



TESTING
CERT #803.01, 803.02, 803.05, 803.06

**ADDENDUM TO SILEX TECHNOLOGY AMERICA, INC.
TEST REPORT FC08-100**

FOR THE

WIRELESS DEVICE SERVER, SX-510

**FCC PART 15 SUBPART C SECTIONS 15.207, 15.209,
15.407 AND RSS 210 ISSUE 7**

TESTING

DATE OF ISSUE: JANUARY 7, 2009

PREPARED FOR:

Silex Technology America, Inc.
15661 Red Hill Ave., Suite 120
Tustin, CA 92780

P.O. No.: 1424
W.O. No.: 88495

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Date of test: September 23 –
November 19, 2008

Report No.: FC08-100A

This report contains a total of 89 pages and may be reproduced in full only. Partial reproduction may only be done with the written consent of CKC Laboratories, Inc. The results in this report apply only to the items tested, as identified herein.

TABLE OF CONTENTS

Administrative Information	3
Approvals	3
Summary of Results	4
Conditions During Testing.....	4
FCC 15.31(e) Voltage Variation.....	5
FCC 15.31(m) Number Of Channels	5
FCC 15.33(a) Frequency Ranges Tested	5
FCC 15.203 Antenna Requirements	5
EUT Operating Frequency	5
Temperature And Humidity During Testing.....	5
Equipment Under Test (EUT) Description	6
Equipment Under Test	6
Peripheral Devices	6
Report of Emissions Measurements.....	7
Testing Parameters.....	7
FCC 15.207 Conducted Emissions	9
FCC 15.209 Radiated Emissions	15
ITU-R 55/1 Bandedge.....	24
FCC 15.407(a)(1) Power Limits	30
FCC 15.407(a)(3) Power Limits	35
26 dB Bandwidth	40
FCC 15.407(a)(5) Peak Power Spectral Density	49
FCC 15.407(a)(6) Peak Excursion.....	58
FCC 15.407(b)(1) Undesirable Emission Limits	67
FCC 15.407(b)(4) Undesirable Emission Limits	74
FCC 15.407(g) Frequency Stability	81
RSS 210 99% Bandwidth.....	83

ADMINISTRATIVE INFORMATION

DATE OF TEST: September 23 -
November 19, 2008

DATE OF RECEIPT: September 23, 2008

REPRESENTATIVE: Ron Tozaki

MANUFACTURER:
Silex Technology America, Inc.
15661 Red Hill Ave., Suite 120
Tustin, CA 92780

TEST LOCATION:
CKC Laboratories, Inc.
110 Olinda Place
Brea, CA 92823

TEST METHOD: ANSI C63.4 (2003), RSS 210 Issue 7 and RSS GEN Issue 2

PURPOSE OF TEST:

Original Report: To perform the testing of the Wireless Device Server, SX-510 with the requirements for FCC Part 15 Subpart C Sections 15.207, 15.209, 15.407 and RSS 210 devices.
Addendum A: To add voltage variations information on page 5, correct the data sheet on page 16 and add antenna gain information pages 30 and 35 with no new testing.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

TEST PERSONNEL:



Septimiu Apahidean, EMC Engineer



Eddie Wong, Senior EMC Engineer

SUMMARY OF RESULTS

Test	Specification	Results
Conducted Emissions	FCC Part 15 Subpart B Section 15.207	Pass
Radiated Emissions	FCC Part 15 Subpart B Section 15.209	Pass
Bandedge	ITU-R 55/1	Pass
Power Limits	FCC 15.407(a)(1)	Pass
Power Limits	FCC 15.407(a)(3)	Pass
26 dB Bandwidth		Pass
Peak Power Spectral Density	FCC 15.407(a)(5)	Pass
Peak Excursion	FCC 15.407(a)(6)	Pass
Undesirable Emission Limits	FCC 15.407(b)(1)	Pass
Undesirable Emission Limits	FCC 15.407(b)(4)	Pass
Frequency Stability	FCC 15.407(g)	Pass
99% Bandwidth	RSS 210/RSS GEN	Pass
Site File No.	FCC Site No. 90473 Industry of Canada File No. IC 3172-A	

CONDITIONS DURING TESTING

No modifications to the EUT were necessary during testing.

FCC 15.31(e) Voltage Variations

Nominal voltage is 120 VAC. When the voltage was set at 102 VAC, no change in the transmitter characteristics was detected. When the voltage was set at 138VAC, no change in the transmitter characteristics was detected.

FCC 15.31(m) Number Of Channels

This device was tested on six channels.

FCC 15.33(a) Frequency Ranges Tested

15.207 Conducted Emissions: 150 kHz – 30 MHz

15.209 Radiated Emissions: 9 kHz – 40 GHz

15.407 Radiated Emissions: 1-40 GHz

FCC 15.203 Antenna Requirements

The antenna is an integral part of the EUT and is non-removable; therefore the EUT complies with Section 15.203 of the FCC rules.

EUT Operating Frequency

The EUT was operating at 5180 MHz – 5805 MHz.

Temperature And Humidity During Testing

The temperature during testing was within +15°C and + 35°C.

The relative humidity was between 20% and 75%.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

EQUIPMENT UNDER TEST

Power Supply

Manuf: SL Power

Model: MW170KB0503F01

Serial: NA

Wireless Device Server

Manuf: Silex Technology America, Inc.

Model: SX-510

Serial: 4

FCC ID: pending

MiniPCI Wireless Board

Manuf: Silex Technology America, Inc.

Model: SX-10WAG

Serial: 0080923A9E74

Antenna

Manuf: Silex Technology America, Inc.

Model: 128-00193-100 Rev A

Serial: NA

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Wireless Access Point

Manuf: 3Com

Model: WL-526

Serial: 0200/MUGADEV4723F

Laptop

Manuf: Sony

Model: PCG-982L

Serial: 28323330

REPORT OF EMISSIONS MEASUREMENTS

TESTING PARAMETERS

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula. This reading was then compared to the applicable specification limit.

SAMPLE CALCULATIONS		
	Meter reading	(dB μ V)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dB μ V/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. When conducted emissions testing was performed, a 10 dB external attenuator was used with internal offset correction in the analyzer.

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the highest readings, this is indicated as a "QP" or an "Ave" on the appropriate rows of the data sheets. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer/receiver readings were recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer/receiver. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.

FCC 15.207 CONDUCTED EMISSIONS

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. • 110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: **Silex Technology, America, Inc.**
 Specification: **FCC 15.207 COND [AVE]**
 Work Order #: **88495** Date: 9/23/2008
 Test Type: **Conducted Emissions** Time: 16:16:27
 Equipment: **Wireless Device Server** Sequence#: 11
 Manufacturer: Silex Technology America, Inc. Tested By: E. Wong
 Model: SX-510 110V 60Hz
 S/N: 4

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	MY46186290	02/12/2007	02/12/2009	02869
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	09/03/2008	09/03/2010	P05664
150kHz HPF	G7755	01/09/2008	01/09/2010	02610
Conducted Emission Cable	Cable #21	05/12/2008	05/12/2010	P04358

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	SL Power	MW170KB0503F01	NA
Wireless Device Server*	Silex Technology America, Inc.	SX-510	4

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Sony	PCG-982L	28323330
Wireless Access Point	3Com	WL-526	0200/MUGADEB4723F

Test Conditions / Notes:

FCC15.207 (2007). The EUT is placed on the wooden table. The device is configured in Wireless to Serial mode. The ethernet port is unpopulated to enable wireless transmission. The serial port is connected to a section of terminated null modem cable with the terminator placed remotely. The laptop is running test software to exercise the ethernet port and the serial port in a loop back configuration via a wireless access point. Mode: Tx and Rx, 802.11a. 21°C, 65% relative humidity. Frequency range of measurement 150kHz – 30 MHz. RBW=VBW=9kHz.

Transducer Legend:

T1=150kHz HPF AN02610_010910	T2=6dB Atten_P05564-090310
T3=Cable #21 -P04358- Site A 05/12/10	T4=(L1) Insertion Loss 00847 EMCO 3816/2NM

Measurement Data:

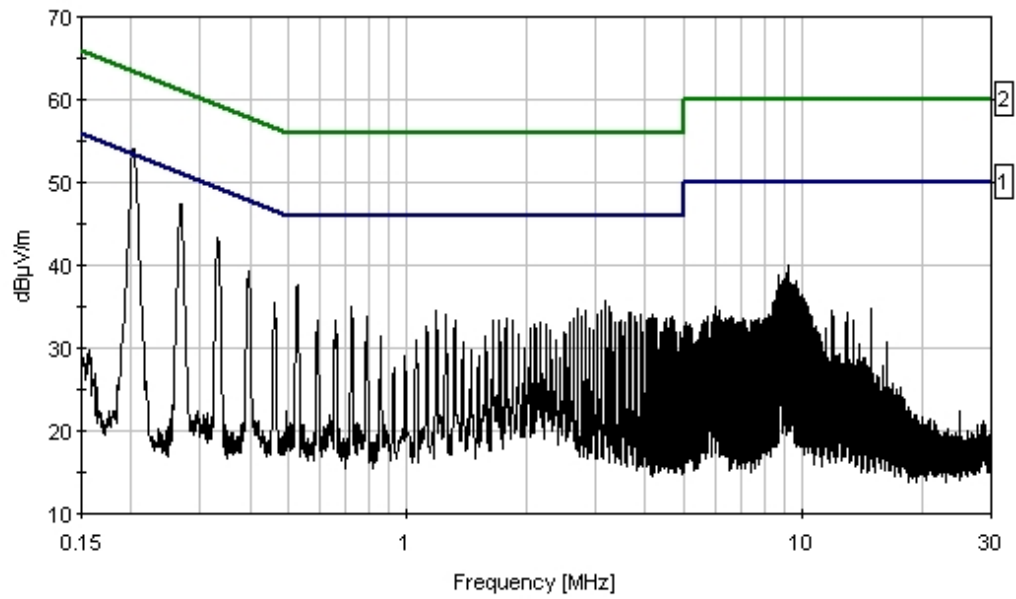
Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	267.080k	41.2	+0.2	+6.0	+0.0	+0.1	+0.0	47.5	51.2	-3.7	Black
2	331.802k	37.1	+0.2	+6.0	+0.0	+0.1	+0.0	43.4	49.4	-6.0	Black
3	527.420k	31.3	+0.2	+6.0	+0.0	+0.1	+0.0	37.6	46.0	-8.4	Black

4	396.523k	33.1	+0.2	+6.0	+0.0	+0.0	+0.0	39.3	47.9	-8.6	Black
5	9.157M	33.3	+0.2	+6.0	+0.2	+0.4	+0.0	40.1	50.0	-9.9	Black
6	3.165M	29.1	+0.2	+6.0	+0.1	+0.2	+0.0	35.6	46.0	-10.4	Black
7	9.094M	32.3	+0.2	+6.0	+0.2	+0.4	+0.0	39.1	50.0	-10.9	Black
8	724.493k	28.6	+0.3	+6.0	+0.0	+0.1	+0.0	35.0	46.0	-11.0	Black
9	3.229M	28.5	+0.2	+6.0	+0.1	+0.2	+0.0	35.0	46.0	-11.0	Black
10	8.697M	32.1	+0.2	+6.0	+0.2	+0.4	+0.0	38.9	50.0	-11.1	Black
11	460.517k	29.2	+0.2	+6.0	+0.0	+0.1	+0.0	35.5	46.7	-11.2	Black
12	2.702M	28.2	+0.2	+6.0	+0.1	+0.2	+0.0	34.7	46.0	-11.3	Black
13	3.097M	28.1	+0.2	+6.0	+0.1	+0.2	+0.0	34.6	46.0	-11.4	Black
14	9.220M	31.8	+0.2	+6.0	+0.2	+0.4	+0.0	38.6	50.0	-11.4	Black
15	198.145k	31.5	+0.2	+6.0	+0.0	+0.1	+0.0	37.8	53.7	-15.9	Black
	Ave										
^	203.086k	47.7	+0.2	+6.0	+0.0	+0.1	+0.0	54.0	53.5	+0.5	Black

CKC Laboratories, Inc. Date: 9/23/2008 Time: 16:16:27 Silix Technology, America, Inc. WO#: 88495
 FCC 15.207 COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 11



— Sweep Data — 1 - FCC 15.207 COND [AVE] — 2 - FCC 15.207 COND [QP]

Test Location: CKC Laboratories, Inc. • 110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: **Silex Technology, America, Inc.**

Specification: **FCC 15.207 COND [AVE]**

Work Order #: **88495**

Date: 9/23/2008

Test Type: **Conducted Emissions**

Time: 16:21:47

Equipment: **Wireless Device Server**

Sequence#: 12

Manufacturer: Silex Technology America, Inc.

