Project 10701-10

Alereon, Inc.
AL5721
Worldwide Wireless USB
Side Device Radio Card

Prepared for:

Alereon, Inc.
7600 N. Capital of Texas Hwy.
Building C Suite 200
Austin, Texas 78731

By

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March 18, 2010

CERTIFICATION
Wireless Test Report
Alereon, Inc.
AL5721

Table of Contents

Title Page **1**
Table of Contents **2**
1.0 Introduction **5**
1.1 Scope 5
1.2 EUT Description 5
1.3 EUT Operation 5
1.4 Test Site 5
1.5 Applicable Documents 6
2.0 Average Output Power **7**
2.1 Test Procedure 7
2.2 Test Criteria 7
3.0 UWB Bandwidth **7**
3.1 Test Procedure 7
3.2 Test Criteria 8
4.0 Spurious Radiated Emissions **8**
4.1 Test Procedure 8
4.2 Test Criteria 9
5.0 Radiated Emissions in GPS Bands **9**
5.1 Test Procedure 9
5.2 Test Criteria 9
6.0 Peak Emissions FM within 50 MHz Bandwidth **10**
6.1 Test Procedure 10
6.2 Test Criteria 10
7.0 Antenna Requirements **10**
7.1 Evaluation Procedure 10
7.2 Evaluation Criteria 10
8.0 Modifications **11**
9.0 Test Equipment **11**
Appendix A Test Setup Diagrams **13**
Appendix B Test Results **16**
End of Report 81

Applicant:	Alereon, Inc..
Applicant's Address:	7600 N. Capital of Texas Hwy. Bldg. C, Suite 200
	Austin, TX 78731
FCC ID:	U9YAL5721
Project Number:	10701-10
Test Dates:	March 3 - 5, 2010

The **Alereon, Inc. AL5721** was tested to and found to be in compliance with FCC 47 CFR Part 15 Subpart F.

The highest emissions generated by the above equipment are listed below:

Parameter	Frequency (MHz)	Level		Limit	Margin (dB)
Radiated Spurious	106.72	26.9 dBµV/m		30 dBµV/m	-3.1
Output Power	3432	-42.5 dBm	.00006 mw	-41.3 dBm	-1.2

UWB Bandwidth 10 dB AL51000 Antenna Wimedia Band Group 1		
Low (3432 MHz)	**Mid (3960 MHz)**	**High (4488 MHz)**
510.06 MHz	513.4 MHz	507.2 MHz

UWB Bandwidth 10 dB ADM6P Antenna Wimedia Band Group 1		
Low (3432 MHz)	**Mid (3960 MHz)**	**High (4488 MHz)**
509.3 MHz	511.5 MHz	507.9 MHz

UWB Bandwidth 10 dB ADM6P Antenna Wimedia Band Group 3		
Low (3432 MHz)	**Mid (3960 MHz)**	**High (4488 MHz)**
507.7 MHz	505.8 MHz	509.2 MHz

UWB Bandwidth 10 dB ADM6P Antenna Wimedia Band Group 6		
Low (3432 MHz)	**Mid (3960 MHz)**	**High (4488 MHz)**
513.1 MHz	500.9 MHz	512.5 MHz

I, Jason Anderson, for Professional Testing (EMI), Inc., being familiar with the FCC rules and test procedures have reviewed the test setup, measured data and this report. I believe them to be true and accurate.

Jason Anderson
EMC Engineer

This report has been reviewed and accepted by Alereon, Inc. The undersigned is responsible for ensuring that this device will continue to comply with the FCC and IC rules.

1.0 Introduction

1.1 Scope

This report describes the extent of the Equipment Under Test (EUT) conformance to the Intentional Radiator requirements of the USA and Canada.

1.2 EUT Description

The Alereon AL5721 is a UWB radio device with a digital interface to the host computer. This device is intended to provide a short-range wireless connection for computers and peripheral devices. The AL5721 is powered from the host system to which it is attached. The digital interface between the host system and the AL5721 is the industry-standard USB 2.0 interface. The AL5721 operates in the frequency band defined in the FCC rules and Regulations for UWB devices. Specifically, it operates between the frequencies of 3.168 and 8.976 GHz per the industry-defined WiMedia 1.1 specification. The AL5721 uses the AL51000 antenna and the Acon ADM6P antenna.

1.3 EUT Operation

The EUT was tested while in a continuous transmit mode. The EUT was tuned to Wimedia Band Group 1 for the AL51000 antenna and Wimedia Band Groups 1, 3, and 6 for the Acon ADM6P antenna to perform power, UWB bandwidth, harmonic and spurious tests. The EUT continuously transmitted at maximum power. The system tested consisted of the following:

Manufacturer	Model	FCC ID Number
Alereon, Inc.	AL5721	U9YAL5721

The following rules apply to the operation of the EUT:

Guidelines	FCC Rules
	Part 15
Transmitter Characteristics	15.519
Spurious Radiated Power	15.209, 15.519(c)
Power Line Conducted	15.207
Antenna Requirement	15.203
Radiated Emissions in GPS Bands	15.519 (d)
UWB Bandwidth	15.519 (b)
Peak Emissions within a 50 MHz Bandwidth	15.519 (e)

1.4 Test Site

Measurements were made at the PTI semi-anechoic facility designated Site 45 (FCC 459644, IC 3036B-1) in Austin, Texas. This site is registered with the FCC under Section 2.948 and Industry Canada per RS-212 and is subsequently confirmed by laboratory accreditation (NVLAP). The test site is located at 11400 Burnett Rd., Austin, Texas, 78758 while the main office is located at 1601 N. A.W. Grimes Blvd., Suite B, Round Rock, Texas, 78665. Professional Testing (EMI), Inc. (PTI), follows the guidelines of NIST for all uncertainty calculations, estimates and expressions thereof for EMC testing. The procedure of ANSI C63.4:2009 and C63.10:2009 were utilized for making all emissions measurements.

1.5 Applicable Documents

The data collected for this report are presented entirely in Appendix B.

Document	Title	Release
ANSI C63.4	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low Voltage Electrical and Electronic Equipment.	2009
ANSI C63.10	American National Standard for Testing Unlicensed Wireless Devices	2009
47 CFR	Part 15 – Radio Frequency Devices Subpart C: Intentional Radiators; Subpart F: Ultra–Wideband Operation	2007

2.0 Average Output Power

Peak power measurements were made on selected fundamental transmit frequencies of the EUT for the lowest, most center, and highest sub-bands of Wimedia Band Group 1 for the AL51000 antenna, and Wimedia Band Groups 1, 3, and 6 for the ADM6P antenna.

Tests of the fundamental emissions of the EUT also determined the worse case polarization of the device. The emissions of the device were measured with the EUT in three orthogonal axes.

2.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The table was centered on a motorized turntable, which allows 360-degree rotation. For measurements of the fundamental signal, a measurement antenna was positioned at a distance of 1 meter as measured from the closest point of the EUT. Rotating the EUT maximized the emissions.

A spectrum analyzer with peak detection was used to find the maximum field strength during the variability testing. RBW used is recorded. A calculation was then made to determine the peak power at the antenna terminal. A drawing showing the test setup is given in Appendix A.

2.2 Test Criteria

The maximum average output power is -41.3 dBm for devices operating in the frequency range 3100 - 10600 MHz according to FCC 15.519.

3.0 UWB Bandwidth

UWB bandwidth measurements were performed on the EUT to determine compliance with FCC 15.519(b).

3.1 Test Procedure

The UWB bandwidth was measured with a spectrum analyzer connected to a double-ridged guide horn while the EUT was operating in continuous transmit mode at the appropriate center frequency. The analyzer center frequency was set to the EUT carrier frequency. The analyzer was set to resolution bandwidth of 5 MHz and a video bandwidth of 50 MHz. Measurements were made at the Lower, Middle, and Upper sub-bands within Wimedia Band Group 1 for the AL51000 antenna, and Wimedia Band Groups 1, 3, and 6 for the ADM6P antenna. Frequency characteristics for Wimedia Band Groups 1, 3, and 6 are shown in the table below. A drawing showing the test setup is given in Appendix A.

BG	Channel	Ch1	Ch0	F low	F mid	F high
N/A	N/A	0	0	-	-	-
1	1(A)	0	1	3168 MHz	3432 MHz	3696 MHz
	2(B)	1	0	3696 MHz	3960 MHz	4224 MHz
	3(C)	1	1	4224 MHz	4488 MHz	4752 MHz
2	4(A)	0	1	4752 MHz	5016 MHz	5280 MHz
	5(B)	1	0	5280 MHz	5544 MHz	5808 MHz
	6(C)	1	1	5808 MHz	6072 MHz	6336 MHz
3	7(A)	0	1	6336 MHz	6600 MHz	6864 MHz
	8(B)	1	0	6864 MHz	7128 MHz	7392 MHz
	9(C)	1	1	7392 MHz	7656 MHz	7920 MHz
6	9(A)	0	1	7392 MHz	7656 MHz	7920 MHz
	10(B)	1	0	7920 MHz	8184 MHz	8448 MHz
	11(C)	1	1	8448 MHz	8712 MHz	8976 MHz

3.2 Test Criteria

A UWB transmitter is defined as an intentional radiator that, at any point in time, has a fractional bandwidth equal or greater than 0.20 or has a UWB bandwidth equal to or greater than 500 MHz, regardless of the fractional bandwidth. The UWB bandwidth is the frequency band bounded by the points that are 10 dB below the highest radiated emission, as based on the complete transmission system including the antenna. The upper boundary is designated f_H and the lower boundary is designated f_L. The frequency at which the highest radiated emission occurs is designated f_M.
Center frequency. The center frequency, f_C, equals $(f_H + f_L)/2$. Fractional bandwidth. The fractional bandwidth equals $2(f_H - f_L)/ (f_H + f_L)$.

Per section 15.519(b), the UWB bandwidth of a UWB system operating under the provisions of this section must be contained between 3100 MHz and 10600 MHz.

4.0 Spurious Radiated Emissions

Spurious radiated emissions measurements were performed on the EUT to determine compliance to FCC 15.209 and 15.519(c).

4.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The table was centered on a rotating turntable at a distance of 10 meters from the measurement antenna.

For spurious emissions below 1 GHz quasi-peak detection is used with a resolution bandwidth of 120 kHz. All measurements below 1 GHz were normalized to 3 meters using a 20 dB/decade distance extrapolation. The emissions were maximized by rotating the EUT and raising and lowering the measurement antenna from 1-4 meters. The test setup is included in Appendix A.

Spurious/harmonic emissions above 1 GHz peak are measured with average and peak detection with a resolution bandwidth of 1 MHz and measured at a distance of 1 meter. Average detection is used to determine compliance of the EUT if the peak does not meet the average limit. Non-

harmonic emissions must satisfy the average limit and the peak limit (20 dB above average). The test setup is included in Appendix A.

Note: Spurious/harmonic emissions above 1 GHz were investigated to 40 GHz with no discrepancies observed.

4.2 Test Criteria

The radiated limits of FCC 15.209 are shown below. The limits specified are at 3 meters. The limits are quasi-peak for emissions below 1 GHz and average for emissions above 1 GHz. Also above 1 GHz the peak limit is 20 dB above the average limit.

Frequency MHz	Test Distance (Meters)	Field Strength (µV/m)	(dBµV/m)
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
Above 960	3	500	54.0

The radiated limits of FCC 15.519c are shown below. The limits specified are at 3 meters.

Frequency MHz	Test Distance (Meters)	Field Strength EIRP (dBm)	(dBµV/m)
960 to 1610	3	-75.3	19.9
1610 to 1990	3	-63.3	31.9
1990 to 3100	3	-61.3	33.9
3100 to 10600	3	-41.3	53.9
Above 10600	3	-61.3	33.9

5.0 Radiated Emissions in GPS Bands

Radiated emissions measurements were performed on the EUT to determine compliance to FCC 15.519(d).

5.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The table was centered on a rotating turntable at a distance of 3 meters from the measurement antenna.

The measurements made over the frequency range from 1164 MHz to 1240 MHz and from 1559 MHz to 1610 MHz were maximized using a spectrum analyzer with RMS detector capabilities. A RBW of 1 kHz and VBW of 1 kHz with a suitable averaging time were used for these measurements. The test setup is included in Appendix A.

5.2 Test Criteria

In addition to the radiated emission limits specified in the table in paragraph 5.2 of this report, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz.

Frequency MHz	Test Distance (Meters)	Field Strength EIRP (dBm)	(dBµV/m)
1164 to 1240	3	-85.3	9.9
1559 to 1610	3	-85.3	9.9

6.0 Peak Emissions FM within 50 MHz Bandwidth

The EUT was evaluated to determine compliance with FCC 15.519(e) following the procedures described in FCC Section 15.521.

6.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The table was centered on a rotating turntable at a distance of 1 meter from the measurement antenna.

The measurements made over the intentionally radiating frequency range of the EUT, from 3100 MHz to 10600 MHz, were maximized using a spectrum analyzer with peak detector capabilities. A spectrum analyzer was used for the final measurement utilizing a peak detector at the frequency with the largest amplitude. The spectrum analyzer did not support the prescribed resolution bandwidth of 50 MHz. However, when a peak measurement is required, it is acceptable to use a resolution bandwidth other than the 50 MHz specified in 47 CFR Part 15, Subpart F. The resolution bandwidth for the measurement was set to 1 MHz. The measurement was centered on the frequency at which the highest radiated emission occurred, f_M. The video bandwidth was 8 MHz.

Since a resolution bandwidth other than 50 MHz was used, the peak EIRP limit has to be adjusted by the resolution bandwidth ratio of 20 log (RBW/50) dB, where RBW is the resolution bandwidth used for the measurement expressed in MHz.

The test setup is included in Appendix A.

6.2 Test Criteria

There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs, f_M. That limit is 0 dBm EIRP. The EUT was evaluated to determine compliance with FCC 15.519(e) following the procedures described in FCC Section 15.521.

7.0 Antenna Requirements

An antenna evaluation was performed on the EUT to determine compliance with FCC sections 15.203 and 15.247(b).

7.1 Evaluation Procedure

The design of the EUT antenna is evaluated for conformance to engineering requirements for gain and to prevent substitution of unapproved antennae. Gain of the antenna is assessed by reviewing the antenna manufacturer's data sheet.

7.2 Evaluation Criteria

The antenna design must meet at least one of the following criteria:

a) Antenna is permanently attached to the unit.
b) Antenna must use a unique type of connector to attach to the EUT.
c) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

Section 15.247(b)(4)(i) states that if the transmitting antenna has a directional gain greater than 6 dBi the power shall be reduced the amount in dB that the directional gain is greater than 6 dBi.

8.0 Modifications

N/A

9.0 Test Equipment

A list of the test equipment utilized to perform the testing is given below. The date of calibration is given for each.

Radiated Test Equipment

Asset #	Manufacturer	Model #	Description	Calibration Due
0275	HP	85650A	Quasi-peak Adapter (high band)	July 8, 2010
1273	HP	85662A	Spectrum Analyzer Display (high band)	NCR
0084	HP	8566B	Spectrum Analyzer (high band)	March 23, 2010
0238	HP	85685A	RF Preselector (high band)	July 16, 2010
0085	HP	85650A	Quasi-peak Adapter (low band)	July 16, 2010
1629	HP	85662A	Spectrum Analyzer Display (low band)	NCR
1145	HP	8568B	Spectrum Analyzer (low band)	July 16, 2010
1035	HP	85685A	RF Preselector (low band)	March 3, 2011
1414	HP	8447D	RF Preamplifier	June 22, 2010
1497	Emco	3108	Biconical Antenna	April 16, 2010
1486	Emco	3147	Log Periodic Dipole Array Antenna	April 16, 2010
C026	none	none	Coaxial Cable (low band)	July 27, 2010
C027	none	none	Coaxial Cable (high band)	July 27, 2010

Microwave Radiated Test Equipment

Asset #	Manufacturer	Model #	Description	Calibration Due
0267	EMCO	3115	Ridge Guide Antenna	October 19, 2010
1529	Miteq	Antenna Mounted	Microwave Preamplifier (preamp 1)	July 17, 2010
0084	HP	8566B	Spectrum Analyzer	March 23, 2010
1273	HP	85662A	Spectrum Analyzer Display	NCR
1530	Miteq	None	Microwave Preamplifier (preamp 2)	July 17, 2010
C030	None	None	Coaxial Cable (MRE band)	July 27, 2010

Asset #	Manufacturer	Model #	Description	Calibration Due
XXXX	Pasternack	LLS	2 sections, total 12ft	Cal Before Use
0582	EMCO	3115	Ridge Guide Antenna	October 19, 2010
1594	Miteq	AFS44-00102650	Microwave Preamplifier (preamp 1)	March 2, 2011
(Rental unit)	Agilent	E4446A	Spectrum Analyzer	February 19, 2012
1542	A.H. Systems	SAS 572	Antenna, Horn 18-26.5GHz	NCR
1735	Pasternack	PE9850-20	Antenna, Horn 26.5-40GHz	NCR

Appendix A Test Setup Diagrams

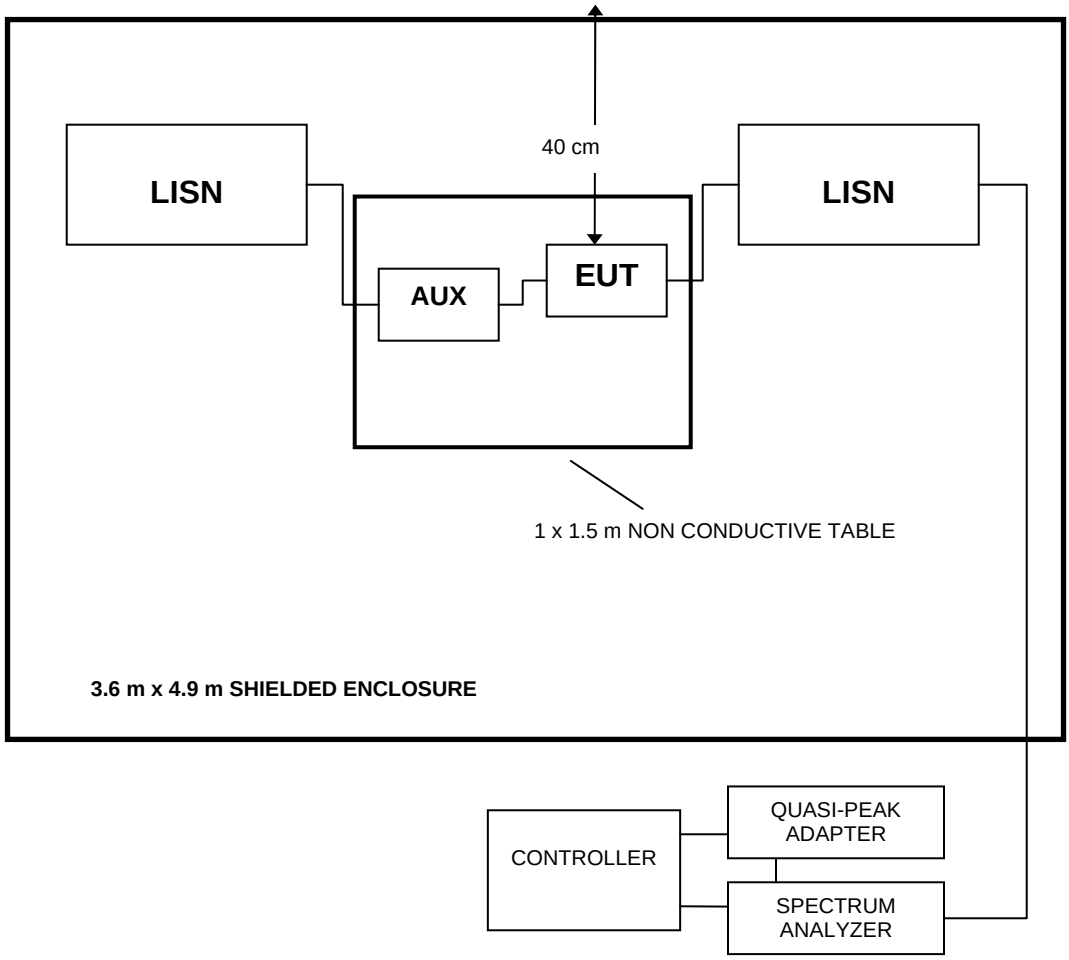


FIGURE 1: Conducted Emissions Test Setup

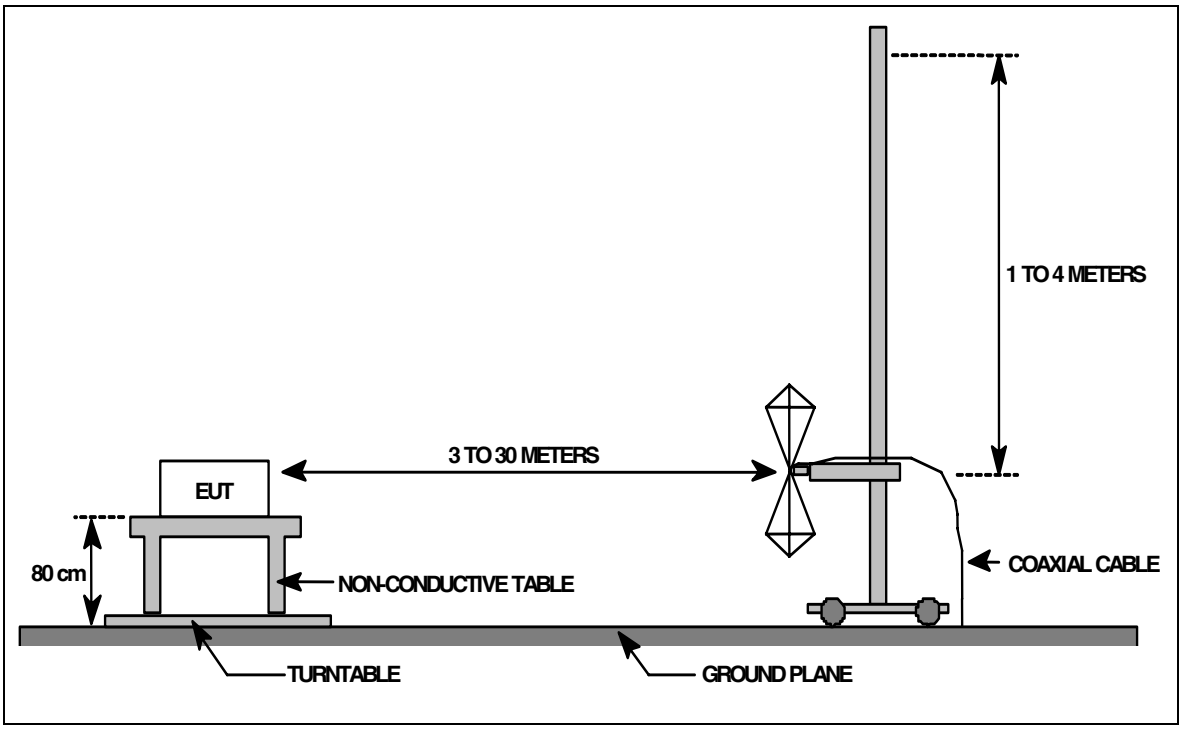


FIGURE 2: Radiated Emissions Test Setup

Appendix B Test Results

Average Power Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	15.519	1m	Horn	1 MHz	3 MHz	RMS Avg

COMMENT	Transmitting UWB BG 1 (AL51000 Antenna)

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)
3432	0	1	58.5	32.0	31.7	3.5	61.7
3960	0	1	55.2	31.6	32.9	3.5	59.9
4488	0	1	55.8	31.4	32.0	3.9	60.2

COMMENT	Transmitting UWB BG 1 (ADM6P Antenna)

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)
3432	0	1	59.1	32.0	31.7	3.5	62.3
3960	0	1	54.3	31.6	32.9	3.5	59.0
4488	0	1	54.8	31.4	32.0	3.9	59.2

COMMENT	Transmitting UWB BG 3 (ADM6P Antenna)

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)
6600	0	1	48.6	31.4	35.6	4.8	57.6
7128	0	1	51	30.7	36.4	4.9	61.5
7656	0	1	50.5	30.9	37.2	4.7	61.5

COMMENT	Transmitting UWB BG 6 (ADM6P Antenna)

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)
7656	0	1	50.8	30.9	37.2	4.7	61.8
8184	0	1	50.6	30.8	37.2	5.0	62.0
8712	0	1	50.5	30.9	37.5	5.0	62.1

Calculations

$$P = \frac{(E * d)^2}{30 * G}$$

P=Power in watts, E=measured maximum field strength in V/m, d=distance in meters, G=numeric gain of transmitting antenna

Distance=1 meters
Gain=0 dBi

Calculated Result AL51000 Antenna BG 1

Frequency (MHz)	Field Strength (dBµV)	E.I.R.P.		Limit (dBm)
		dBm	mW	
3432	61.7	-43.07	.000049	-41.3
3960	59.9	-44.87	.000032	-41.3
4488	60.2	-44.57	.000035	-41.3

Calculated Result ADM6P Antenna BG 1

Frequency (MHz)	Field Strength (dBµV)	E.I.R.P.		Limit (dBm)
		dBm	mW	
3432	62.3	-42.47	.000057	-41.3
3960	59.0	-45.77	.000026	-41.3
4488	59.2	-45.57	.000028	-41.3

Calculated Result ADM6P Antenna BG 3

Frequency (MHz)	Field Strength (dBµV)	E.I.R.P.		Limit (dBm)
		dBm	mW	
6600	57.6	-47.17	.000019	-41.3
7128	61.5	-43.27	.000047	-41.3
7656	61.5	-43.27	.000047	-41.3

