



TESTING

CERT #803.01, 803.02, 803.05, 803.06

SILEX TECHNOLOGY AMERICA, INC. TEST REPORT
FOR THE
WIRELESS ETHERNET BRIDGE, XRX-610
FCC PART 15 SUBPART C SECTION 15.407 & RSS-210 ISSUE 7
TESTING

DATE OF ISSUE: OCTOBER 27, 2009

PREPARED FOR:

Silex Technology America, Inc.
157 West 7065 South
Midvale, UT 84047

P.O. No.: 3354-00
W.O. No.: 89951

PREPARED BY:

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Date of test: September 11-29, 2009

Report No.: FC09-180

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ADMINISTRATIVE INFORMATION

DATE OF TEST: September 11-29, 2009

DATE OF RECEIPT: September 11, 2009

REPRESENTATIVE: Ron Tozaki

MANUFACTURER:

Silex Technology America, Inc.
157 West 7065 South
Midvale, UT 84047

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: To perform the testing of the Wireless Ethernet Bridge, XRX-610 with the requirements for FCC Part 15 Subpart C Section 15.407 and RSS-210 devices.

APPROVALS

QUALITY ASSURANCE:

Steve Behm, Director of Engineering Services

TEST PERSONNEL:



Eddie Wong, Senior EMC Engineer

SUMMARY OF RESULTS

Test	Specification/Method	Results
RF Output Power (5.15-5.25 GHz)	FCC 15.407(a)(1)	Pass
RF Output Power (5.25-5.35GHz)	FCC 15.407(a)(3)	Pass
Peak Power Spectral Density	FCC 15.407(a)(5)	Pass
Peak Excursion	FCC 15.407(a)(6)	Pass
OATS Spurious Emissions (5.15-5.25 GHz)	FCC 15.407(b)(1)	Pass
OATS Spurious Emissions (5.725-5.825GHz)	FCC 15.407(b)(4)	Pass
Conducted Emissions	FCC 15.407(b)(6)/FCC 15.207	Pass
Radiated Emissions	FCC 15.407(b)(6)/FCC15.209	Pass
Undesirable Emissions Limits	FCC 15.407(b)(7)/FCC15.205	Pass
Frequency Stability	FCC 15.407(g)	Pass
Bandedge	ITU-R 55/1	Pass
26dB Bandwidth		Pass
99% Bandwidth	RSS-210 Issue 7/RSS GEN Issue 2	Pass
Site File No.	FCC: 90473 IC: 3082D-1	

CONDITIONS DURING TESTING

Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to the antenna cable.

FCC 15.31(m) Number Of Channels

This device was tested on three channels.

FCC 15.33(a) Frequency Ranges Tested

15.207 Conducted Emissions: 150 kHz – 30 MHz

15.209/15.407 Radiated Emissions: 9 kHz – 40 GHz

EUT Operating Frequency

The EUT was operating at 5.15 - 5.25GHz and 5.725 - 5.825GHz.

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

EQUIPMENT UNDER TEST

Power Supply

Manuf: APD

Model: DA-24F12

Serial: NA

Wireless 802.11 a/b/g Ethernet Bridge

Manuf: Silex Technology America, Inc.

Model: XRX-610

Serial: NA

PERIPHERAL DEVICES

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

Ethernet Hub

Manuf: Netgear

Model: DS108

Serial: NA

802.11 a/b/g Wireless Access Point

Manuf: 3-Com

Model: WL-526

Serial: NA

Laptop

Manuf: Sony

Model: PCG-982L

Serial: 8323330

Laptop

Manuf: HP

Model: Omnibook XE3

Serial: TW13113065

MEASUREMENT UNCERTAINTIES

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Compliance is deemed to occur provided measurements are below the specified limits.

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 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 15.407(a)(1) RF OUTPUT POWER

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946
Programmable Power Source	345AMX / UPC32	03/23/2009	03/23/2011	01695/ 01696

Test Conditions

The EUT is placed on the test bench. The device is set in continuous transmit mode. The RF output power is measured at the antenna port in accordance with FCC Public Notice DA 02-2138, August 30, 2002, method 1, using the Band power measurement of a spectrum analyzer.

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

Modulation: 802.11a (54 mbps)

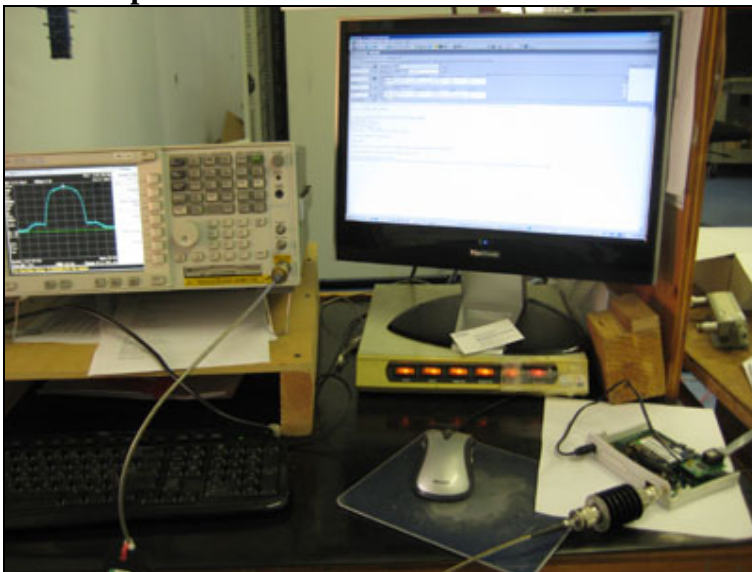
Firmware Power setting: 127

21°C, 55% relative humidity.

Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to the antenna cable.

The AC supply voltage was varied + - 15 %, no variation in output power was observed.

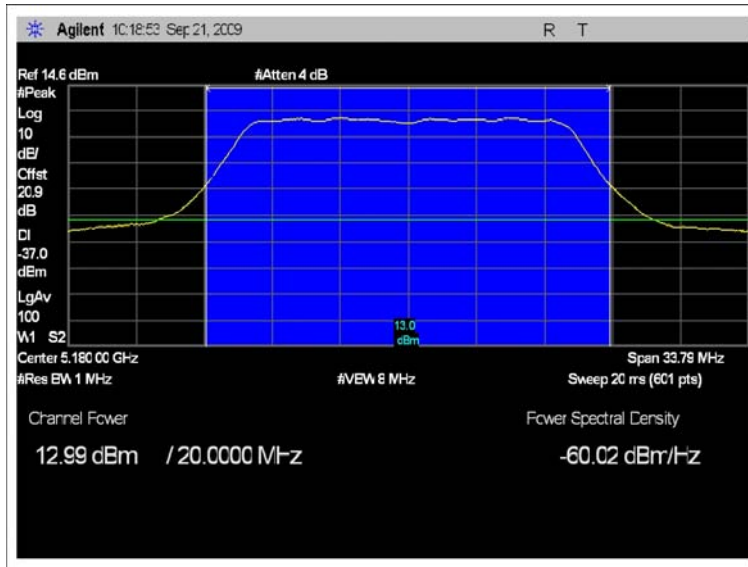
Test Setup Photos



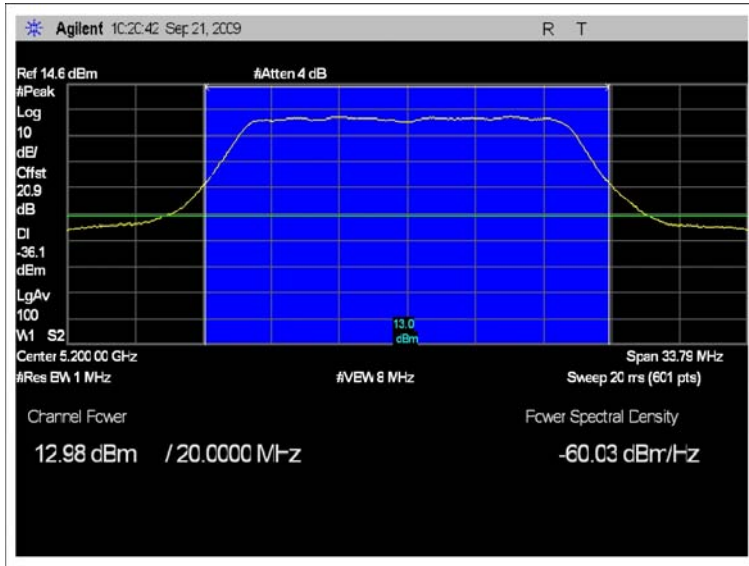
Data

Modulation	Frequency	Power	Power
802.11a	5180 MHz	12.9 dBm	0.0195W
802.11a	5200 MHz	13.0 dBm	0.0200W
802.11a	5240 MHz	13.7 dBm	0.0234W

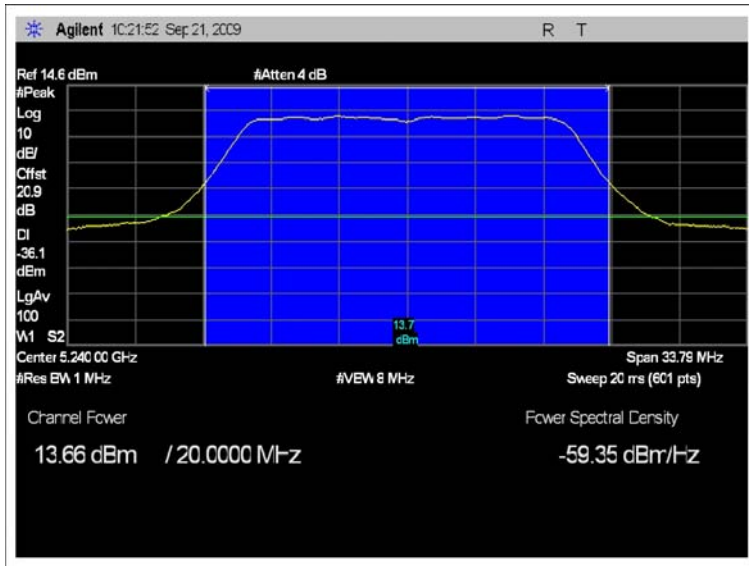
FCC 15.407(a)(1) PEAK POWER 802.11a - 5180MHz



FCC 15.407(a)(1) PEAK POWER 802.11a - 5200MHz



FCC 15.407(a)(1) PEAK POWER 802.11a - 5240MHz



FCC 15.407(a)(3) RF OUTPUT POWER

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946
Programmable Power Source	345AMX / UPC32	03/23/2009	03/23/2011	01695/ 01696

Test Conditions

The EUT is placed on the test bench. The device is set in continuous transmit mode. The RF output power is measured at the antenna port in accordance with FCC Public Notice DA 02-2138, August 30, 2002, method 1, using the Band power measurement of a spectrum analyzer.

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

Modulation: 802.11a (54 mbps),

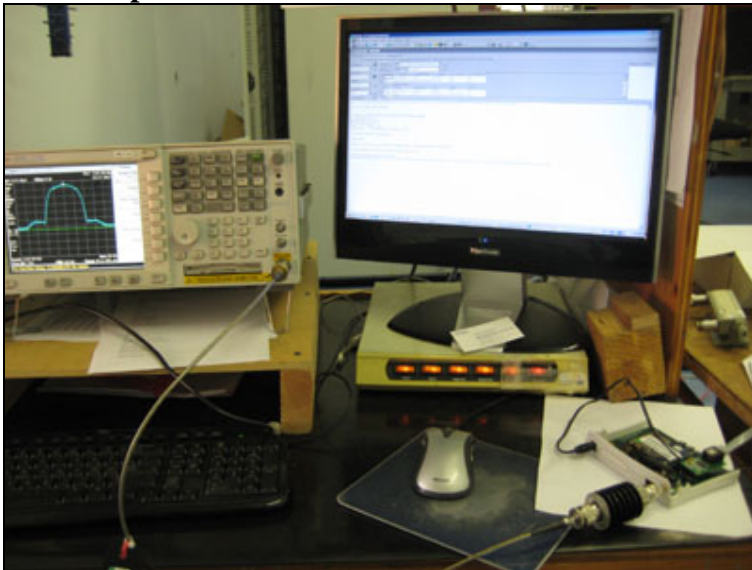
Firmware Power setting: 127

21°C, 55% relative humidity.

Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to the antenna cable.

The AC supply voltage was varied + - 15 %, no variation in output power was observed.

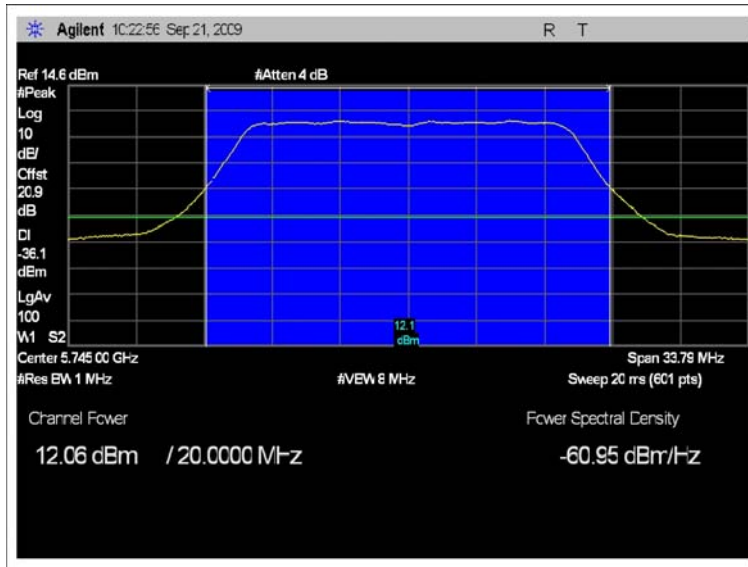
Test Setup Photos



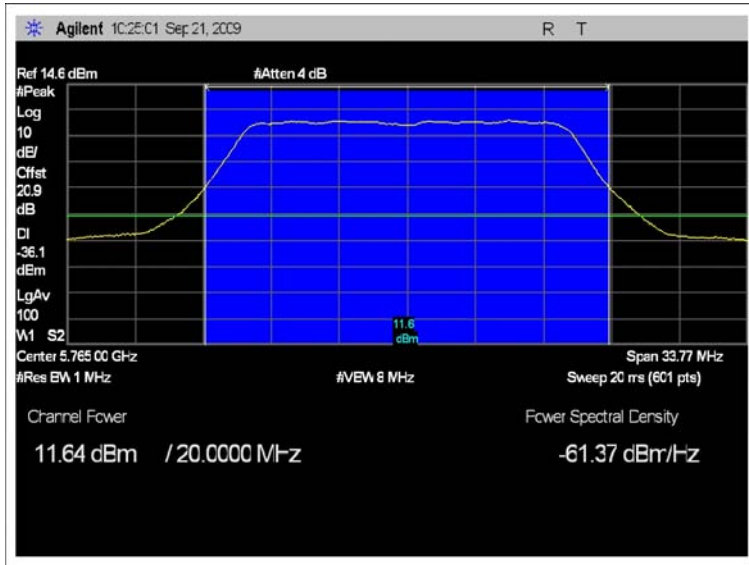
Data

Modulation	Frequency	Power	Power
802.11a	5745 MHz	12.1 dBm	0.0162W
802.11a	5765MHz	11.6 dBm	0.0145W
802.11a	5805MHz	11.0dBm	0.0126W

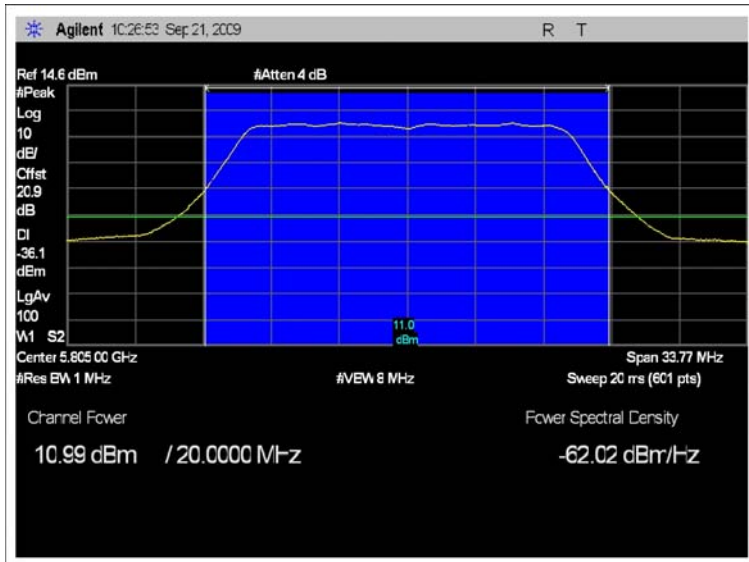
FCC 15.407(a)(3) PEAK POWER 802.11a - 5745MHz



FCC 15.407(a)(3) PEAK POWER 802.11a - 5765MHz



FCC 15.407(a)(3) PEAK POWER 802.11a - 5805MHz



FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946

Test Conditions

The EUT is placed on the test bench. The device is set in continuous transmit mode, The RF output power is measured at the antenna port in accordance with Peak Power Spectral Density measurement method 1, as described in FCC Public Notice DA 02-2138, August 30, 2002.

Two plots at each frequency point were captured, with the second plots spanned at 1 MHz and video triggered to capture the true peak signal.

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

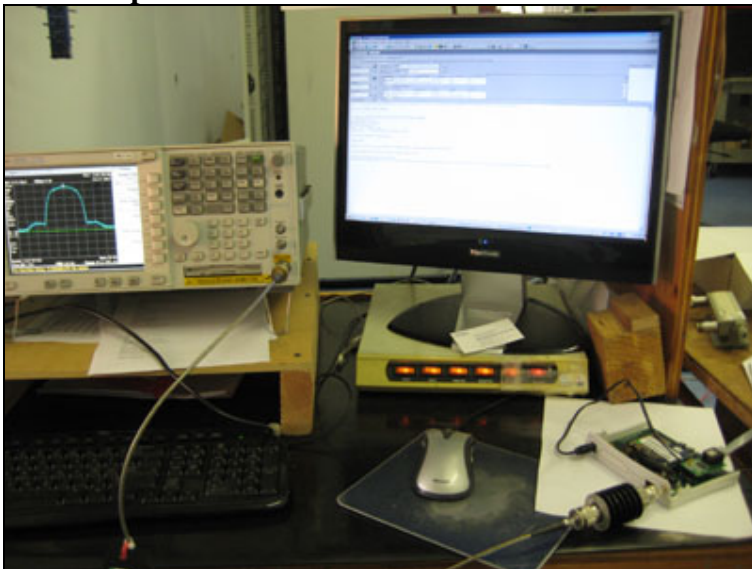
Modulation: 802.11a (54 mbps).

Firmware Power setting: 127

21°C, 55% relative humidity.

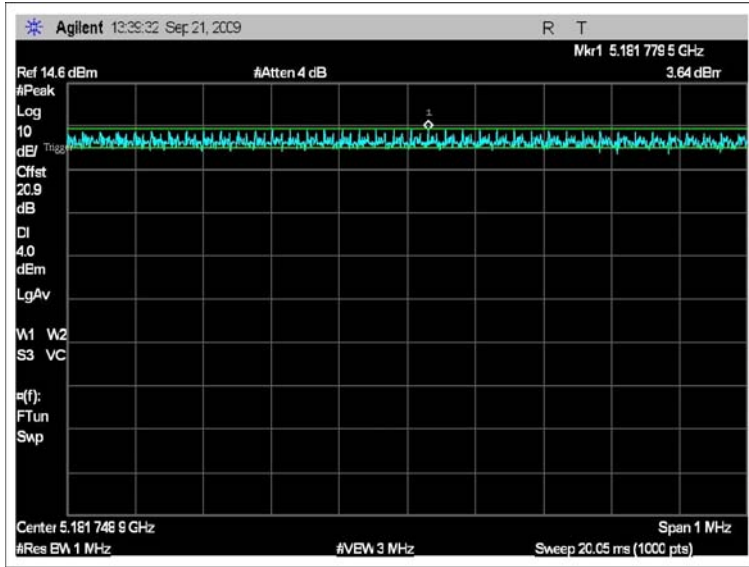
Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to the antenna cable.

Test Setup Photos

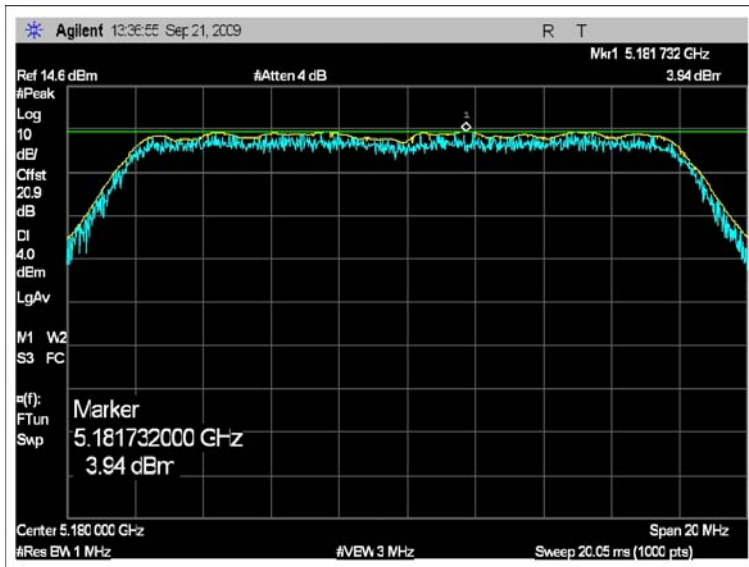


Plots

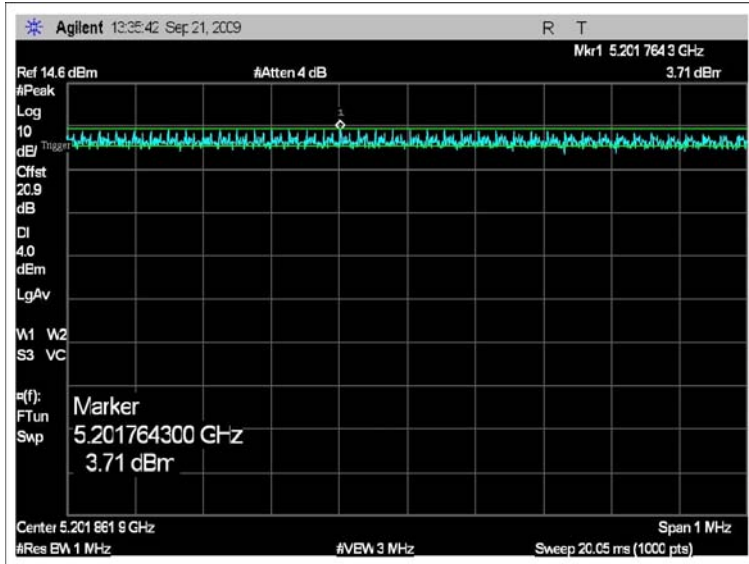
**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5180MHz**