Tested By: E. Wong

Model: SX-510

110V 60Hz

S/N: 4

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	MY46186290	02/12/2007	02/12/2009	02869
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	09/03/2008	09/03/2010	P05664
150kHz HPF	G7755	01/09/2008	01/09/2010	02610
Conducted Emission Cable	Cable #21	05/12/2008	05/12/2010	P04358

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	SL Power	MW170KB0503F01	NA
Wireless Device Server*	Silex Technology America, Inc.	SX-510	4

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Sony	PCG-982L	28323330
Wireless Access Point	3Com	WL-526	0200/MUGADEB4723F

Test Conditions / Notes:

FCC15.207 (2007). The EUT is placed on the wooden table. The device is configured in Wireless to Serial mode. The ethernet port is unpopulated to enable wireless transmission. The serial port is connected to a section of terminated null modem cable with the terminator placed remotely. The laptop is running test software to exercise the ethernet port and the serial port in a loop back configuration via a wireless access point. Mode: Tx and Rx, 802.11a. 21°C, 65% relative humidity. Frequency range of measurement 150kHz – 30 MHz. RBW=VBW=9kHz.

Transducer Legend:

T1=150kHz HPF AN02610_010910	T2=6dB Atten_P05564-090310
T3=Cable #21 -P04358- Site A 05/12/10	T4=(L2) Insertion Loss 00847 EMCO 3816/2NM

Measurement Data:

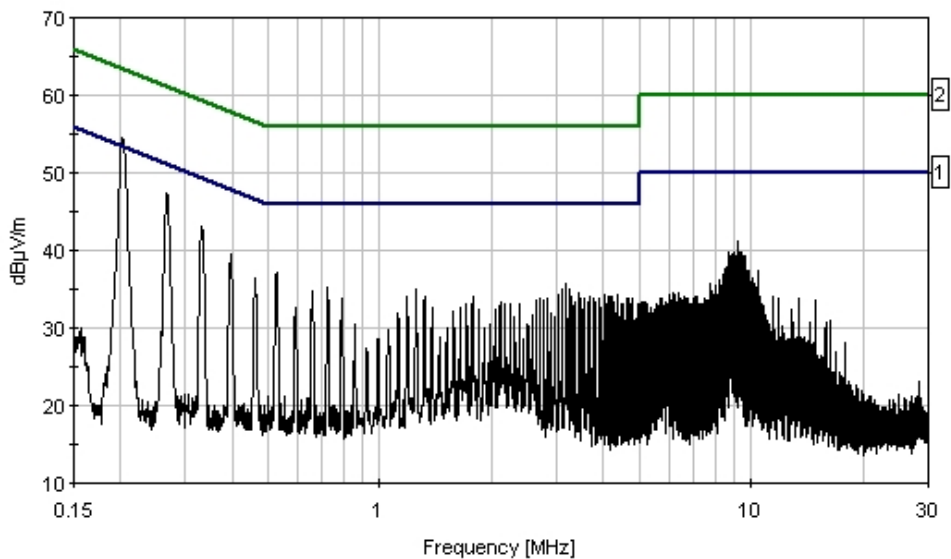
Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	267.079k	41.1	+0.2	+6.0	+0.0	+0.1	+0.0	47.4	51.2	-3.8	White
2	331.801k	36.8	+0.2	+6.0	+0.0	+0.1	+0.0	43.1	49.4	-6.3	White
3	397.249k	33.3	+0.2	+6.0	+0.0	+0.1	+0.0	39.6	47.9	-8.3	White
4	526.692k	30.9	+0.2	+6.0	+0.0	+0.1	+0.0	37.2	46.0	-8.8	White

5	9.157M	34.3	+0.2	+6.0	+0.2	+0.4	+0.0	41.1	50.0	-8.9	White
6	3.161M	29.3	+0.2	+6.0	+0.1	+0.2	+0.0	35.8	46.0	-10.2	White
7	9.031M	33.0	+0.2	+6.0	+0.2	+0.4	+0.0	39.8	50.0	-10.2	White
8	9.292M	33.0	+0.2	+6.0	+0.2	+0.4	+0.0	39.8	50.0	-10.2	White
9	461.970k	30.1	+0.2	+6.0	+0.0	+0.1	+0.0	36.4	46.7	-10.3	White
10	8.697M	32.9	+0.2	+6.0	+0.2	+0.4	+0.0	39.7	50.0	-10.3	White
11	9.418M	32.9	+0.2	+6.0	+0.2	+0.4	+0.0	39.7	50.0	-10.3	White
12	8.896M	32.7	+0.2	+6.0	+0.2	+0.4	+0.0	39.5	50.0	-10.5	White
13	9.355M	32.7	+0.2	+6.0	+0.2	+0.4	+0.0	39.5	50.0	-10.5	White
14	9.562M	32.6	+0.2	+6.0	+0.2	+0.4	+0.0	39.4	50.0	-10.6	White
15	197.457k	34.2	+0.2	+6.0	+0.0	+0.2	+0.0	40.6	53.7	-13.1	White
Ave											
^	202.358k	48.1	+0.2	+6.0	+0.0	+0.2	+0.0	54.5	53.5	+1.0	White

CKC Laboratories, Inc. Date: 9/23/2008 Time: 16:21:47 Silex Technology, America, Inc. WO#: 88495
 FCC 15.207 COND [AVE] Test Lead: White 110V 60Hz Sequence#: 12



— Sweep Data — 1 - FCC 15.207 COND [AVE] — 2 - FCC 15.207 COND [QP]

FCC 15.209 RADIATED EMISSIONS

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. • 110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112
 Customer: **Silex Technology, America, Inc.**
 Specification: **FCC 15.209**
 Work Order #: **88495** Date: 10/6/2008
 Test Type: **Radiated Scan** Time: 14:54:29
 Equipment: **Wireless Device Server** Sequence#: 1
 Manufacturer: Silex Technology America, Inc. Tested By: Sep Apahidean
 Model: SX-510
 S/N: 4

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Antenna cable	Cable#17	09/22/2008	09/22/2010	P04382
HeliAx Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
Loop Antenna	2014	06/16/2008	06/16/2010	00314
Pre-amp	2727A05392	04/29/2008	04/29/2010	00010
Preamp to SA Cable (3 feet)	Cable #22	08/19/2008	08/19/2010	P05555

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	SL Power	MW170KB0503F01	NA
Wireless Device Server*	Silex Technology America, Inc.	SX-510	4
MiniPCI Wireless Board	Silex Technology America, Inc.	SX-10WAG	0080923A9E74
Antenna	Silex Technology America, Inc.	128-00193-100 Rev A -	

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Sony	PCG-982L	28323330
Wireless Access Point	3 Com	WL-526	0200/MUGA6DEB4723F

Test Conditions / Notes:

The EUT is placed on the wooden table with Styrofoam padding of 5 cm thickness. The device is configured in Wireless to Serial mode. The wireless modem is connected to a remote support laptop via a remote support wireless router. The serial port is connected to a section of terminated null modem cable with the terminator placed remotely. The laptop is running test software to exercise the unit and the serial port in a loop back configuration. Test distance correction factor used in accordance with 15.31. 21°C, 65% relative humidity. Frequency range: 9kHz - 30 MHz Bandwidth: 9kHz-150kHz =200Hz , 150kHz-30MHz = 9kHz 802.11 B and G mode of operation . L M H.

Transducer Legend:

T1=84' HeliAx Cable P04382_#17	T2=HeliAx Cable 54' ANP05565 090410
T3=Active loop antenna_AN00314	T4=Preamplifier ANP00010 042910
T5=Cable_P05555_SA to pre-amp	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	T5	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	13.612M	37.0	+0.4 +0.1	+0.2	+9.4	-27.3	-20.0	-0.2	29.5	-29.7	Paral
2	16.900k	35.1	+0.0 +0.1	+0.0	+14.3	+0.0	-40.0	9.5	43.0	-33.5	Paral

3	15.110M	29.9	+0.4 +0.1	+0.2	+9.4	-27.3	-20.0	-7.3	29.5	-36.8	Paral
4	10.922M	29.2	+0.3 +0.1	+0.2	+9.4	-27.3	-20.0	-8.1	29.5	-37.6	Paral
5	4.271M	29.3	+0.2 +0.0	+0.2	+9.4	-27.3	-20.0	-8.2	29.5	-37.7	Paral
6	4.886M	25.7	+0.2 +0.0	+0.2	+9.4	-27.3	-20.0	-11.8	29.5	-41.3	Paral
7	25.150k	25.7	+0.0 +0.1	+0.0	+12.4	+0.0	-40.0	-1.8	39.6	-41.4	Paral
8	10.925M	24.2	+0.3 +0.1	+0.2	+9.4	-27.3	-20.0	-13.1	29.5	-42.6	Perpe
9	8.052M	23.3	+0.3 +0.1	+0.2	+9.4	-27.3	-20.0	-14.0	29.5	-43.5	Paral
10	18.438M	22.7	+0.5 +0.1	+0.3	+9.3	-27.3	-20.0	-14.4	29.5	-43.9	Paral
11	25.530M	24.0	+0.6 +0.1	+0.3	+7.9	-27.4	-20.0	-14.5	29.5	-44.0	Paral
12	425.900k	27.1	+0.1 +0.1	+0.0	+9.4	-27.0	-40.0	-30.3	15.0	-45.3	Paral
13	7.347M	19.4	+0.3 +0.1	+0.2	+9.4	-27.3	-20.0	-17.9	29.5	-47.4	Paral
14	412.900k	25.2	+0.1 +0.1	+0.0	+9.5	-27.0	-40.0	-32.1	15.3	-47.4	Paral
15	1.972M	18.9	+0.1 +0.0	+0.1	+9.5	-27.2	-20.0	-18.6	29.5	-48.1	Paral
16	9.516M	18.3	+0.3 +0.1	+0.2	+9.4	-27.3	-20.0	-19.0	29.5	-48.5	Paral
17	418.000k	23.9	+0.1 +0.1	+0.0	+9.5	-27.0	-40.0	-33.4	15.2	-48.6	Perpe
18	411.700k	24.0	+0.1 +0.1	+0.0	+9.5	-27.0	-40.0	-33.3	15.3	-48.6	Perpe
19	1.932M	18.1	+0.1 +0.0	+0.1	+9.5	-27.2	-20.0	-19.4	29.5	-48.9	Perpe
20	8.074M	17.8	+0.3 +0.1	+0.2	+9.4	-27.3	-20.0	-19.5	29.5	-49.0	Perpe
21	4.248M	17.5	+0.2 +0.0	+0.2	+9.4	-27.3	-20.0	-20.0	29.5	-49.5	Perpe
22	7.390M	17.2	+0.3 +0.1	+0.2	+9.4	-27.3	-20.0	-20.1	29.5	-49.6	Perpe
23	9.473M	17.1	+0.3 +0.1	+0.2	+9.4	-27.3	-20.0	-20.2	29.5	-49.7	Perpe
24	21.078M	16.7	+0.5 +0.1	+0.3	+9.0	-27.3	-20.0	-20.7	29.5	-50.2	Paral
25	29.376M	19.9	+0.6 +0.1	+0.4	+5.5	-27.5	-20.0	-21.0	29.5	-50.5	Paral
26	183.000k	28.4	+0.0 +0.0	+0.0	+9.3	-26.0	-40.0	-28.3	22.4	-50.7	Paral
27	185.000k	26.2	+0.0 +0.0	+0.0	+9.3	-26.0	-40.0	-30.5	22.3	-52.8	Perpe

Test Location: CKC Laboratories, Inc. • 110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: **Silex Technology, America, Inc.**

Specification: **FCC 15.209**

Work Order #: **88495**

Date: 10/6/2008

Test Type: **Radiated Scan**

Time: 10:53:29

Equipment: **Wireless Device Server**

Sequence#: 1

Manufacturer: Silex Technology America, Inc.

