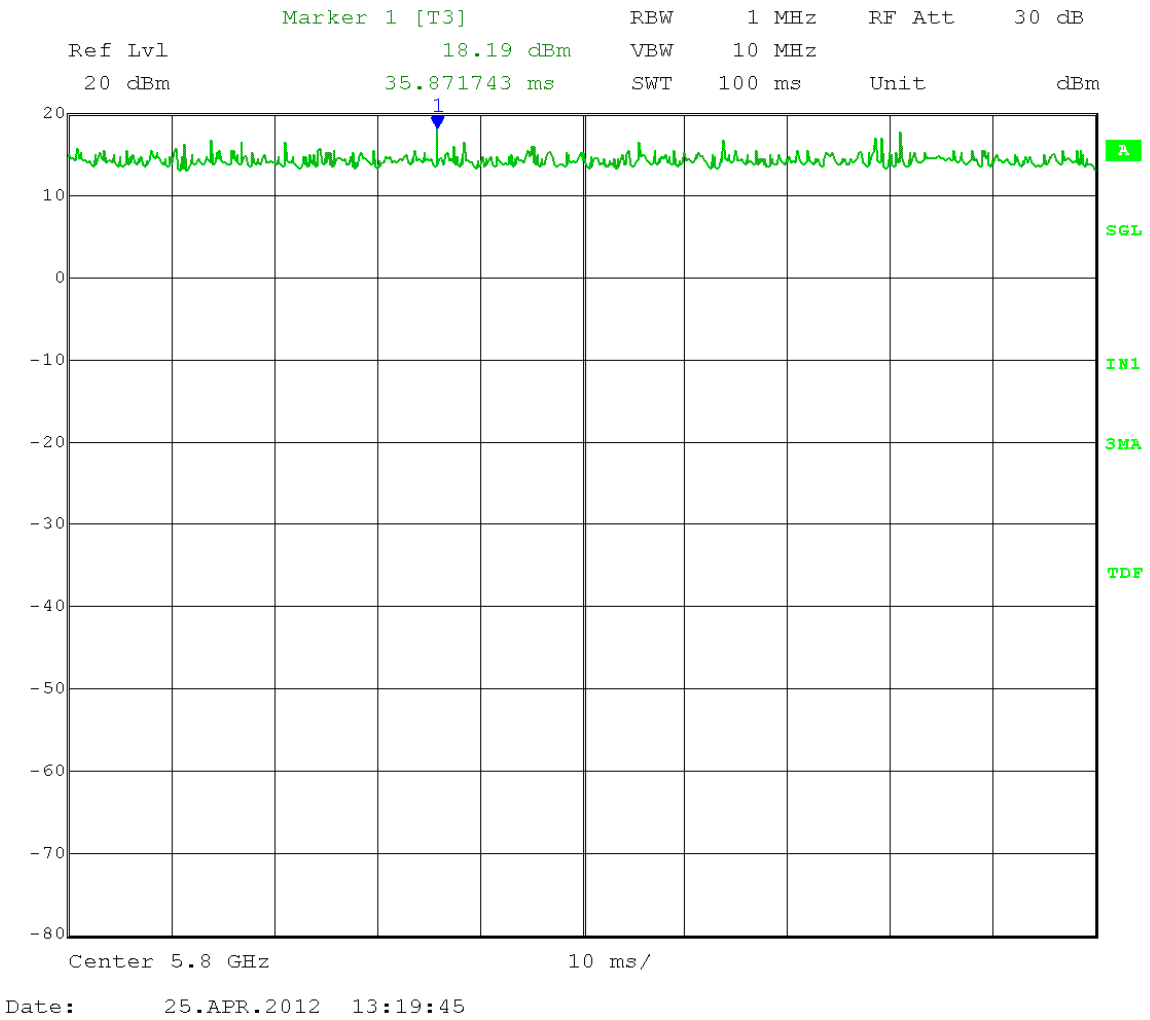
166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

Test Date: 04-25-2012
Company: Cambium Networks
EUT: PMP450SM 5.7 GHz MIMO OFDM SN:0A003EA00047
Test: Duty Cycle – duty cycle used during testing (special test software)
Operator: Craig B

EUT nominal channel bandwidth: 20 MHz
Output port: Channel B; Middle Channel Frequency: 5.800 GHz
Output power setting: 19; Modulation Type: QPSK

Continuous transmit; 100 ms sweep:



166 South Carter, Genoa City, WI 53128

Appendix A – Measurement Data

A9.0 AC Line Conducted Emissions

Rule Part: FCC Part 15.207
RSS-Gen 7.2.4

Test Procedure: ANSI C63.10-2009
Section 6.2

Limit: FCC Part 15.207(a)
Canada: RSSS-Gen 7.2.4 Table 4

Results: Compliant

Notes: This was an AC Conducted emissions measurement.
The EUT was powered from a representative AC Adapter with an input of 120 VAC 60 Hz.