Calculated Result ADM6P Antenna BG 6

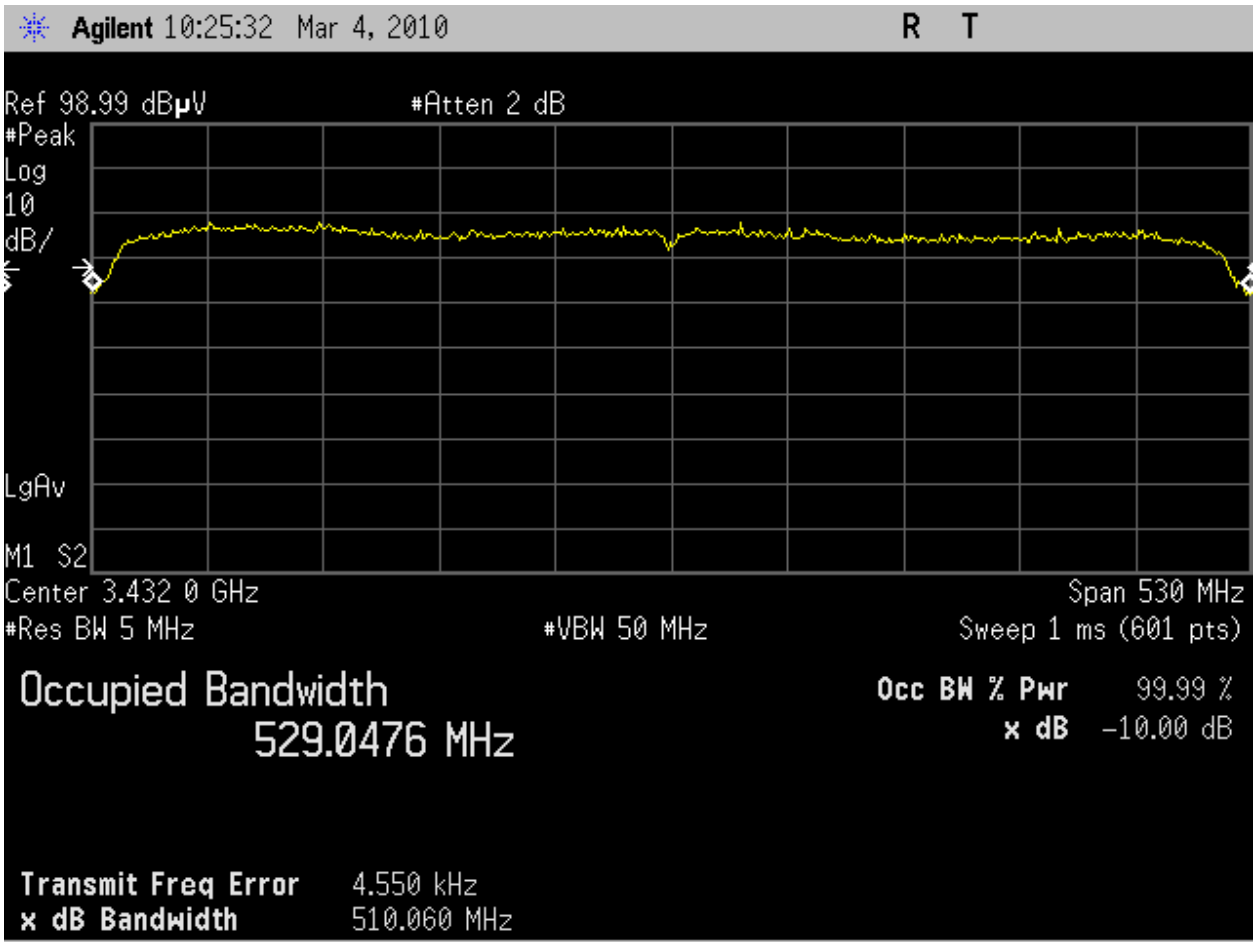
Frequency (MHz)	Field Strength (dBµV)	E.I.R.P.		Limit (dBm)
		dBm	mW	
7656	61.8	-42.97	.000050	-41.3
8184	62.0	-42.77	.000053	-41.3
8712	62.1	-42.67	.000054	-41.3

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting Low Channel AL51000 Antenna BG 1 10 dB Bandwidth – 510.06 MHz

Low Channel
10 dB



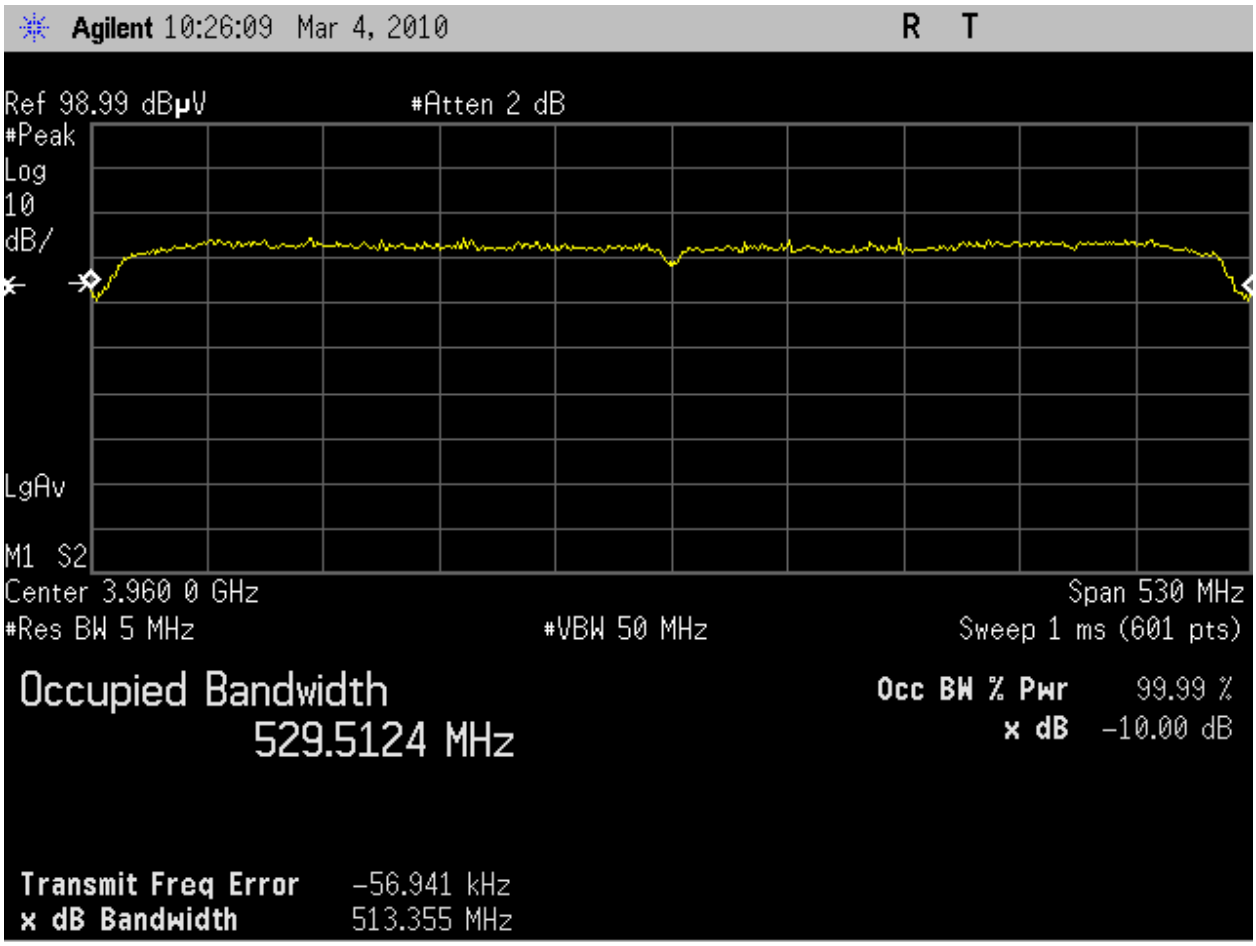
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting Middle Channel AL51000 Antenna BG 1 10 dB Bandwidth – 513.355 MHz

Mid Channel
10 dB



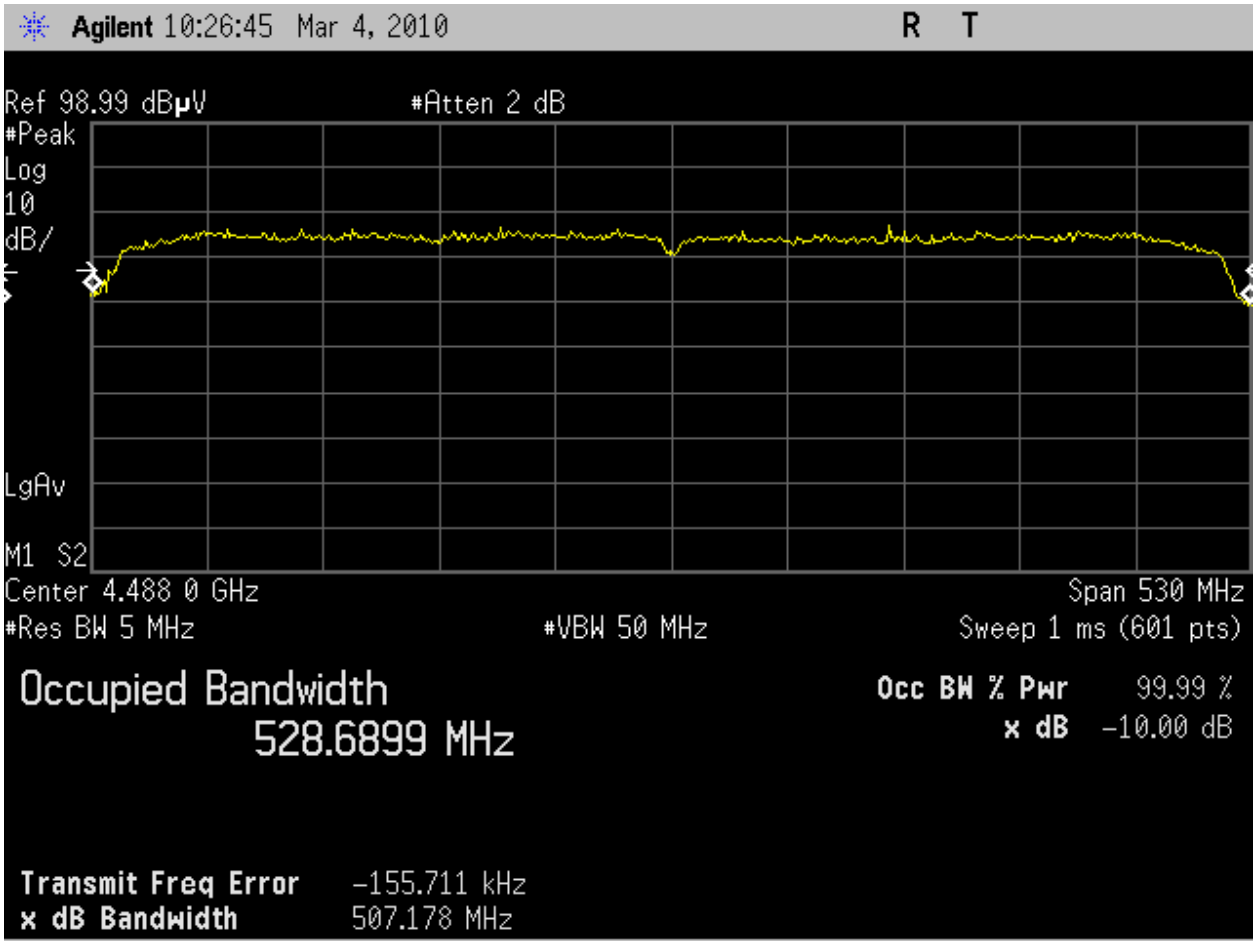
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting High Channel AL51000 Antenna BG 1 10 dB Bandwidth – 507.178 MHz

High Channel
10 dB



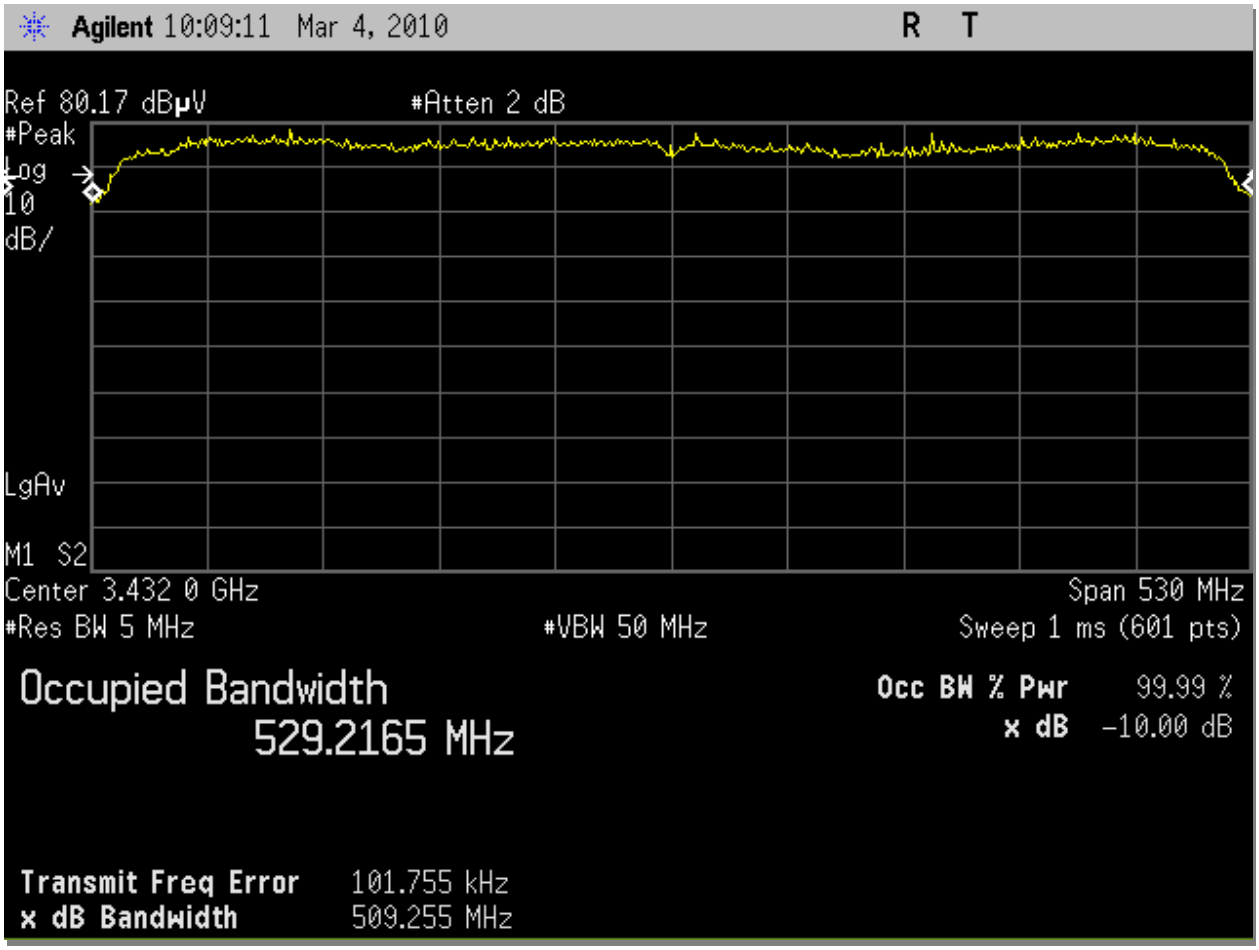
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting Low Channel ADM6P Antenna BG 1 10 dB Bandwidth – 509.255 MHz

Low Channel
10 dB



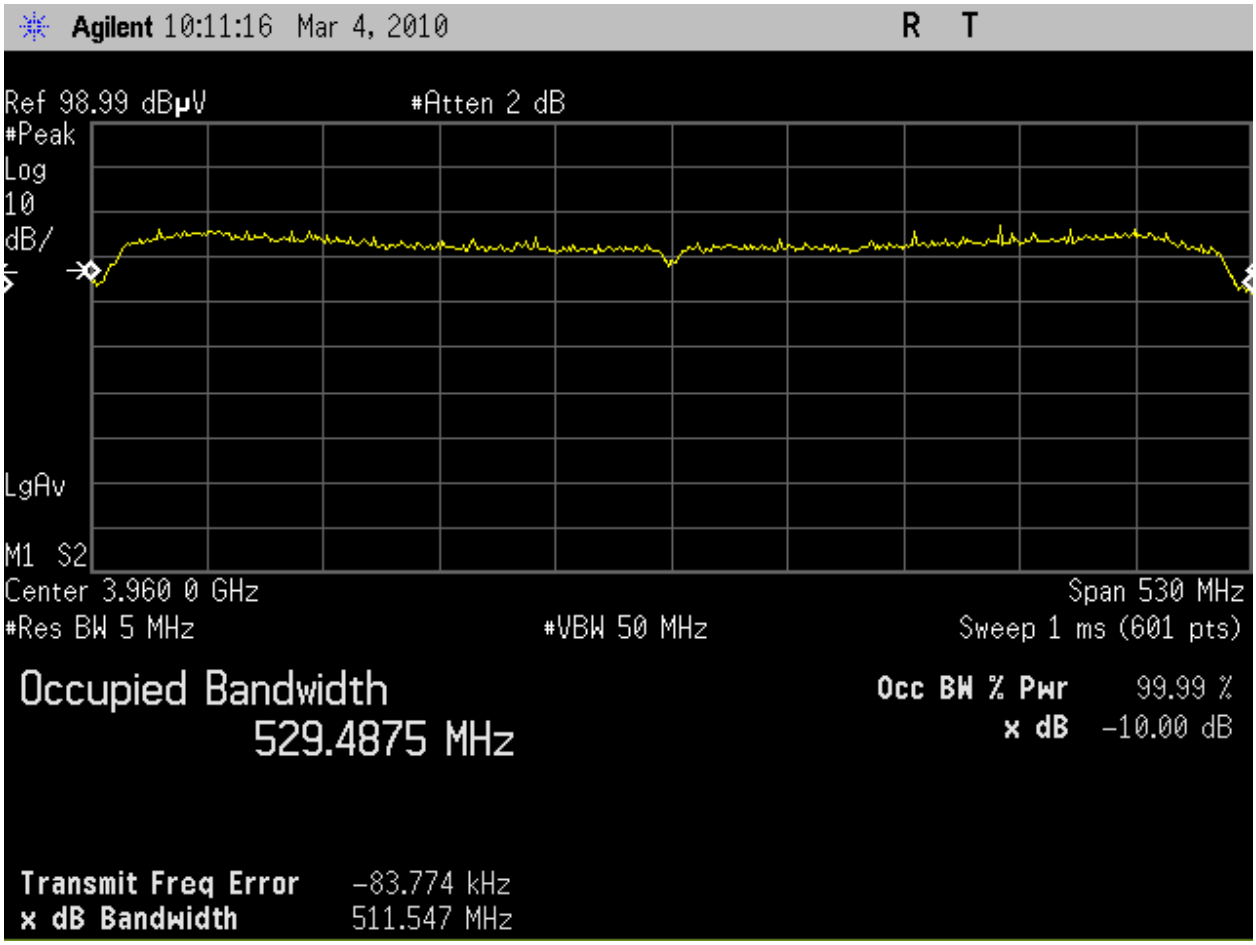
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting Mid Channel ADM6P Antenna BG 1 10 dB Bandwidth – 511.547 MHz

Mid Channel
10 dB



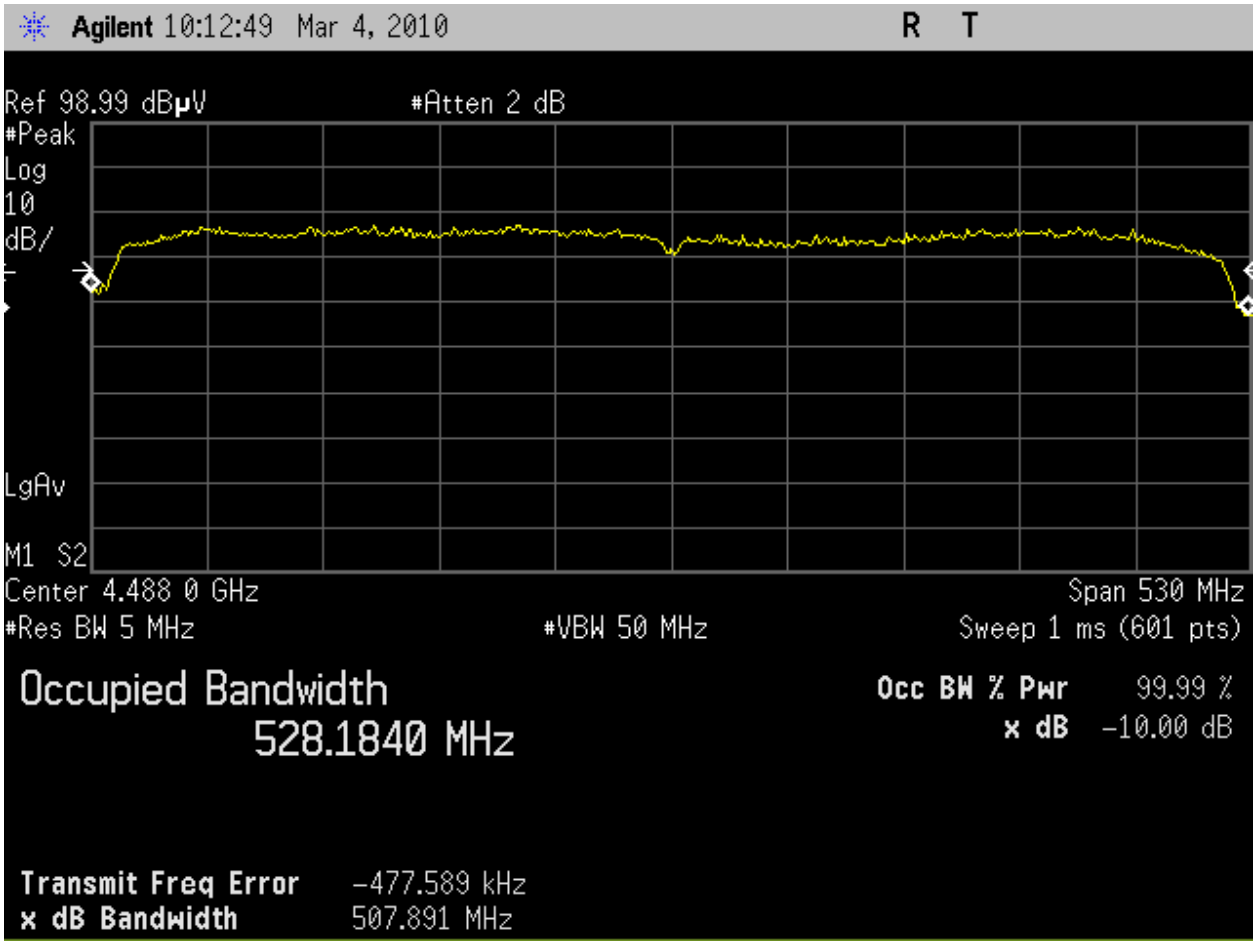
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting High Channel ADM6P Antenna BG 1 10 dB Bandwidth – 507.891 MHz

High Channel
10 dB



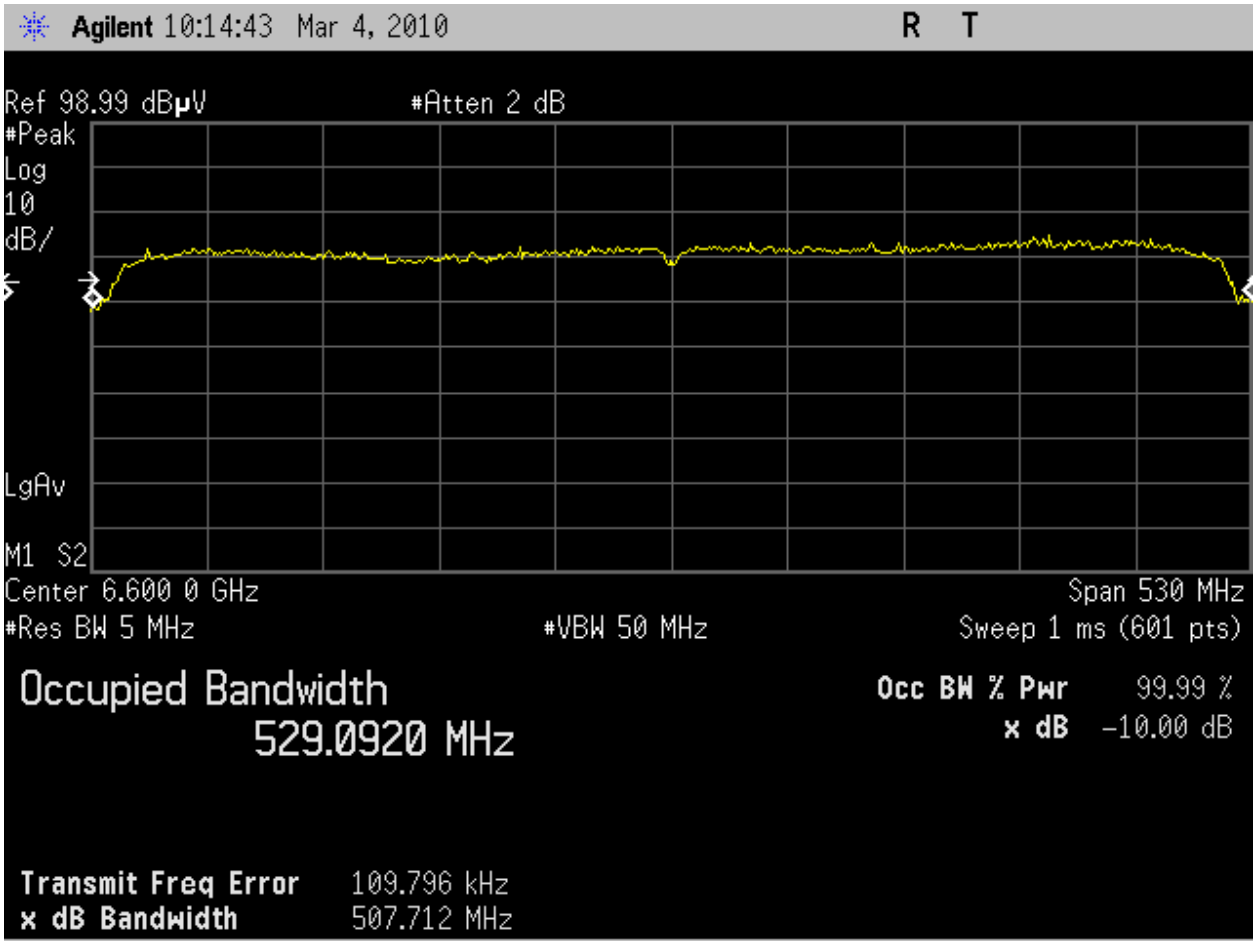
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting Low Channel ADM6P Antenna BG 3 10 dB Bandwidth – 507.712 MHz