Tested By: Sep Apahidean

Model: SX-510

S/N: 4

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Heliacx Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
Bilog Antenna	2629	01/21/2008	01/21/2010	00851
Antenna cable	Cable#17	09/22/2008	09/22/2010	P04382
Preamp to SA Cable (3 feet)	Cable #22	08/19/2008	08/19/2010	P05555
Pre-amp	2727A05392	04/29/2008	04/29/2010	00010
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	SL Power	MW170KB0503F01	NA
Wireless Device Server*	Silex Technology America, Inc.	SX-510	4
MiniPCI Wireless Board	Silex Technology America, Inc.	SX-10WAG	0080923A9E74
Antenna	Silex Technology America, Inc.	128-00193-100 Rev A	-

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Sony	PCG-982L	28323330
Wireless Access Point	3 Com	WL-526	0200/MUGA6DEB4723F

Test Conditions / Notes:

The EUT is placed on the wooden table with Styrofoam padding of 5 cm thickness. The device is configured in Wireless to Serial mode. The wireless modem is connected to a remote support laptop via a remote support wireless router. The serial port is connected to a section of terminated null modem cable with the terminator placed remotely. The laptop is running test software to exercise the unit and the serial port in a loop back configuration. 21°C, 65% relative humidity. 30-1000MHz test range with 120kHz BW. 802.11A mode of operation . L M H.

Transducer Legend:

T1=Preamplifier ANP00010 042910	T2=ANT-AN00851 BILOG
T3=84' Heliacx Cable P04382_#17	T4=Cable_P05555_SA to pre-amp
T5=Heliacx Cable 54' ANP05565 090410	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	933.328M	36.8	-27.7 +2.3	+23.4	+3.4	+0.7	+0.0	38.9	46.0	-7.1	Horiz

2	133.356M	49.2	-27.1 +0.8	+11.5	+1.2	+0.3	+0.0	35.9	43.5	-7.6	Horiz
3	666.700M	40.8	-28.1 +1.9	+20.2	+2.8	+0.5	+0.0	38.1	46.0	-7.9	Horiz
4	866.668M	35.0	-27.8 +2.2	+22.6	+3.2	+0.8	+0.0	36.0	46.0	-10.0	Horiz
5	399.991M	42.9	-27.4 +1.4	+15.7	+2.1	+0.3	+0.0	35.0	46.0	-11.0	Vert
6	266.676M	45.6	-26.7 +1.3	+12.6	+1.7	+0.4	+0.0	34.9	46.0	-11.1	Horiz
7	266.656M	45.6	-26.7 +1.3	+12.6	+1.7	+0.4	+0.0	34.9	46.0	-11.1	Vert
8	133.326M	45.6	-27.1 +0.8	+11.5	+1.2	+0.3	+0.0	32.3	43.5	-11.2	Vert
9	933.348M	32.5	-27.7 +2.3	+23.4	+3.4	+0.7	+0.0	34.6	46.0	-11.4	Vert
10	833.338M	33.9	-27.8 +2.1	+22.3	+3.2	+0.8	+0.0	34.5	46.0	-11.5	Horiz
11	799.994M	34.1	-27.9 +2.1	+21.9	+3.1	+0.9	+0.0	34.2	46.0	-11.8	Horiz
12	399.998M	40.9	-27.4 +1.4	+15.7	+2.1	+0.3	+0.0	33.0	46.0	-13.0	Horiz
13	533.380M	37.3	-28.1 +1.7	+18.6	+2.5	+0.3	+0.0	32.3	46.0	-13.7	Horiz
14	833.353M	31.6	-27.8 +2.1	+22.3	+3.2	+0.8	+0.0	32.2	46.0	-13.8	Vert
15	499.948M	36.6	-28.0 +1.6	+18.0	+2.4	+0.4	+0.0	31.0	46.0	-15.0	Vert
16	533.320M	35.4	-28.1 +1.7	+18.6	+2.5	+0.3	+0.0	30.4	46.0	-15.6	Vert
17	333.341M	39.4	-26.9 +1.3	+14.1	+1.9	+0.4	+0.0	30.2	46.0	-15.8	Vert
18	900.019M	28.2	-27.8 +2.3	+23.0	+3.3	+0.9	+0.0	29.9	46.0	-16.1	Vert
19	999.994M	34.5	-27.5 +2.4	+24.3	+3.5	+0.7	+0.0	37.9	54.0	-16.1	Horiz
20	900.054M	28.2	-27.8 +2.3	+23.0	+3.3	+0.9	+0.0	29.9	46.0	-16.1	Horiz
21	333.340M	38.8	-26.9 +1.3	+14.1	+1.9	+0.4	+0.0	29.6	46.0	-16.4	Vert
22	166.681M	41.4	-26.9 +0.9	+9.8	+1.4	+0.3	+0.0	26.9	43.5	-16.6	Vert
23	299.998M	38.4	-26.6 +1.3	+13.1	+1.8	+0.3	+0.0	28.3	46.0	-17.7	Horiz
24	499.998M	33.9	-28.0 +1.6	+18.0	+2.4	+0.4	+0.0	28.3	46.0	-17.7	Horiz
25	333.336M	37.4	-26.9 +1.3	+14.1	+1.9	+0.4	+0.0	28.2	46.0	-17.8	Horiz

26	299.983M	37.6	-26.6 +1.3	+13.1	+1.8	+0.3	+0.0	27.5	46.0	-18.5	Vert
27	166.686M	38.9	-26.9 +0.9	+9.8	+1.4	+0.3	+0.0	24.4	43.5	-19.1	Horiz
28	366.670M	32.1	-27.1 +1.3	+14.9	+2.0	+0.4	+0.0	23.6	46.0	-22.4	Vert
29	320.024M	33.1	-26.8 +1.3	+13.7	+1.9	+0.3	+0.0	23.5	46.0	-22.5	Horiz
30	340.024M	32.0	-26.9 +1.3	+14.2	+2.0	+0.4	+0.0	23.0	46.0	-23.0	Horiz
31	966.658M	27.8	-27.6 +2.3	+23.9	+3.4	+0.6	+0.0	30.4	54.0	-23.6	Horiz
32	966.728M	27.5	-27.6 +2.3	+23.9	+3.4	+0.6	+0.0	30.1	54.0	-23.9	Vert
33	74.965M	33.5	-27.2 +0.6	+6.9	+0.9	+0.2	+0.0	14.9	40.0	-25.1	Horiz

Test Location: CKC Laboratories, Inc. • 110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: **Silex Technology, America, Inc.**

Specification: **FCC 15.209**

Work Order #: **88495**

Date: 10/6/2008

Test Type: **Radiated Scan**

Time: 13:47:53

Equipment: **Wireless Device Server**

Sequence#: 1

Manufacturer: Silex Technology America, Inc.

Tested By: Sep Apahidean

Model: SX-510

S/N: 4

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Heliacx Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
Antenna cable	Cable#17	09/22/2008	09/22/2010	P04382
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Horn Antenna 1-18GHz	9603-4683	06/06/2008	06/06/2010	01646
Microwave Pre-amp	3123A00282	06/05/2007	06/05/2009	00787
2'-40GHz cable	NA	09/18/2007	09/18/2009	P02947
Microwave Pre-amp	00323	02/05/2008	02/05/2010	02810
1-40GHz				
18-26GHz Horn	942126-003	09/21/2007	09/21/2009	01413
3'-40GHz cable	NA	09/18/2007	09/18/2009	P02945
26-40GHz Horn	951559-008	01/08/2008	01/08/2010	01414

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	SL Power	MW170KB0503F01	NA
Wireless Device Server*	Silex Technology America, Inc.	SX-510	4
MiniPCI Wireless Board	Silex Technology America, Inc.	SX-10WAG	0080923A9E74
Antenna	Silex Technology America, Inc.	128-00193-100 Rev A	-

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Sony	PCG-982L	28323330
Wireless Access Point	3 Com	WL-526	0200/MUGA6DEB4723F

Test Conditions / Notes:

The EUT is placed on the wooden table with Styrofoam padding of 5 cm thickness. The device is configured in Wireless to Serial mode. The wireless modem is connected to a remote support laptop via a remote support wireless router. The serial port is connected to a section of terminated null modem cable with the terminator placed remotely. The laptop is running test software to exercise the unit and the serial port in a loop back configuration. 21°C, 65% relative humidity. 1-40GHz test range with 1 MHz BW. 802.11A mode of operation . L M H.

Transducer Legend:

T1=84' Heliac Cable P04382_#17	T2=Heliac Cable 54' ANP05565 090410
T3=Preamplifier 83017A 00787	T4=Horn Ant AN01646 060610
T5=CAB-ANP02947 091807	T6=AMP-AN02810-020508
T7=ANT 18-26GHz Horn AN01413	T8=CAB-ANP02945 091807