**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5180MHz RAW**



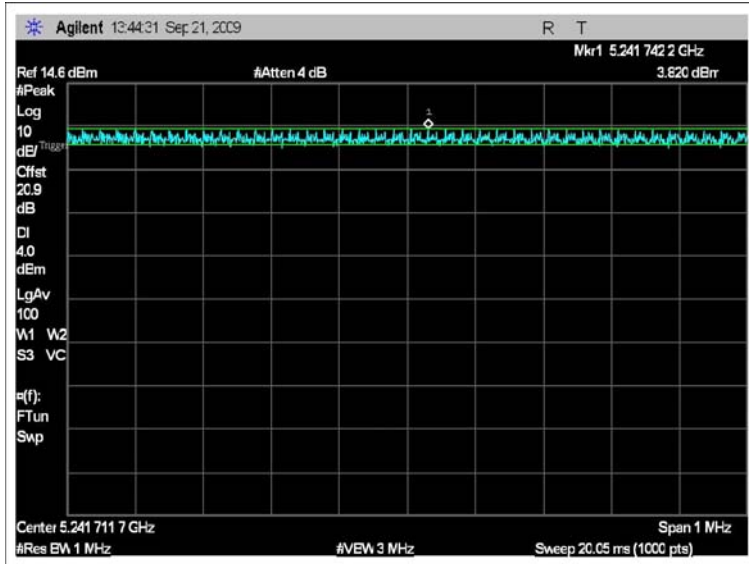
**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5200MHz**



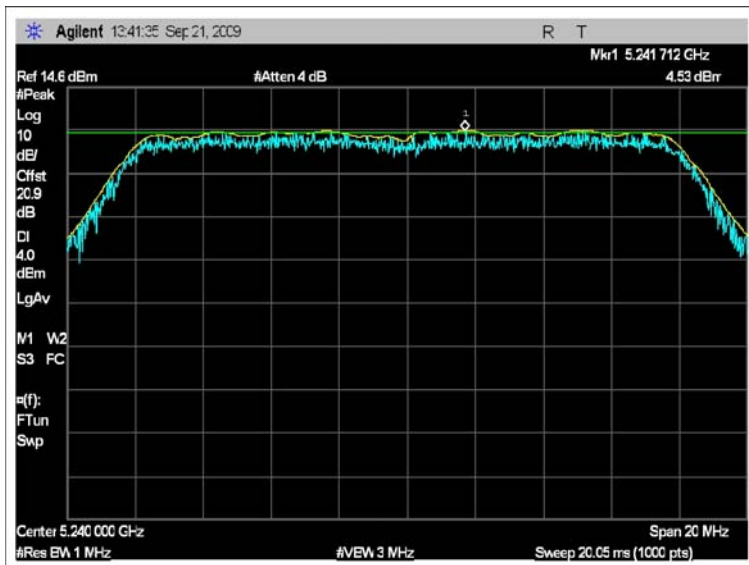
**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5200MHz RAW**



**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5240MHz**



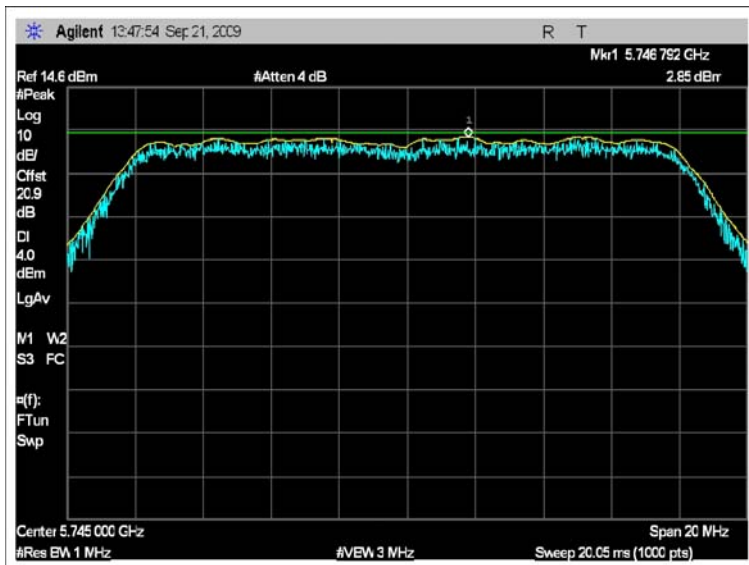
**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5240MHz RAW**



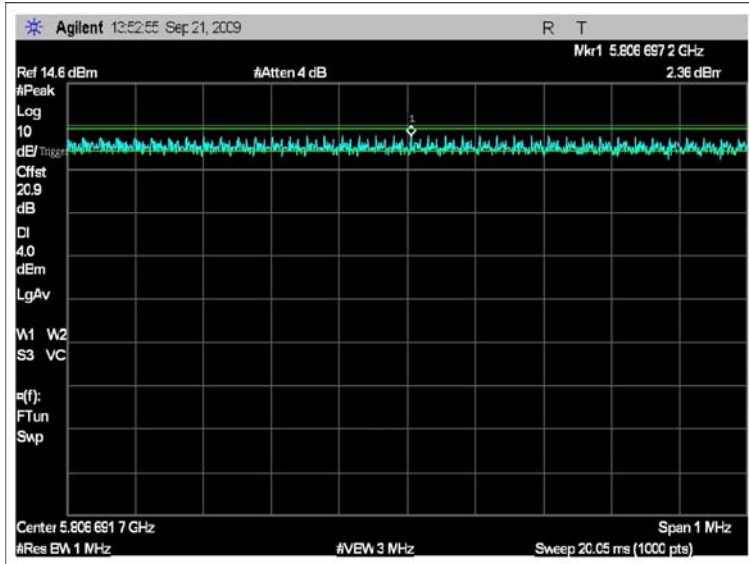
**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5245MHz**



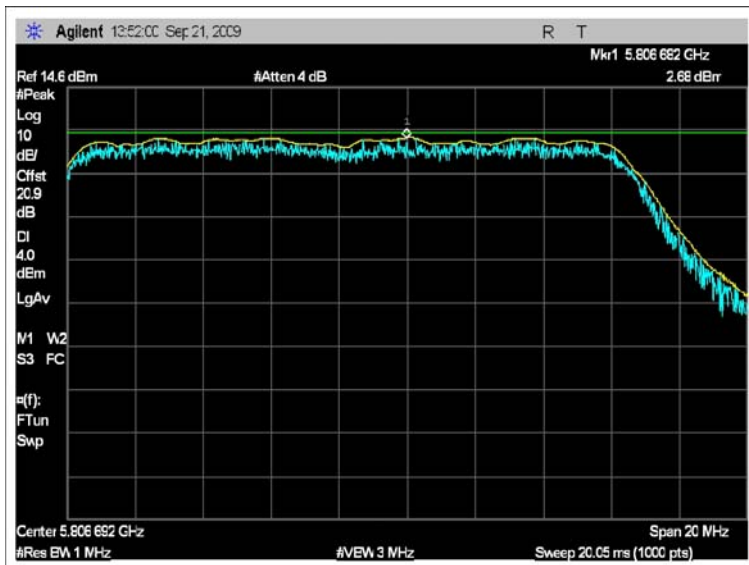
**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5245MHz RAW**



**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5805MHz**



**FCC 15.407(a)(5) PEAK POWER SPECTRAL DENSITY
802.11a - 5805MHz RAW**



FCC 15.407(a)(6) PEAK EXCURSION

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946

Test Conditions

The EUT is placed on the test bench. The device is set in continuous transmit mode, The RF output power is measured at the antenna port in accordance with Peak excursion measurement method as described in FCC Public Notice DA 02-2138, August 30, 2002,

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

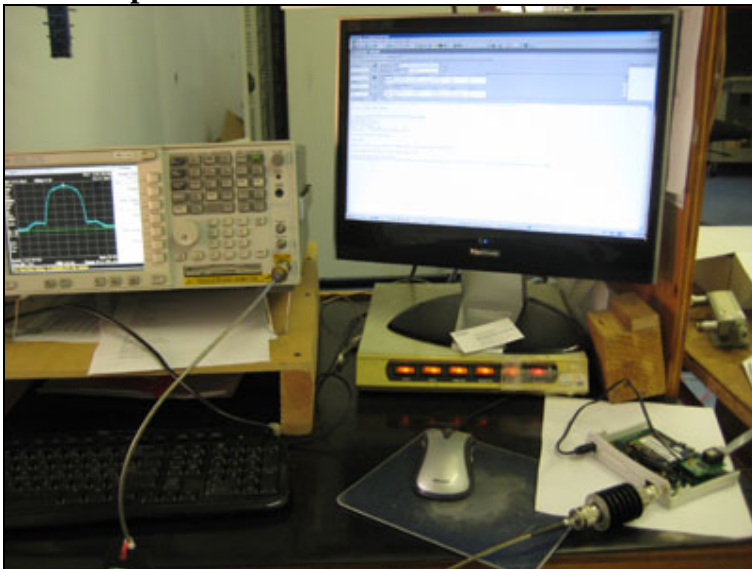
Modulation: 802.11a (54 mbps)

Firmware Power setting: 127

21°C, 55% relative humidity.

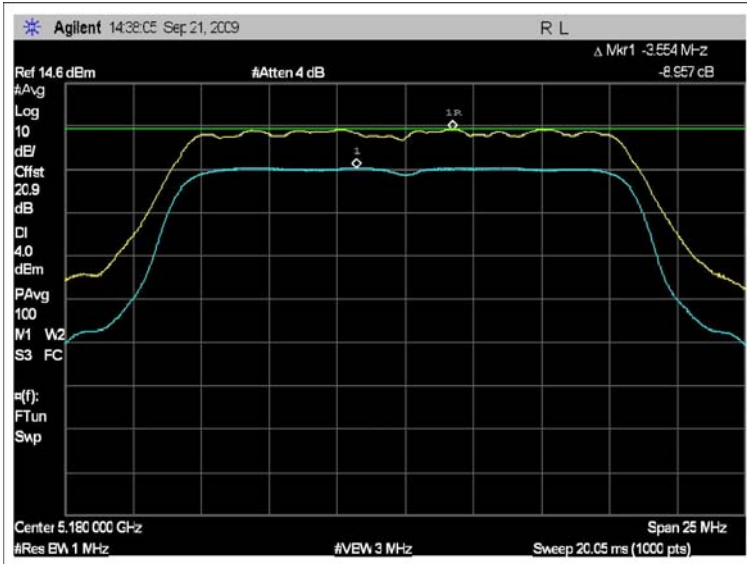
Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to the antenna cable.