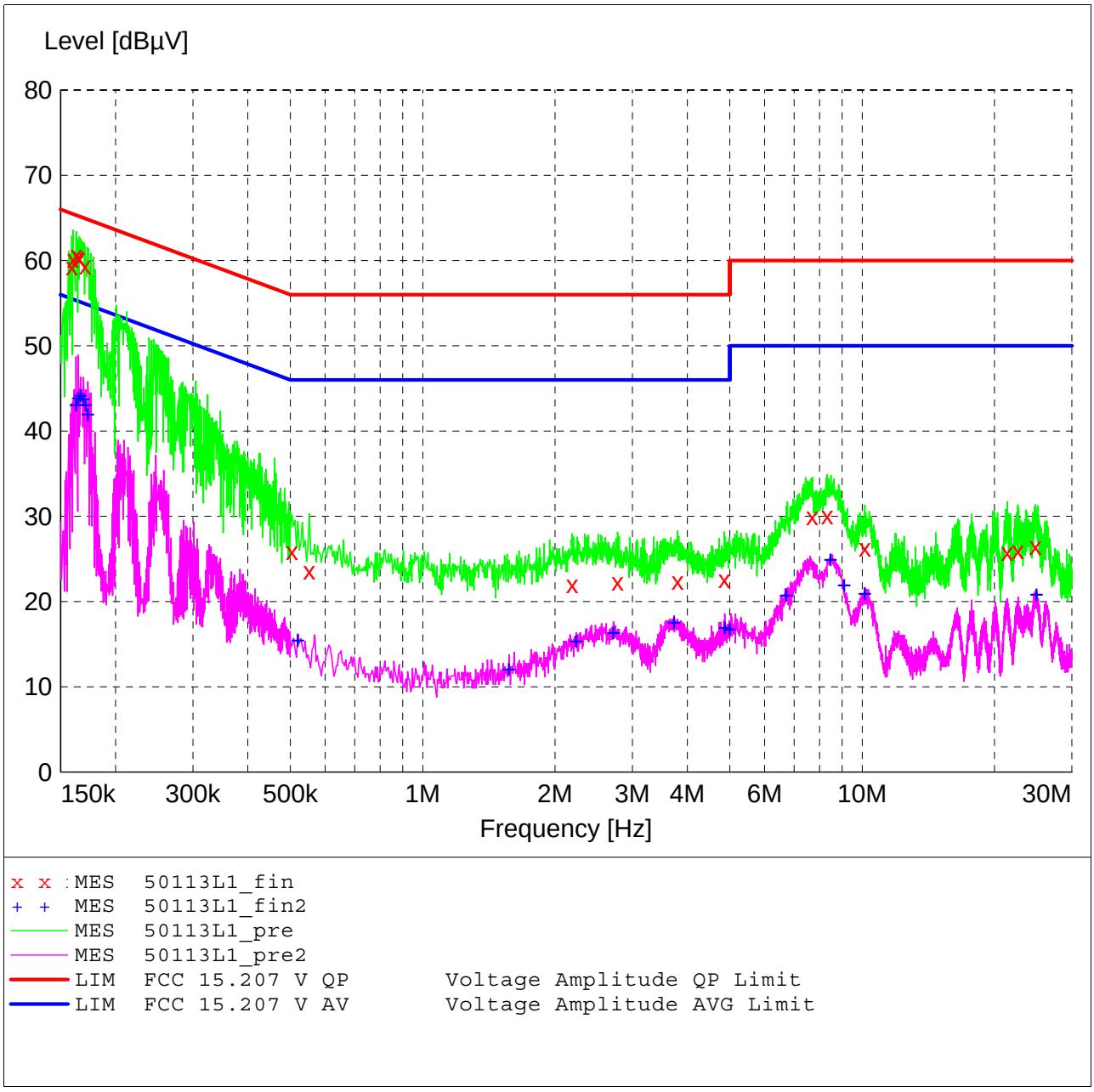
FCC Part 15.207 Class B

Voltage Mains Test

```
EUT:                  PMP450SM 5.7 GHz MIMO OFDM
Manufacturer:         Cambium Networks
Operating Condition:  69 deg. F,  40%  R.H.
Test Site:            DLS OATS 2
Operator:             Craig B
Test Specification:   120 V  60 Hz; Line 1; Power Supply: Phihong model: PSA15R-295(MOT)
Comment:              Continuous transmit
                      Date:  05-01-2012
```