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 T6 dB	T3 T7 dB	T4 T8 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	17583.350 M	7.0	+24.4 +1.0	+12.6 +0.0	-37.7 +0.0	+43.6 +0.0	+0.0	50.9	54.0	-3.1	Vert
2	4436.110M	39.3	+8.2 +0.4	+5.3 +0.0	-39.4 +0.0	+32.5 +0.0	+0.0	46.3	54.0	-7.7	Horiz
3	15035.400 M	12.5	+18.9 +0.9	+11.7 +0.0	-37.8 +0.0	+39.9 +0.0	+0.0	46.1	54.0	-7.9	Vert
4	12928.400 M	16.9	+17.2 +0.9	+10.1 +0.0	-39.0 +0.0	+39.2 +0.0	+0.0	45.3	54.0	-8.7	Vert
5	11507.400 M	16.5	+15.8 +0.7	+9.6 +0.0	-39.5 +0.0	+38.8 +0.0	+0.0	41.9	54.0	-12.1	Vert
6	10821.400 M	17.7	+15.5 +0.7	+9.0 +0.0	-39.4 +0.0	+38.1 +0.0	+0.0	41.6	54.0	-12.4	Vert
7	2190.785M	43.2	+5.4 +0.3	+3.6 +0.0	-38.9 +0.0	+27.7 +0.0	+0.0	41.3	54.0	-12.7	Horiz
8	9195.350M	21.4	+12.7 +0.7	+8.2 +0.0	-39.5 +0.0	+37.5 +0.0	+0.0	41.0	54.0	-13.0	Vert
9	1744.985M	45.0	+4.8 +0.3	+3.1 +0.0	-38.9 +0.0	+26.2 +0.0	+0.0	40.5	54.0	-13.5	Horiz
10	1499.250M	46.7	+4.4 +0.2	+2.9 +0.0	-38.8 +0.0	+25.0 +0.0	+0.0	40.4	54.0	-13.6	Horiz
11	1852.285M	44.0	+5.0 +0.3	+3.2 +0.0	-38.9 +0.0	+26.7 +0.0	+0.0	40.3	54.0	-13.7	Horiz
12	1000.164M	50.3	+3.5 +0.2	+2.4 +0.0	-40.6 +0.0	+24.2 +0.0	+0.0	40.0	54.0	-14.0	Horiz
13	9645.400M	19.4	+13.0 +0.7	+8.4 +0.0	-39.4 +0.0	+37.9 +0.0	+0.0	40.0	54.0	-14.0	Vert
14	1166.540M	47.0	+3.8 +0.2	+2.5 +0.0	-39.9 +0.0	+24.5 +0.0	+0.0	38.1	54.0	-15.9	Horiz
15	1000.029M	48.4	+3.5 +0.2	+2.4 +0.0	-40.6 +0.0	+24.2 +0.0	+0.0	38.1	54.0	-15.9	Vert
16	1750.010M	37.8	+4.8 +0.3	+3.1 +0.0	-38.9 +0.0	+26.2 +0.0	+0.0	33.3	54.0	-20.7	Vert
17	1011.960M	43.4	+3.5 +0.2	+2.4 +0.0	-40.5 +0.0	+24.2 +0.0	+0.0	33.2	54.0	-20.8	Vert
18	1253.230M	39.9	+4.0 +0.2	+2.6 +0.0	-39.6 +0.0	+24.6 +0.0	+0.0	31.7	54.0	-22.3	Vert

19	1244.490M	39.8	+3.9 +0.2	+2.5 +0.0	-39.6 +0.0	+24.6 +0.0	+0.0	31.4	54.0	-22.6	Vert
20	1277.630M	38.4	+4.0 +0.2	+2.6 +0.0	-39.5 +0.0	+24.7 +0.0	+0.0	30.4	54.0	-23.6	Vert
21	1500.030M	36.2	+4.4 +0.2	+2.9 +0.0	-38.8 +0.0	+25.0 +0.0	+0.0	29.9	54.0	-24.1	Vert
22	1422.290M	35.9	+4.2 +0.2	+2.7 +0.0	-39.0 +0.0	+24.9 +0.0	+0.0	28.9	54.0	-25.1	Vert
23	18997.350 M	11.6	+0.0 +1.0	+0.0 -26.4	+0.0 +40.4	+0.0 +1.6	+0.0	28.2	54.0	-25.8	Vert
24	1166.690M	36.9	+3.8 +0.2	+2.5 +0.0	-39.9 +0.0	+24.5 +0.0	+0.0	28.0	54.0	-26.0	Vert

ITU-R 55/1 BANDEDGE

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Helix Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Horn Antenna 1-18GHz	9603-4683	06/06/2008	06/06/2010	01646
Microwave Pre-amp	3123A00282	06/05/2007	06/05/2009	00787
2'-40GHz cable	NA	09/18/2007	09/18/2009	P02947

Test Conditions

The EUT is placed on the wooden table with Styrofoam padding of 5 cm thickness. The device is configured in Wireless to Serial mode. The wireless modem is connected to a remote support laptop via a remote support wireless router. The serial port is connected to a section of terminated null modem cable with the terminator placed remotely. The laptop is running test software to exercise the unit and the serial port in a loop back configuration.