Test Setup Photos

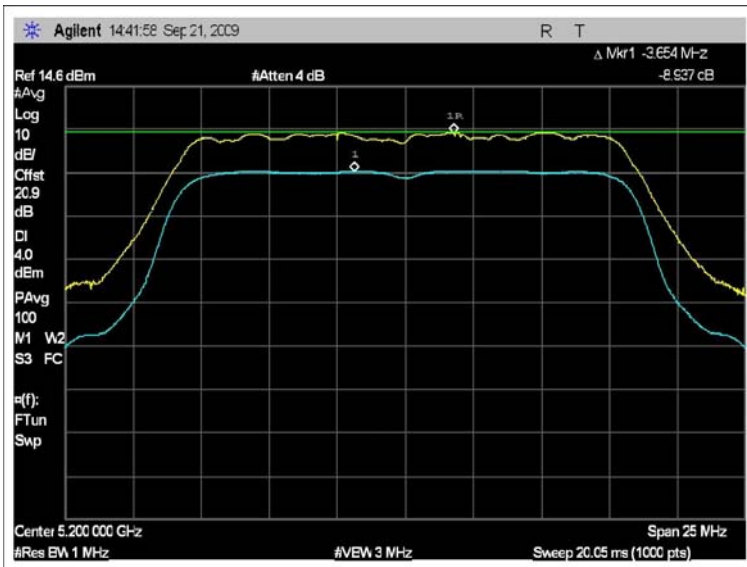


Plots

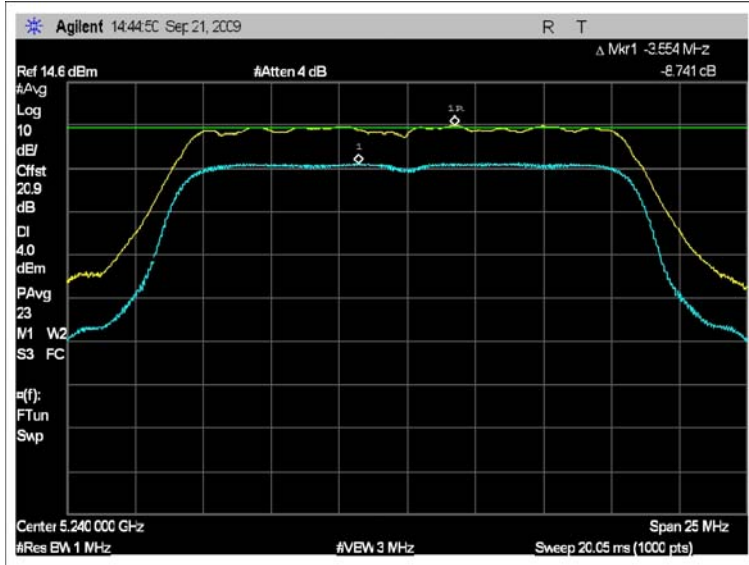
FCC 15.407(a)(6) PEAK EXCURSION 802.11a - 5180MHz



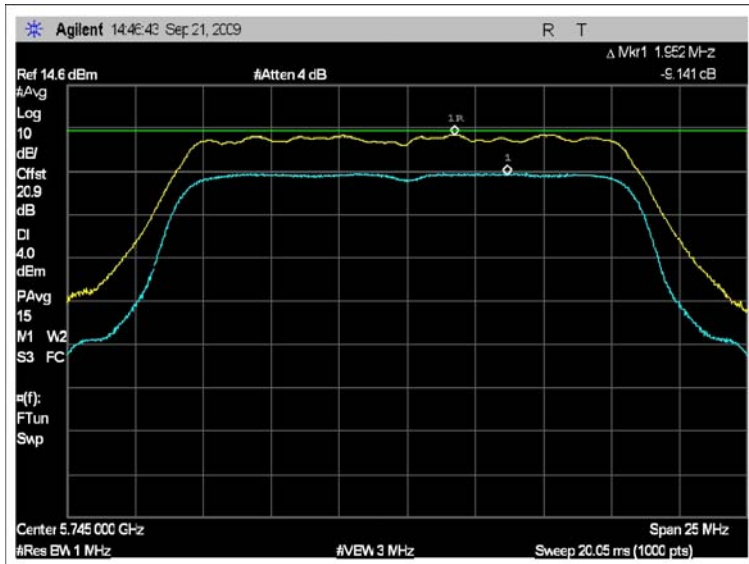
FCC 15.407(a)(6) PEAK EXCURSION 802.11a - 5200MHz



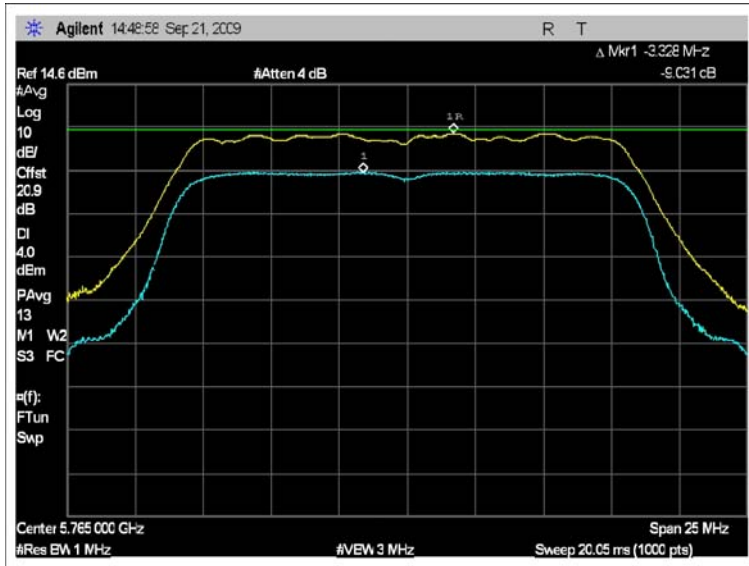
FCC 15.407(a)(6) PEAK EXCURSION 802.11a - 5240MHz



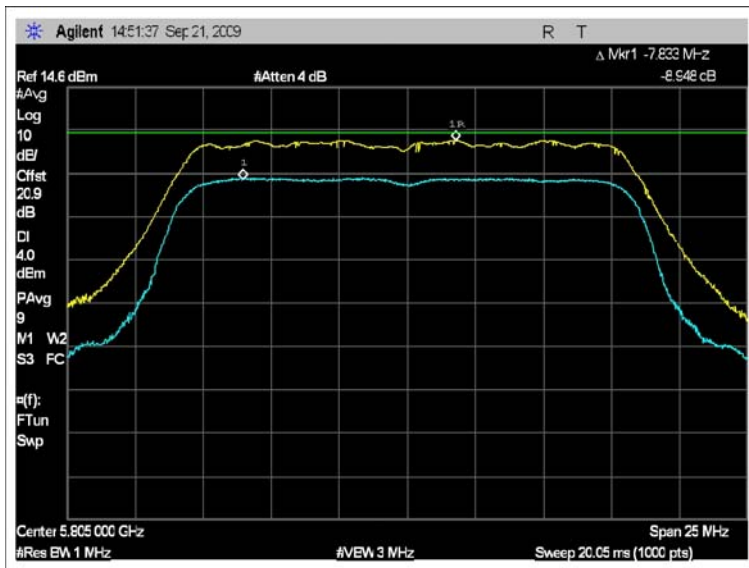
FCC 15.407(a)(6) PEAK EXCURSION 802.11a - 5745MHz



FCC 15.407(a)(6) PEAK EXCURSION 802.11a - 5765MHz



FCC 15.407(a)(6) PEAK EXCURSION 802.11a - 5805MHz



FCC 15.407(b)(1) OATS SPURIOUS 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 15.407 (b)(1)**
 Work Order #: **89951** Date: 9/18/2009
 Test Type: **Radiated Scan** Time: 11:42:19
 Equipment: **Wireless 802.11 a/b/g Ethernet Bridge** Sequence#: 22
 Manufacturer: Silex Technology America, Inc. Tested By: E. Wong
 Model: **XRX-610**
 S/N: **NA**

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Bilog Antenna	2451	01/21/2008	01/21/2010	01995
Loop Antenna	2014	06/16/2008	06/16/2010	00314
Pre amp to SA Cable	Cable #10	04/16/2009	04/16/2011	P05050
Cable	Cable15	01/05/2009	01/05/2011	P05198
Pre Amp	1937A02548	05/02/2008	05/02/2010	00309
Horn Antenna	6246	06/06/2008	06/06/2010	00849
Microwave Pre-amp	3123A00281	07/28/2008	07/28/2010	00786
Helix Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
18-26GHz Horn	942126-003	11/12/2008	11/12/2010	01413
26.5-40GHz Horn Antenna	1012	01/08/2008	01/08/2010	02045
2'-40GHz cable	NA	09/14/2009	09/14/2011	P02947
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946
5.8 GHz HPF	1	03/25/2008	03/25/2010	02755
AMP 50GHz	3332A00309	11/13/2008	11/13/2010	02115

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	APD	DA-24F12	NA
Wireless 802.11 a/b/g Ethernet Bridge*	Silex Technology America, Inc.	XRX-610	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Ethernet Hub	Netgear	DS108	NA
Laptop	HP	Omnibook XE3	TW13113065
802.11 a/b/g Wireless Access Point	3-Com	WL-526	NA
Laptop	Sony	PCG-982L	8323330

Test Conditions / Notes:

The EUT is placed on the wooden table lined with a Styrofoam surface of 5 cm thickness. The ethernet port is connected to remote laptop computer via a support ethernet hub.

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

Modulation: 802.11 a (54 mbps),

Firmware Power setting: 127

Power : 13.7 dBm 0.0230 watt

Antenna Gain: 2.1 dBi @ 5.825GHz (linear gain = 1.62)

The antenna is orientated in upright position.

21°C, 55% relative humidity.

Limit eirp = -27dBm/MHz = 70.3 dBuV/m @3meter, antenna gain of 2.1 dBi

Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to antenna cable.

Frequency range of measurement = 9 kHz - 40 GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 40000 MHz RBW=1 MHz, VBW=1 MHz.

Transducer Legend:

T1=Helix Cable 54' ANP05565 090410	T2=HF_pre AMP-1-26GHz_AN00786-072810.TRN
T3=Horn Ant AN00849 060610	T4=Hi-Freq_40GHz_2ft_AN02947 0911411
T5=HPF_6GHz-AN02755-032510	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	10480.000 M Ave	33.2	+8.9 +0.3	-36.2	+38.0	+0.9	+0.0	45.1	70.3	-25.2	Vert
802.11a 5240MHz											
^	10480.000 M	41.9	+8.9 +0.3	-36.2	+38.0	+0.9	+0.0	53.8	70.3	-16.5	Vert
802.11a 5240MHz											
3	10360.000 M Ave	32.6	+8.8 +0.3	-36.2	+38.0	+0.9	+0.0	44.4	70.3	-25.9	Vert
802.11a 5180MHz											
^	10360.000 M	41.5	+8.8 +0.3	-36.2	+38.0	+0.9	+0.0	53.3	70.3	-17.0	Vert
802.11a 5180MHz											
5	10400.000 M Ave	32.5	+8.8 +0.3	-36.2	+38.0	+0.9	+0.0	44.3	70.3	-26.0	Vert
802.11a 5200MHz											
^	10400.000 M	41.1	+8.8 +0.3	-36.2	+38.0	+0.9	+0.0	52.9	70.3	-17.4	Vert
802.11a 5200MHz											

FCC 15.407(b)(4) OATS SPURIOUS 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 15.407 (b)(4)**
 Work Order #: **89951** Date: 9/18/2009
 Test Type: **Radiated Scan** Time: 11:42:19
 Equipment: **Wireless 802.11 a/b/g Ethernet Bridge** Sequence#: 22
 Manufacturer: Silex Technology America, Inc. Tested By: E. Wong
 Model: **XRX-610**
 S/N: **NA**

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Bilog Antenna	2451	01/21/2008	01/21/2010	01995
Loop Antenna	2014	06/16/2008	06/16/2010	00314
Pre amp to SA Cable	Cable #10	04/16/2009	04/16/2011	P05050
Cable	Cable15	01/05/2009	01/05/2011	P05198
Pre Amp	1937A02548	05/02/2008	05/02/2010	00309
Horn Antenna	6246	06/06/2008	06/06/2010	00849
Microwave Pre-amp	3123A00281	07/28/2008	07/28/2010	00786
Helix Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
18-26GHz Horn	942126-003	11/12/2008	11/12/2010	01413
26.5-40GHz Horn Antenna	1012	01/08/2008	01/08/2010	02045
2'-40GHz cable	NA	09/14/2009	09/14/2011	P02947
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946
5.8 GHz HPF	1	03/25/2008	03/25/2010	02755
AMP 50GHz	3332A00309	11/13/2008	11/13/2010	02115

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	APD	DA-24F12	NA
Wireless 802.11 a/b/g Ethernet Bridge*	Silex Technology America, Inc.	XRX-610	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Ethernet Hub	Netgear	DS108	NA
Laptop	HP	Omnibook XE3	TW13113065
802.11 a/b/g Wireless Access Point	3-Com	WL-526	NA
Laptop	Sony	PCG-982L	8323330

Test Conditions / Notes:

The EUT is placed on the wooden table lined with a Styrofoam surface of 5 cm thickness. The ethernet port is connected to remote laptop computer via a support ethernet hub.