Low Channel
10 dB



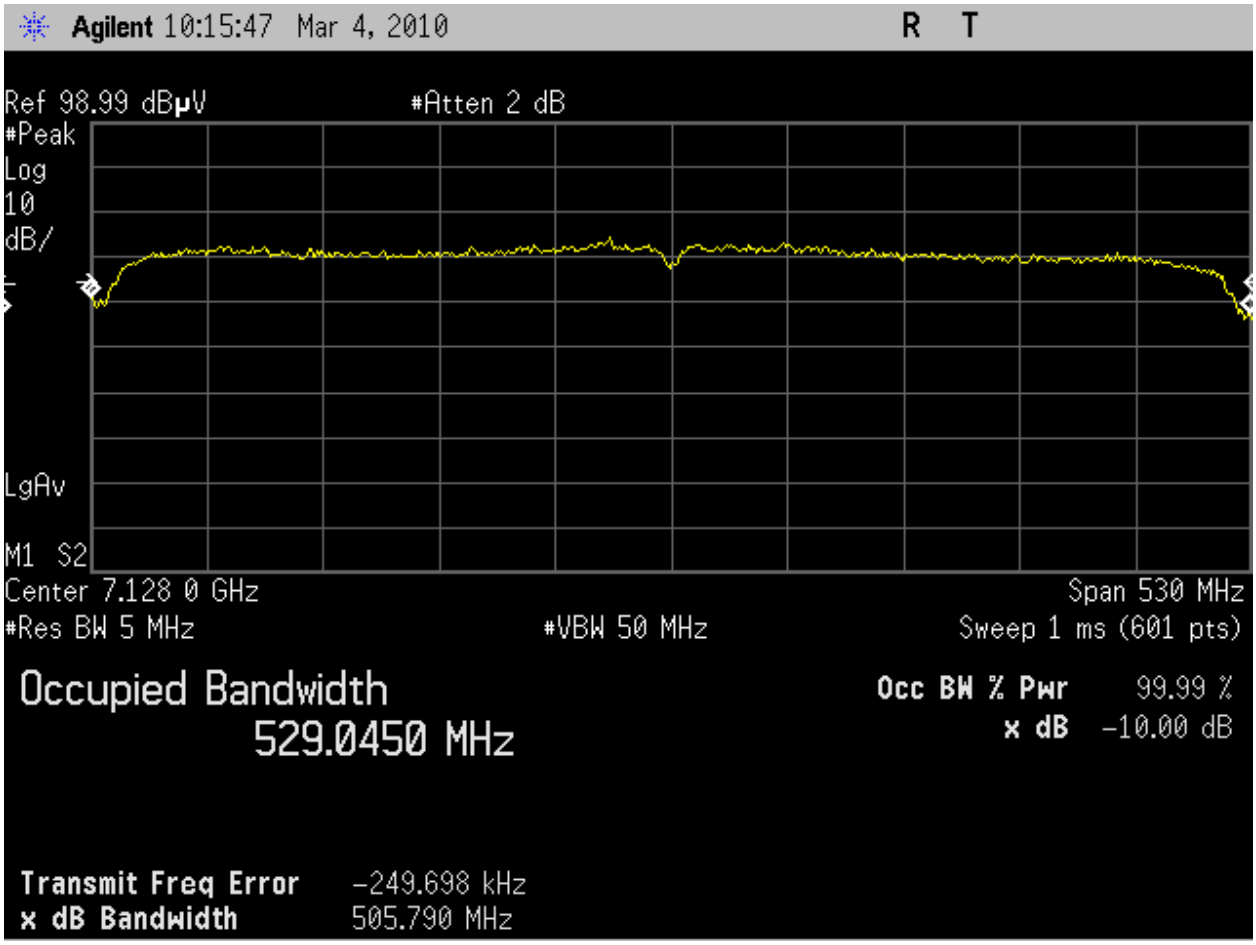
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting Mid Channel ADM6P Antenna BG 3 10 dB Bandwidth – 505.790 MHz

Mid Channel
10 dB



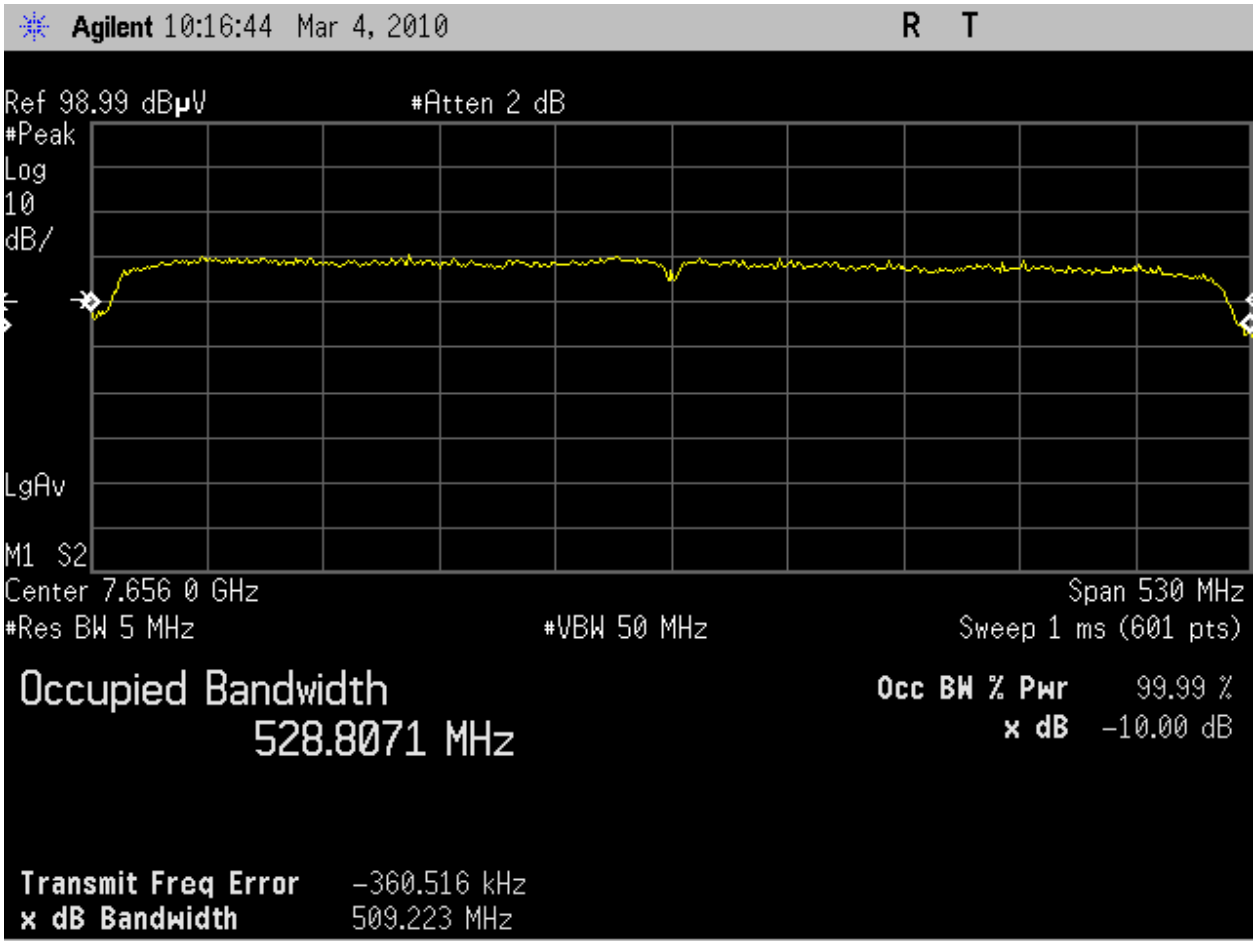
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting High Channel ADM6P Antenna BG 3 10 dB Bandwidth – 509.223 MHz

High Channel
10 dB



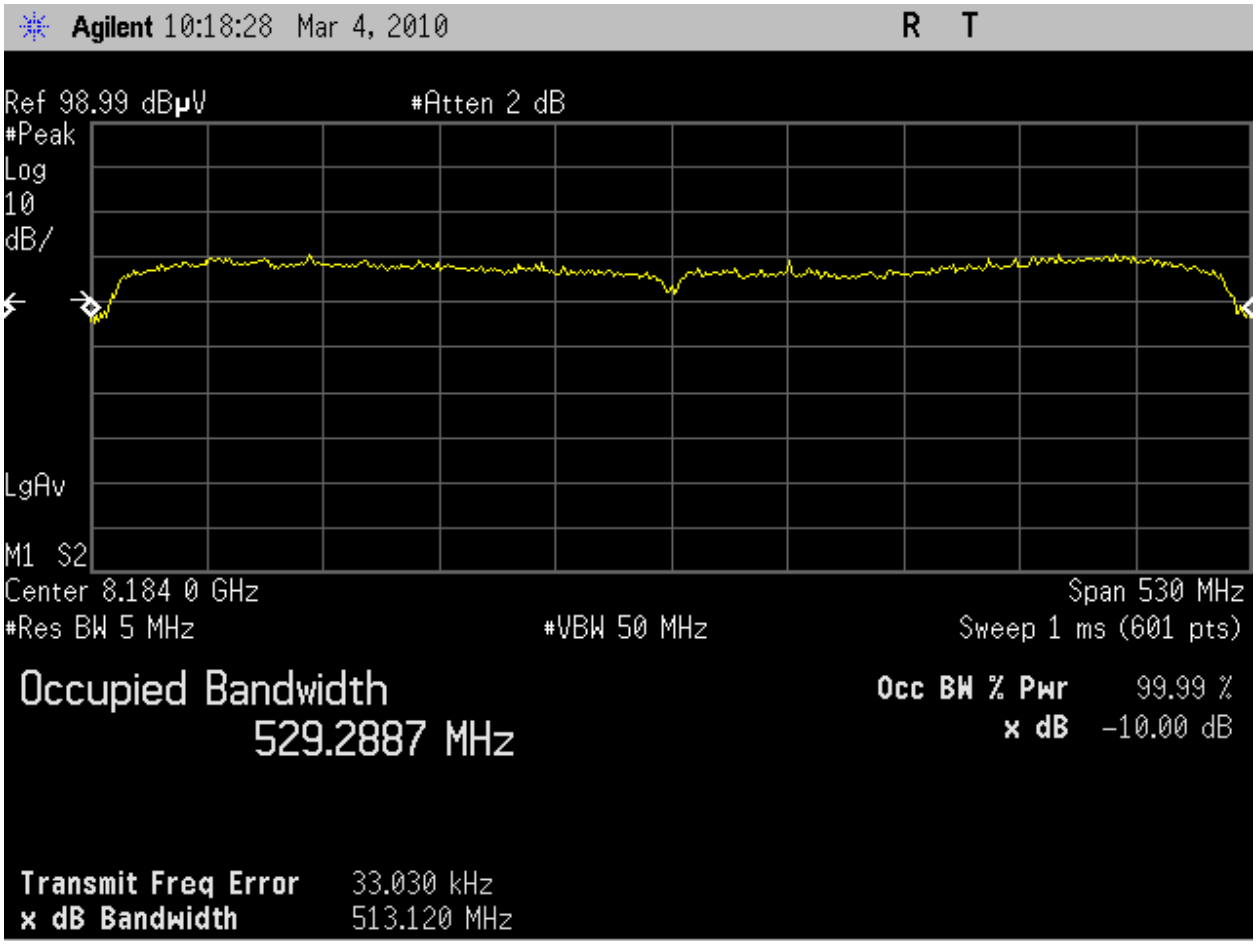
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting Low Channel ADM6P Antenna BG 6 10 dB Bandwidth – 513.120 MHz

Low Channel
10 dB



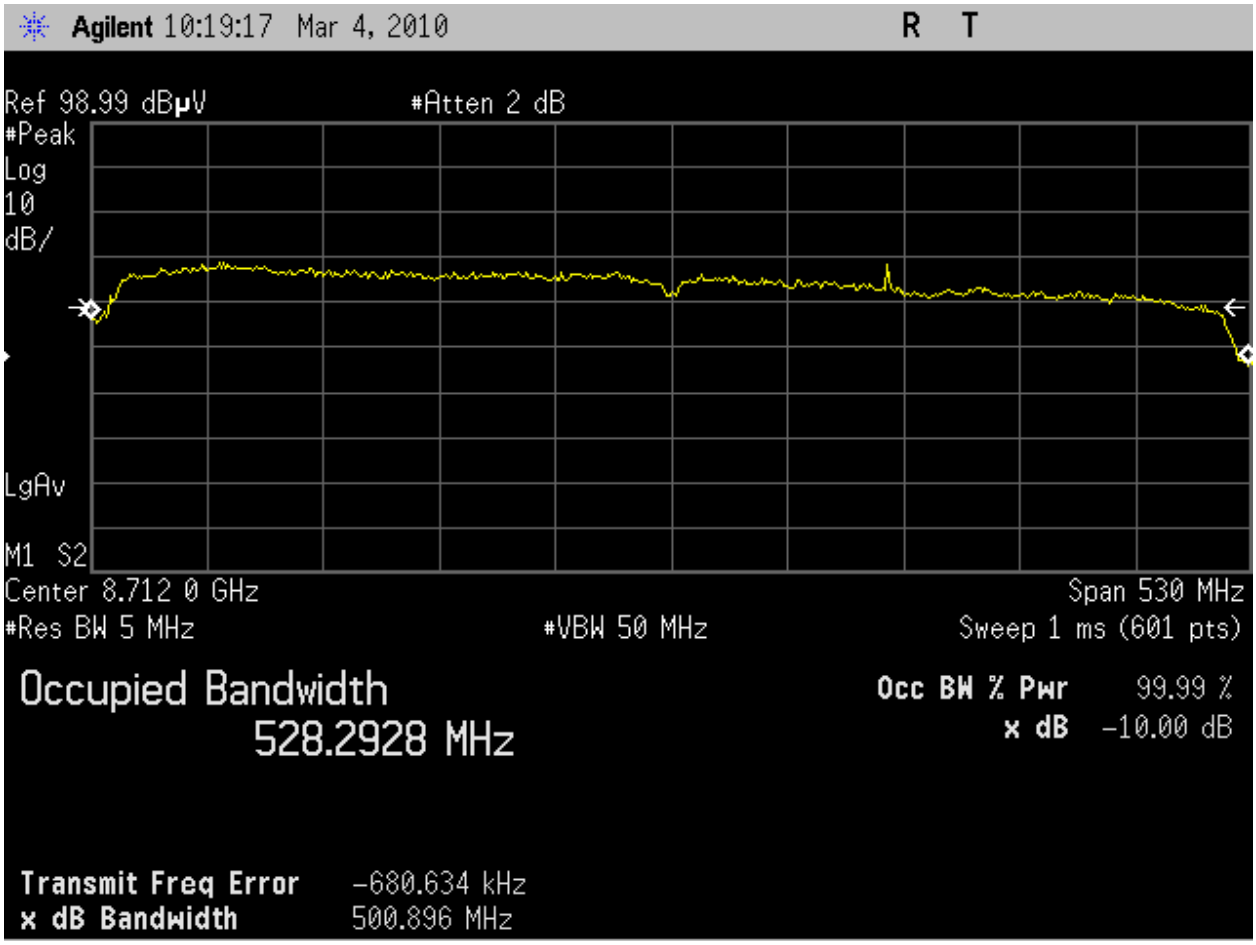
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting Mid Channel ADM6P Antenna BG 6 10 dB Bandwidth – 500.896 MHz

Mid Channel
10 dB



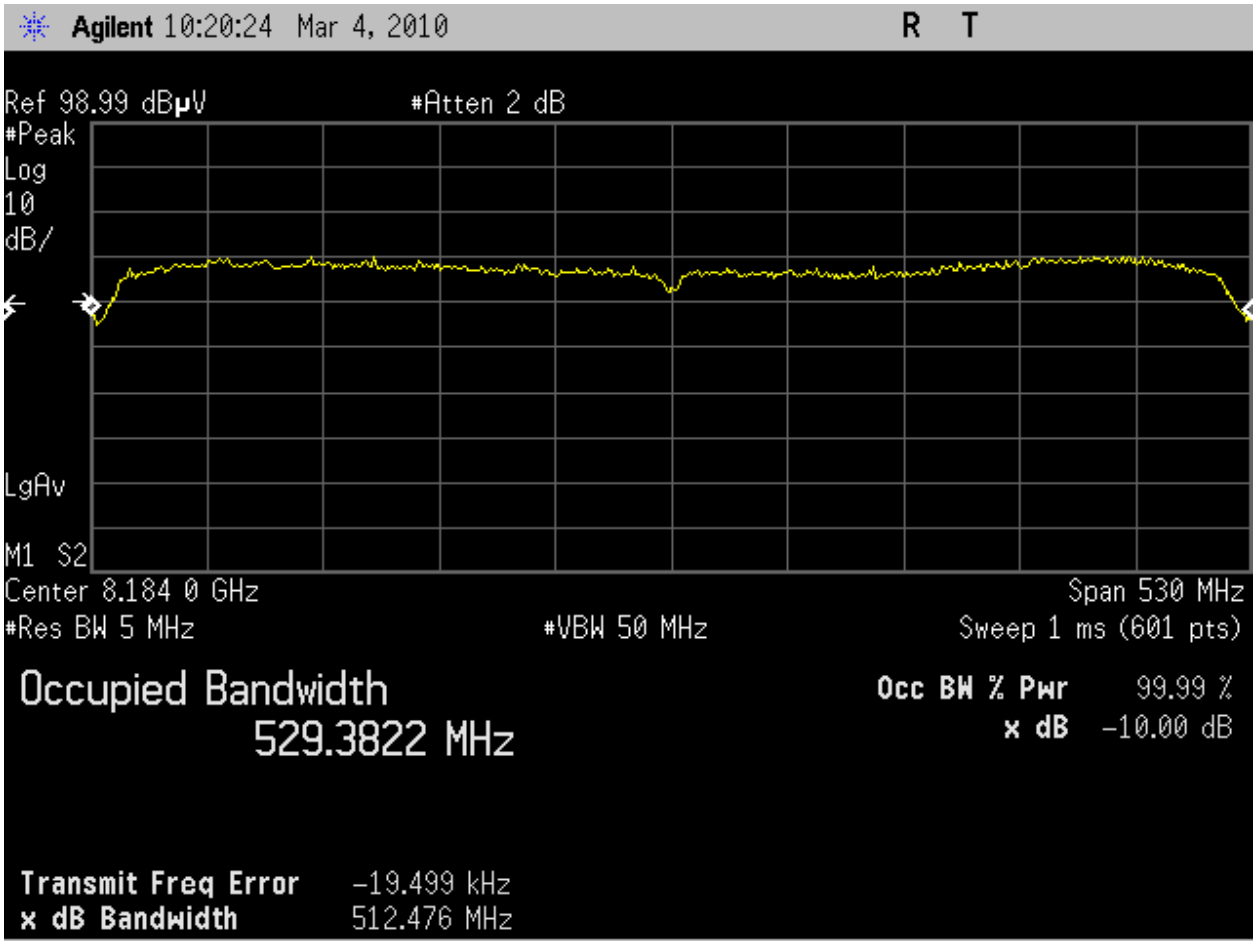
Result = Pass

UWB Bandwidth Data Sheet

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(b)	1m	Horn	5 MHz	50 MHz	Peak

COMMENT	Transmitting High Channel ADM6P Antenna BG 6 10 dB Bandwidth – 512.476 MHz

High Channel
10 dB



Result = Pass

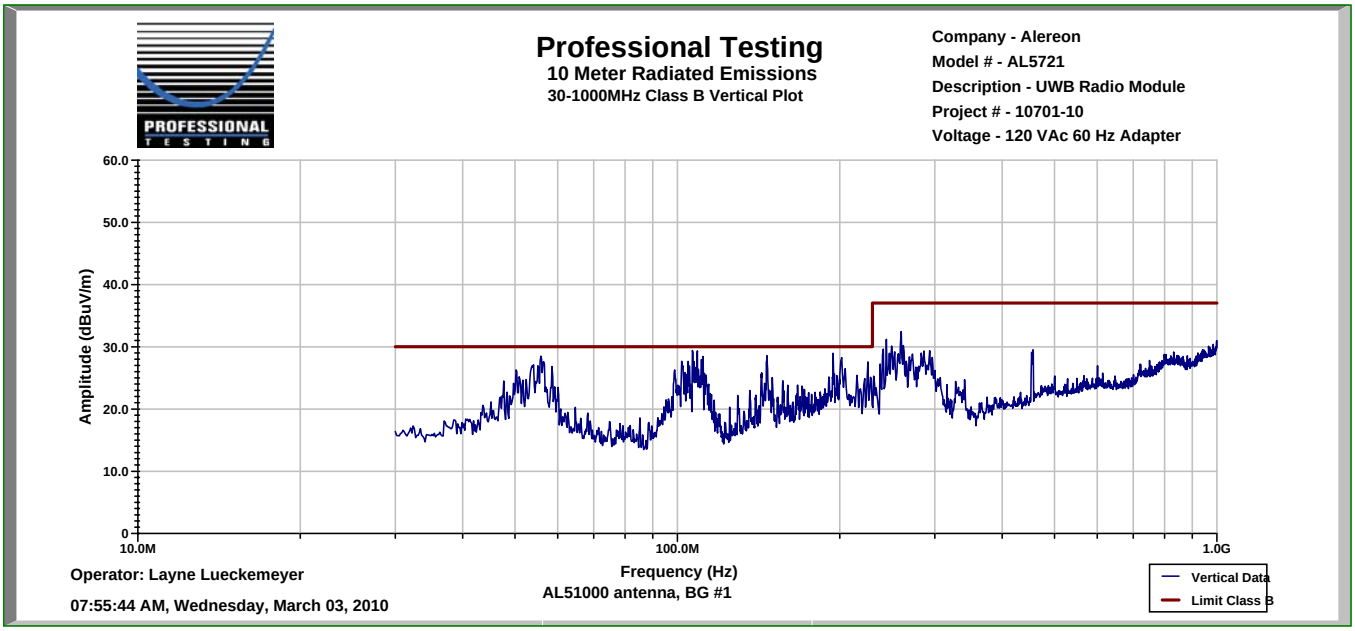
Radiated Emissions Data Sheet
Emissions 30 MHz … 960 MHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	10 m	Bicon | Log	CISPR 120 kHz	1 MHz	Quasi Peak

COMMENT	Transmitting UWB BG 1 AL51000 Antenna

Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
106.72	0	1	42.4	26.3	9.6	1.2	26.9	30	-3.1	QP
108.88	46	1	39.9	26.3	9.8	1.2	24.6	30	-5.4	QP
145.99	152	1	39.4	26.4	12.2	1.5	26.7	30	-3.3	QP
194.39	24	1	32.01	26.1	13.5	1.7	21.1	30	-8.9	QP
248.4	151	1	40.3	31.0	12.5	2.2	24.0	37	-13.0	QP
258.4	142	1	39.5	31.2	12.9	2.3	23.5	37	-13.5	QP



Result = Pass

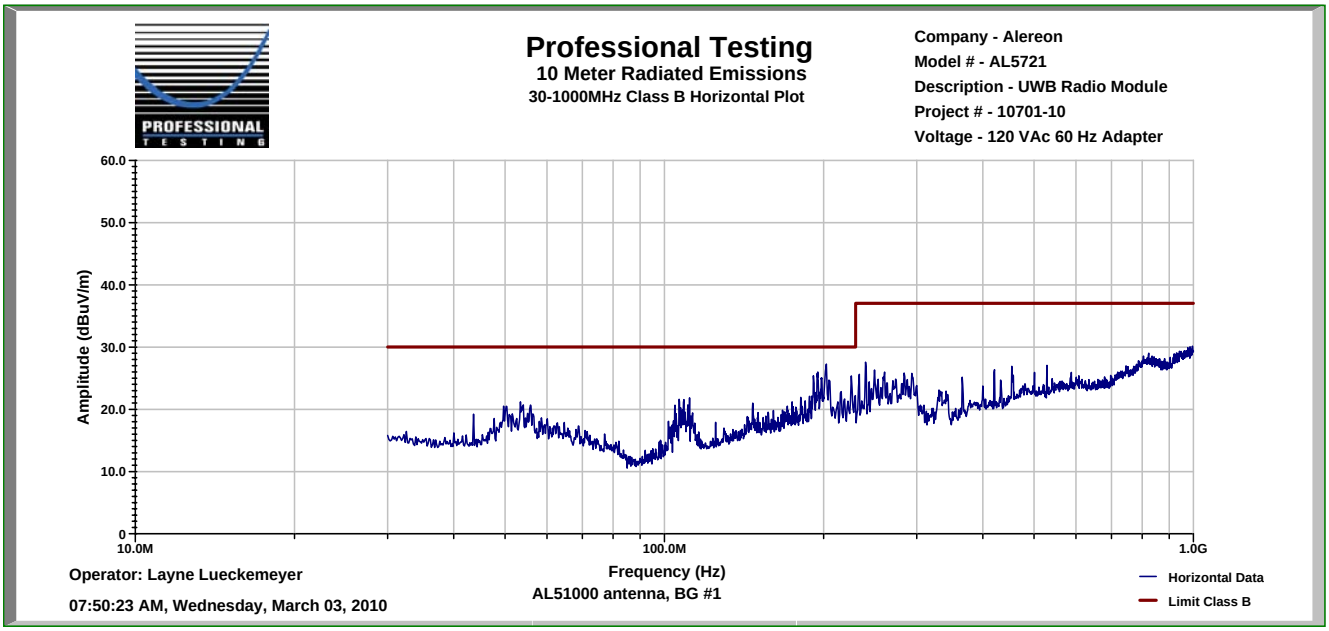
Radiated Emissions Data Sheet
Emissions 30 MHz … 1 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	10 m	Bicon | Log	CISPR 120 kHz	1 MHz	Quasi Peak

COMMENT	Transmitting UWB BG 1 AL51000 Antenna

Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
200.6	61	4	39.5	30.697	10.9	1.9	21.6	30	-8.4	QP