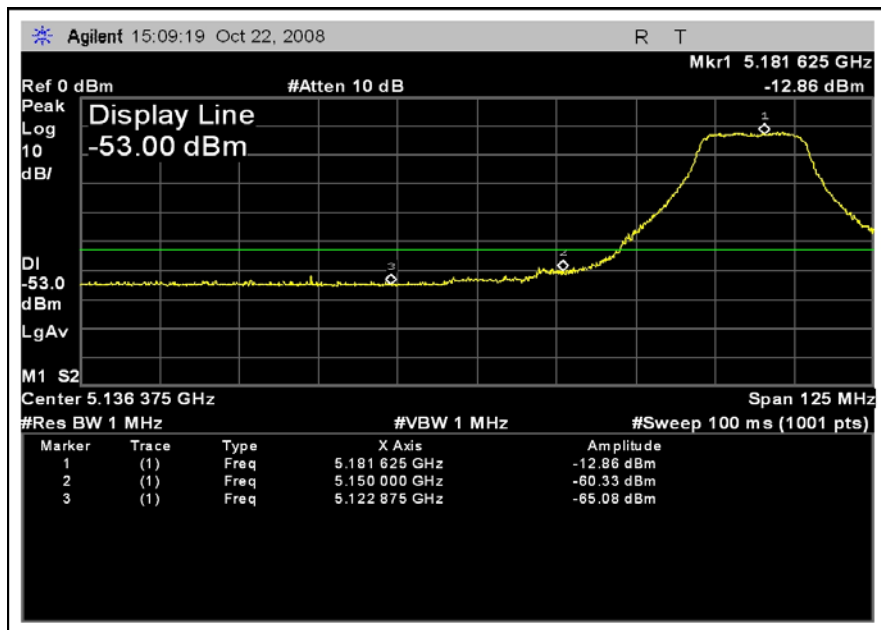
Test Setup Photos



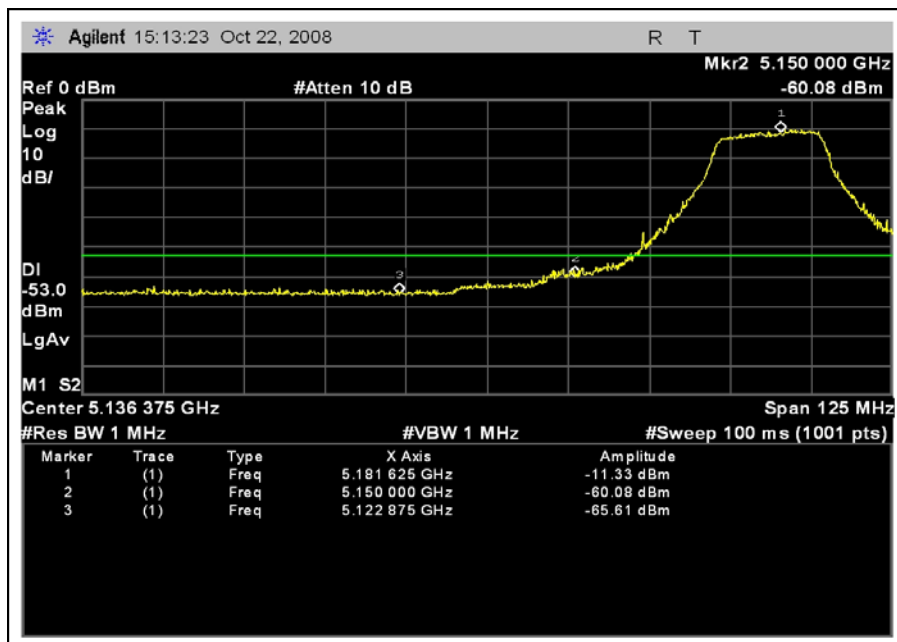


Plots

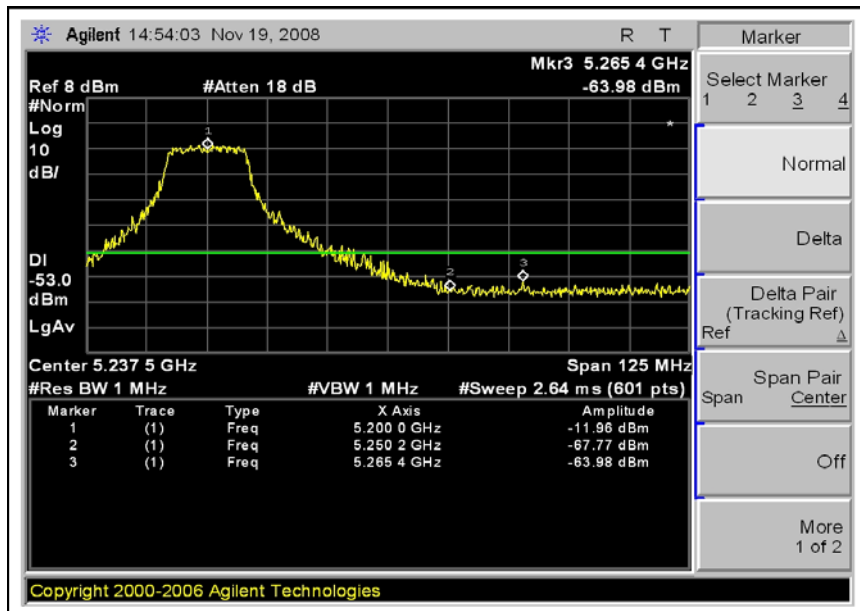
BAND EDGE 802.11a CHANNEL 36 ANTENNA A



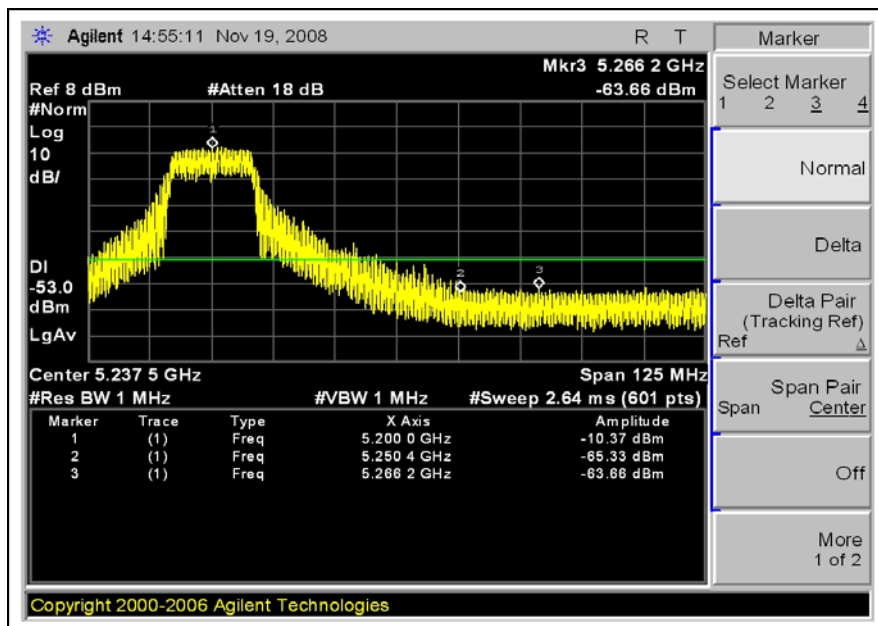
BAND EDGE 802.11a CHANNEL 36 ANTENNA B



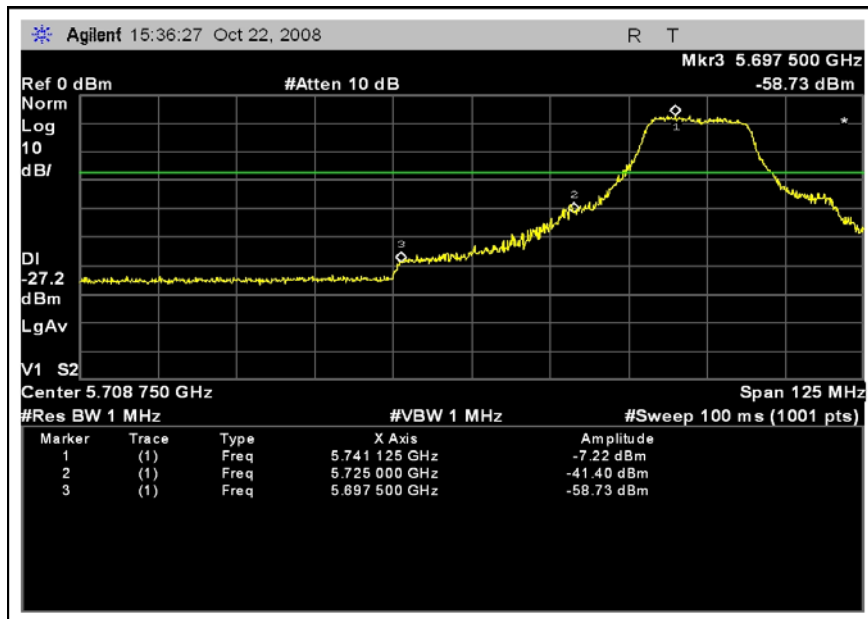
BAND EDGE 802.11a CHANNEL 40 ANTENNA A



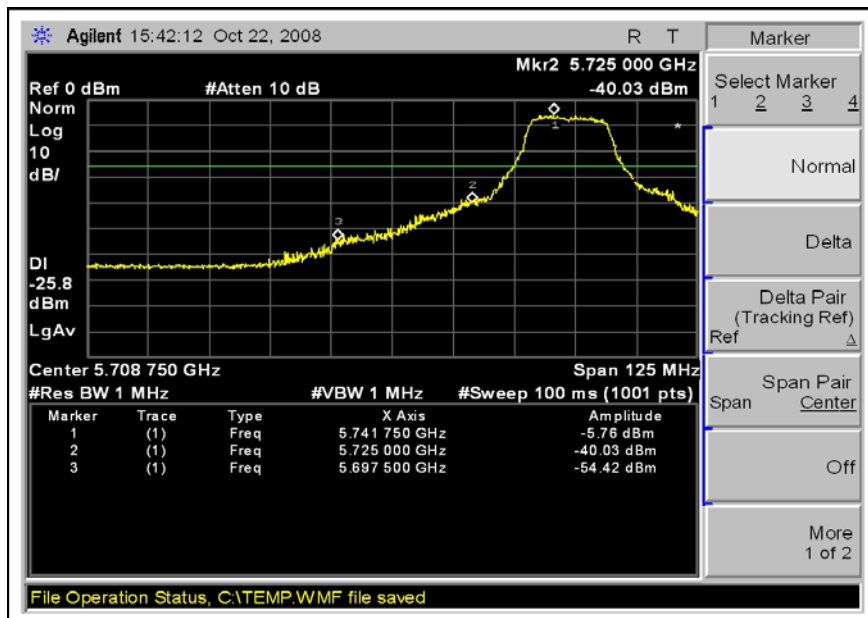
BAND EDGE 802.11a CHANNEL 40 ANTENNA B



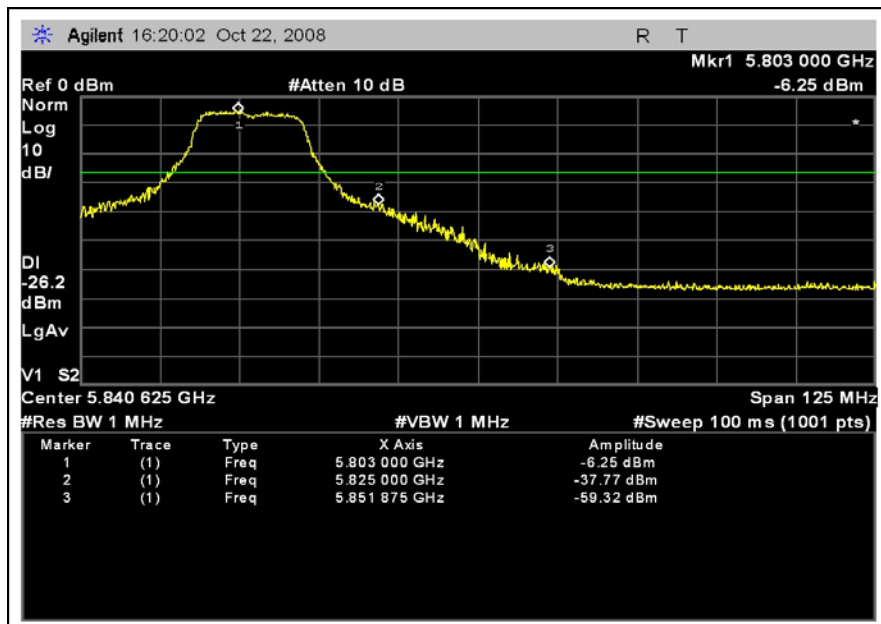
BAND EDGE 802.11a CHANNEL 149 ANTENNA A



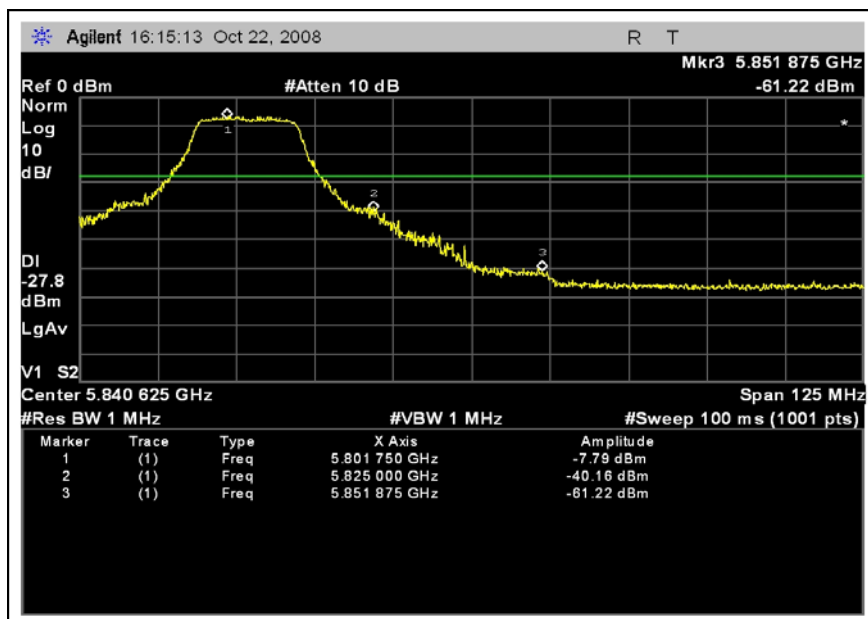
BAND EDGE 802.11a CHANNEL 149 ANTENNA B



BAND EDGE 802.11a CHANNEL 161 ANTENNA A



BAND EDGE 802.11a CHANNEL 161 ANTENNA B



FCC 15.407(a)(1) POWER LIMITS

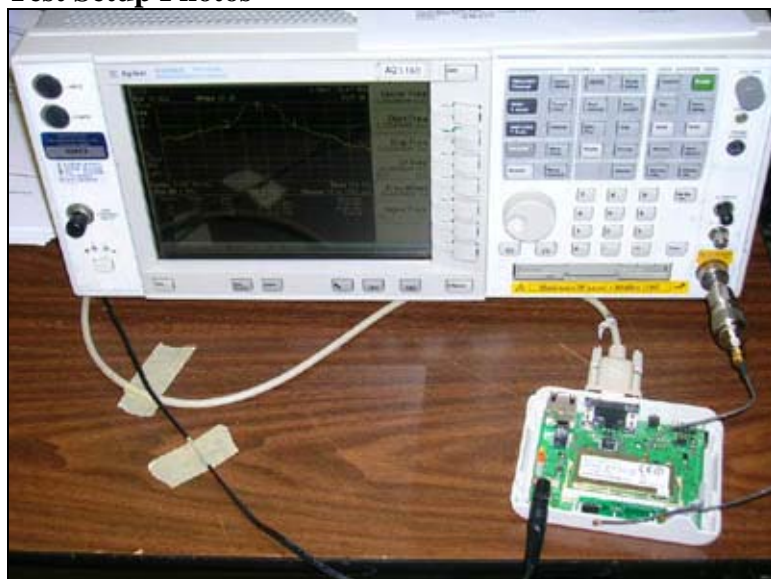
Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672

Test Conditions

Unit is located next to the spectrum analyzer . The laptop is connected to the unit via RS232 cable. The laptop is used only to change the Channel settings. The spectrum analyzer is directly connected to the antenna port of the transmitter. Antenna gain was 3 dBi at 5 GHz.

Test Setup Photos



FCC 15.407(a)(1)

Maximum Peak Output Power (Antenna A)

IEEE 802.11a : 54Mbps

Channel	Freq. MHz	S/A Reading dBm	Entire Emission Bandwidth (26db) MHz	Result dBm	Limit dbm	Limit Watt
Low	5180	6.12	30.67	13.94	17	0.050
Mid	5200	6.07	30.24	13.42	17	0.050
High	5240	6.04	30.17	11.63	17	0.050

FCC 15.407(a)(1)

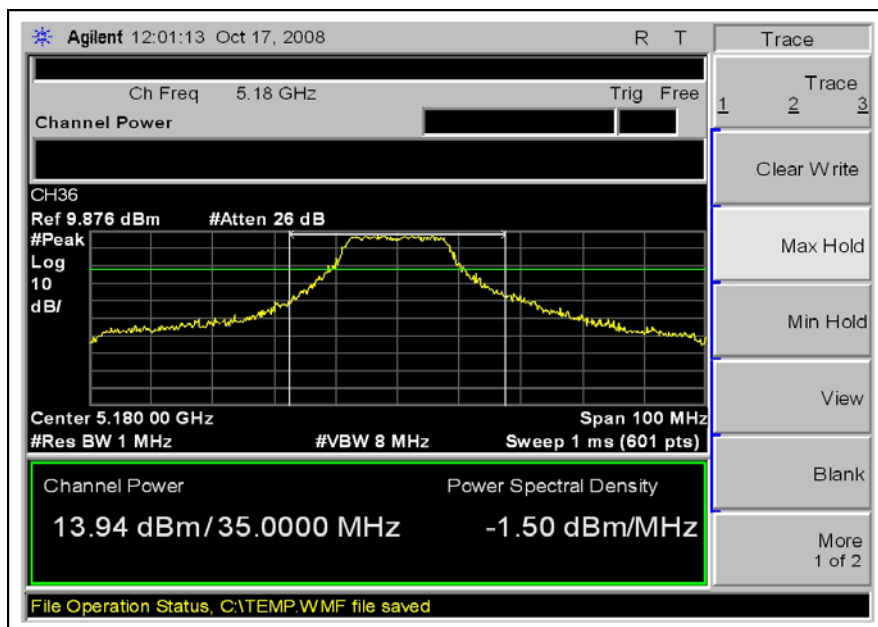
Maximum Peak Output Power (Antenna B)