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

Modulation: 802.11 a (54 mbps),

Firmware Power setting: 127

Power : 13.7 dBm 0.0230 watt

Antenna Gain: 2.1 dBi @ 5.825GHz (linear gain = 1.62)

The antenna is orientated in upright position.

21°C, 55% relative humidity.

Limit eirp = -27dBm/MHz = 70.3 dBuV/m @3meter, antenna gain of 2.1 dBi

Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to antenna cable.

Frequency range of measurement = 9 kHz - 40 GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 40000 MHz RBW=1 MHz, VBW=1 MHz.

Transducer Legend:

T1=Heliac Cable 54' ANP05565 090410	T2=HF_pre AMP-1-26GHz_AN00786-072810.TRN
T3=Horn Ant AN00849 060610	T4=Hi-Freq_40GHz_2ft_AN02947 0911411
T5=HPF_6GHz-AN02755-032510	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	11609.990	30.5	+9.6	-35.9	+38.8	+1.0	+0.0	44.4	70.3	-25.9	Vert
	M		+0.4								
	Ave								802.11a 5805MHz		
^	11609.990	40.2	+9.6	-35.9	+38.8	+1.0	+0.0	54.1	70.3	-16.2	Vert
	M		+0.4								
									802.11a 5805MHz		
3	11490.000	30.5	+9.6	-35.9	+38.8	+0.9	+0.0	44.3	70.3	-26.0	Vert
	M		+0.4								
	Ave								802.11a 5754MHz		
^	11490.000	39.6	+9.6	-35.9	+38.8	+0.9	+0.0	53.4	70.3	-16.9	Vert
	M		+0.4								
									802.11a 5754MHz		

FCC 15.407(b)(6)/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 #: **89951** Date: 9/16/2009
 Test Type: **Conducted Emissions** Time: 1:51:07 PM
 Equipment: **Wireless 802.11 a/b/g Ethernet Bridge** Sequence#: 11
 Manufacturer: **Silex Technology America, Inc.** Tested By: E. Wong
 Model: **XRX-610** 110V 60Hz
 S/N: **NA**

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
LISN	1104	12/09/2008	12/09/2010	00847
6dB Attenuator	None	10/14/2008	10/14/2010	P05886
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	APD	DA-24F12	NA
Wireless 802.11 a/b/g Ethernet Bridge*	Silex Technology America, Inc.	XRX-610	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Ethernet Hub	Netgear	DS108	NA
Laptop	HP	Omnibook XE3	TW13113065
802.11 a/b/g Wireless Access Point	3-Com	WL-526	NA
Laptop	Sony	PCG-982L	8323330

Test Conditions / Notes:

The EUT is placed on the wooden table. The ethernet port is connected to remote laptop computer via a support ethernet hub.

Frequency: 2.4 - 2.4845GHz, 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx/Rx Frequency: 5.8 GHz

Modulation: 802.11 a

Power: 15dBm

To evaluate the non-intentional and intentional radiator portion of the device, the EUT is operating in loop back mode via ethernet port and WiFi simultaneously. The EUT receives data via ethernet port and transmits the received data to remote wireless access point.

5.8 GHz Receiver portion of the RF circuit is active.

The antenna is orientated in upright position.

21°C, 55% relative humidity.

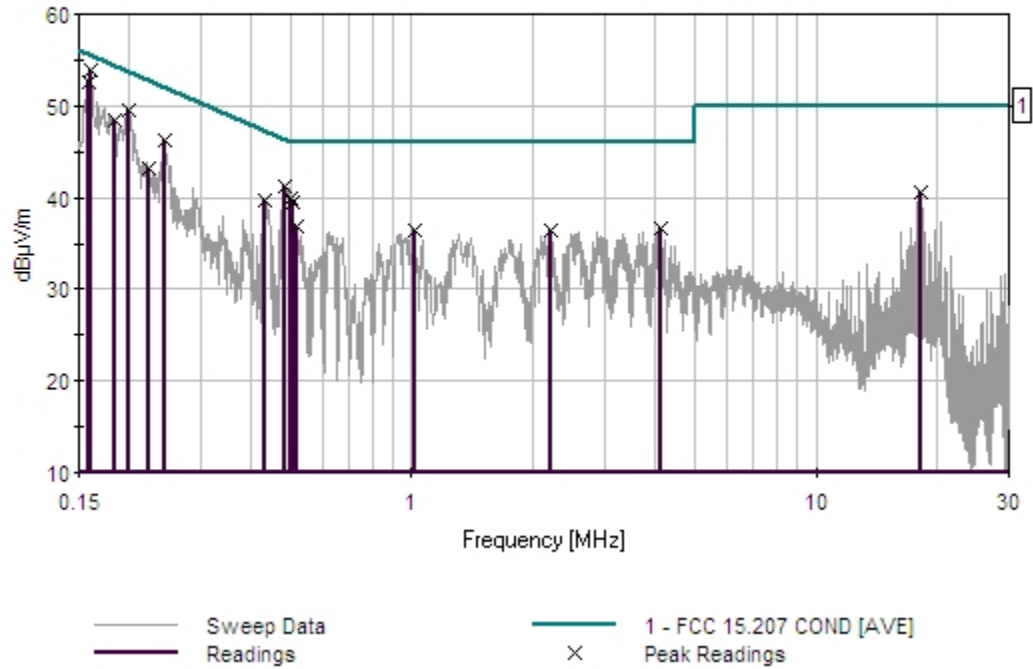
Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to antenna cable.

Transducer Legend:

T1=150kHz HPF AN02610_010910	T2=6dB atten-P05886-101410.TRN
T3=Cable #21 -P04358- Site A 05/12/10	T4=L1 Insertion Loss AN00847_120910

#	Freq MHz	Rdng dB μ V	Reading listed by margin.				Dist Table	Test Lead: Black			
			T1 dB	T2 dB	T3 dB	T4 dB		Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	160.181k	47.1	+0.6	+6.1	+0.0	+0.0	+0.0	53.8	55.5	-1.7	Black
2	158.727k	45.7	+0.8	+6.1	+0.0	+0.0	+0.0	52.6	55.5	-2.9	Black
3	198.723k	43.3	+0.2	+6.1	+0.0	+0.0	+0.0	49.6	53.7	-4.1	Black
4	482.333k	34.9	+0.2	+6.1	+0.0	+0.0	+0.0	41.2	46.3	-5.1	Black
5	243.810k	40.0	+0.2	+6.1	+0.0	+0.0	+0.0	46.3	52.0	-5.7	Black
6	184.179k	42.1	+0.3	+6.1	+0.0	+0.0	+0.0	48.5	54.3	-5.8	Black
7	501.241k	33.6	+0.2	+6.1	+0.0	+0.0	+0.0	39.9	46.0	-6.1	Black
8	504.877k	33.2	+0.2	+6.1	+0.0	+0.0	+0.0	39.5	46.0	-6.5	Black
9	435.065k	33.5	+0.2	+6.1	+0.0	+0.0	+0.0	39.8	47.2	-7.4	Black
10	516.512k	30.6	+0.2	+6.1	+0.0	+0.0	+0.0	36.9	46.0	-9.1	Black
11	4.139M	30.1	+0.2	+6.1	+0.1	+0.1	+0.0	36.6	46.0	-9.4	Black
12	18.247M	32.9	+0.3	+6.1	+0.3	+1.0	+0.0	40.6	50.0	-9.4	Black
13	223.448k	36.9	+0.2	+6.1	+0.0	+0.0	+0.0	43.2	52.7	-9.5	Black
14	2.217M	30.1	+0.2	+6.1	+0.1	+0.0	+0.0	36.5	46.0	-9.5	Black
15	1.013M	29.9	+0.3	+6.1	+0.1	+0.0	+0.0	36.4	46.0	-9.6	Black

CKC Laboratories, Inc. Date: 9/16/2009 Time: 1:51:07 PM Silex Technology, America, Inc. WO#: 89951
 FCC 15.207 COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 11
 XRX 610



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 #: **89951** Date: 9/16/2009
 Test Type: **Conducted Emissions** Time: 1:48:23 PM
 Equipment: **Wireless 802.11 a/b/g Ethernet Bridge** Sequence#: 10
 Manufacturer: Silex Technology America, Inc. Tested By: E. Wong
 Model: XRX-610 110V 60Hz
 S/N: NA

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
LISN	1104	12/09/2008	12/09/2010	00847
6dB Attenuator	None	10/14/2008	10/14/2010	P05886
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	APD	DA-24F12	NA
Wireless 802.11 a/b/g Ethernet Bridge*	Silex Technology America, Inc.	XRX-610	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Ethernet Hub	Netgear	DS108	NA
Laptop	HP	Omnibook XE3	TW13113065
802.11 a/b/g Wireless Access Point	3-Com	WL-526	NA
Laptop	Sony	PCG-982L	8323330

Test Conditions / Notes:

The EUT is placed on the wooden table. The ethernet port is connected to remote laptop computer via a support ethernet hub.

Frequency: 2.4 - 2.4845GHz, 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx/Rx Frequency: 5.8 GHz

Modulation: 802.11 a

Power: 15dBm

To evaluate the non-intentional and intentional radiator portion of the device, the EUT is operating in loop back mode via ethernet port and WiFi simultaneously. The EUT receives data via ethernet port and transmits the received data to remote wireless access point.

5.8 GHz Receiver portion of the RF circuit is active.

The antenna is orientated in upright position.

21°C, 55% relative humidity.

Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to antenna cable.