Result = Pass

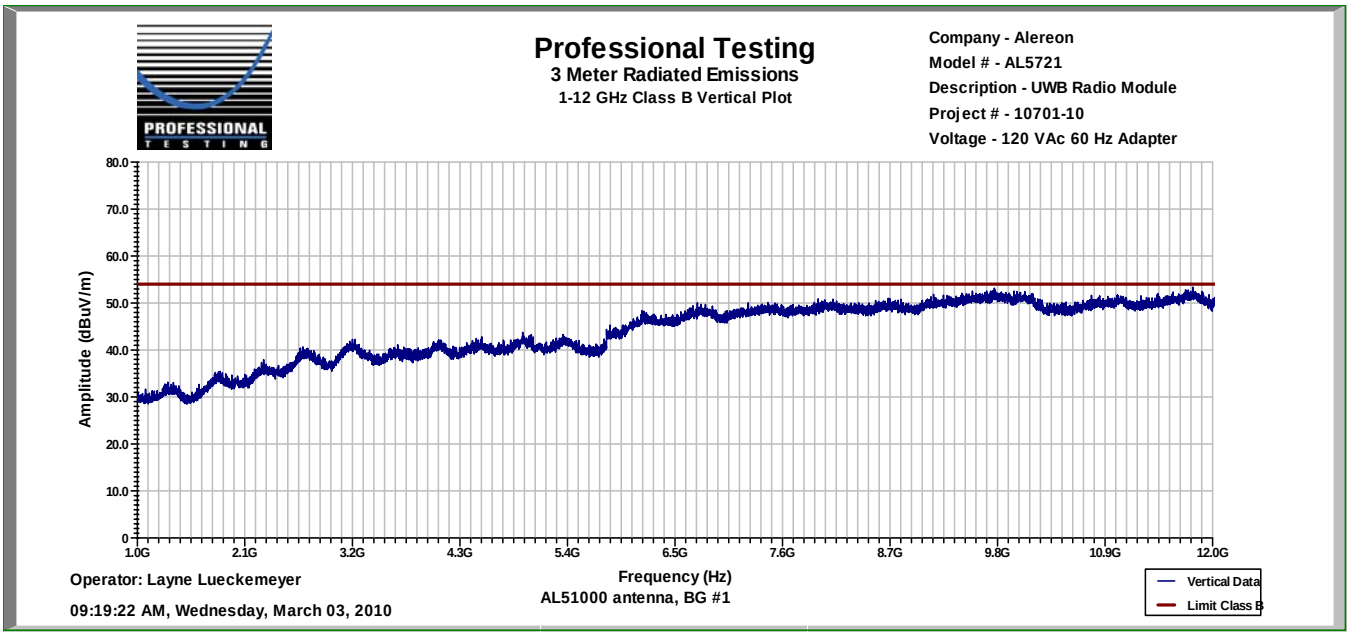
Radiated Emissions Data Sheet
1 GHz…12 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	3 m	Horn	1 MHz	1 MHz	Average

COMMENT	Transmitting UWB BG 1 AL51000 Antenna

Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
6163	noise	floor	48.1	54.1	35.2	6.8	36.0	54	-18.0	Avg
6730	noise	floor	50	53.9	35.7	7.2	39.0	54	-15.0	Avg
7967	noise	floor	50.9	54.1	37.6	8.0	42.4	54	-11.6	Avg
8701	noise	floor	50.8	53.4	37.4	8.2	43.0	54	-11.0	Avg
9769	noise	floor	53.1	54.1	37.9	9.1	46.0	54	-8.0	Avg
11442	noise	floor	51.9	54.2	39.7	9.8	47.1	54	-6.9	Avg



Result = Pass

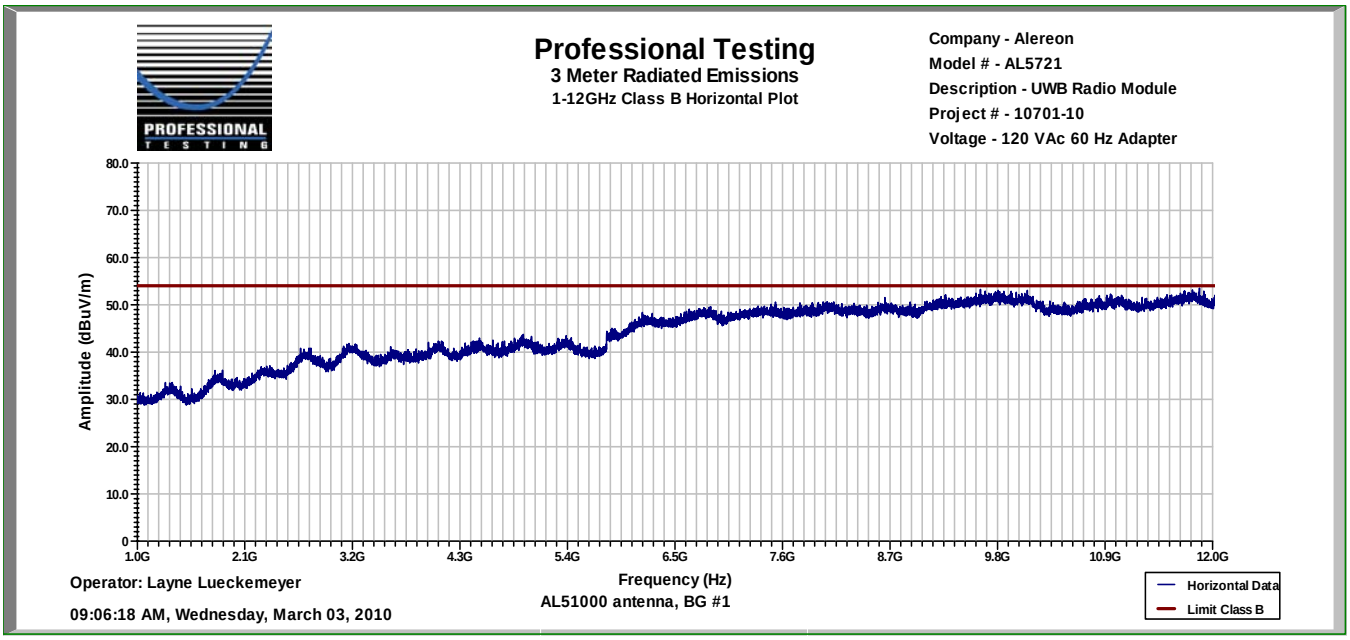
Radiated Emissions Data Sheet
1 GHz…12 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	3 m	Horn	1 MHz	1 MHz	Average

COMMENT	Transmitting UWB BG 1 AL51000 Antenna

Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
6167	noise	floor	48.3	54.1	35.2	6.8	36.2	54	-17.8	Avg
7529	noise	floor	50.6	54.5	37.2	7.9	41.2	54	-12.8	Avg
8649	noise	floor	51.5	53.3	37.4	8.2	43.8	54	-10.2	Avg
9626	noise	floor	53.2	54.0	37.8	9.0	46.0	54	-8.0	Avg
10842	noise	floor	51.9	53.6	38.6	9.2	46.1	54	-7.9	Avg
11312	noise	floor	51.3	54.0	39.4	9.6	46.3	54	-7.7	Avg



Result = Pass

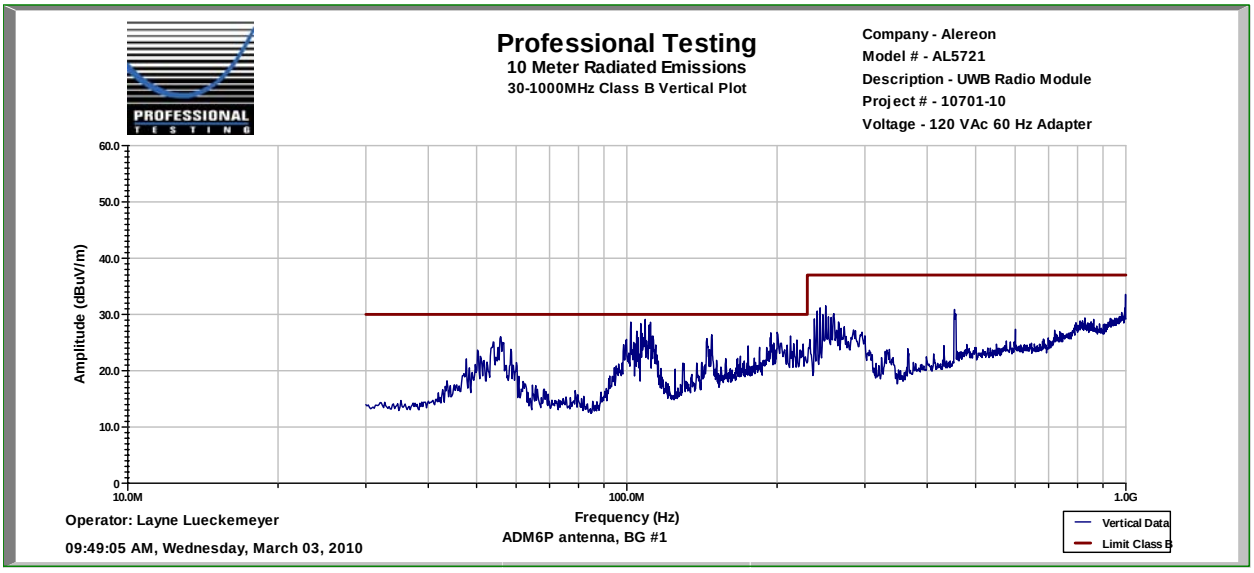
Radiated Emissions Data Sheet
Emissions 30 MHz … 960 MHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	10 m	Bicon | Log	CISPR 120 kHz	1 MHz	Quasi Peak

COMMENT	Transmitting UWB BG 1 ADM6P Antenna

Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
101.91	0	1	41.9	26.3	9.2	1.1	25.9	30	-4.1	QP
108.88	46	1	38.2	26.3	9.8	1.2	22.9	30	-7.1	QP
111.6	152	1	39.6	26.3	10.1	1.2	24.6	30	-5.4	QP
147.98	152	1	39.6	26.2	12.2	1.4	27.1	30	-2.9	QP
244.0	24	1	33.1	31.0	12.3	2.2	16.5	30	-13.5	QP
250.4	151	1	39.8	31.0	12.7	2.2	23.6	37	-13.4	QP



Result = Pass

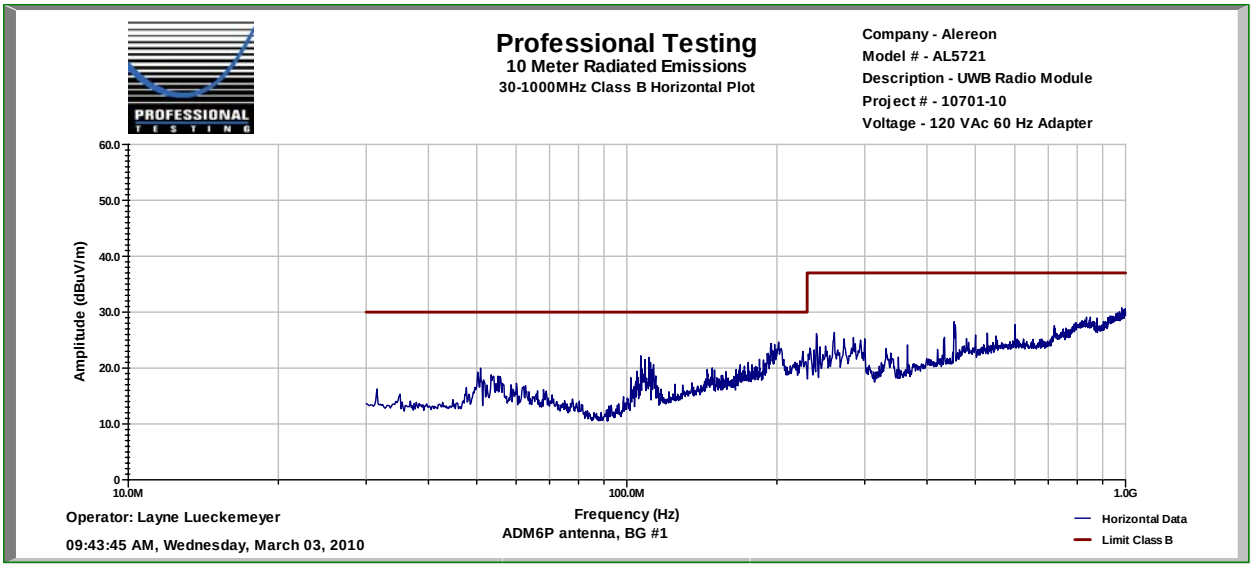
Radiated Emissions Data Sheet
Emissions 30 MHz … 960 MHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	10 m	Bicon | Log	CISPR 120 kHz	1 MHz	Quasi Peak

COMMENT	Transmitting UWB BG 1 ADM6P Antenna

Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
201.6	62	4	39.2	30.700	10.9	1.9	21.3	30	-8.7	QP



Result = Pass

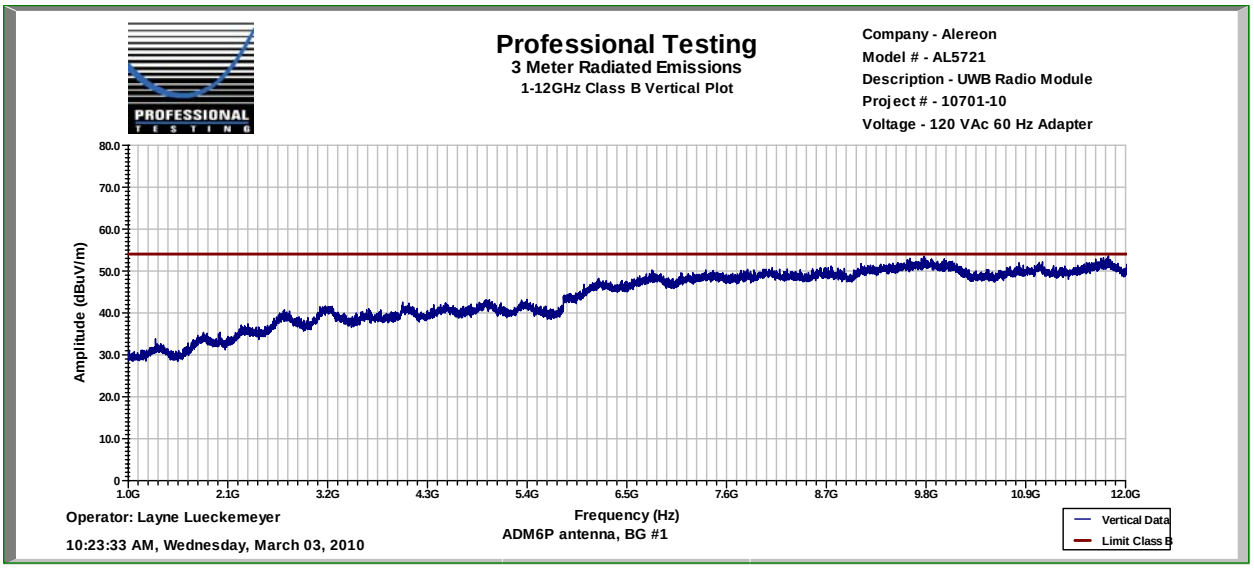
Radiated Emissions Data Sheet
1 GHz…12 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	3 m	Horn	1 MHz	1 MHz	Average

COMMENT	Transmitting UWB BG 1 ADM6P Antenna

Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
6777	noise	floor	50.3	53.9	35.8	7.2	39.4	54	-14.6	Avg
7902	noise	floor	50.2	54.1	37.5	8.0	41.5	54	-12.5	Avg
9085	noise	floor	51.8	53.8	37.4	8.6	43.9	54	-10.1	Avg
9625	noise	floor	53	54.0	37.8	9.0	45.8	54	-8.2	Avg
10002	noise	floor	52.8	54.3	38.1	9.2	45.8	54	-8.2	Avg
11051	noise	floor	52	53.6	38.8	9.3	46.5	54	-7.5	Avg



Result = Pass

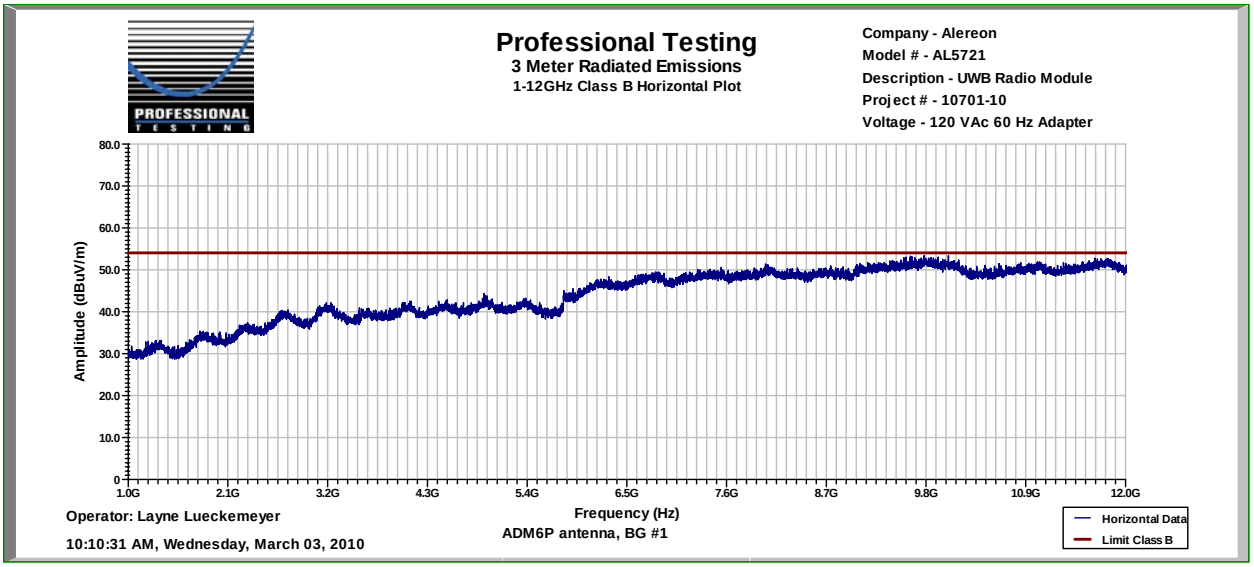
Radiated Emissions Data Sheet
1 GHz…12 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	3 m	Horn	1 MHz	1 MHz	Average

COMMENT	Transmitting UWB BG 1 ADM6P Antenna

Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
6302	noise	floor	48.3	54.0	35.2	6.9	36.3	54	-17.7	Avg
7542	noise	floor	50.6	54.5	37.2	7.9	41.2	54	-12.8	Avg
8030	noise	floor	51.4	54.0	37.6	8.0	43.0	54	-11.0	Avg
9070	noise	floor	51.5	53.8	37.4	8.5	43.6	54	-10.4	Avg
9624	noise	floor	52.8	54.0	37.8	9.0	45.6	54	-8.4	Avg
10603	noise	floor	51.4	53.8	38.4	9.1	45.1	54	-8.9	Avg



Result = Pass

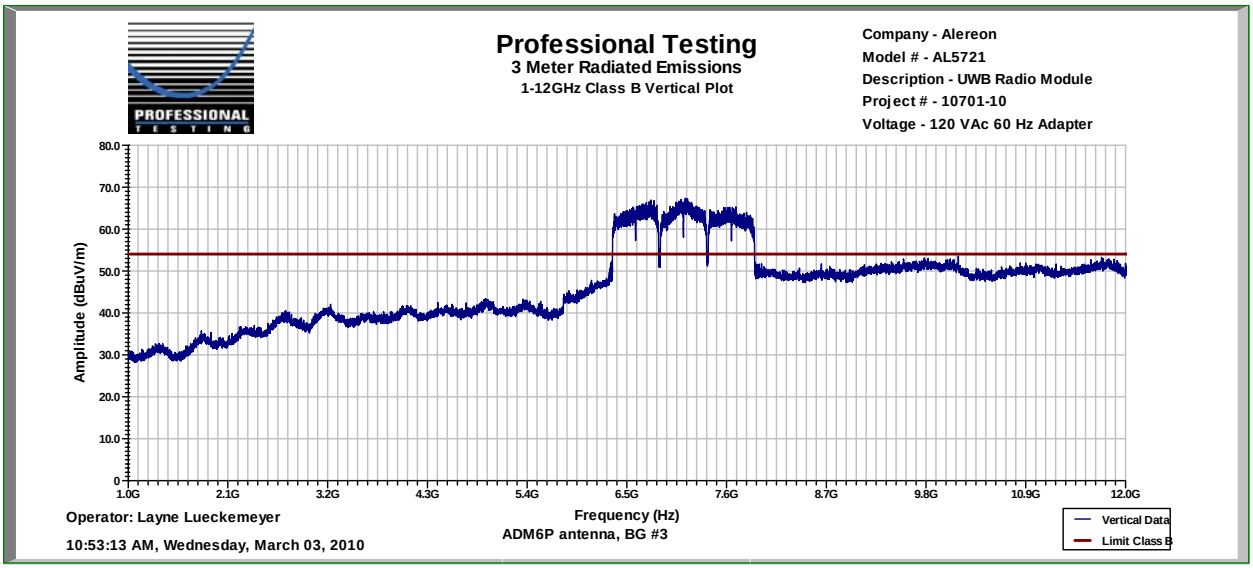
Radiated Emissions Data Sheet
1 GHz…12 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	3 m	Horn	1 MHz	1 MHz	Average

COMMENT	Transmitting UWB BG 3 ADM6P Antenna

Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
6110	noise	floor	47.7	54.2	35.3	6.8	35.6	54	-18.4	Avg
8403	noise	floor	50.7	53.3	37.4	8.0	42.9	54	-11.1	Avg
8646	noise	floor	51.7	53.3	37.4	8.2	44.0	54	-10.0	Avg
9504	noise	floor	52.3	53.9	37.7	8.9	45.0	54	-9.0	Avg
10102	noise	floor	52.7	54.2	38.1	9.2	45.8	54	-8.2	Avg
11737	noise	floor	53.2	54.0	39.5	9.8	48.5	54	-5.5	Avg



Result = Pass

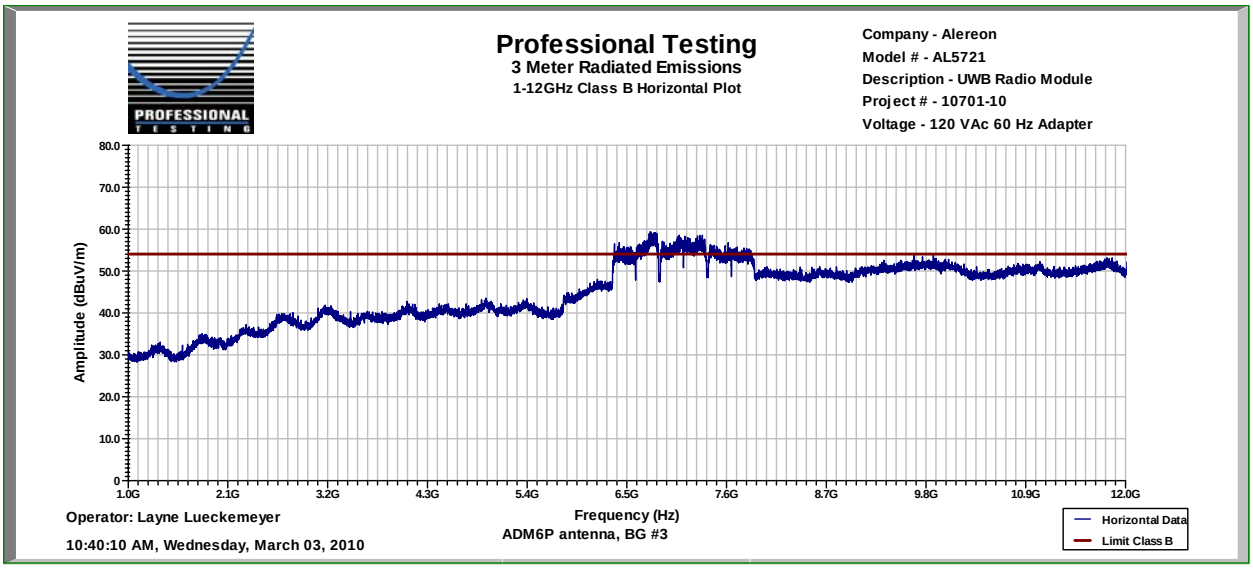
Radiated Emissions Data Sheet
1 GHz…12 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	3 m	Horn	1 MHz	1 MHz	Average

COMMENT	Transmitting UWB BG 3 ADM6P Antenna

Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
6175	noise	floor	48	54.1	35.2	6.8	35.9	54	-18.1	Avg
8033	noise	floor	50.8	54.0	37.6	8.0	42.4	54	-11.6	Avg
8813	noise	floor	50.9	53.6	37.3	8.3	43.0	54	-11.0	Avg
9336	noise	floor	52.5	53.9	37.6	8.8	45.0	54	-9.0	Avg
9897	noise	floor	52.9	54.2	38.0	9.1	45.9	54	-8.1	Avg
11056	noise	floor	52.2	53.6	38.8	9.3	46.7	54	-7.3	Avg



Result = Pass

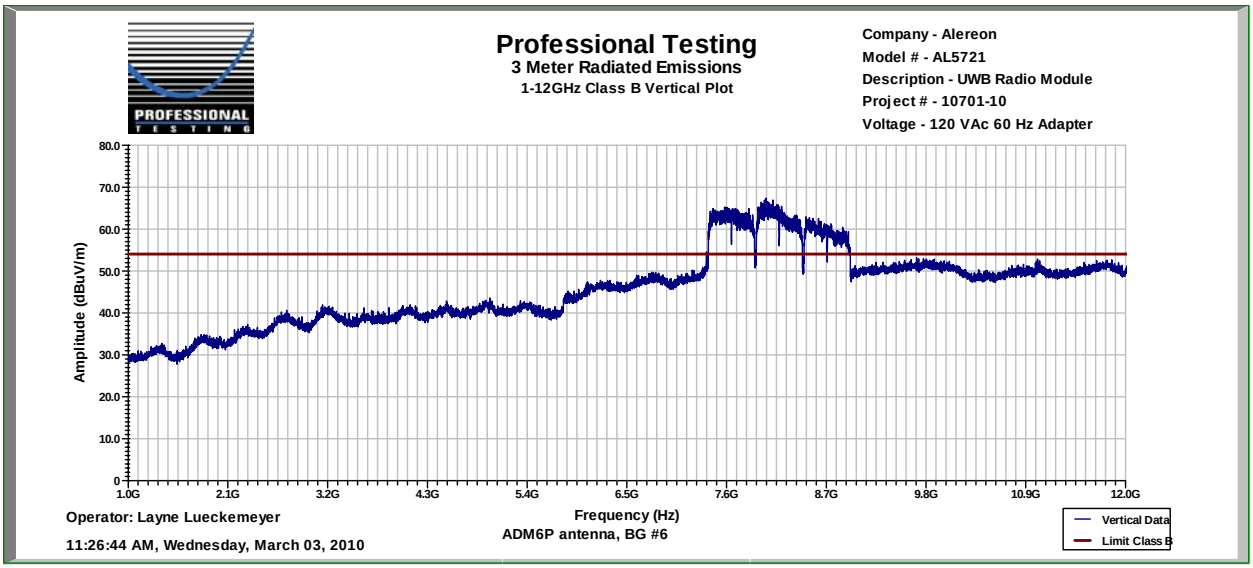
Radiated Emissions Data Sheet
1 GHz…12 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	3 m	Horn	1 MHz	1 MHz	Average