IEEE 802.11a : 54Mbps

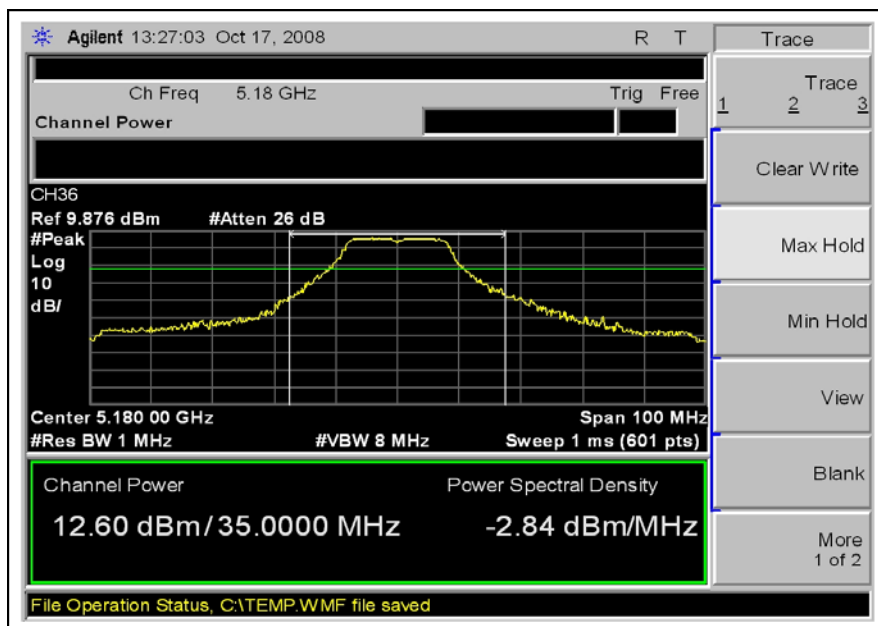
Channel	Freq. MHz	S/A Reading dBm	Entire Emission Bandwidth (26db) MHz	Result dBm	Limit dbm	Limit Watt
Low	5180	6.51	30.00	12.60	17	0.050
Mid	5200	6.15	30.12	14.34	17	0.050
High	5240	5.17	30.33	11.15	17	0.050

Test Plots

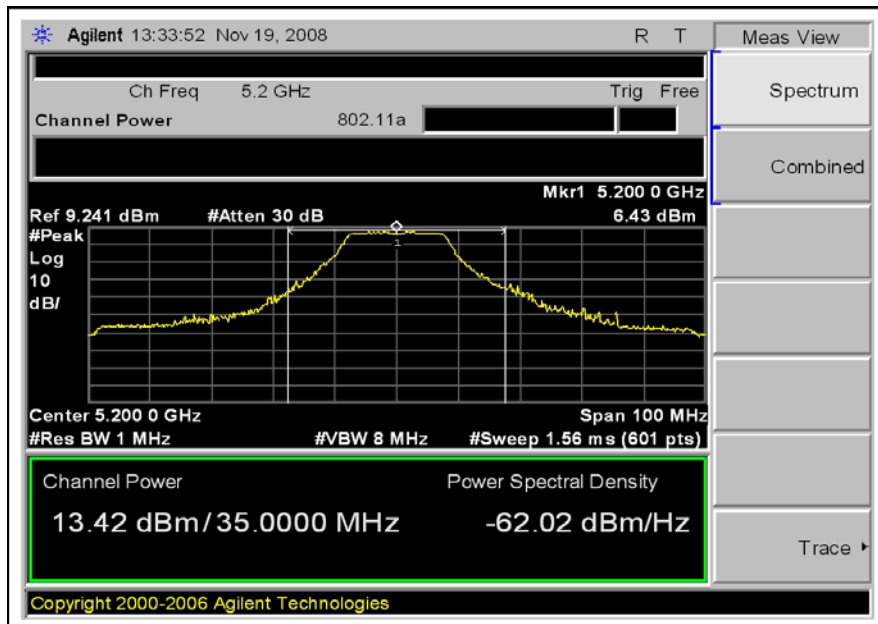
FCC 15.407(a)(1) CHANNEL POWER 802.11a CHANNEL 36 ANTENNA A



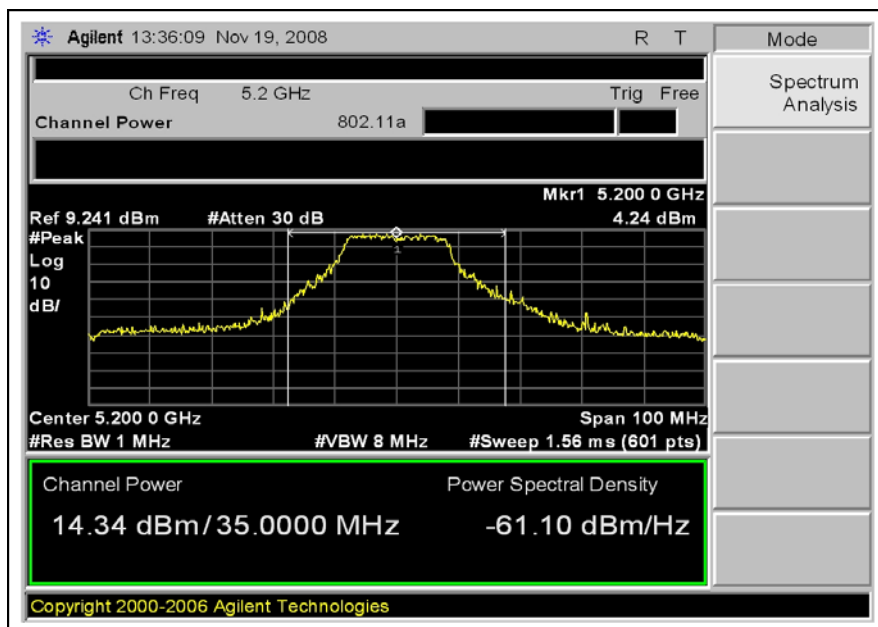
FCC 15.407(a)(1) CHANNEL POWER 802.11a CHANNEL 36 ANTENNA B



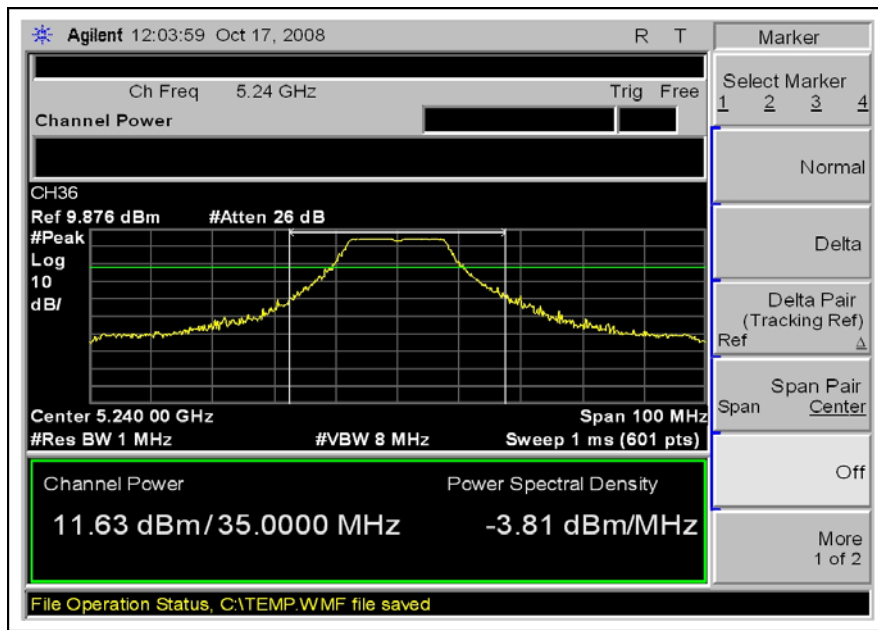
**FCC 15.407(a)(1) CHANNEL POWER 802.11a
CHANNEL 40 ANTENNA A**



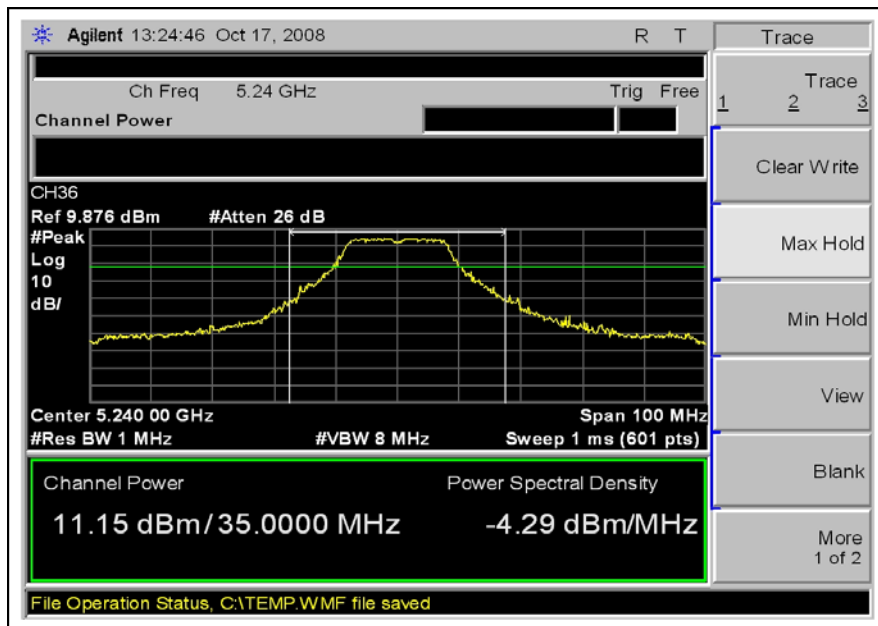
**FCC 15.407(a)(1) CHANNEL POWER 802.11a
CHANNEL 40 ANTENNA B**



**FCC 15.407(a)(1) CHANNEL POWER 802.11a
CHANNEL 48 ANTENNA A**



**FCC 15.407(a)(1) CHANNEL POWER 802.11a
CHANNEL 48 ANTENNA B**



FCC 15.407(a)(3) POWER LIMITS

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672

Test Conditions

Unit is located next to the spectrum analyzer . The laptop is connected to the unit via RS232 cable. The laptop is used only to change the Channel settings. The spectrum analyzer is directly connected to the antenna port of the transmitter. Antenna gain was 3 dBi at 5 GHz.