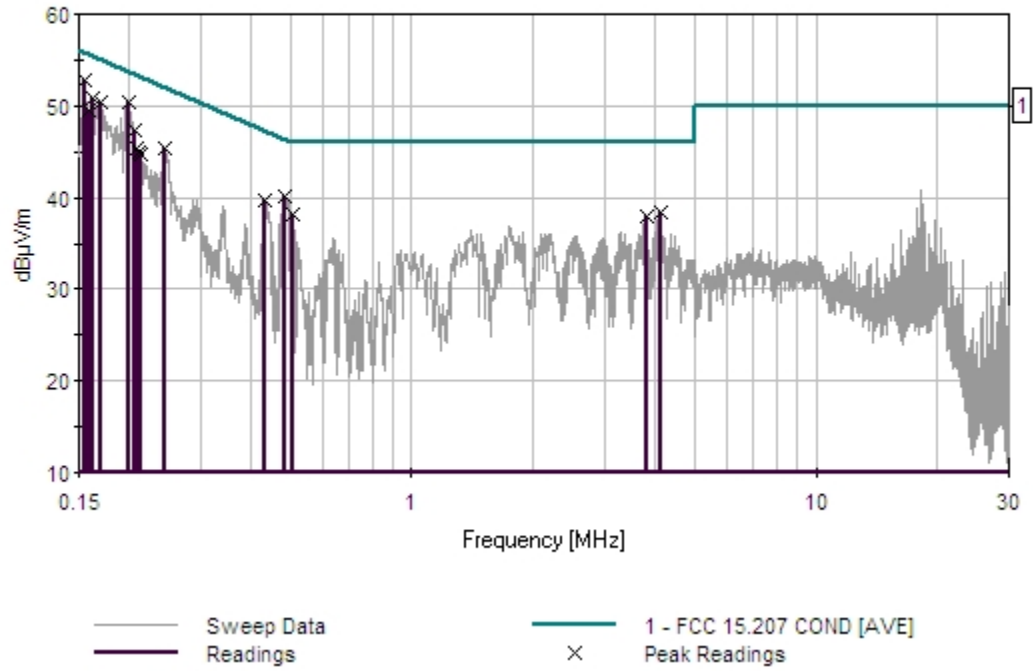
Transducer Legend:

T1=150kHz HPF AN02610_010910	T2=6dB atten-P05886-101410.TRN
T3=Cable #21 -P04358- Site A 05/12/10	T4=L2 Insertion Loss AN00847_120910

Measurement Data: Reading listed by margin. Test Lead: White

#	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	155.090k	45.3	+1.4	+6.1	+0.0	+0.0	+0.0	52.8	55.7	-2.9	White
2	198.723k	44.1	+0.2	+6.1	+0.0	+0.1	+0.0	50.5	53.7	-3.2	White
3	162.363k	44.1	+0.6	+6.1	+0.0	+0.0	+0.0	50.8	55.3	-4.5	White
4	170.362k	43.9	+0.4	+6.1	+0.0	+0.0	+0.0	50.4	54.9	-4.5	White
5	158.727k	42.7	+0.8	+6.1	+0.0	+0.0	+0.0	49.6	55.5	-5.9	White
6	205.995k	40.9	+0.2	+6.1	+0.0	+0.1	+0.0	47.3	53.4	-6.1	White
7	485.242k	33.8	+0.2	+6.1	+0.0	+0.0	+0.0	40.1	46.2	-6.1	White
8	245.264k	39.0	+0.2	+6.1	+0.0	+0.0	+0.0	45.3	51.9	-6.6	White
9	433.610k	33.3	+0.2	+6.1	+0.0	+0.0	+0.0	39.6	47.2	-7.6	White
10	4.139M	31.7	+0.2	+6.1	+0.1	+0.2	+0.0	38.3	46.0	-7.7	White
11	505.604k	31.8	+0.2	+6.1	+0.0	+0.0	+0.0	38.1	46.0	-7.9	White
12	208.177k	38.9	+0.2	+6.1	+0.0	+0.1	+0.0	45.3	53.3	-8.0	White
13	3.803M	31.3	+0.2	+6.1	+0.1	+0.2	+0.0	37.9	46.0	-8.1	White
14	210.358k	38.6	+0.2	+6.1	+0.0	+0.1	+0.0	45.0	53.2	-8.2	White
15	212.540k	38.3	+0.2	+6.1	+0.0	+0.1	+0.0	44.7	53.1	-8.4	White

CKC Laboratories, Inc. Date: 9/16/2009 Time: 1:48:23 PM Silex Technology, America, Inc. WO#: 89951
 FCC 15.207 COND [AVE] Test Lead: White 110V 60Hz Sequence#: 10
 XRX 610



FCC 15.407(b)(6)/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 15.407 (b)(6) / (15.209)**
 Work Order #: **89951** Date: 9/18/2009
 Test Type: **Radiated Scan** Time: 11:42:19
 Equipment: **Wireless 802.11 a/b/g Ethernet Bridge** Sequence#: 22
 Manufacturer: Silex Technology America, Inc. Tested By: E. Wong
 Model: **XRX-610**
 S/N: **NA**

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Bilog Antenna	2451	01/21/2008	01/21/2010	01995
Loop Antenna	2014	06/16/2008	06/16/2010	00314
Pre amp to SA Cable	Cable #10	04/16/2009	04/16/2011	P05050
Cable	Cable15	01/05/2009	01/05/2011	P05198
Pre Amp	1937A02548	05/02/2008	05/02/2010	00309
Horn Antenna	6246	06/06/2008	06/06/2010	00849
Microwave Pre-amp	3123A00281	07/28/2008	07/28/2010	00786
Helix Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
18-26GHz Horn	942126-003	11/12/2008	11/12/2010	01413
26.5-40GHz Horn Antenna	1012	01/08/2008	01/08/2010	02045
2'-40GHz cable	NA	09/14/2009	09/14/2011	P02947
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946
5.8 GHz HPF	1	03/25/2008	03/25/2010	02755
AMP 50GHz	3332A00309	11/13/2008	11/13/2010	02115

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	APD	DA-24F12	NA
Wireless 802.11 a/b/g Ethernet Bridge*	Silex Technology America, Inc.	XRX-610	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Ethernet Hub	Netgear	DS108	NA
Laptop	HP	Omnibook XE3	TW13113065
802.11 a/b/g Wireless Access Point	3-Com	WL-526	NA
Laptop	Sony	PCG-982L	8323330

Test Conditions / Notes:

The EUT is placed on the wooden table lined with a Styrofoam surface of 5 cm thickness. The ethernet port is connected to remote laptop computer via a support ethernet hub.

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

Modulation: 802.11 a (54 mbps),

Firmware Power setting: 127

Power : 13.7 dBm 0.0230 watt

Antenna Gain: 2.1 dBi @ 5.825GHz (linear gain = 1.62)

The antenna is orientated in upright position.

21°C, 55% relative humidity.

Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to antenna cable.

Frequency range of measurement = 9 kHz- 40 GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 40000 MHz RBW=1 MHz, VBW=1 MHz.

Transducer Legend:

T1=Bilog-AN01995 BILOG_012110	T2=Cable #10 ANP05050 041611
T3=Cable #15_05198_ Site A, 010511	T4=Pre_amp_HP8447D-AN00309-050210
T5=Heliac Cable 54' ANP05565 090410	T6=HF_pre AMP-1-26GHz_AN00786-072810.TRN
T7=Horn Ant AN00849 060610	T8=Hi-Freq_40GHz_2ft_AN02947 0911411
T9=HPF_6GHz-AN02755-032510	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dB μ V	T9				Table	dB μ V/m	dB μ V/m	dB	Ant
			dB	dB	dB	dB					
1	666.717M	45.5	+20.4	+0.5	+4.8	-27.2	+0.0	44.0	46.0	-2.0	Vert
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	666.717M	46.5	+20.4	+0.5	+4.8	-27.2	+0.0	45.0	46.0	-1.0	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
3	800.067M	42.3	+22.5	+0.4	+5.3	-27.2	+0.0	43.3	46.0	-2.7	Vert
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	800.067M	44.6	+22.5	+0.4	+5.3	-27.2	+0.0	45.6	46.0	-0.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
5	533.383M	46.7	+18.8	+0.4	+4.2	-27.7	+0.0	42.4	46.0	-3.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
6	400.033M	50.0	+16.0	+0.4	+3.6	-27.8	+0.0	42.2	46.0	-3.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
7	666.722M	43.6	+20.4	+0.5	+4.8	-27.2	+0.0	42.1	46.0	-3.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

8	950.097M	38.4	+24.1 +0.0 +0.0	+0.7 +0.0	+5.9 +0.0	-27.2 +0.0	+0.0	41.9	46.0	-4.1	Horiz
9	950.080M	37.6	+24.1 +0.0 +0.0	+0.7 +0.0	+5.9 +0.0	-27.2 +0.0	+0.0	41.1	46.0	-4.9	Horiz
10	400.017M	48.1	+16.0 +0.0 +0.0	+0.4 +0.0	+3.6 +0.0	-27.8 +0.0	+0.0	40.3	46.0	-5.7	Horiz
11	950.117M	36.7	+24.1 +0.0 +0.0	+0.7 +0.0	+5.9 +0.0	-27.2 +0.0	+0.0	40.2	46.0	-5.8	Vert
12	533.367M	44.4	+18.8 +0.0 +0.0	+0.4 +0.0	+4.2 +0.0	-27.7 +0.0	+0.0	40.1	46.0	-5.9	Vert
13	750.055M	39.0	+21.6 +0.0 +0.0	+0.4 +0.0	+5.1 +0.0	-27.0 +0.0	+0.0	39.1	46.0	-6.9	Horiz
14	360.000M	47.8	+15.0 +0.0 +0.0	+0.3 +0.0	+3.4 +0.0	-27.8 +0.0	+0.0	38.7	46.0	-7.3	Horiz
15	750.083M	38.6	+21.6 +0.0 +0.0	+0.4 +0.0	+5.1 +0.0	-27.0 +0.0	+0.0	38.7	46.0	-7.3	Vert
16	159.967M	50.6	+10.6 +0.0 +0.0	+0.3 +0.0	+2.1 +0.0	-27.9 +0.0	+0.0	35.7	43.5	-7.8	Horiz
17	260.017M	49.9	+12.7 +0.0 +0.0	+0.3 +0.0	+2.8 +0.0	-27.7 +0.0	+0.0	38.0	46.0	-8.0	Horiz
18	900.083M	35.3	+23.3 +0.0 +0.0	+0.7 +0.0	+5.7 +0.0	-27.2 +0.0	+0.0	37.8	46.0	-8.2	Vert
19	119.933M	49.2	+11.6 +0.0 +0.0	+0.2 +0.0	+1.8 +0.0	-27.9 +0.0	+0.0	34.9	43.5	-8.6	Horiz
20	10480.000 M Ave	33.2	+0.0 +8.9 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	45.1	54.0	-8.9	Vert
	^ 10480.000 M	41.9	+0.0 +8.9 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	53.8	54.0	-0.2	Vert
									802.11a 5240MHz		
22	374.983M	45.5	+15.4 +0.0 +0.0	+0.4 +0.0	+3.5 +0.0	-27.8 +0.0	+0.0	37.0	46.0	-9.0	Vert
23	11609.990 M Ave	30.5	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +1.0	+0.0	44.4	54.0	-9.6	Vert
	^ 11609.990 M	40.2	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +1.0	+0.0	54.1	54.0	+0.1	Vert
									802.11a 5805MHz		

25	10360.000 M Ave	32.6	+0.0 +8.8 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	44.4	54.0	-9.6	Vert	802.11a 5180MHz
^	10360.000 M	41.5	+0.0 +8.8 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	53.3	54.0	-0.7	Vert	802.11a 5180MHz
27	250.017M	48.3	+12.6 +0.0 +0.0	+0.3 +0.0	+2.8 +0.0	-27.7 +0.0	+0.0	36.3	46.0	-9.7	Horiz	
28	110.250M	49.0	+10.9 +0.0 +0.0	+0.1 +0.0	+1.7 +0.0	-27.9 +0.0	+0.0	33.8	43.5	-9.7	Vert	
29	11490.000 M Ave	30.5	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +0.9	+0.0	44.3	54.0	-9.7	Vert	802.11a 5754MHz
^	11490.000 M	39.6	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +0.9	+0.0	53.4	54.0	-0.6	Vert	802.11a 5754MHz
31	10400.000 M Ave	32.5	+0.0 +8.8 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	44.3	54.0	-9.7	Vert	802.11a 5200MHz
^	10400.000 M	41.1	+0.0 +8.8 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	52.9	54.0	-1.1	Vert	802.11a 5200MHz
33	325.017M	46.3	+14.0 +0.0 +0.0	+0.3 +0.0	+3.2 +0.0	-27.8 +0.0	+0.0	36.0	46.0	-10.0	Horiz	
34	919.967M	32.9	+23.6 +0.0 +0.0	+0.7 +0.0	+5.8 +0.0	-27.2 +0.0	+0.0	35.8	46.0	-10.2	Vert	
35	839.983M	33.7	+22.8 +0.0 +0.0	+0.6 +0.0	+5.5 +0.0	-27.0 +0.0	+0.0	35.6	46.0	-10.4	Vert	
36	200.000M	49.2	+9.1 +0.0 +0.0	+0.3 +0.0	+2.4 +0.0	-28.0 +0.0	+0.0	33.0	43.5	-10.5	Horiz	
37	325.017M	45.6	+14.0 +0.0 +0.0	+0.3 +0.0	+3.2 +0.0	-27.8 +0.0	+0.0	35.3	46.0	-10.7	Vert	
38	260.017M	47.2	+12.7 +0.0 +0.0	+0.3 +0.0	+2.8 +0.0	-27.7 +0.0	+0.0	35.3	46.0	-10.7	Vert	
39	480.033M	40.6	+17.8 +0.0 +0.0	+0.4 +0.0	+4.0 +0.0	-27.8 +0.0	+0.0	35.0	46.0	-11.0	Horiz	
40	266.683M	46.5	+12.8 +0.0 +0.0	+0.3 +0.0	+2.9 +0.0	-27.8 +0.0	+0.0	34.7	46.0	-11.3	Horiz	
41	300.017M	45.8	+13.2 +0.0 +0.0	+0.3 +0.0	+3.0 +0.0	-27.8 +0.0	+0.0	34.5	46.0	-11.5	Horiz	