COMMENT	Transmitting UWB BG 6 ADM6P Antenna

Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
7223	noise	floor	50.2	54.2	36.8	7.6	40.4	54	-13.6	Avg
9250	noise	floor	52	53.9	37.5	8.7	44.3	54	-9.7	Avg
9697	noise	floor	53.2	54.0	37.9	9.0	46.1	54	-7.9	Avg
11031	noise	floor	52.8	53.6	38.8	9.3	47.3	54	-6.7	Avg
11682	noise	floor	52.5	54.0	39.5	9.8	47.8	54	-6.2	Avg
11850	noise	floor	52.7	53.8	39.3	9.8	48.0	54	-6.0	Avg



Result = Pass

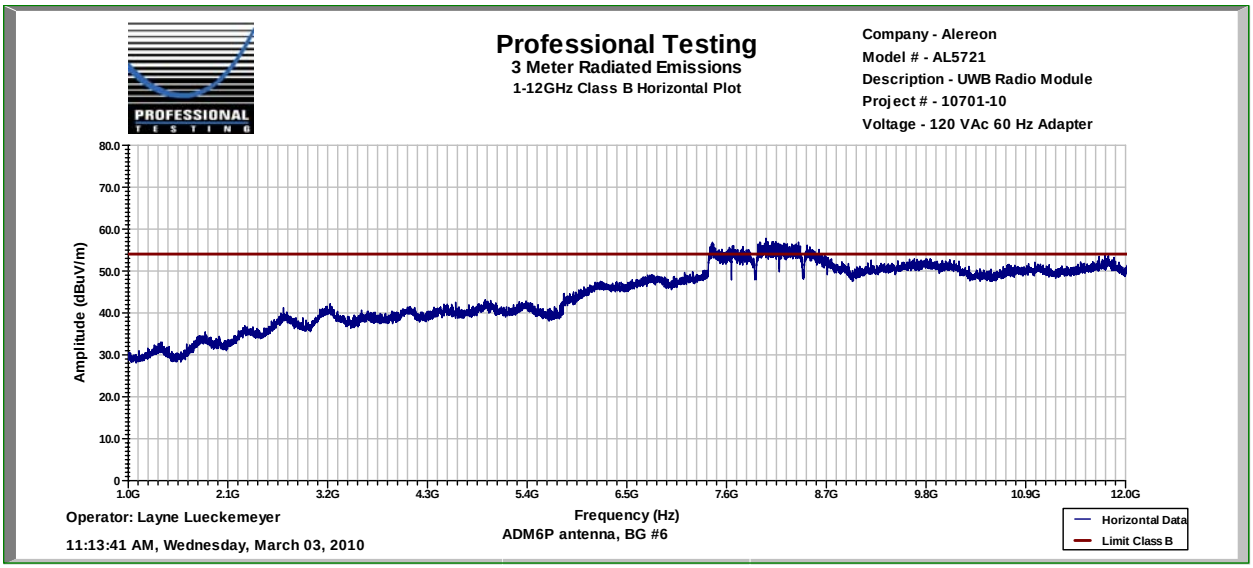
Radiated Emissions Data Sheet
1 GHz…12 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 3, 2010	FCC B	3 m	Horn	1 MHz	1 MHz	Average

COMMENT	Transmitting UWB BG 6 ADM6P Antenna

Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector
7137	noise	floor	49.6	54.1	36.6	7.5	39.7	54	-14.3	Avg
9196	noise	floor	52.6	53.9	37.5	8.6	44.9	54	-9.1	Avg
9672	noise	floor	52.8	54.0	37.8	9.0	45.6	54	-8.4	Avg
10164	noise	floor	52.3	54.1	38.2	9.2	45.5	54	-8.5	Avg
11001	noise	floor	52.1	53.5	38.7	9.3	46.6	54	-7.4	Avg
11711	noise	floor	53.4	54.0	39.5	9.8	48.7	54	-5.3	Avg



Result = Pass

Spurious/Harmonic Emissions
1 GHz … 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting Low Channel AL51000 Antenna BG 1 Investigated up to 40 GHz.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
6.864	noise	floor	41.86	43.1	36.7	4.6	40.1	63.4	-23.3	Peak
10.296	noise	floor	40.96	38.4	38.8	6.6	47.9	63.4	-15.5	Peak
13.728	noise	floor	43.39	39.5	41.5	6.8	52.2	53.4	-1.2	Peak
17.16	noise	floor	41.61	41.4	43.8	8.4	52.4	53.4	-1.0	Peak
20.592	noise	floor	40.6	43.9	37.1	9.0	42.8	53.4	-10.6	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
6.864	noise	floor	41.86	43.1	36.7	4.6	40.1	63.4	-23.3	Peak
10.296	noise	floor	40.96	38.4	38.8	6.6	47.9	63.4	-15.5	Peak
13.728	noise	floor	43.39	39.5	41.5	6.8	52.2	53.4	-1.2	Peak
17.16	noise	floor	41.61	41.4	43.8	8.4	52.4	53.4	-1.0	Peak
20.592	noise	floor	40.6	43.9	37.1	9.0	42.8	53.4	-10.6	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz … 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting Middle Channel AL51000 Antenna BG 1 Investigated up to 40 GHz.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
7.92	noise	floor	42	42.1	37.0	4.9	41.8	63.4	-21.6	Peak
11.88	noise	floor	40.5	37.1	40.2	6.1	49.7	53.4	-3.7	Peak
15.84	noise	floor	41.8	39.6	38.0	7.4	47.6	53.4	-5.8	Peak
19.8	noise	floor	38.9	43.7	36.5	8.2	40.0	53.4	-13.4	Peak
23.76	noise	floor	40.4	41.8	37.1	10.8	46.6	53.4	-6.8	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
7.92	noise	floor	42	42.1	37.0	4.9	41.8	63.4	-21.6	Peak
11.88	noise	floor	40.5	37.1	40.2	6.1	49.7	53.4	-3.7	Peak
15.84	noise	floor	41.8	39.6	38.0	7.4	47.6	53.4	-5.8	Peak
19.8	noise	floor	38.9	43.7	36.5	8.2	40.0	53.4	-13.4	Peak
23.76	noise	floor	40.4	41.8	37.1	10.8	46.6	53.4	-6.8	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	December 17, 2009	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting High Channel AL51000 Antenna BG 1 Investigated up to 40 GHz. Harmonics from 26.5 – 40 GHz were measured at a distance of .3 meters to improve the measurement system's noise floor. Limit is converted to account for .3 meter distance.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
8.976	noise	floor	39.7	40.5	37.6	4.9	41.7	63.4	-21.7	Peak
13.464	noise	floor	43.2	38.6	41.4	7.0	53.0	53.4	-0.4	Peak
17.952	noise	floor	39.5	42.7	46.8	9.0	52.6	53.4	-0.8	Peak
22.44	noise	floor	40.3	40.5	37.1	9.4	46.3	53.4	-7.1	Peak
26.928	noise	floor	39.9	41.3	37	9.0	44.6	62.9	-18.3	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
8.976	noise	floor	39.7	40.5	37.6	4.9	41.7	63.4	-21.7	Peak
13.464	noise	floor	43.2	38.6	41.4	7.0	53.0	53.4	-0.4	Peak
17.952	noise	floor	39.5	42.7	46.8	9.0	52.6	53.4	-0.8	Peak
22.44	noise	floor	40.3	40.5	37.1	9.4	46.3	53.4	-7.1	Peak
26.928	noise	floor	39.9	41.3	37	9.0	44.6	62.9	-18.3	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting Low Channel ADM6P Antenna BG 1 Investigated up to 40 GHz.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
6.864	Noise	Floor	39.5	43.1	36.7	4.6	37.7	63.4	-25.7	Peak
10.296	Noise	Floor	38.1	38.4	38.8	6.6	45.1	63.4	-18.3	Peak
13.728	Noise	Floor	40.8	39.5	41.5	6.8	49.6	53.4	-3.8	Peak
17.16	Noise	Floor	39.5	41.4	43.8	8.4	50.3	53.4	-3.1	Peak
20.59	Noise	Floor	40.9	43.9	37.1	9.0	43.1	53.4	-10.3	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
6.864	Noise	Floor	39.5	43.1	36.7	4.6	37.7	63.4	-25.7	Peak
10.296	Noise	Floor	38.1	38.4	38.8	6.6	45.1	63.4	-18.3	Peak
13.728	Noise	Floor	40.8	39.5	41.5	6.8	49.6	53.4	-3.8	Peak
17.16	Noise	Floor	39.5	41.4	43.8	8.4	50.3	53.4	-3.1	Peak
20.59	Noise	Floor	40.9	43.9	37.1	9.0	43.1	53.4	-10.3	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting Mid Channel ADM6P Antenna BG 1 Investigated up to 40 GHz.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
7.92	Noise	Floor	39.1	42.1	37.0	4.9	38.8	63.4	-24.6	Peak
11.88	Noise	Floor	38.1	37.1	40.2	6.1	47.3	53.4	-6.1	Peak
15.84	Noise	Floor	42	39.6	38.0	7.4	47.9	53.4	-5.5	Peak
19.8	Noise	Floor	39.21	43.7	36.5	8.2	40.3	53.4	-13.1	Peak
23.76	Noise	Floor	40.4	41.8	37.1	10.8	46.6	53.4	-6.8	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
7.92	Noise	Floor	39.1	42.1	37.0	4.9	38.8	63.4	-24.6	Peak
11.88	Noise	Floor	38.1	37.1	40.2	6.1	47.3	53.4	-6.1	Peak
15.84	Noise	Floor	42	39.6	38.0	7.4	47.9	53.4	-5.5	Peak
19.8	Noise	Floor	39.21	43.7	36.5	8.2	40.3	53.4	-13.1	Peak
23.76	Noise	Floor	40.4	41.8	37.1	10.8	46.6	53.4	-6.8	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting High Channel ADM6P Antenna BG 1 Investigated up to 40 GHz. Harmonics. Harmonics from 26.5 – 40 GHz were measured at a distance of .3 meters to improve the measurement system's noise floor. Limit is converted to account for .3 meter distance.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
8.976	Noise	Floor	36.8	40.5	37.6	4.9	38.8	63.4	-24.6	Peak
13.464	Noise	Floor	40.1	38.6	41.4	7.0	49.9	53.4	-3.5	Peak
17.952	Noise	Floor	40.1	42.7	46.8	9.0	53.2	53.4	-0.2	Peak
22.44	Noise	Floor	40.6	40.5	37.1	9.4	46.6	53.4	-6.8	Peak
26.928	Noise	Floor	40.4	41.3	37.0	9.0	45.1	62.9	-17.8	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
8.976	Noise	Floor	36.8	40.5	37.6	4.9	38.8	63.4	-24.6	Peak
13.464	Noise	Floor	40.1	38.6	41.4	7.0	49.9	53.4	-3.5	Peak
17.952	Noise	Floor	40.1	42.7	46.8	9.0	53.2	53.4	-0.2	Peak
22.44	Noise	Floor	40.6	40.5	37.1	9.4	46.6	53.4	-6.8	Peak
26.928	Noise	Floor	40.4	41.3	37.0	9.0	45.1	62.9	-17.8	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting Low Channel ADM6P Antenna BG 3 Investigated up to 40 GHz. Harmonics from 26.5 – 40 GHz were measured at a distance of .3 meters to improve the measurement system's noise floor. Limit is converted to account for .3 meter distance.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
13.2	Noise	Floor	40.9	39.0	40.7	7.1	49.7	53.4	-3.7	Peak
19.8	Noise	Floor	39.6	43.9	36.5	8.2	40.4	53.4	-13.0	Peak
26.4	Noise	Floor	43.8	41.3	37.1	9.4	49.0	53.4	-4.4	Peak
33	Noise	Floor	47.5	41.3	37.1	9.4	52.7	62.9	-10.2	Peak
39.6	Noise	Floor	51.8	41.3	37.1	9.4	57	62.9	-5.9	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
13.2	Noise	Floor	40.9	39.0	40.7	7.1	49.7	53.4	-3.7	Peak
19.8	Noise	Floor	39.6	43.9	36.5	8.2	40.4	53.4	-13.0	Peak
26.4	Noise	Floor	43.8	41.3	37.1	9.4	49.0	53.4	-4.4	Peak
33	Noise	Floor	47.5	41.3	37.1	9.4	52.7	62.9	-10.2	Peak
39.6	Noise	Floor	51.8	41.3	37.1	9.4	57	62.9	-5.9	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting Mid Channel ADM6P Antenna BG 3 Investigated up to 40 GHz. Harmonics from 26.5 – 40 GHz were measured at a distance of .3 meters to improve the measurement system's noise floor. Limit is converted to account for .3 meter distance.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
14.256	Noise	Floor	41.5	39.5	42.4	6.2	50.6	53.4	-2.8	Peak
21.384	Noise	Floor	39.32	43.1	36.9	9.9	43.0	53.4	-10.4	Peak
28.512	Noise	Floor	39.1	41.3	37.1	9.4	44.3	62.9	-18.6	Peak
35.64	Noise	Floor	50.2	41.3	37.1	9.4	55.4	62.9	-7.5	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
14.256	Noise	Floor	41.5	39.5	42.4	6.2	50.6	53.4	-2.8	Peak
21.384	Noise	Floor	39.32	43.1	36.9	9.9	43.0	53.4	-10.4	Peak
28.512	Noise	Floor	39.1	41.3	37.1	9.4	44.3	62.9	-18.6	Peak
35.64	Noise	Floor	50.2	41.3	37.1	9.4	55.4	62.9	-7.5	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting High Channel ADM6P Antenna BG 3 Investigated up to 40 GHz. Harmonics from 26.5 – 40 GHz were measured at a distance of .3 meters to improve the measurement system's noise floor. Limit is converted to account for .3 meter distance.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
15.312	Noise	Floor	41.5	39.4	39.3	7.3	48.6	53.4	-4.8	Peak
22.968	Noise	Floor	40.71	40.6	37.0	10.1	47.3	53.4	-6.1	Peak
30.624	Noise	Floor	41.7	41.3	37.1	9.4	46.9	62.9	-16	Peak
38.28	Noise	Floor	52.8	41.3	37.1	9.4	58	62.9	-4.9	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
15.312	Noise	Floor	41.5	39.4	39.3	7.3	48.6	53.4	-4.8	Peak
22.968	Noise	Floor	40.71	40.6	37.0	10.1	47.3	53.4	-6.1	Peak
30.624	Noise	Floor	41.7	41.3	37.1	9.4	46.9	62.9	-16	Peak
38.28	Noise	Floor	52.8	41.3	37.1	9.4	58	62.9	-4.9	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting Low Channel ADM6P Antenna BG 6 Investigated up to 40 GHz. Harmonics from 26.5 – 40 GHz were measured at a distance of .3 meters to improve the measurement system's noise floor. Limit is converted to account for .3 meter distance.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
15.312	Noise	Floor	41.5	39.4	39.3	7.3	48.6	53.4	-4.8	Peak
22.968	Noise	Floor	40.71	40.6	37.0	10.1	47.3	53.4	-6.1	Peak
30.624	Noise	Floor	41.7	41.3	37.1	9.4	46.9	62.9	-16	Peak
38.28	Noise	Floor	52.8	41.3	37.1	9.4	58	62.9	-4.9	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
15.312	Noise	Floor	41.5	39.4	39.3	7.3	48.6	53.4	-4.8	Peak
22.968	Noise	Floor	40.71	40.6	37.0	10.1	47.3	53.4	-6.1	Peak
30.624	Noise	Floor	41.7	41.3	37.1	9.4	46.9	62.9	-16	Peak
38.28	Noise	Floor	52.8	41.3	37.1	9.4	58	62.9	-4.9	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting Mid Channel ADM6P Antenna BG 6 Investigated up to 40 GHz. Harmonics from 26.5 – 40 GHz were measured at a distance of .3 meters to improve the measurement system's noise floor. Limit is converted to account for .3 meter distance.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
16.368	Noise	Floor	39.9	40.2	38.8	8.0	46.4	53.4	-7.0	Peak
24.552	Noise	Floor	40.9	42.2	37.2	9.8	45.7	53.4	-7.7	Peak
32.736	Noise	Floor	39.2	41.3	37.1	9.4	44.4	62.9	-18.5	Peak

Vertical

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
16.368	Noise	Floor	39.9	40.2	38.8	8.0	46.4	53.4	-7.0	Peak
24.552	Noise	Floor	40.9	42.2	37.2	9.8	45.7	53.4	-7.7	Peak
32.736	Noise	Floor	39.2	41.3	37.1	9.4	44.4	62.9	-18.5	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	CLASS	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	FCC B	1 m	Horn	1 MHz	3 MHz	Peak

COMMENT	Transmitting High Channel ADM6P Antenna BG 6 Investigated up to 40 GHz. Harmonics from 26.5 – 40 GHz were measured at a distance of .3 meters to improve the measurement system's noise floor. Limit is converted to account for .3 meter distance.

Horizontal

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
17.424	Noise	Floor	39.9	41.5	44.6	8.7	51.6	53.4	-1.8	Peak
26.136	Noise	Floor	42.7	40.7	37.4	9.3	48.6	53.4	-4.8	Peak
34.848	Noise	Floor	41.8	41.3	37.1	9.4	47	62.9	-15.9	Peak

Vertical

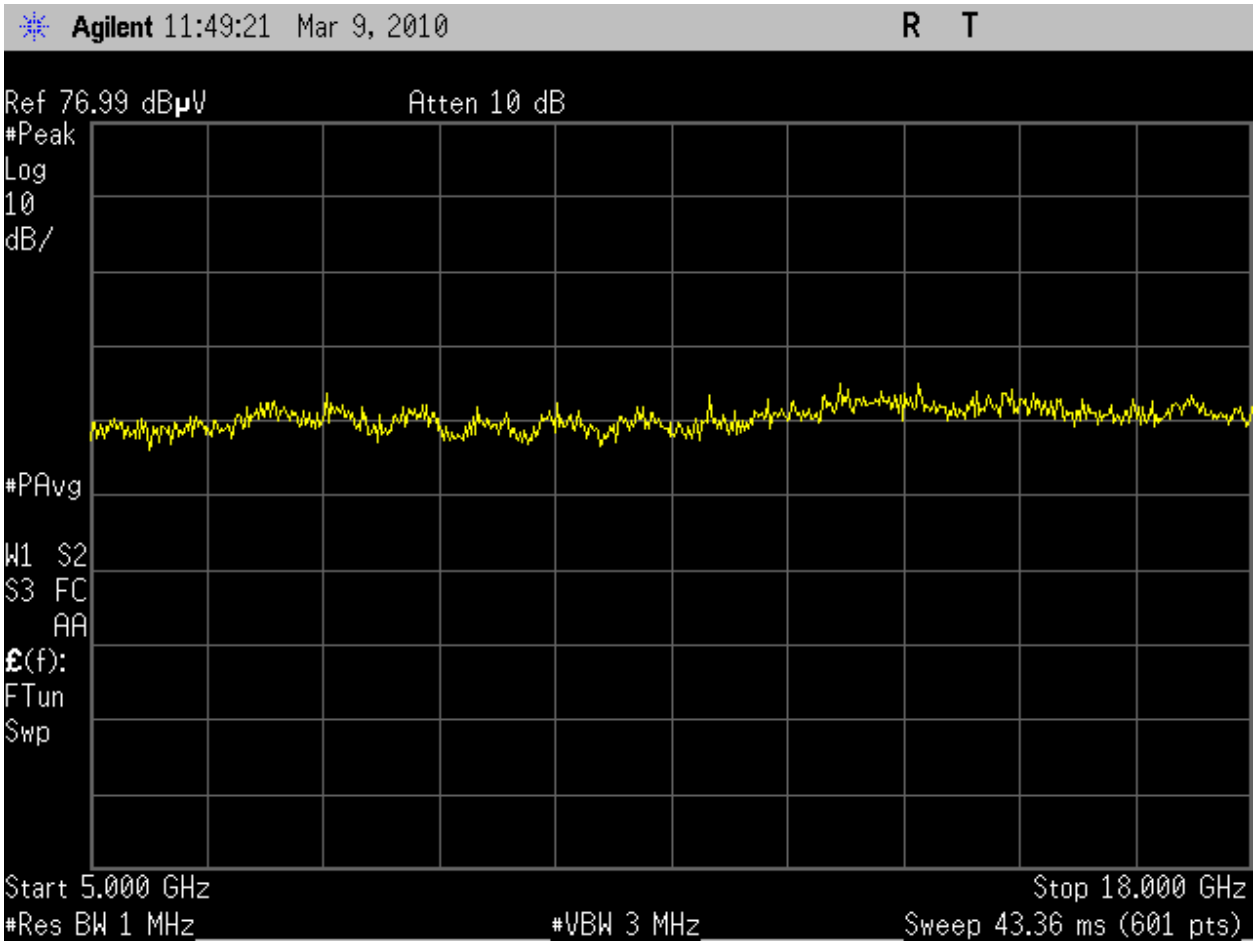
Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
17.424	Noise	Floor	39.9	41.5	44.6	8.7	51.6	53.4	-1.8	Peak
26.136	Noise	Floor	42.7	40.7	37.4	9.3	48.6	53.4	-4.8	Peak
34.848	Noise	Floor	41.8	41.3	37.1	9.4	47	62.9	-15.9	Peak

Result = Pass

Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519	1 m	Horn	1 MHz	3 MHz	Peak

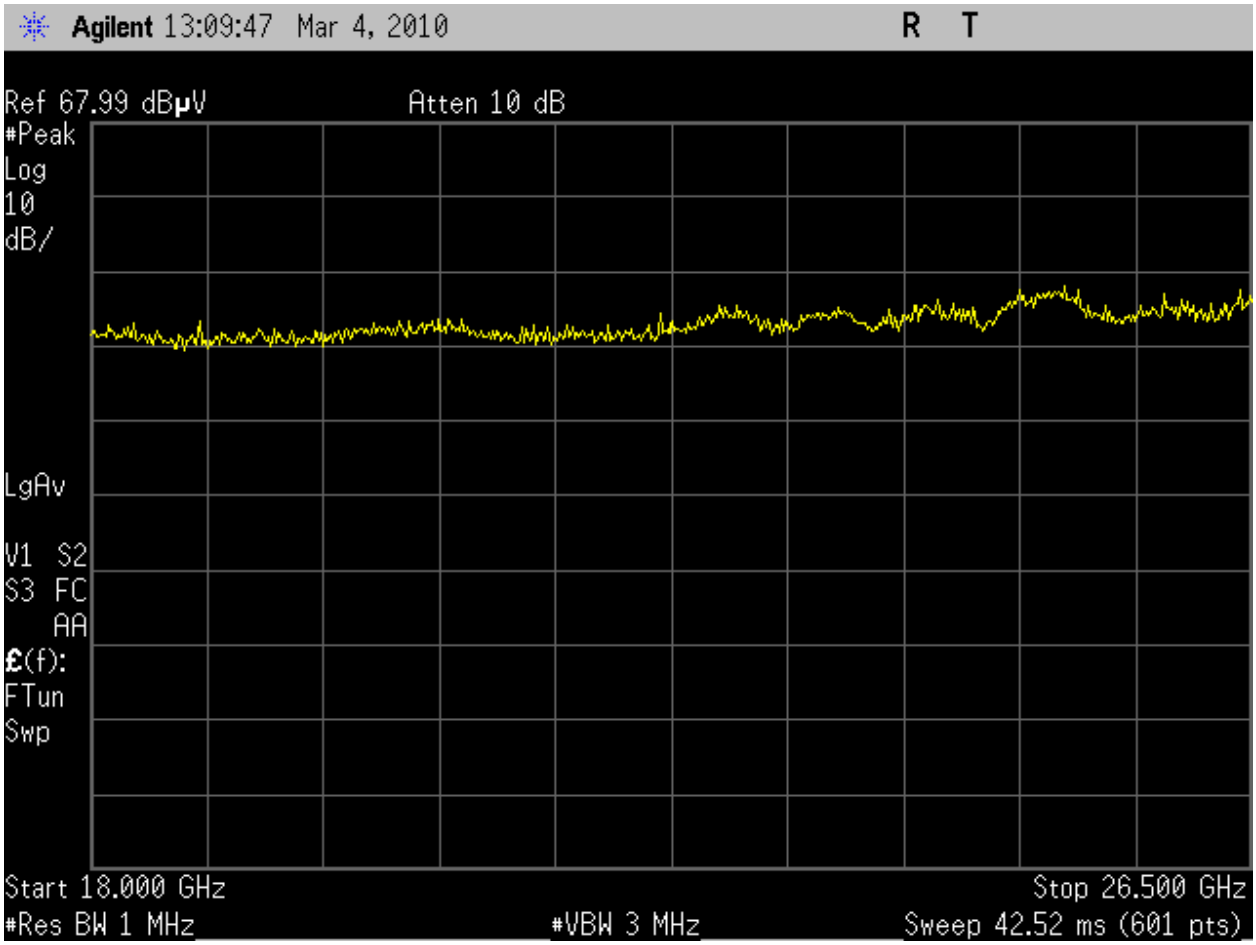
COMMENT	AL51000 Antenna 5 to 18 GHz



Spurious/Harmonic Emissions
1 GHz to 40 GHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519	1 m	Horn	1 MHz	3 MHz	Peak