Test Setup Photos



FCC 15.407(a)(3)

Maximum Peak Output Power (Antenna A)

IEEE 802.11a : 54Mbps

Channel	Freq. MHz	S/A Reading dBm	Entire Emission Bandwidth (26db) MHz	Result dBm	Limit dbm	Limit Watt
Low	5745	7.64	30.50	14.04	30	1.00
Mid	5765	8.04	30.83	14.18	30	1.00
High	5805	6.44	31.33	12.90	30	1.00

FCC 15.407(a)(3)

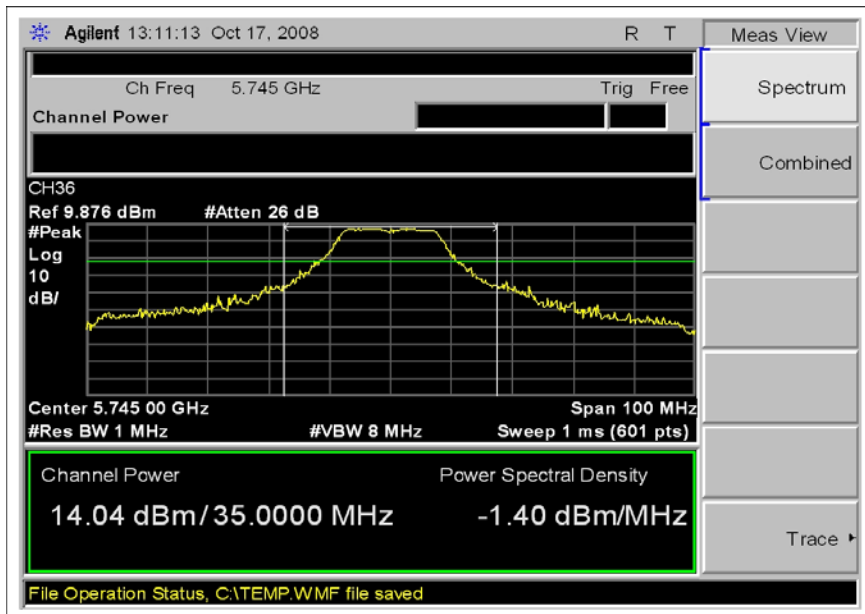
Maximum Peak Output Power (Antenna B)

IEEE 802.11a : 54Mbps

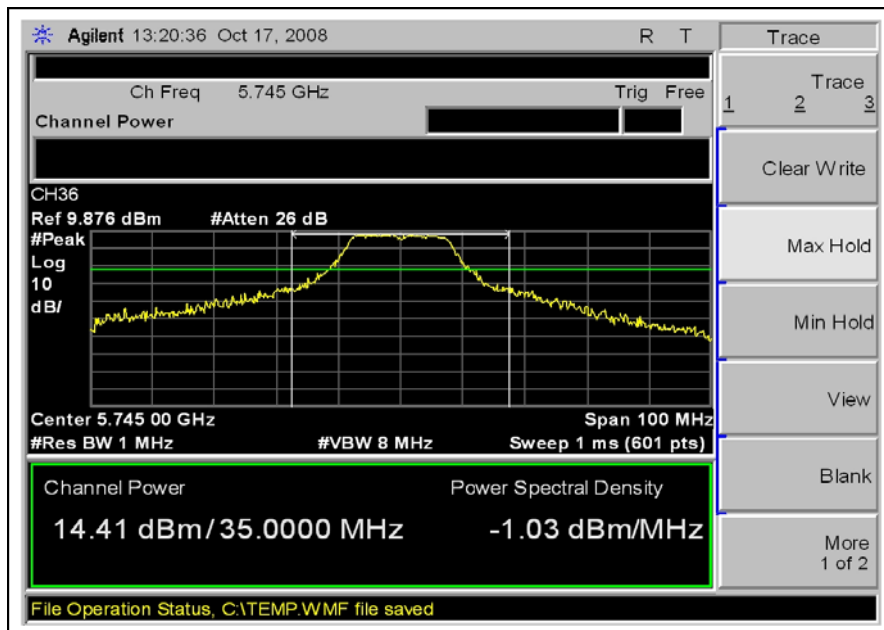
Channel	Freq. MHz	S/A Reading dBm	Entire Emission Bandwidth (26db) MHz	Result dBm	Limit dbm	Limit Watt
Low	5745	7.76	34.00	14.41	30	1.00
Mid	5765	6.44	31.33	14.77	30	1.00
High	5805	6.56	31.67	13.81	30	1.00

Test Plots

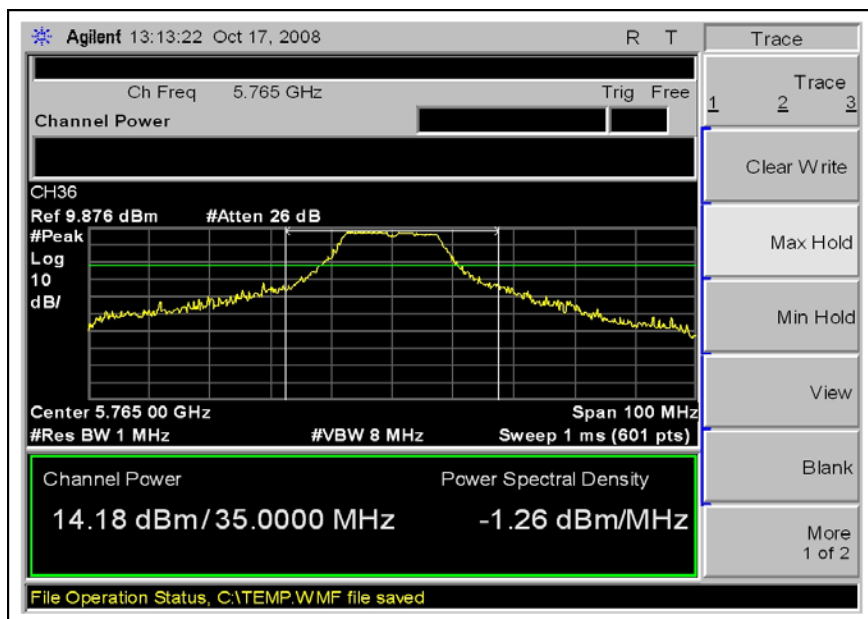
FCC 15.407(a)(3) CHANNEL POWER 802.11a CHANNEL 149 ANTENNA A



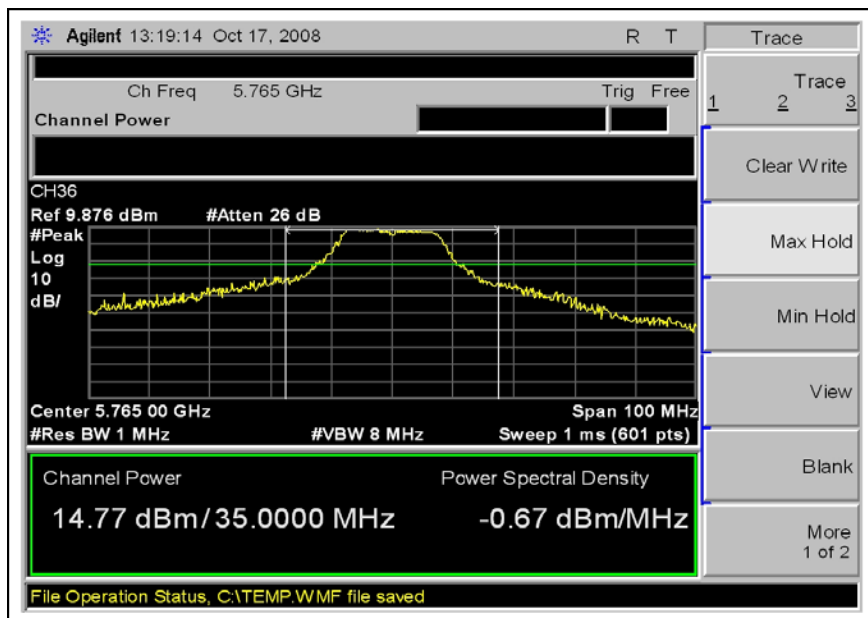
FCC 15.407(a)(3) CHANNEL POWER 802.11a CHANNEL 149 ANTENNA B



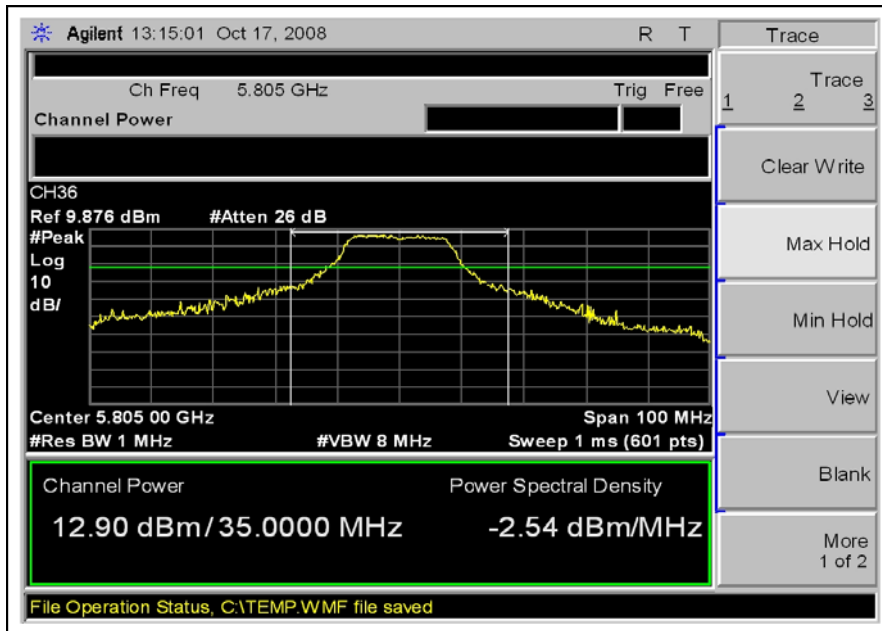
**FCC 15.407(a)(3) CHANNEL POWER 802.11a
CHANNEL 153 ANTENNA A**



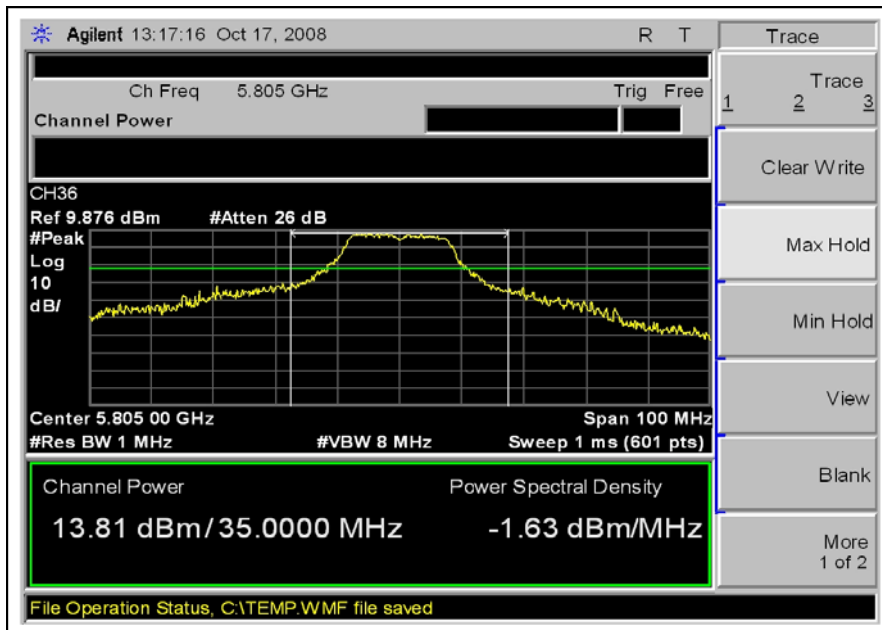
**FCC 15.407(a)(3) CHANNEL POWER 802.11a
CHANNEL 153 ANTENNA B**



**FCC 15.407(a)(3) CHANNEL POWER 802.11a
CHANNEL 161 ANTENNA A**



**FCC 15.407(a)(3) CHANNEL POWER 802.11a
CHANNEL 161 ANTENNA B**



26 dB BANDWIDTH

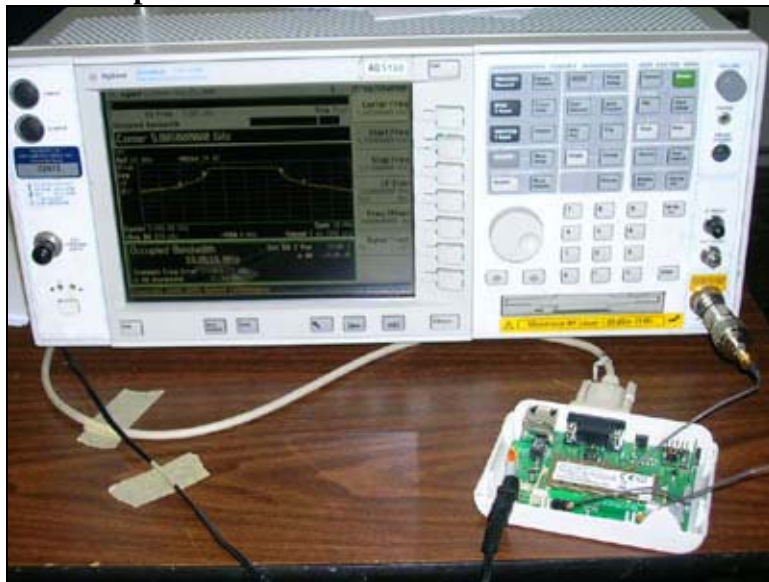
Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672

Test Conditions

Unit is located next to the spectrum analyzer . The laptop is connected to the unit via RS232 cable. The laptop is used only to change the Channel settings. The spectrum analyzer is directly connected to the antenna port of the transmitter.