42	700.033M	35.6	+20.7 +0.0 +0.0	+0.5 +0.0	+4.9 +0.0	-27.3 +0.0	+0.0	34.4	46.0	-11.6	Vert
43	124.983M	46.0	+11.8 +0.0 +0.0	+0.2 +0.0	+1.8 +0.0	-27.9 +0.0	+0.0	31.9	43.5	-11.6	Vert
44	11530.000 M Ave	28.5	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +1.0	+0.0	42.4	54.0	-11.6	Vert
^	11530.000 M	38.1	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +1.0	+0.0	52.0	54.0	-2.0	Vert
									802.11a 5765MHz		
46	359.983M	42.8	+15.0 +0.0 +0.0	+0.3 +0.0	+3.4 +0.0	-27.8 +0.0	+0.0	33.7	46.0	-12.3	Vert
47	320.017M	44.1	+13.8 +0.0 +0.0	+0.3 +0.0	+3.1 +0.0	-27.8 +0.0	+0.0	33.5	46.0	-12.5	Horiz
48	240.017M	46.0	+12.0 +0.0 +0.0	+0.3 +0.0	+2.7 +0.0	-27.8 +0.0	+0.0	33.2	46.0	-12.8	Vert
49	900.030M	30.3	+23.3 +0.0 +0.0	+0.7 +0.0	+5.7 +0.0	-27.2 +0.0	+0.0	32.8	46.0	-13.2	Horiz
50	488.933M	38.0	+18.0 +0.0 +0.0	+0.4 +0.0	+4.0 +0.0	-27.8 +0.0	+0.0	32.6	46.0	-13.4	Vert
51	725.047M	33.0	+21.2 +0.0 +0.0	+0.4 +0.0	+5.0 +0.0	-27.1 +0.0	+0.0	32.5	46.0	-13.5	Horiz
52	833.363M	30.7	+22.8 +0.0 +0.0	+0.6 +0.0	+5.4 +0.0	-27.1 +0.0	+0.0	32.4	46.0	-13.6	Horiz
53	711.163M	33.3	+20.9 +0.0 +0.0	+0.5 +0.0	+4.9 +0.0	-27.2 +0.0	+0.0	32.4	46.0	-13.6	Horiz
54	283.433M	44.0	+13.0 +0.0 +0.0	+0.3 +0.0	+2.9 +0.0	-27.8 +0.0	+0.0	32.4	46.0	-13.6	Horiz
55	300.000M	43.7	+13.2 +0.0 +0.0	+0.3 +0.0	+3.0 +0.0	-27.8 +0.0	+0.0	32.4	46.0	-13.6	Vert
56	5360.000M Ave	36.4	+0.0 +6.1 +0.0	+0.0 -36.6	+0.0 +33.7	+0.0 +0.6	+0.0	40.2	54.0	-13.8	Vert
									data from bandedge plot		
^	5360.000M	50.3	+0.0 +6.1 +0.0	+0.0 -36.6	+0.0 +33.7	+0.0 +0.6	+0.0	54.1	54.0	+0.1	Vert
									data from bandedge plot		
58	333.383M	42.2	+14.2 +0.0 +0.0	+0.3 +0.0	+3.2 +0.0	-27.8 +0.0	+0.0	32.1	46.0	-13.9	Vert

59	5380.000M Ave	36.1	+0.0 +6.2 +0.0	+0.0 -36.6	+0.0 +33.8	+0.0 +0.6	+0.0	40.1	54.0	-13.9	Vert
data from bandedge plot											
^	5380.000M	47.9	+0.0 +6.2 +0.0	+0.0 -36.6	+0.0 +33.8	+0.0 +0.6	+0.0	51.9	54.0	-2.1	Vert
data from bandedge plot											
61	208.000M	44.7	+9.7 +0.0 +0.0	+0.3 +0.0	+2.5 +0.0	-28.0 +0.0	+0.0	29.2	43.5	-14.3	Horiz
62	239.983M	44.4	+12.0 +0.0 +0.0	+0.3 +0.0	+2.7 +0.0	-27.8 +0.0	+0.0	31.6	46.0	-14.4	Horiz
63	768.100M	30.9	+22.0 +0.0 +0.0	+0.4 +0.0	+5.2 +0.0	-27.1 +0.0	+0.0	31.4	46.0	-14.6	Vert
64	519.950M	35.9	+18.6 +0.0 +0.0	+0.4 +0.0	+4.2 +0.0	-27.7 +0.0	+0.0	31.4	46.0	-14.6	Vert
65	366.750M	40.3	+15.2 +0.0 +0.0	+0.3 +0.0	+3.4 +0.0	-27.8 +0.0	+0.0	31.4	46.0	-14.6	Vert
66	125.050M	42.2	+11.8 +0.0 +0.0	+0.2 +0.0	+1.8 +0.0	-27.9 +0.0	+0.0	28.1	43.5	-15.4	Horiz
67	533.383M	34.8	+18.8 +0.0 +0.0	+0.4 +0.0	+4.2 +0.0	-27.7 +0.0	+0.0	30.5	46.0	-15.5	Horiz
68	975.100M	34.2	+24.4 +0.0 +0.0	+0.7 +0.0	+6.1 +0.0	-27.3 +0.0	+0.0	38.1	54.0	-15.9	Vert
69	960.055M	33.3	+24.2 +0.0 +0.0	+0.7 +0.0	+6.0 +0.0	-27.2 +0.0	+0.0	37.0	54.0	-17.0	Horiz
70	408.017M	36.5	+16.2 +0.0 +0.0	+0.4 +0.0	+3.6 +0.0	-27.8 +0.0	+0.0	28.9	46.0	-17.1	Horiz
71	275.017M	40.4	+12.9 +0.0 +0.0	+0.3 +0.0	+2.9 +0.0	-27.8 +0.0	+0.0	28.7	46.0	-17.3	Vert
72	425.067M	35.8	+16.6 +0.0 +0.0	+0.3 +0.0	+3.7 +0.0	-27.8 +0.0	+0.0	28.6	46.0	-17.4	Horiz
73	274.983M	40.3	+12.9 +0.0 +0.0	+0.3 +0.0	+2.9 +0.0	-27.8 +0.0	+0.0	28.6	46.0	-17.4	Horiz
74	425.017M	35.8	+16.6 +0.0 +0.0	+0.3 +0.0	+3.7 +0.0	-27.8 +0.0	+0.0	28.6	46.0	-17.4	Vert
75	466.700M	34.5	+17.5 +0.0 +0.0	+0.3 +0.0	+3.9 +0.0	-27.8 +0.0	+0.0	28.4	46.0	-17.6	Horiz

76	444.467M	35.1	+17.0 +0.0 +0.0	+0.3 +0.0	+3.8 +0.0	-27.8 +0.0	+0.0	28.4	46.0	-17.6	Horiz
77	975.080M	31.8	+24.4 +0.0 +0.0	+0.7 +0.0	+6.1 +0.0	-27.3 +0.0	+0.0	35.7	54.0	-18.3	Horiz
78	416.017M	34.9	+16.4 +0.0 +0.0	+0.4 +0.0	+3.7 +0.0	-27.8 +0.0	+0.0	27.6	46.0	-18.4	Vert

FCC 15.407(b)(7)/15.205 UNDESIRABLE EMISSIONS LIMITS

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 15.407 (b)(7) / (15.205)**
 Work Order #: **89951** Date: 9/18/2009
 Test Type: **Radiated Scan** Time: 11:42:19
 Equipment: **Wireless 802.11 a/b/g Ethernet Bridge** Sequence#: 22
 Manufacturer: **Silex Technology America, Inc.** Tested By: E. Wong
 Model: **XRX-610**
 S/N: **NA**

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Bilog Antenna	2451	01/21/2008	01/21/2010	01995
Loop Antenna	2014	06/16/2008	06/16/2010	00314
Pre amp to SA Cable	Cable #10	04/16/2009	04/16/2011	P05050
Cable	Cable15	01/05/2009	01/05/2011	P05198
Pre Amp	1937A02548	05/02/2008	05/02/2010	00309
Horn Antenna	6246	06/06/2008	06/06/2010	00849
Microwave Pre-amp	3123A00281	07/28/2008	07/28/2010	00786
Helix Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
18-26GHz Horn	942126-003	11/12/2008	11/12/2010	01413
26.5-40GHz Horn Antenna	1012	01/08/2008	01/08/2010	02045
2'-40GHz cable	NA	09/14/2009	09/14/2011	P02947
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946
5.8 GHz HPF	1	03/25/2008	03/25/2010	02755
AMP 50GHz	3332A00309	11/13/2008	11/13/2010	02115

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Power Supply	APD	DA-24F12	NA
Wireless 802.11 a/b/g Ethernet Bridge*	Silex Technology America, Inc.	XRX-610	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Ethernet Hub	Netgear	DS108	NA
Laptop	HP	Omnibook XE3	TW13113065
802.11 a/b/g Wireless Access Point	3-Com	WL-526	NA
Laptop	Sony	PCG-982L	8323330

Test Conditions / Notes:

The EUT is placed on the wooden table lined with a Styrofoam surface of 5 cm thickness. The ethernet port is connected to remote laptop computer via a support ethernet hub.

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

Modulation: 802.11 a (54 mbps),

Firmware Power setting: 127

Power : 13.7 dBm 0.0230 watt

Antenna Gain: 2.1 dBi @ 5.825GHz (linear gain = 1.62)

The antenna is orientated in upright position.

21°C, 55% relative humidity.

Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to antenna cable.

Frequency range of measurement = 9 kHz- 40 GHz.

Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 40000 MHz RBW=1 MHz, VBW=1 MHz.