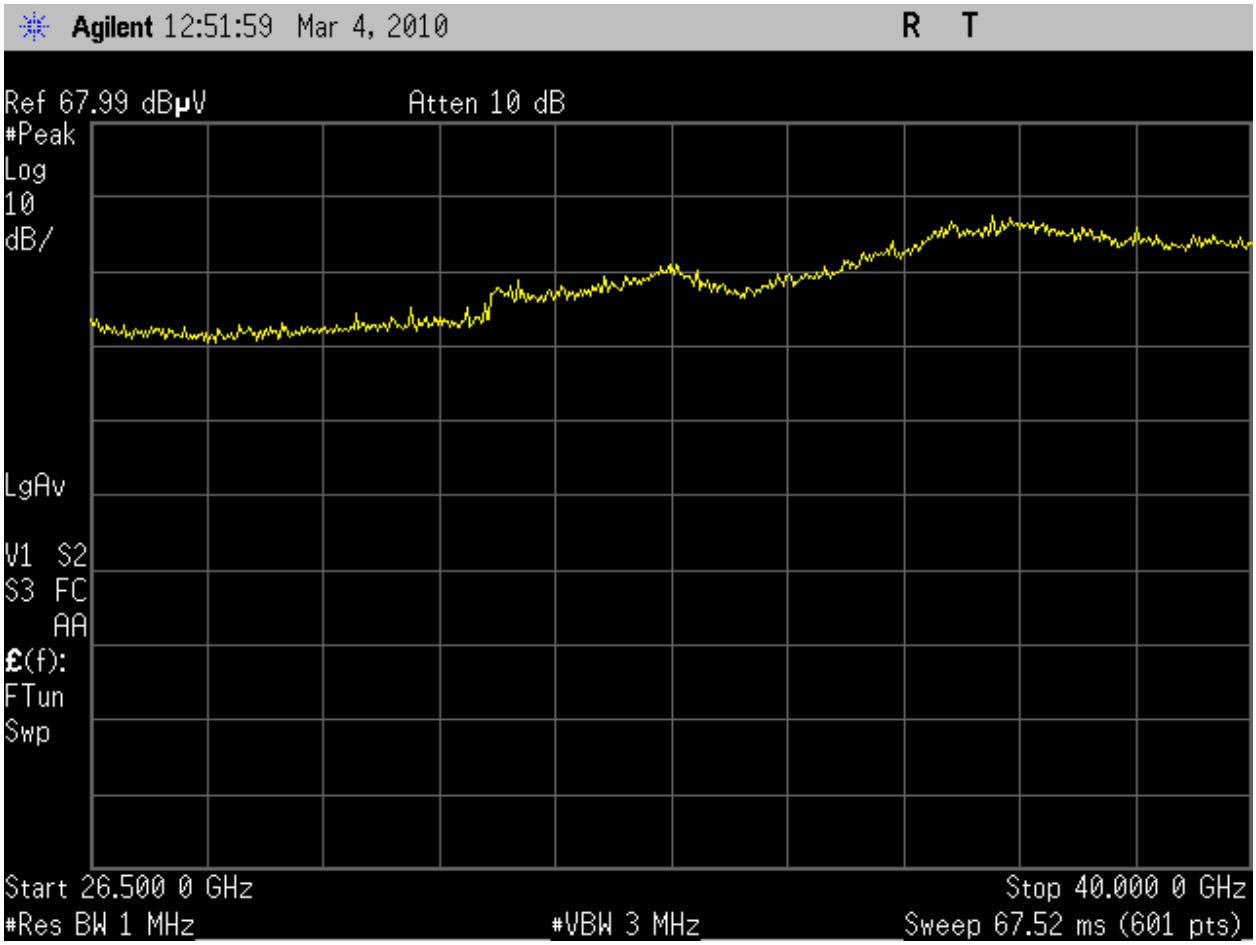
COMMENT	AL51000 Antenna 18 to 26.5 GHz



Spurious/Harmonic Emissions
1 GHz … 40 GHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519	.3 m	Horn	1 MHz	3 MHz	Peak

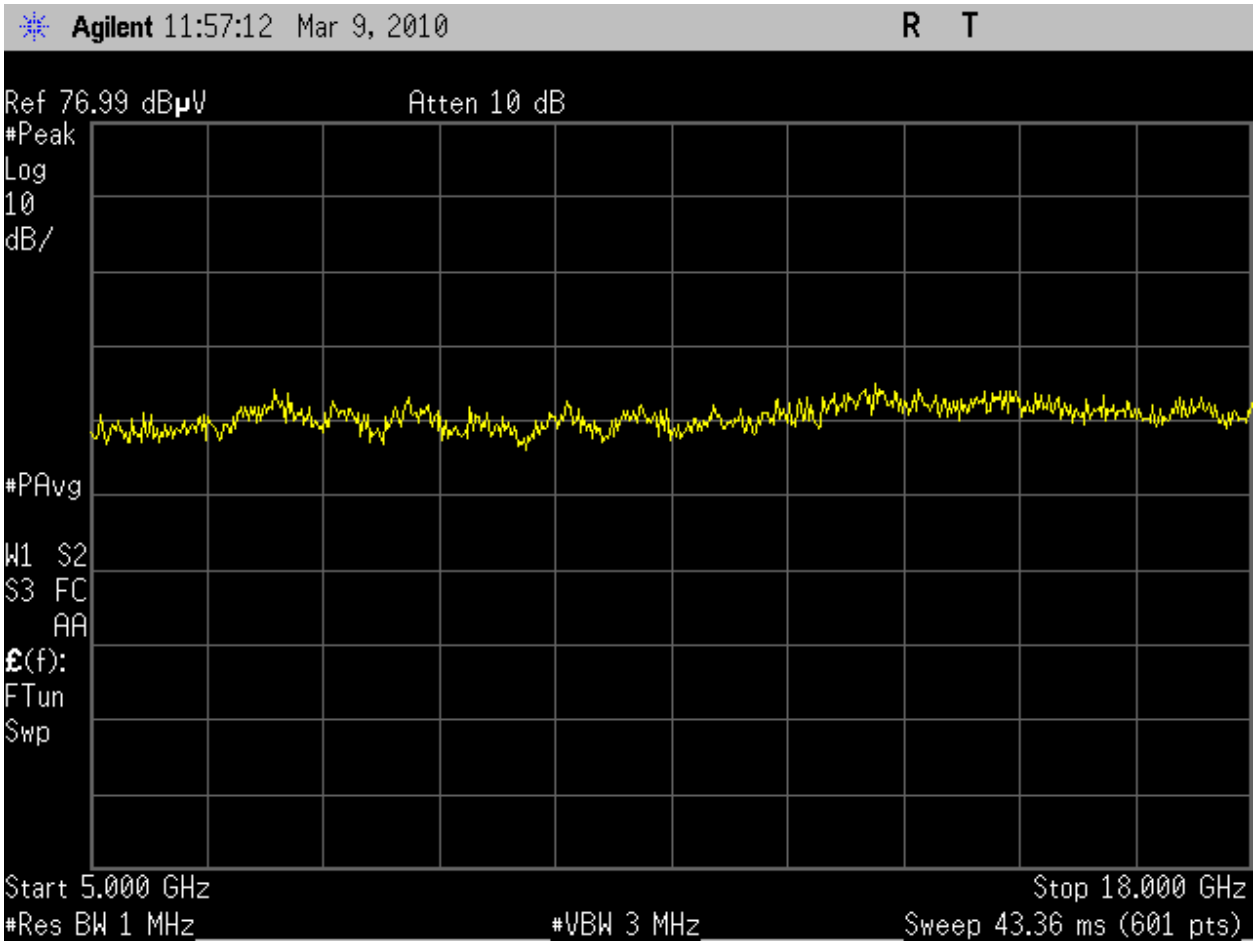
COMMENT	AL51000 Antenna 26.5 to 40 GHz



Spurious/Harmonic Emissions
1 GHz … 40 GHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 9, 2010	15.519	1 m	Horn	1 MHz	3 MHz	Peak

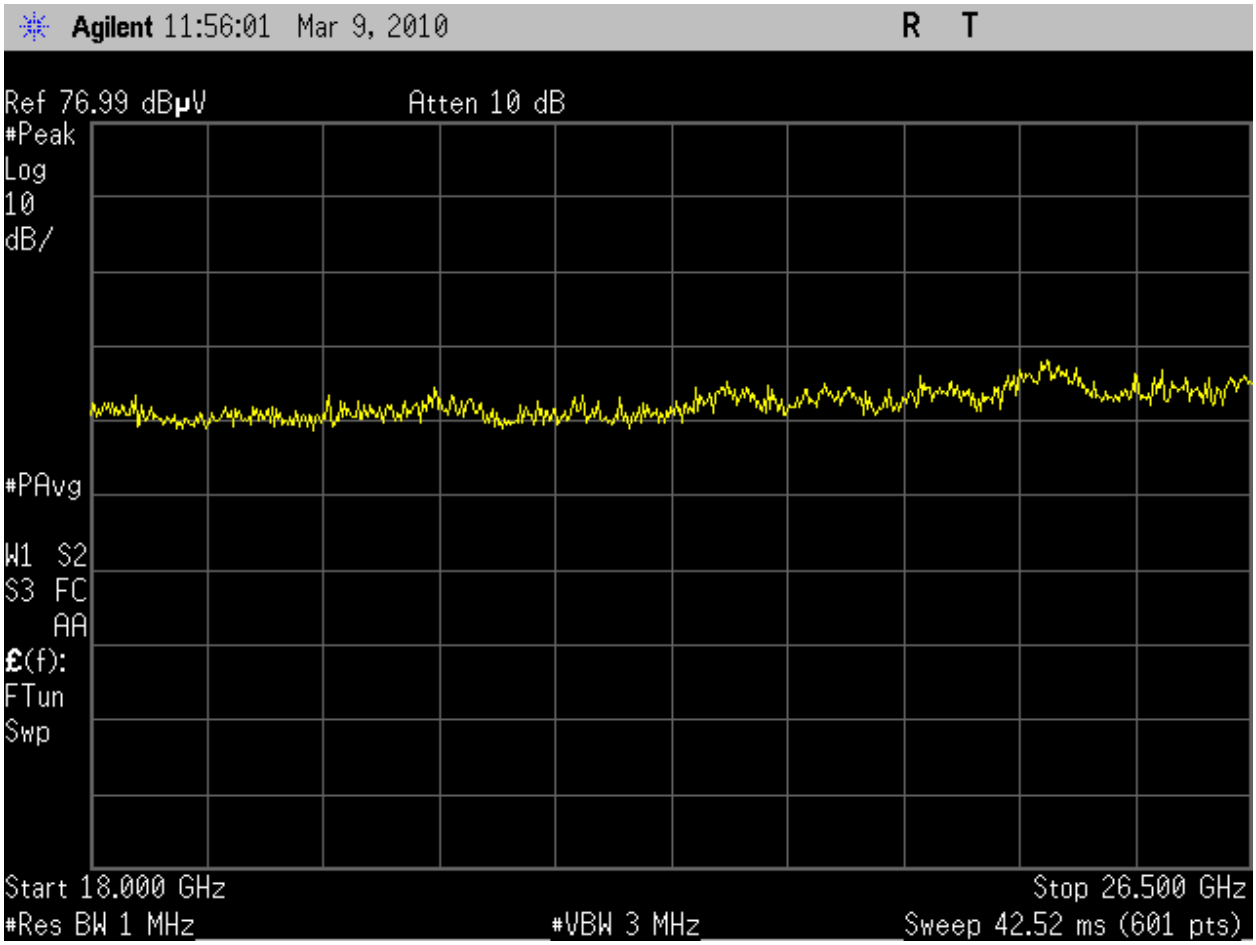
COMMENT	ADM6P Antenna 5 to 18 GHz



Spurious/Harmonic Emissions
1 GHz … 40 GHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 9, 2010	15.519	1 m	Horn	1 MHz	3 MHz	Peak

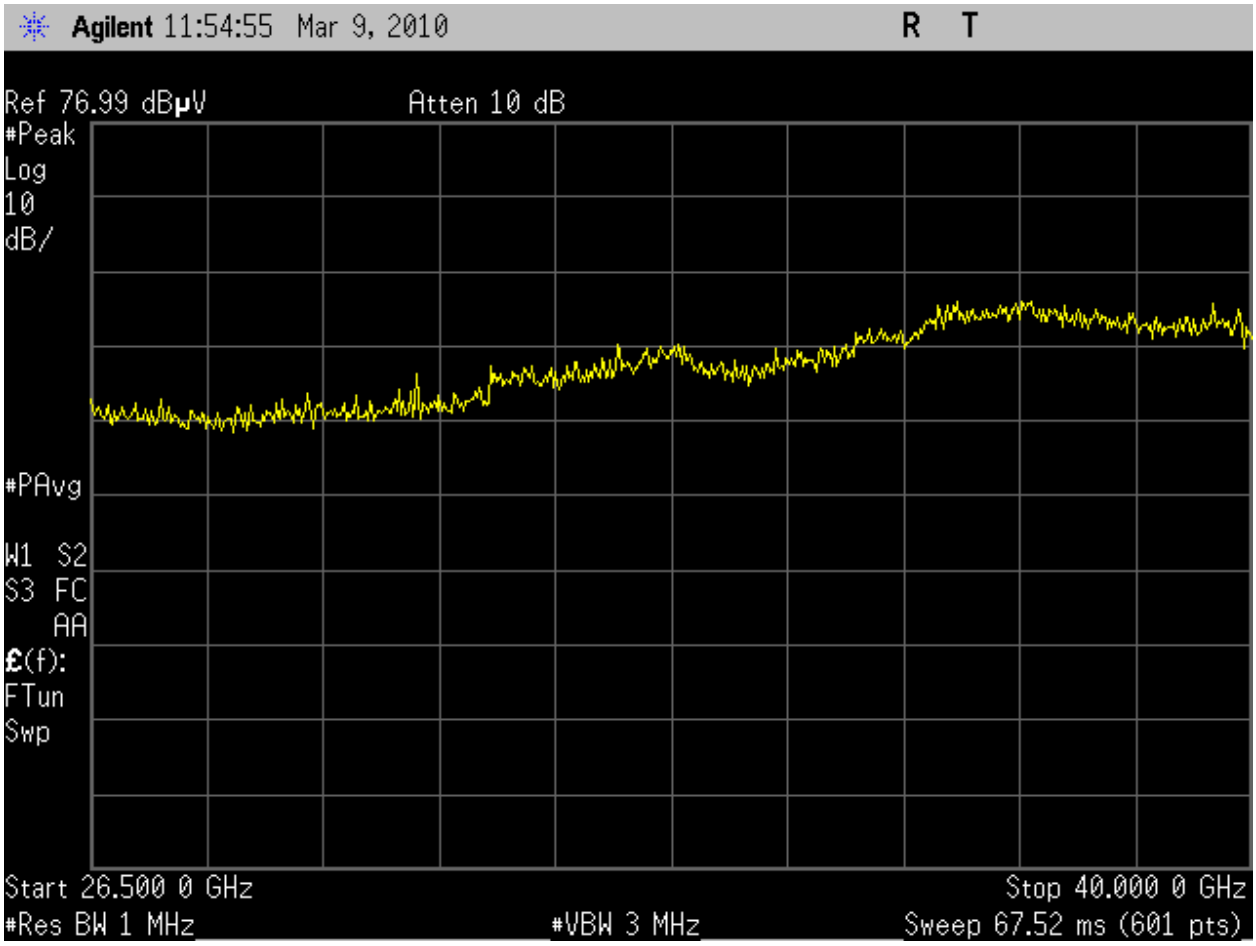
COMMENT	ADM6P Antenna 18 to 26.5 GHz



Spurious/Harmonic Emissions
1 GHz … 40 GHz

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 9, 2010	15.519	.3 m	Horn	1 MHz	3 MHz	Peak

COMMENT	ADM6P Antenna 26.5 to 40 GHz

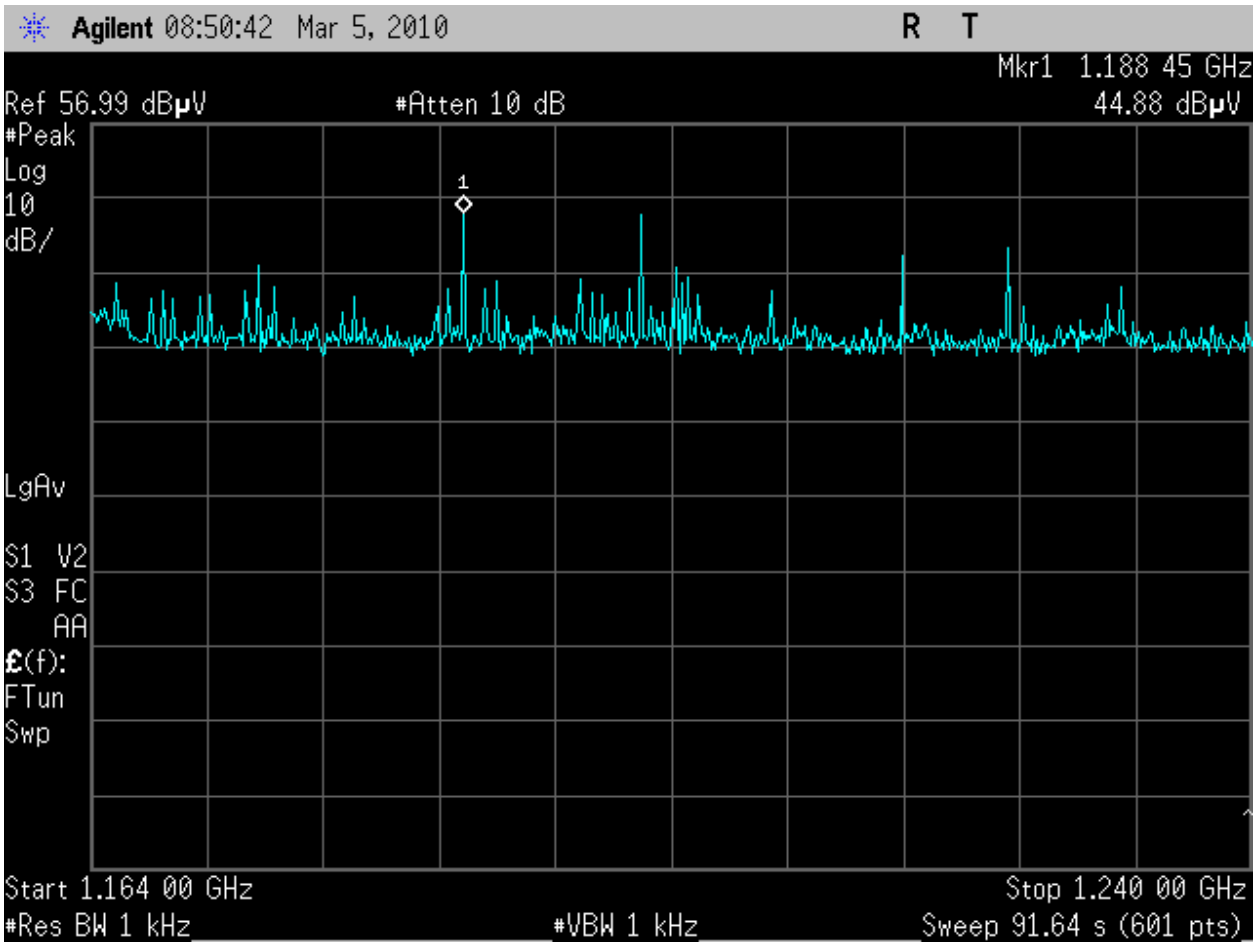


Spurious Radiated Emissions in GPS Bands

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 5, 2010	15.519(d)	3 m	Horn	1 kHz	1 kHz	Peak

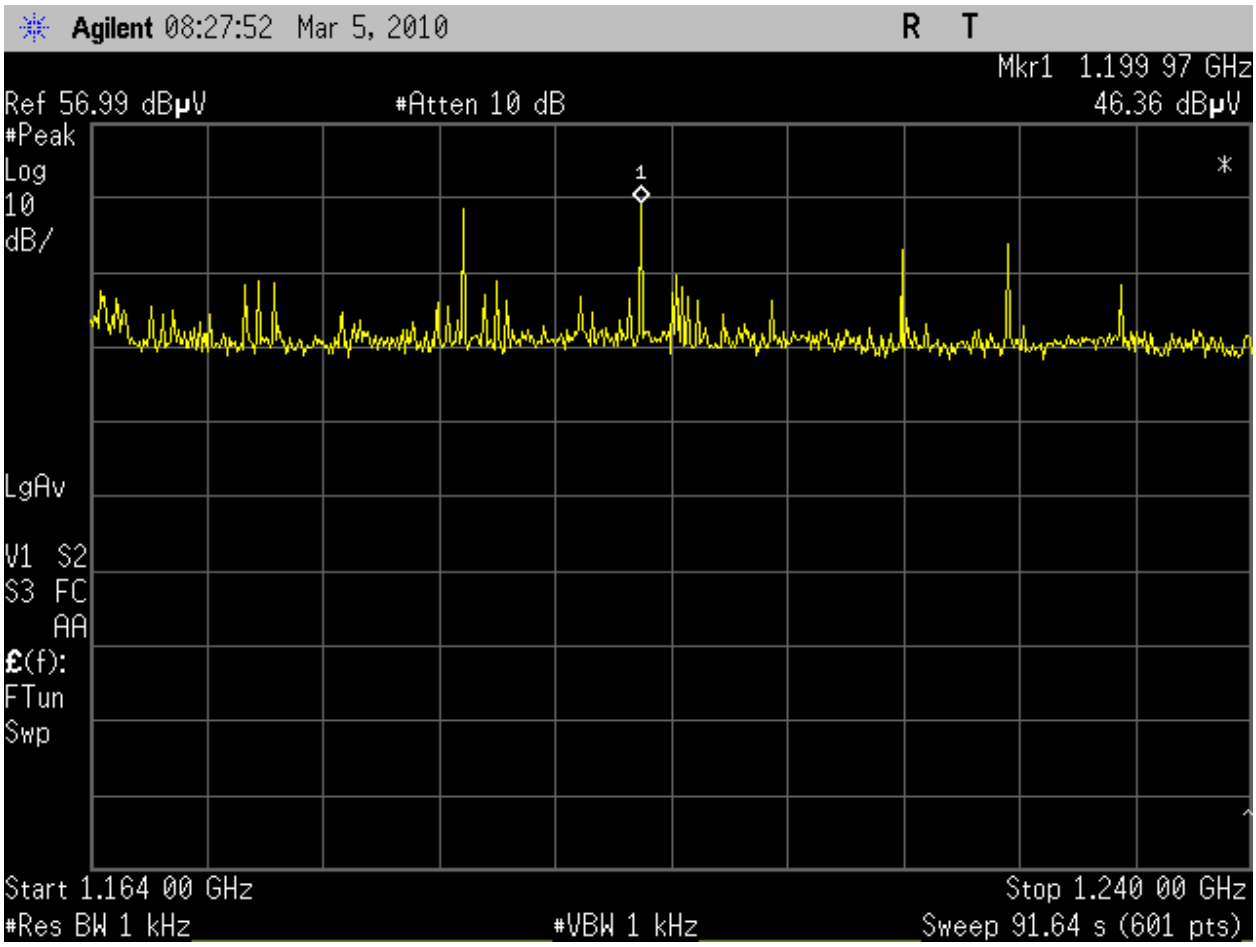
COMMENT	Transmitting ADM6P Antenna BG 1 1164 MHz to 1240 MHz

ADM6P Antenna



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Antenna Terminated



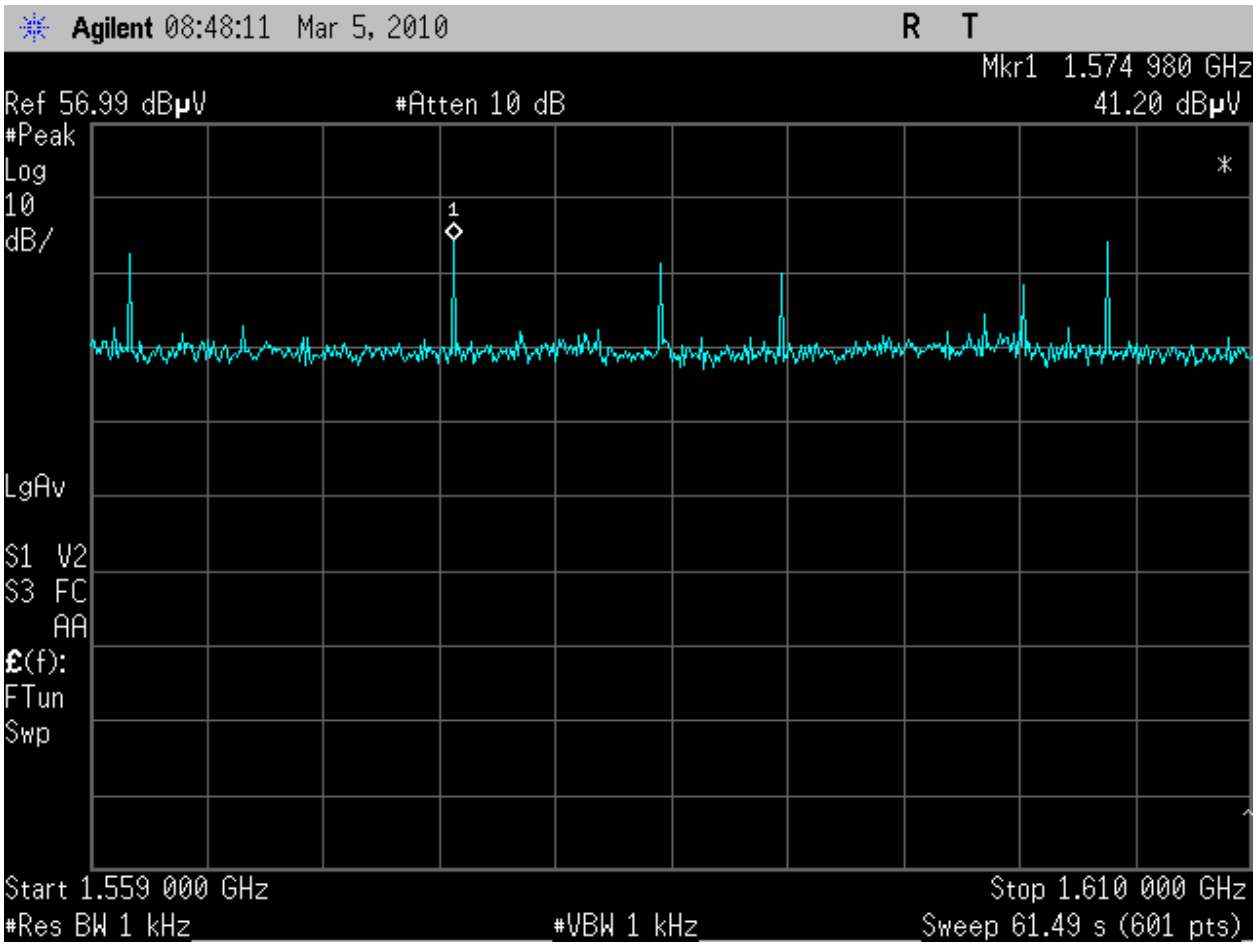
NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Spurious Radiated Emissions in GPS Bands

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 5, 2010	15.519(d)	3 m	Horn	1 kHz	1 kHz	Peak