Test Setup Photos



FCC 15.407(a)(1)
 26 db Bandwidth (Antenna A)
 IEEE 802.11a: 54Mbps

Channel	Frequency MHz	26 db Bandwidth MHz
Low	5180	22.766
Mid	5200	27.319
High	5240	24.053

FCC 15.407(a)(1)
 26 db Bandwidth (Antenna B)
 IEEE 802.11a: 54Mbps

Channel	Frequency MHz	26 db Bandwidth MHz
Low	5180	25.134
Mid	5200	24.658
High	5240	25.018

FCC 15.407(a)(3)
 26 db Bandwidth (Antenna A)
 IEEE 802.11a: 54Mbps

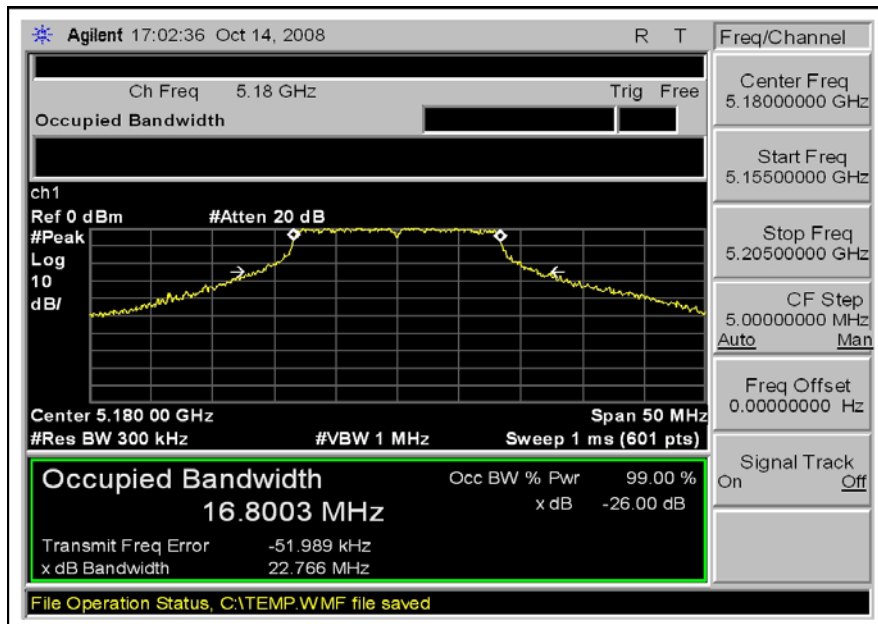
Channel	Frequency MHz	26 db Bandwidth MHz
Low	5745	23.630
Mid	5765	25.330
High	5805	23.578

FCC 15.407(a)(3)
 26 db Bandwidth (Antenna B)
 IEEE 802.11a: 54Mbps

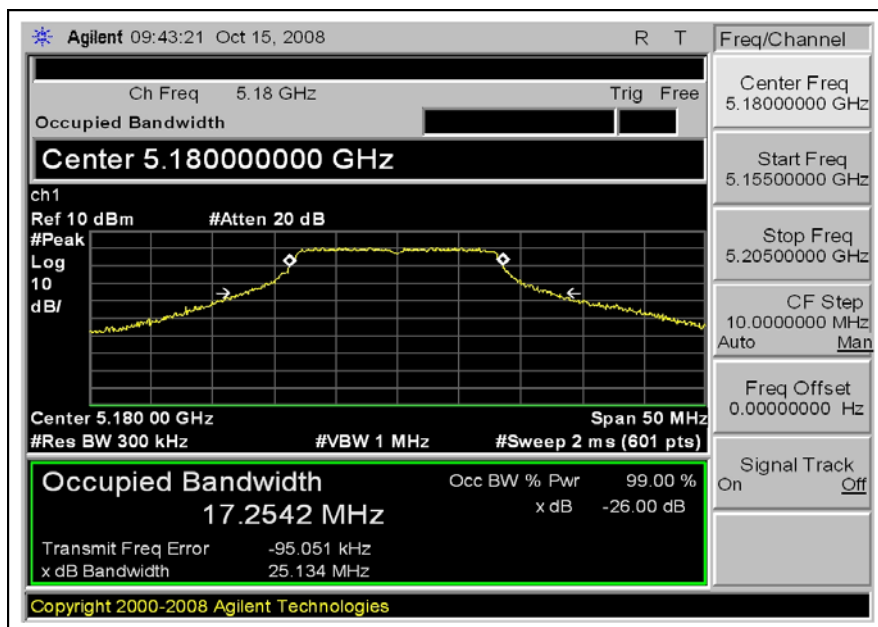
Channel	Frequency MHz	26 db Bandwidth MHz
Low	5745	25.877
Mid	5765	25.524
High	5805	24.665

Plots

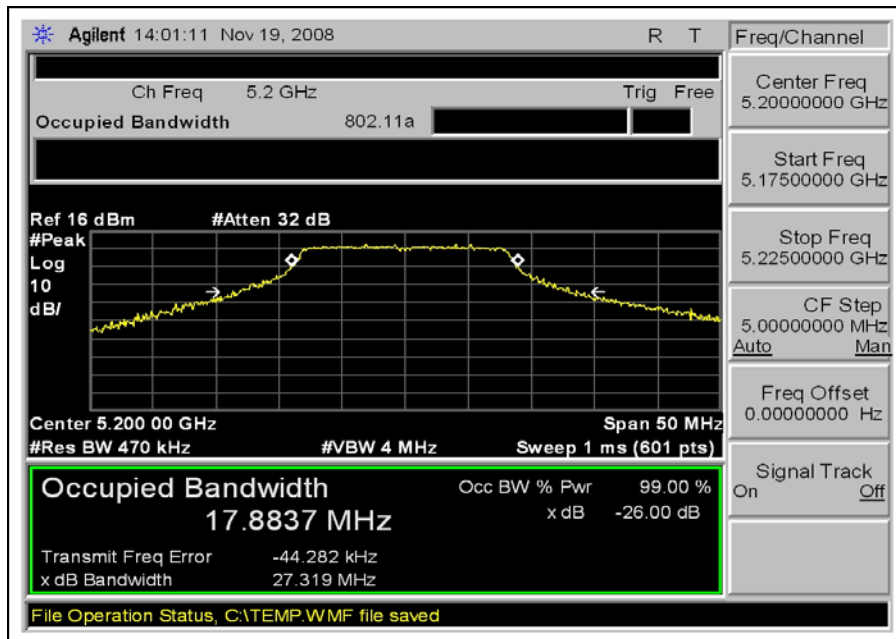
FCC 15.407 26 dB BANDWIDTH 802.11a CHANNEL 36 ANTENNA A



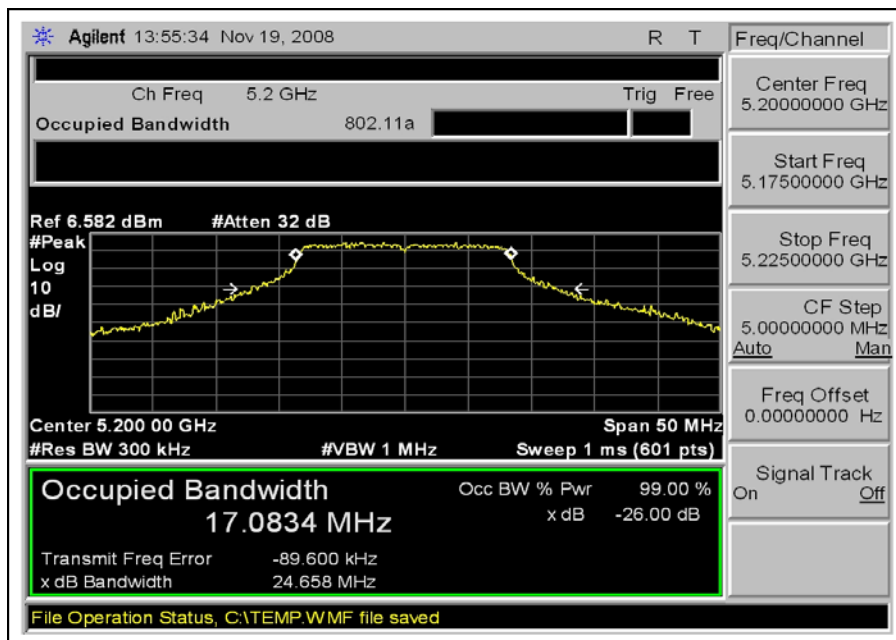
FCC 15.407 26 dB BANDWIDTH 802.11a CHANNEL 36 ANTENNA B



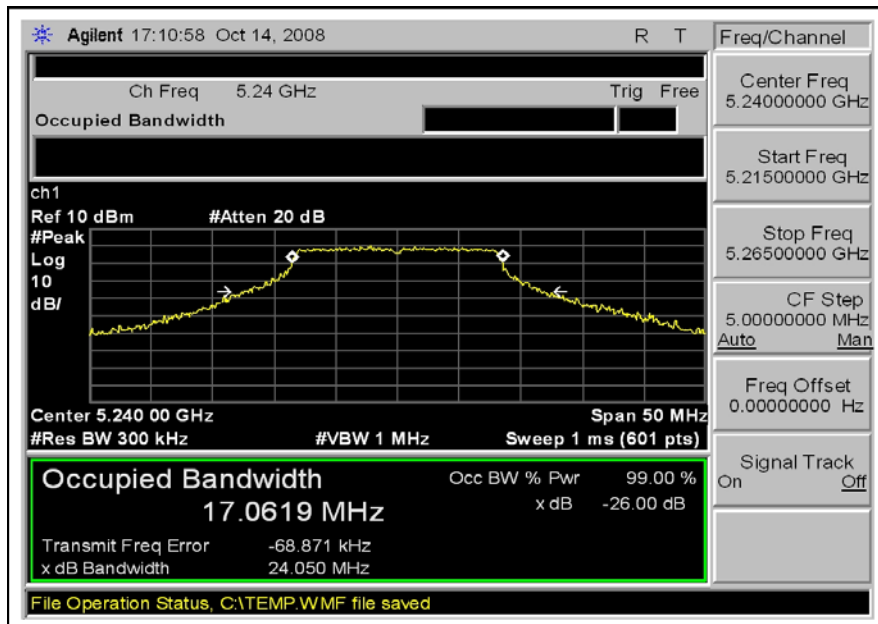
FCC 15.407 26dB BANDWIDTH 802.11a CHANNEL 40 ANTENNA A



FCC 15.407 26dB BANDWIDTH 802.11a CHANNEL 40 ANTENNA B



FCC 15.407 26 dB BANDWIDTH 802.11a CHANNEL 48 ANTENNA A



FCC 15.407 26 dB BANDWIDTH 802.11a CHANNEL 48 ANTENNA B