SCAN TABLE: "Line Cond.Site2Final"

Short Description:			Line Conducted Emissions			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak CISPR AV	5.0 s	9 kHz	LISN DLS#127



MEASUREMENT RESULT: "50113L1_fin"

5/1/2012 10:29AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.159000	59.30	13.7	66	6.2	QP
0.160000	60.20	13.7	66	5.3	QP
0.163000	60.70	13.6	65	4.6	QP
0.164500	60.50	13.6	65	4.7	QP
0.165500	60.30	13.6	65	4.9	QP
0.170500	59.40	13.5	65	5.5	QP
0.504000	25.90	11.4	56	30.1	QP
0.552000	23.60	11.3	56	32.4	QP
2.188000	22.00	10.8	56	34.0	QP
2.776000	22.30	10.7	56	33.7	QP
3.800000	22.40	10.9	56	33.6	QP
4.856000	22.60	10.9	56	33.4	QP
7.700000	30.00	10.9	60	30.0	QP
8.330000	30.10	11.0	60	29.9	QP
10.140000	26.30	11.1	60	33.7	QP
21.370000	25.80	11.7	60	34.2	QP
22.600000	26.00	11.8	60	34.0	QP
24.800000	26.50	11.9	60	33.5	QP

MEASUREMENT RESULT: "50113L1_fin2"

5/1/2012 10:29AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.162500	43.00	13.6	55	12.3	CAV
0.164500	43.80	13.6	55	11.4	CAV
0.166500	44.10	13.5	55	11.0	CAV
0.169000	43.70	13.5	55	11.3	CAV
0.171000	43.00	13.4	55	11.9	CAV
0.173000	41.90	13.4	55	12.9	CAV
0.520000	15.40	11.4	46	30.6	CAV
1.572000	12.00	10.7	46	34.0	CAV
2.236000	15.30	10.8	46	30.7	CAV
2.716000	16.30	10.7	46	29.7	CAV
3.732000	17.50	10.9	46	28.5	CAV
4.868000	16.90	10.9	46	29.1	CAV
5.000000	16.70	10.9	46	29.3	CAV
6.720000	20.70	10.8	50	29.3	CAV
8.470000	24.90	11.0	50	25.1	CAV
9.090000	21.90	11.0	50	28.1	CAV
10.140000	20.90	11.1	50	29.1	CAV
24.940000	20.80	11.9	50	29.2	CAV