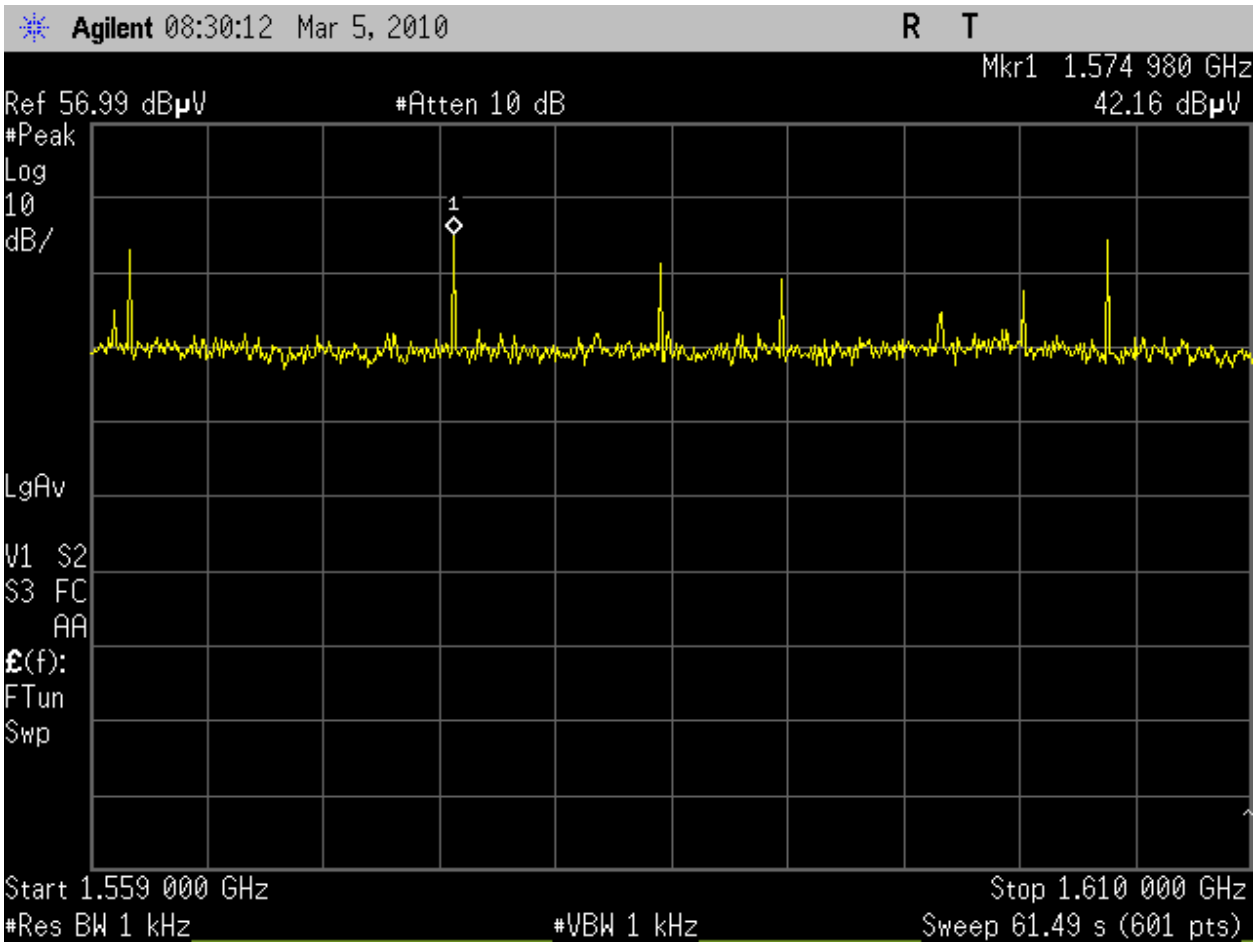
COMMENT	Transmitting ADM6P Antenna BG 1 1559 MHz to 1610 MHz

ADM6P Antenna



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Antenna Terminated



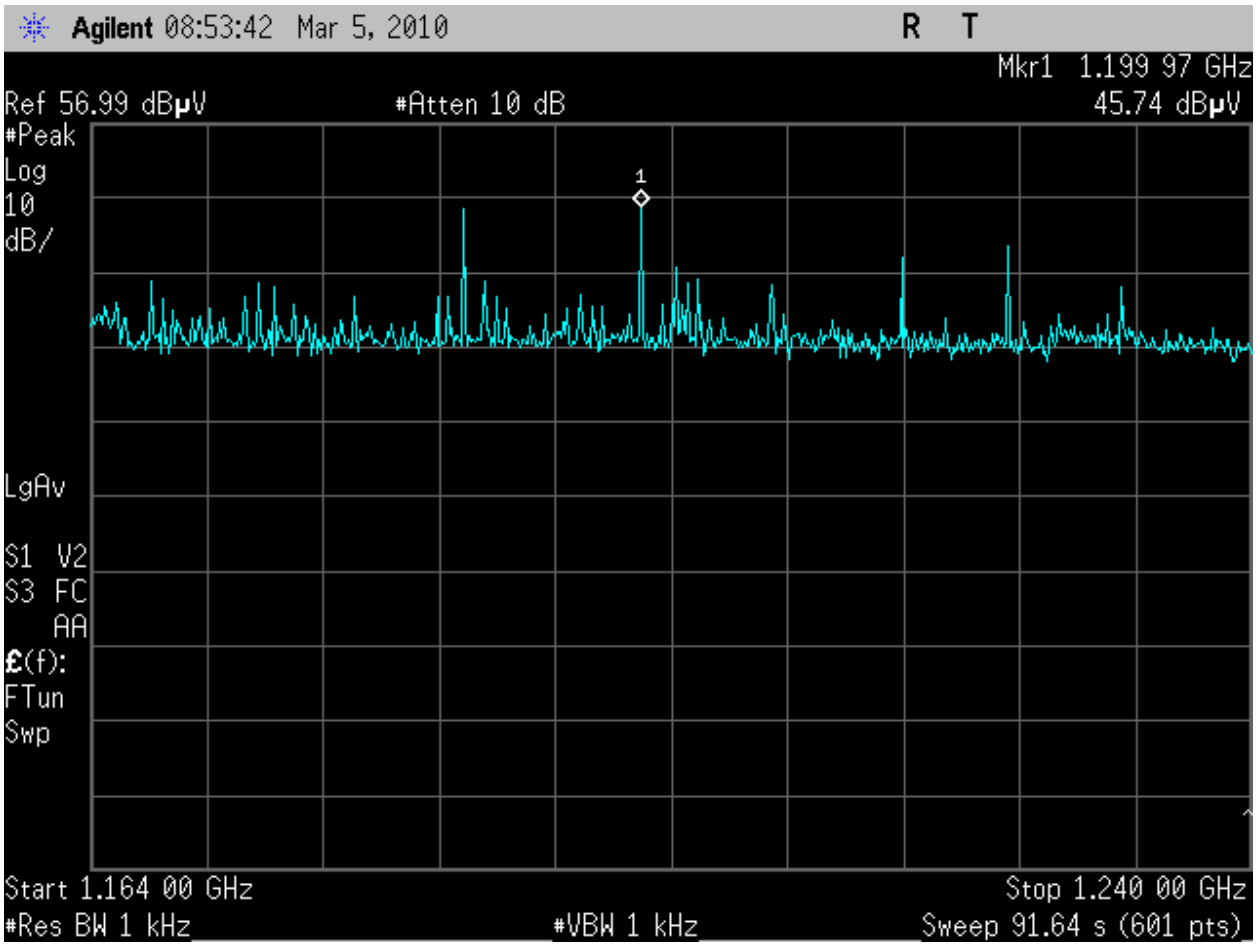
NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Spurious Radiated Emissions in GPS Bands

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 5, 2010	15.519(d)	3 m	Horn	1 kHz	1 kHz	Peak

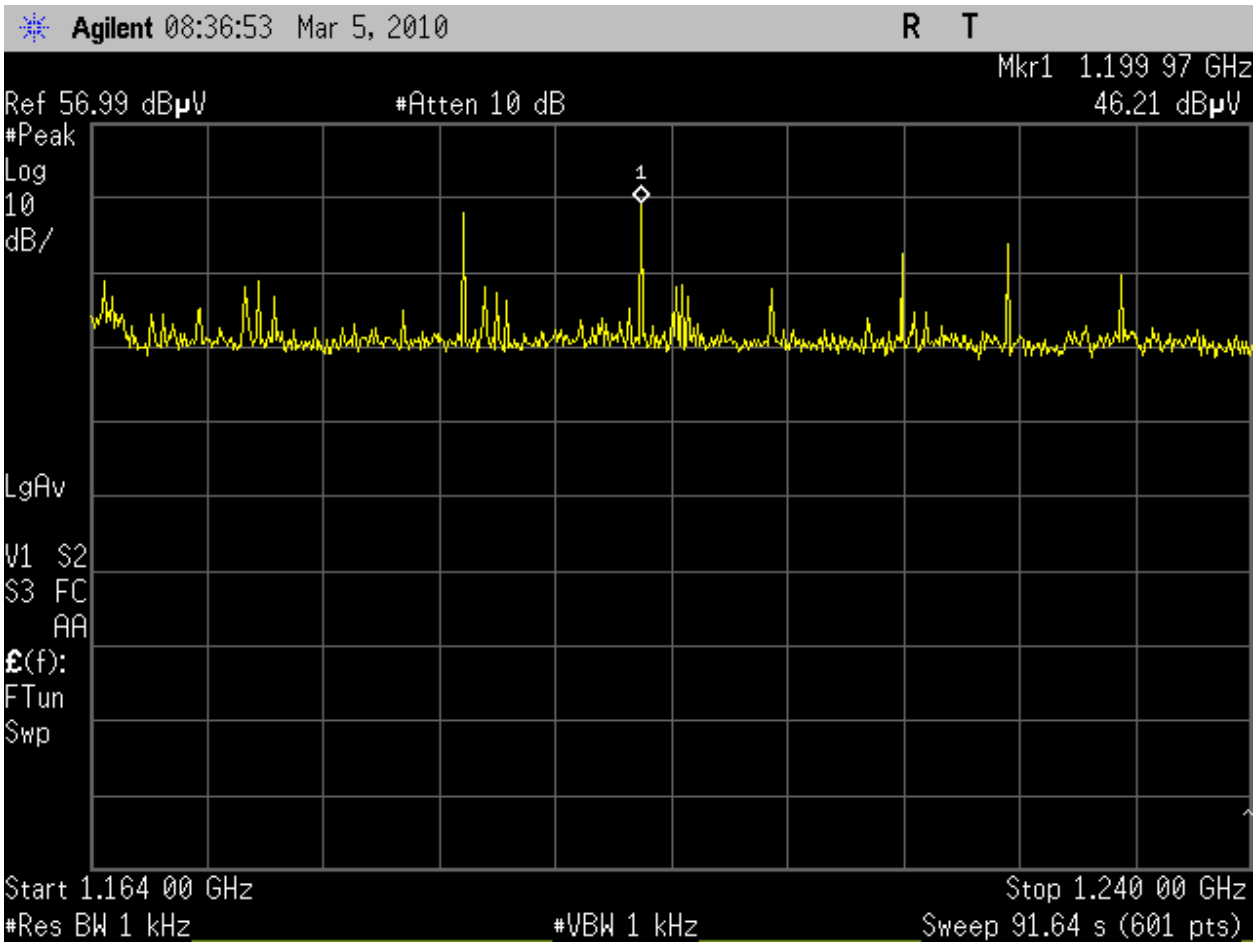
COMMENT	Transmitting ADM6P Antenna BG 3 1164 MHz to 1240 MHz

ADM6P Antenna



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Antenna Terminated



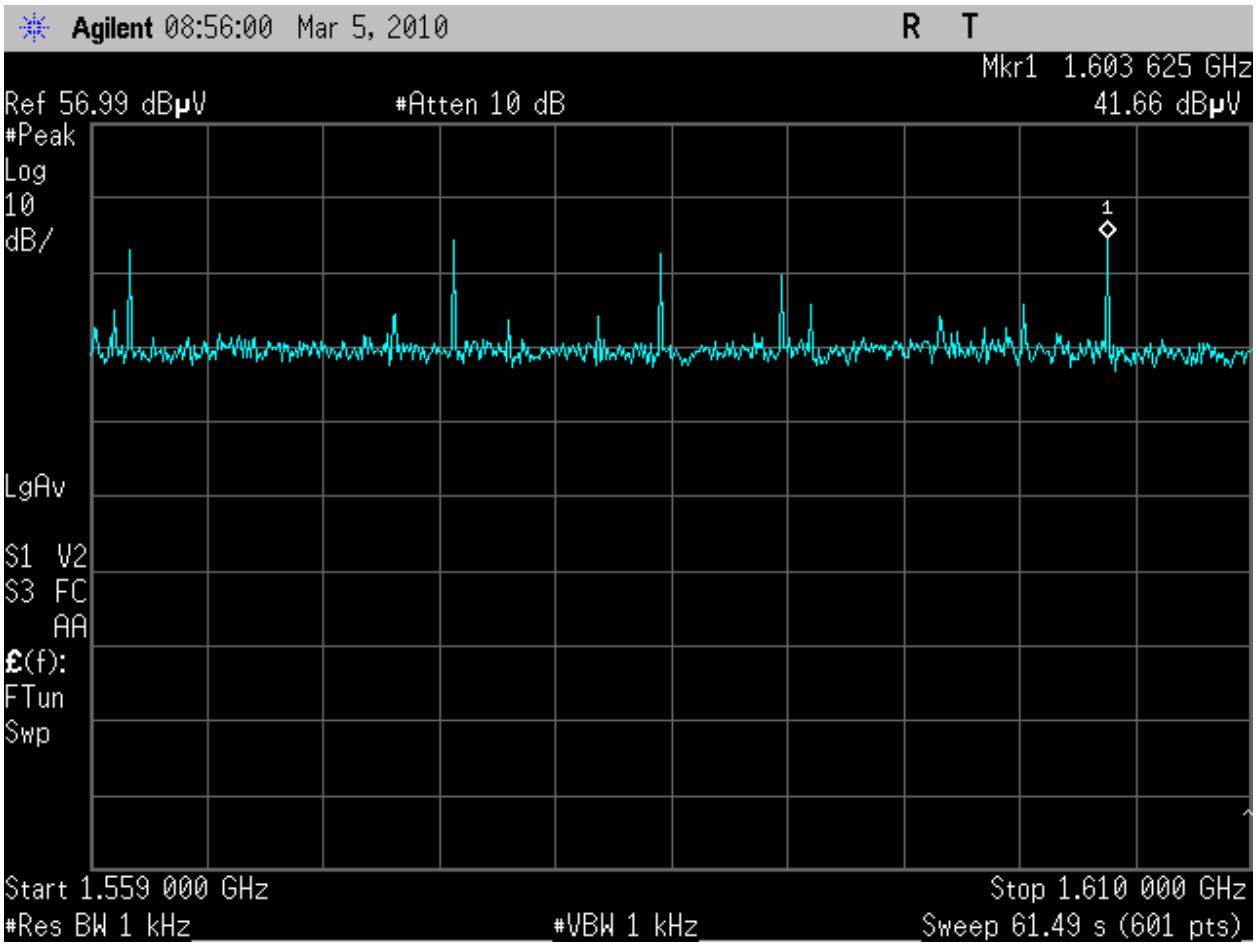
NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Spurious Radiated Emissions in GPS Bands

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 5, 2010	15.519(d)	3 m	Horn	1 kHz	1 kHz	Peak

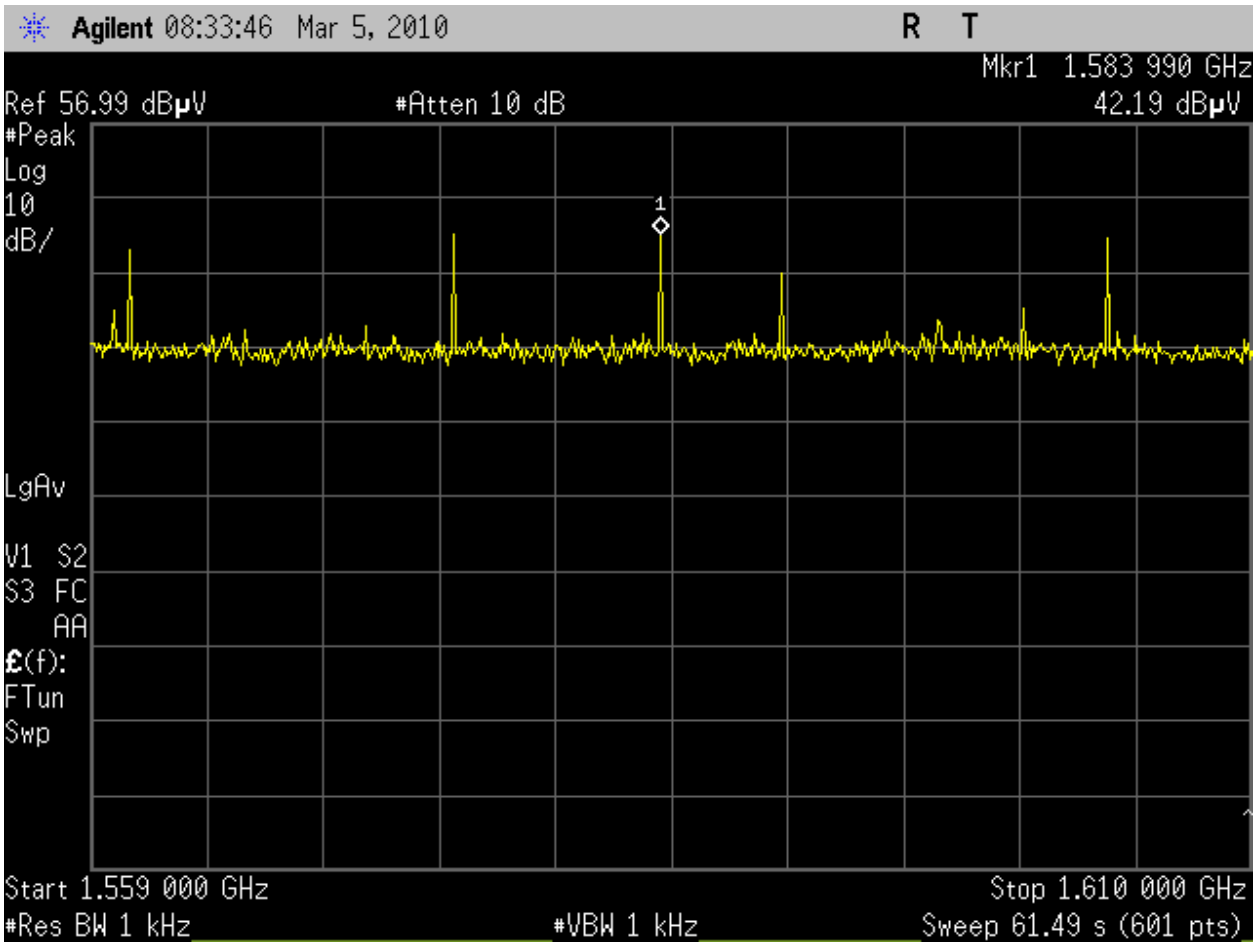
COMMENT	Transmitting ADM6P Antenna BG3 1559 MHz to 1610 MHz

ADM6P Antenna



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Antenna Terminated



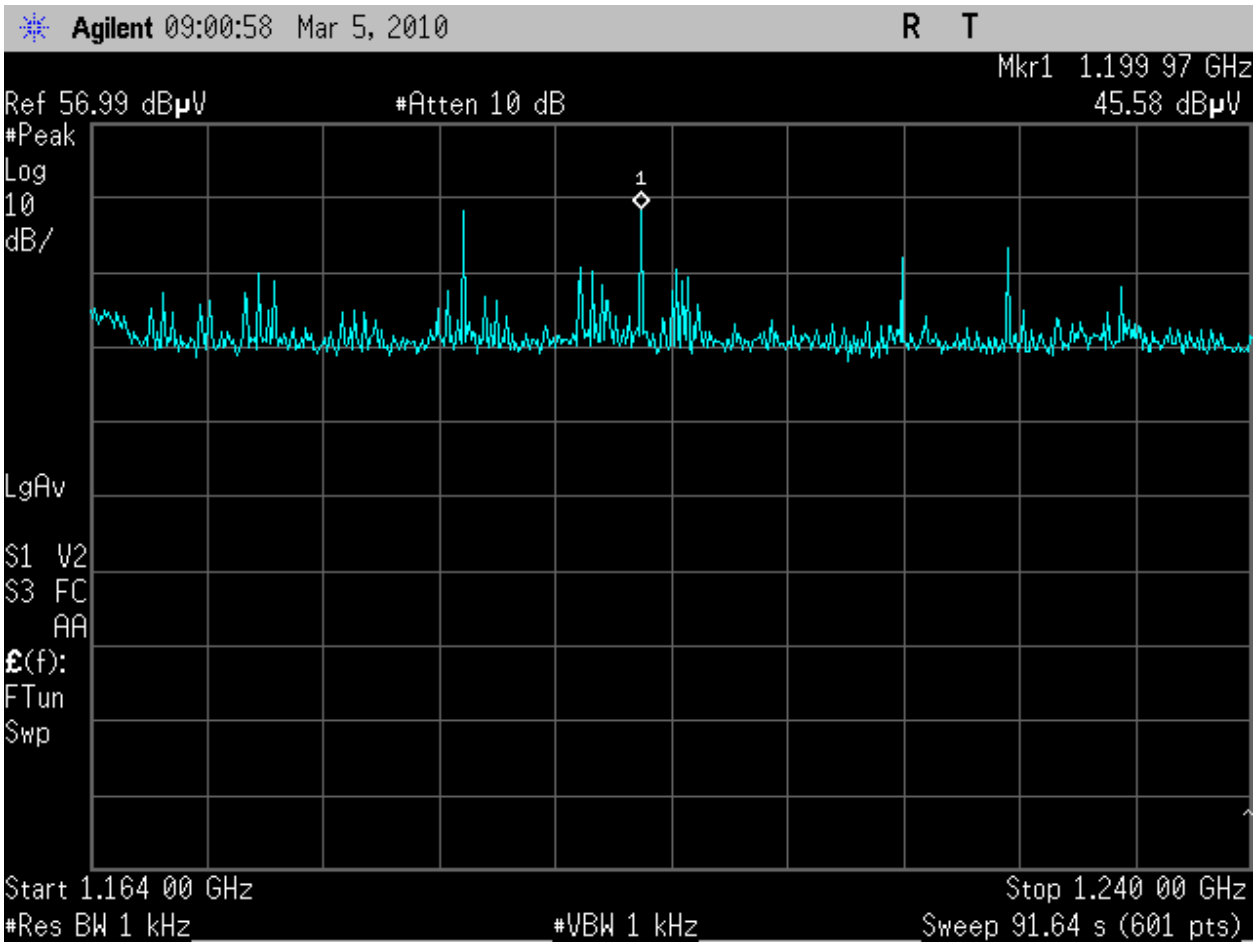
NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Spurious Radiated Emissions in GPS Bands

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 5, 2010	15.519(d)	3 m	Horn	1 kHz	1 kHz	Peak

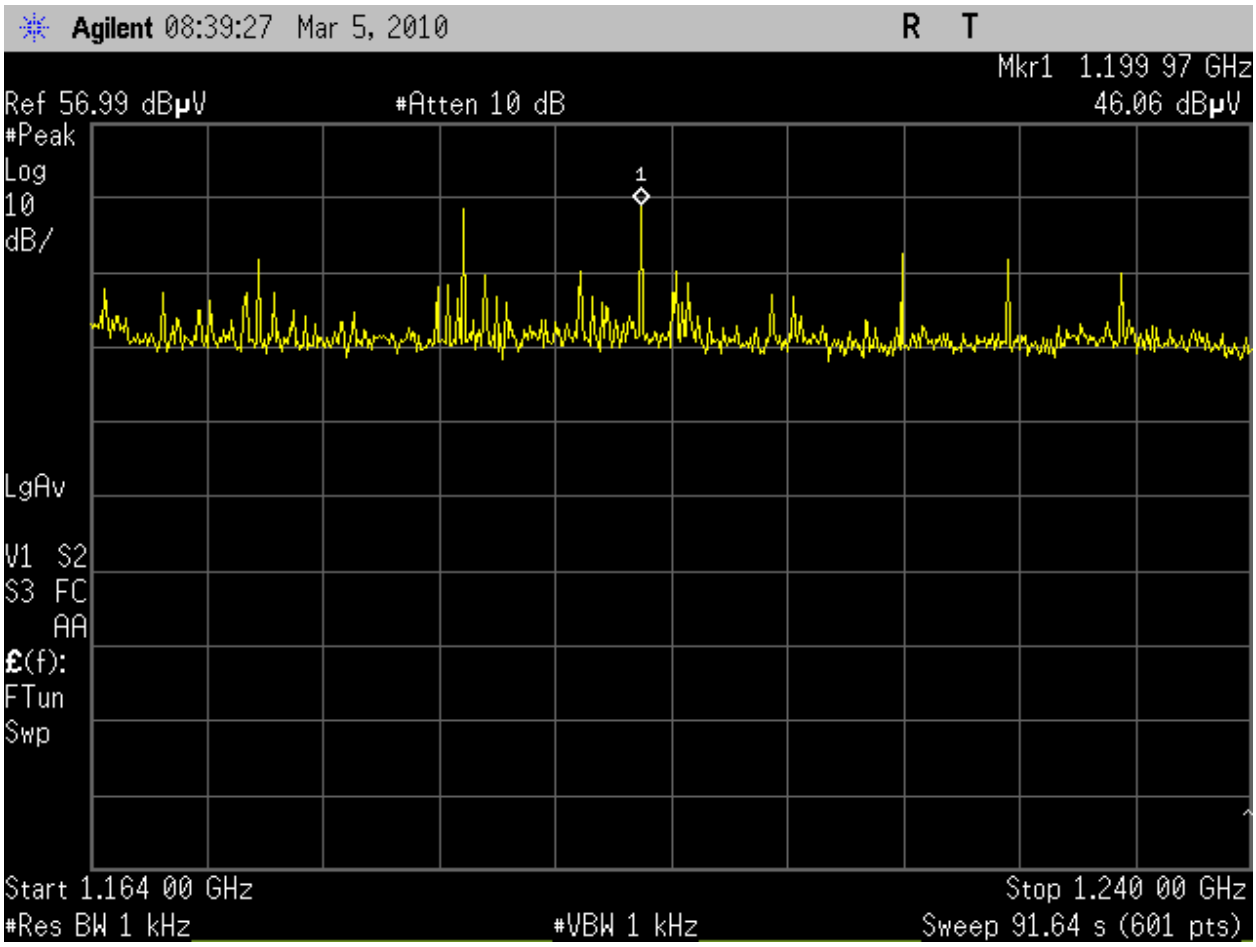
COMMENT	Transmitting ADM6P Antenna BG6 1164 MHz to 1240 MHz