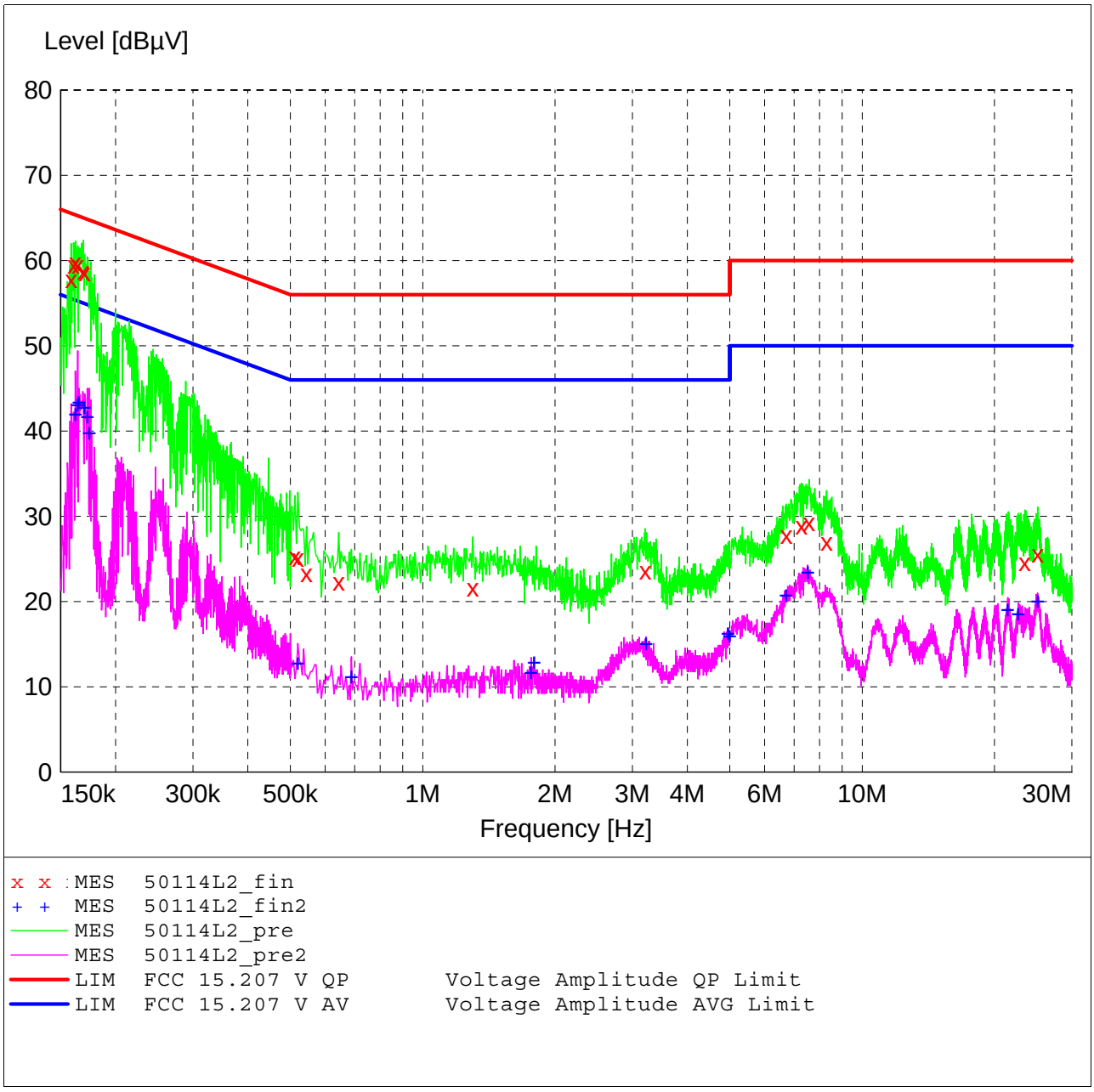
FCC Part 15.107 Class B

Voltage Mains Test

```
EUT:                  PMP450SM 5.7 GHz MIMO OFDM
Manufacturer:         Cambium Networks
Operating Condition:  69 deg. F,  40%  R.H.
Test Site:            DLS OATS 2
Operator:             Craig B
Test Specification:   120 V  60 Hz; Line 2; Power Supply: Phihong model: PSA15R-295(MOT)
Comment:              Continuous transmit
                      Date:  05-01-2012
```

SCAN TABLE: "Line Cond.Site2Final"

Short Description:			Line Conducted Emissions			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak CISPR AV	5.0 s	9 kHz	LISN DLS#127



MEASUREMENT RESULT: "50114L2_fin"

5/1/2012 10:43AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.158500	57.80	13.8	66	7.7	QP
0.160500	59.50	13.7	65	5.9	QP
0.162000	59.80	13.7	65	5.6	QP
0.164000	59.50	13.6	65	5.8	QP
0.169000	58.80	13.5	65	6.2	QP
0.170000	58.60	13.5	65	6.4	QP
0.512000	25.30	11.4	56	30.7	QP
0.520000	25.10	11.4	56	30.9	QP
0.544000	23.30	11.4	56	32.7	QP
0.644000	22.30	11.2	56	33.7	QP
1.300000	21.60	10.8	56	34.4	QP
3.208000	23.60	10.8	56	32.4	QP
6.720000	27.80	10.8	60	32.2	QP
7.280000	28.90	10.9	60	31.1	QP
7.570000	29.30	10.9	60	30.7	QP
8.300000	27.00	11.0	60	33.0	QP
23.460000	24.60	11.8	60	35.4	QP
25.090000	25.60	11.9	60	34.4	QP

MEASUREMENT RESULT: "50114L2_fin2"

5/1/2012 10:43AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector
0.162000	41.90	13.7	55	13.5	CAV
0.164000	43.00	13.6	55	12.3	CAV
0.165000	43.30	13.6	55	11.9	CAV
0.170000	42.70	13.5	55	12.3	CAV
0.172500	41.70	13.4	55	13.1	CAV
0.174500	39.80	13.4	55	14.9	CAV
0.520000	12.70	11.4	46	33.3	CAV
0.688000	11.10	11.1	46	34.9	CAV
1.764000	11.60	10.7	46	34.4	CAV
1.792000	12.80	10.7	46	33.2	CAV
3.220000	15.00	10.8	46	31.0	CAV
4.952000	16.20	10.9	46	29.8	CAV
5.000000	15.90	10.9	46	30.1	CAV
6.720000	20.70	10.8	50	29.3	CAV
7.520000	23.40	10.9	50	26.6	CAV
21.450000	19.00	11.7	50	31.0	CAV
22.650000	18.50	11.8	50	31.5	CAV
25.070000	20.00	11.9	50	30.0	CAV

END OF REPORT

Revision #	Date	Comments	By
1.0 Part II	05-07-2012	Preliminary Release, 20 MHz bandwidth, including IC	JS