ADM6P Antenna



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Antenna Terminated



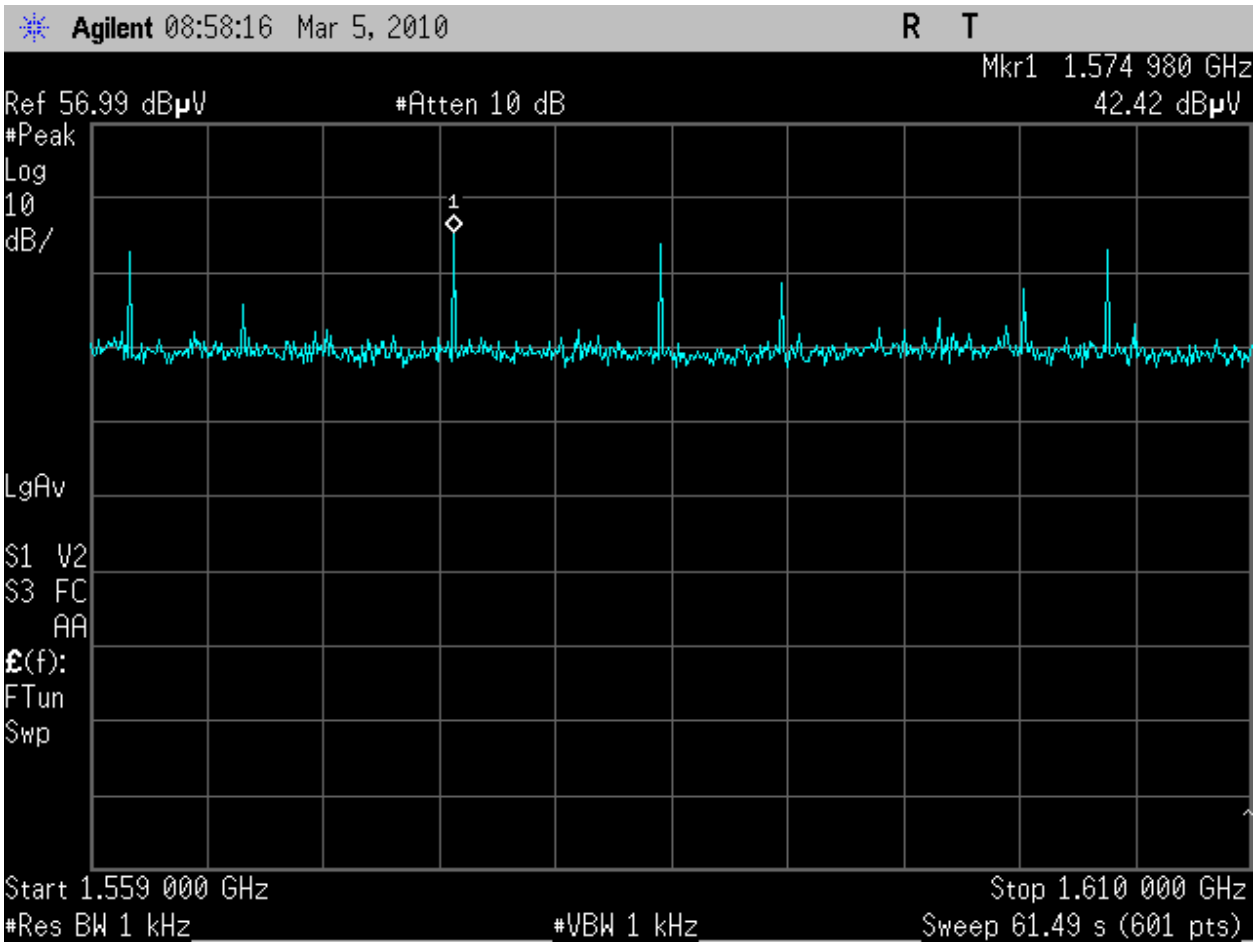
NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Spurious Radiated Emissions in GPS Bands

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 5, 2010	15.519(d)	3 m	Horn	1 kHz	1 kHz	Peak

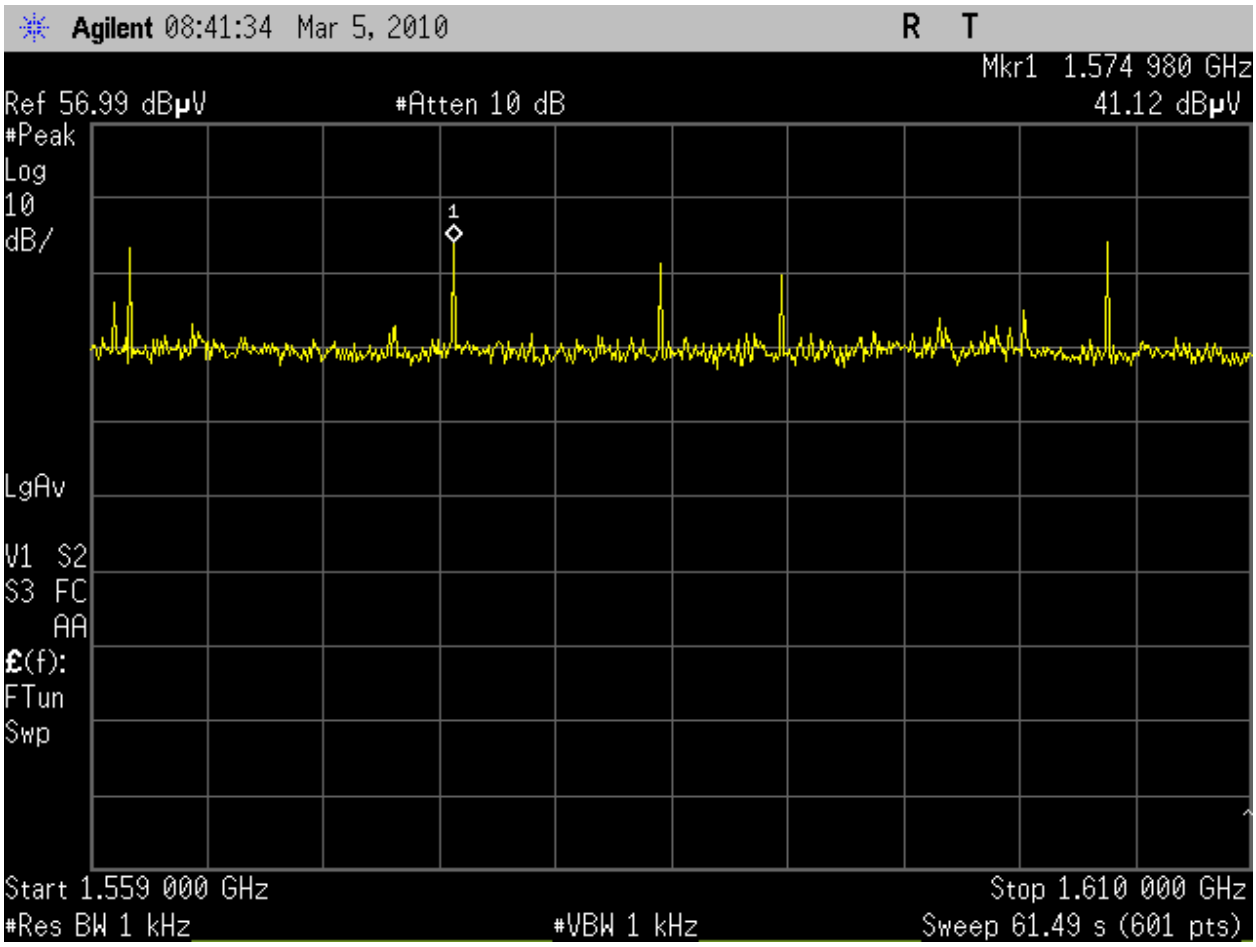
COMMENT	Transmitting ADM6P Antenna BG6 1559 MHz to 1610 MHz

ADM6P Antenna



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Antenna Terminated



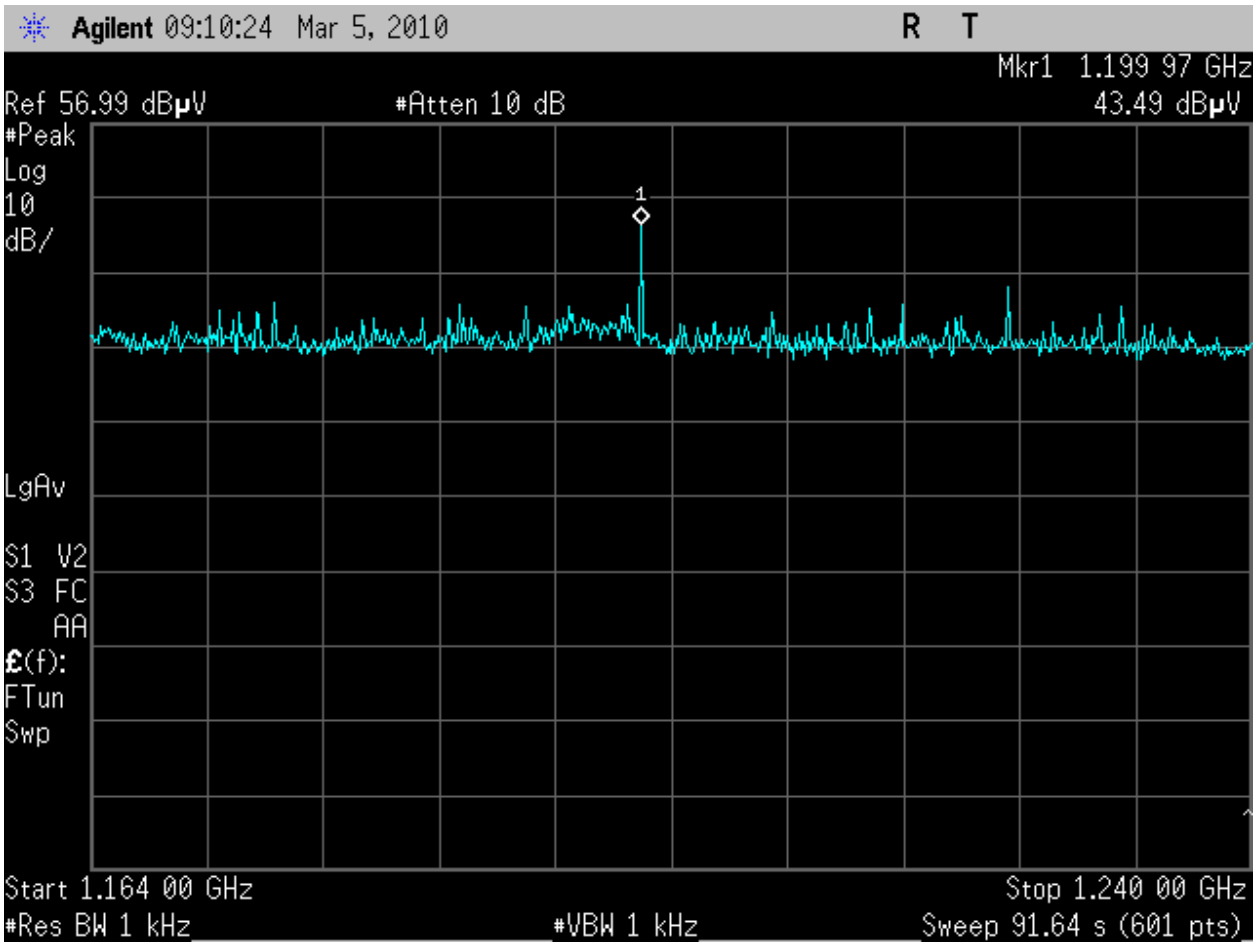
NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Spurious Radiated Emissions in GPS Bands

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 5, 2010	15.519(d)	3 m	Horn	1 kHz	1 kHz	Peak

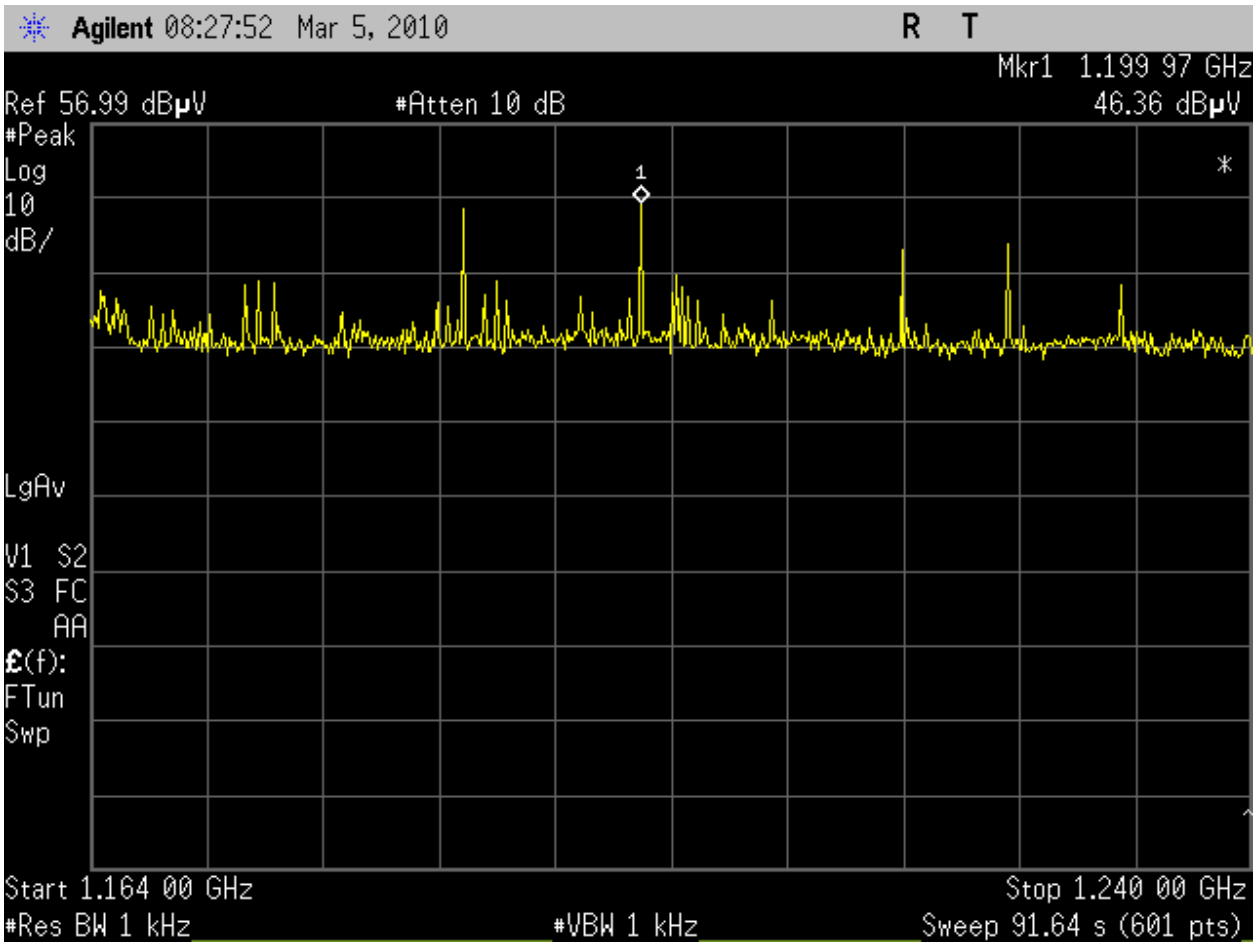
COMMENT	Transmitting AL51000 Antenna BG1 1164 MHz to 1240 MHz

AL51000 Antenna



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Antenna Terminated



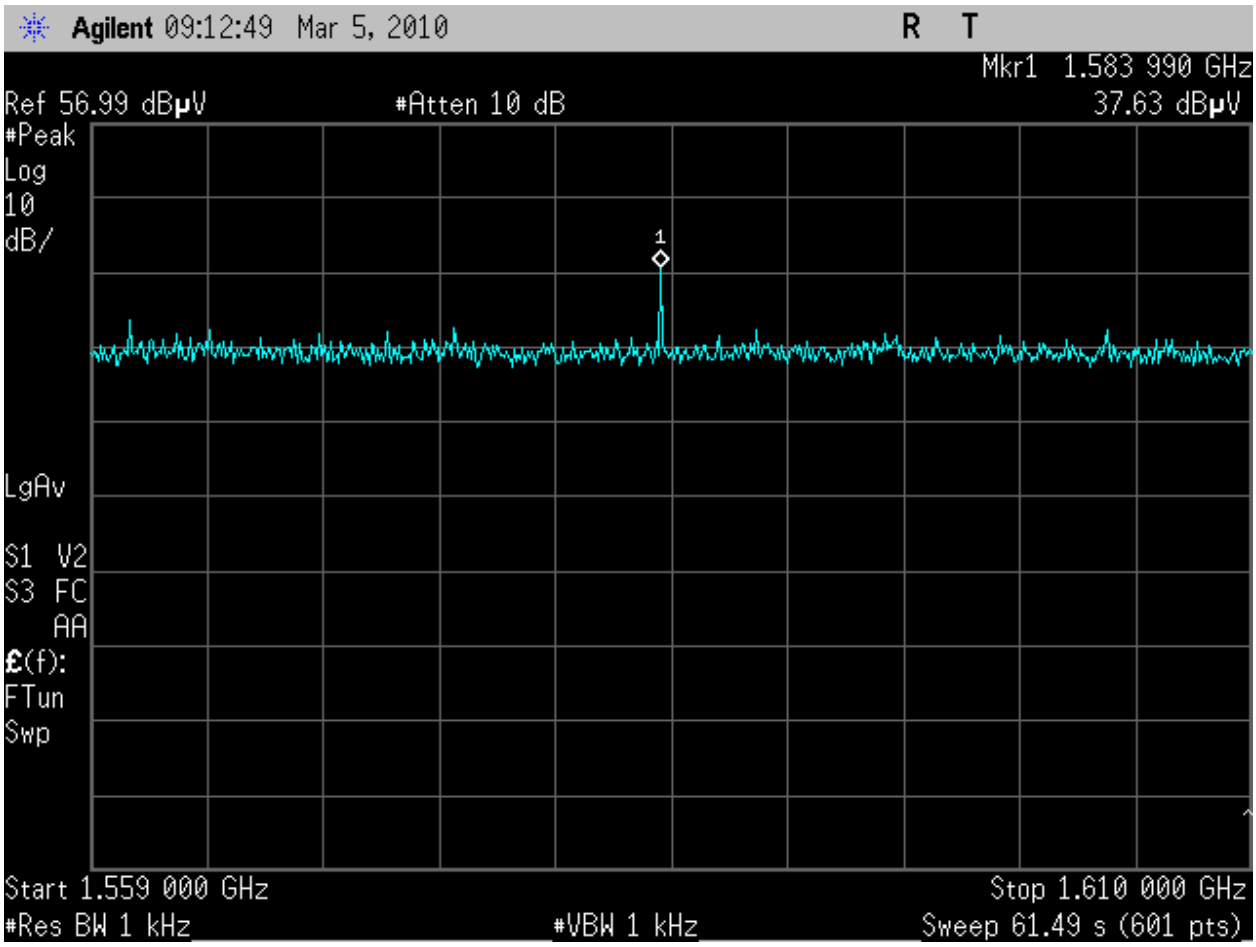
NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Spurious Radiated Emissions in GPS Bands

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 5, 2010	15.519(d)	3 m	Horn	1 kHz	1 kHz	Peak

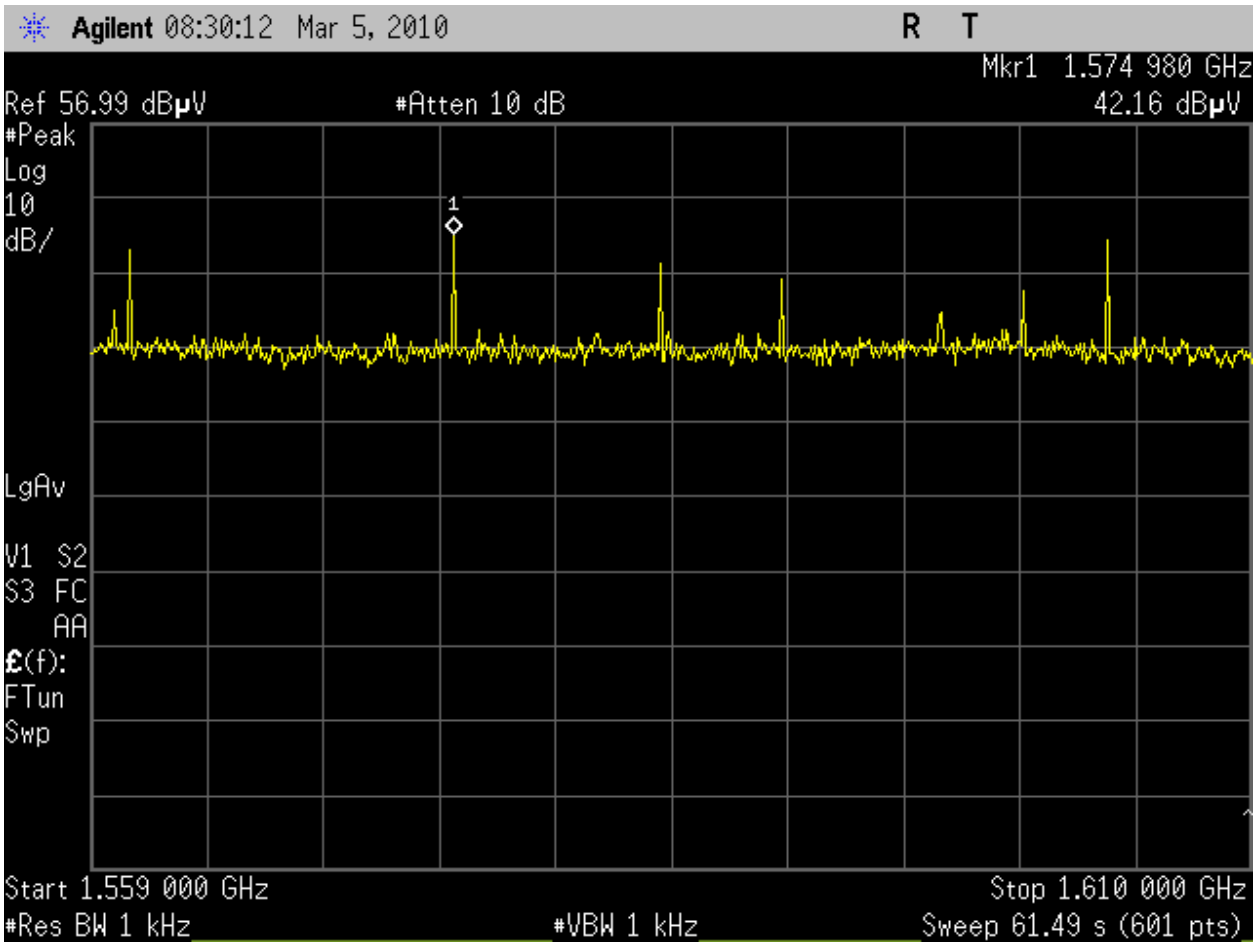
COMMENT	Transmitting AL51000 Antenna BG1 1559 MHz to 1610 MHz

AL51000 Antenna



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Antenna Terminated



NOTE: All digital emissions from the transmitter radiating from the antenna port meet the limits of 47 CFR, Part 15, Subpart F, 15.519(d), 15.209

Peak Emissions within 50 MHz Bandwidth

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting Low Channel AL51000 Antenna BG 1 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm.						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
3.2196	0	1	67.4	40.8	31.7	3.2	61.5	70.7	-9.2	Peak

Result = Pass

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting Mid Channel AL51000 Antenna BG 1 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
3.7514	0	1	64	40.7	32.1	3.3	58.7	70.7	-12.0	Peak

Result = Pass

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting High Channel AL51000 Antenna BG 1 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
4.3366	0	1	65.5	41.2	32.5	3.8	60.6	70.7	-10.1	Peak

Result = Pass

Peak Emissions within 50 MHz Bandwidth

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting Low Channel ADM6P Antenna BG 1 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
3.2196	0	1	67.8	40.8	31.7	3.2	61.9	70.7	-8.8	Peak

Result = Pass

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting Mid Channel ADM6P Antenna BG 1 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
3.7523	0	1	65.1	40.7	32.1	3.3	59.8	70.7	-10.9	Peak

Result = Pass

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting High Channel ADM6P Antenna BG 1 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
4.4037	0	1	66.4	41.5	32.0	3.8	60.7	70.7	-10.0	Peak

Result = Pass

Peak Emissions within 50 MHz Bandwidth

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting Low Channel ADM6P Antenna BG 3 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
6.3672	0	1	63.32	42.9	35.4	4.7	60.6	70.7	-10.1	Peak

Result = Pass

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting Mid Channel ADM6P Antenna BG 3 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
7.0638	0	1	63.42	42.4	36.4	4.9	62.2	70.7	-8.5	Peak

Result = Pass

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting High Channel ADM6P Antenna BG 3 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
7.5874	0	1	61.3	42.1	37.2	4.7	61.1	70.7	-9.6	Peak

Result = Pass

Peak Emissions within 50 MHz Bandwidth

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting Low Channel ADM6P Antenna BG 6 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
7.5639	0	1	61.3	42.6	37.3	4.6	60.5	70.7	-10.2	Peak

Result = Pass

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting Mid Channel ADM6P Antenna BG 6 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
7.9752	0	1	58.9	41.9	37.4	4.7	59.1	70.7	-11.6	Peak

Result = Pass

PROJECT #	DATE	RULE	DISTANCE	ANTENNA	RBW	VBW	DETECTOR
10701-10	March 4, 2010	15.519(e)	1 m	Horn	1 MHz	8 MHz	Peak
COMMENT	Transmitting High Channel ADM6P Antenna BG 6 Note: If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be 20 log(RBW/50)dBm where RBW is the resolution bandwidth in megahertz that is employed. 20 log(1/50) = -33.9dBm						

Frequency (GHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBµV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Detector Function
8.5196	0	1	57.6	41.5	37.2	5.3	58.6	70.7	-12.1	Peak

Result = Pass

End of Report

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