Transducer Legend:

T1=Bilog-AN01995 BILOG_012110	T2=Cable #10 ANP05050 041611
T3=Cable #15_05198_ Site A, 010511	T4=Pre_amp_HP8447D-AN00309-050210
T5=Heliac Cable 54' ANP05565 090410	T6=HF_pre AMP-1-26GHz_AN00786-072810.TRN
T7=Horn Ant AN00849 060610	T8=Hi-Freq_40GHz_2ft_AN02947 0911411
T9=HPF_6GHz-AN02755-032510	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar		
			T5	T6	T7	T8							
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant		
1	400.033M	50.0	+16.0 +0.0 +0.0	+0.4 +0.0 +0.0	+3.6 +0.0 +0.0	-27.8 +0.0 +0.0	+0.0	42.2	46.0	-3.8	Vert		
2	400.017M	48.1	+16.0 +0.0 +0.0	+0.4 +0.0 +0.0	+3.6 +0.0 +0.0	-27.8 +0.0 +0.0	+0.0	40.3	46.0	-5.7	Horiz		
3	260.017M	49.9	+12.7 +0.0 +0.0	+0.3 +0.0 +0.0	+2.8 +0.0 +0.0	-27.7 +0.0 +0.0	+0.0	38.0	46.0	-8.0	Horiz		
4	119.933M	49.2	+11.6 +0.0 +0.0	+0.2 +0.0 +0.0	+1.8 +0.0 +0.0	-27.9 +0.0 +0.0	+0.0	34.9	43.5	-8.6	Horiz		
5	11609.990 M Ave	30.5	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +1.0	+0.0	44.4	54.0	-9.6	Vert		
^	11609.990 M	40.2	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +1.0	+0.0	54.1	54.0	+0.1	Vert		
			802.11a 5805MHz										
7	110.250M	49.0	+10.9 +0.0 +0.0	+0.1 +0.0 +0.0	+1.7 +0.0 +0.0	-27.9 +0.0 +0.0	+0.0	33.8	43.5	-9.7	Vert		

8	11490.000 M Ave	30.5	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +0.9	+0.0	44.3	54.0	-9.7	Vert
802.11a 5754MHz											
^	11490.000 M	39.6	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +0.9	+0.0	53.4	54.0	-0.6	Vert
802.11a 5754MHz											
10	250.017M	48.3	+12.6 +0.0 +0.0	+0.3 +0.0	+2.8 +0.0	-27.7 +0.0	+0.0	36.3	46.0	-9.7	Horiz
11	325.017M	46.3	+14.0 +0.0 +0.0	+0.3 +0.0	+3.2 +0.0	-27.8 +0.0	+0.0	36.0	46.0	-10.0	Horiz
12	260.017M	47.2	+12.7 +0.0 +0.0	+0.3 +0.0	+2.8 +0.0	-27.7 +0.0	+0.0	35.3	46.0	-10.7	Vert
13	325.017M	45.6	+14.0 +0.0 +0.0	+0.3 +0.0	+3.2 +0.0	-27.8 +0.0	+0.0	35.3	46.0	-10.7	Vert
14	266.683M	46.5	+12.8 +0.0 +0.0	+0.3 +0.0	+2.9 +0.0	-27.8 +0.0	+0.0	34.7	46.0	-11.3	Horiz
15	124.983M	46.0	+11.8 +0.0 +0.0	+0.2 +0.0	+1.8 +0.0	-27.9 +0.0	+0.0	31.9	43.5	-11.6	Vert
16	11530.000 M Ave	28.5	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +1.0	+0.0	42.4	54.0	-11.6	Vert
802.11a 5765MHz											
^	11530.000 M	38.1	+0.0 +9.6 +0.4	+0.0 -35.9	+0.0 +38.8	+0.0 +1.0	+0.0	52.0	54.0	-2.0	Vert
802.11a 5765MHz											
18	240.017M	46.0	+12.0 +0.0 +0.0	+0.3 +0.0	+2.7 +0.0	-27.8 +0.0	+0.0	33.2	46.0	-12.8	Vert
19	283.433M	44.0	+13.0 +0.0 +0.0	+0.3 +0.0	+2.9 +0.0	-27.8 +0.0	+0.0	32.4	46.0	-13.6	Horiz
20	5360.000M Ave	36.4	+0.0 +6.1 +0.0	+0.0 -36.6	+0.0 +33.7	+0.0 +0.6	+0.0	40.2	54.0	-13.8	Vert
data from bandedge plot											
^	5360.000M	50.3	+0.0 +6.1 +0.0	+0.0 -36.6	+0.0 +33.7	+0.0 +0.6	+0.0	54.1	54.0	+0.1	Vert
data from bandedge plot											
22	333.383M	42.2	+14.2 +0.0 +0.0	+0.3 +0.0	+3.2 +0.0	-27.8 +0.0	+0.0	32.1	46.0	-13.9	Vert
23	5380.000M Ave	36.1	+0.0 +6.2 +0.0	+0.0 -36.6	+0.0 +33.8	+0.0 +0.6	+0.0	40.1	54.0	-13.9	Vert
data from bandedge plot											
^	5380.000M	47.9	+0.0 +6.2 +0.0	+0.0 -36.6	+0.0 +33.8	+0.0 +0.6	+0.0	51.9	54.0	-2.1	Vert
data from bandedge plot											

25	125.050M	42.2	+11.8 +0.0 +0.0	+0.2 +0.0	+1.8 +0.0	-27.9 +0.0	+0.0	28.1	43.5	-15.4	Horiz
26	975.100M	34.2	+24.4 +0.0 +0.0	+0.7 +0.0	+6.1 +0.0	-27.3 +0.0	+0.0	38.1	54.0	-15.9	Vert
27	960.055M	33.3	+24.2 +0.0 +0.0	+0.7 +0.0	+6.0 +0.0	-27.2 +0.0	+0.0	37.0	54.0	-17.0	Horiz
28	408.017M	36.5	+16.2 +0.0 +0.0	+0.4 +0.0	+3.6 +0.0	-27.8 +0.0	+0.0	28.9	46.0	-17.1	Horiz
29	275.017M	40.4	+12.9 +0.0 +0.0	+0.3 +0.0	+2.9 +0.0	-27.8 +0.0	+0.0	28.7	46.0	-17.3	Vert
30	274.983M	40.3	+12.9 +0.0 +0.0	+0.3 +0.0	+2.9 +0.0	-27.8 +0.0	+0.0	28.6	46.0	-17.4	Horiz
31	975.080M	31.8	+24.4 +0.0 +0.0	+0.7 +0.0	+6.1 +0.0	-27.3 +0.0	+0.0	35.7	54.0	-18.3	Horiz
32	10480.000 M Ave	33.2	+0.0 +8.9 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	45.1	80.0	-34.9	Vert
802.11a 5240MHz											
^	10480.000 M	41.9	+0.0 +8.9 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	53.8	80.0	-26.2	Vert
802.11a 5240MHz											
34	10360.000 M Ave	32.6	+0.0 +8.8 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	44.4	80.0	-35.6	Vert
802.11a 5180MHz											
^	10360.000 M	41.5	+0.0 +8.8 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	53.3	80.0	-26.7	Vert
802.11a 5180MHz											
36	10400.000 M Ave	32.5	+0.0 +8.8 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	44.3	80.0	-35.7	Vert
802.11a 5200MHz											
^	10400.000 M	41.1	+0.0 +8.8 +0.3	+0.0 -36.2	+0.0 +38.0	+0.0 +0.9	+0.0	52.9	80.0	-27.1	Vert
802.11a 5200MHz											
38	666.717M QP	45.5	+20.4 +0.0 +0.0	+0.5 +0.0	+4.8 +0.0	-27.2 +0.0	+0.0	44.0	80.0	-36.0	Vert
^	666.717M	46.5	+20.4 +0.0 +0.0	+0.5 +0.0	+4.8 +0.0	-27.2 +0.0	+0.0	45.0	80.0	-35.0	Vert
40	800.067M QP	42.3	+22.5 +0.0 +0.0	+0.4 +0.0	+5.3 +0.0	-27.2 +0.0	+0.0	43.3	80.0	-36.7	Vert
^	800.067M	44.6	+22.5 +0.0 +0.0	+0.4 +0.0	+5.3 +0.0	-27.2 +0.0	+0.0	45.6	80.0	-34.4	Vert

42	533.383M	46.7	+18.8 +0.0 +0.0	+0.4 +0.0	+4.2 +0.0	-27.7 +0.0	+0.0	42.4	80.0	-37.6	Horiz
43	666.722M	43.6	+20.4 +0.0 +0.0	+0.5 +0.0	+4.8 +0.0	-27.2 +0.0	+0.0	42.1	80.0	-37.9	Horiz
44	950.097M	38.4	+24.1 +0.0 +0.0	+0.7 +0.0	+5.9 +0.0	-27.2 +0.0	+0.0	41.9	80.0	-38.1	Horiz
45	950.080M	37.6	+24.1 +0.0 +0.0	+0.7 +0.0	+5.9 +0.0	-27.2 +0.0	+0.0	41.1	80.0	-38.9	Horiz
46	950.117M	36.7	+24.1 +0.0 +0.0	+0.7 +0.0	+5.9 +0.0	-27.2 +0.0	+0.0	40.2	80.0	-39.8	Vert
47	533.367M	44.4	+18.8 +0.0 +0.0	+0.4 +0.0	+4.2 +0.0	-27.7 +0.0	+0.0	40.1	80.0	-39.9	Vert
48	750.055M	39.0	+21.6 +0.0 +0.0	+0.4 +0.0	+5.1 +0.0	-27.0 +0.0	+0.0	39.1	80.0	-40.9	Horiz
49	360.000M	47.8	+15.0 +0.0 +0.0	+0.3 +0.0	+3.4 +0.0	-27.8 +0.0	+0.0	38.7	80.0	-41.3	Horiz
50	750.083M	38.6	+21.6 +0.0 +0.0	+0.4 +0.0	+5.1 +0.0	-27.0 +0.0	+0.0	38.7	80.0	-41.3	Vert
51	900.083M	35.3	+23.3 +0.0 +0.0	+0.7 +0.0	+5.7 +0.0	-27.2 +0.0	+0.0	37.8	80.0	-42.2	Vert
52	374.983M	45.5	+15.4 +0.0 +0.0	+0.4 +0.0	+3.5 +0.0	-27.8 +0.0	+0.0	37.0	80.0	-43.0	Vert
53	919.967M	32.9	+23.6 +0.0 +0.0	+0.7 +0.0	+5.8 +0.0	-27.2 +0.0	+0.0	35.8	80.0	-44.2	Vert
54	159.967M	50.6	+10.6 +0.0 +0.0	+0.3 +0.0	+2.1 +0.0	-27.9 +0.0	+0.0	35.7	80.0	-44.3	Horiz
55	839.983M	33.7	+22.8 +0.0 +0.0	+0.6 +0.0	+5.5 +0.0	-27.0 +0.0	+0.0	35.6	80.0	-44.4	Vert
56	480.033M	40.6	+17.8 +0.0 +0.0	+0.4 +0.0	+4.0 +0.0	-27.8 +0.0	+0.0	35.0	80.0	-45.0	Horiz
57	300.017M	45.8	+13.2 +0.0 +0.0	+0.3 +0.0	+3.0 +0.0	-27.8 +0.0	+0.0	34.5	80.0	-45.5	Horiz
58	700.033M	35.6	+20.7 +0.0 +0.0	+0.5 +0.0	+4.9 +0.0	-27.3 +0.0	+0.0	34.4	80.0	-45.6	Vert

59	359.983M	42.8	+15.0 +0.0 +0.0	+0.3 +0.0	+3.4 +0.0	-27.8 +0.0	+0.0	33.7	80.0	-46.3	Vert
60	320.017M	44.1	+13.8 +0.0 +0.0	+0.3 +0.0	+3.1 +0.0	-27.8 +0.0	+0.0	33.5	80.0	-46.5	Horiz
61	200.000M	49.2	+9.1 +0.0 +0.0	+0.3 +0.0	+2.4 +0.0	-28.0 +0.0	+0.0	33.0	80.0	-47.0	Horiz
62	900.030M	30.3	+23.3 +0.0 +0.0	+0.7 +0.0	+5.7 +0.0	-27.2 +0.0	+0.0	32.8	80.0	-47.2	Horiz
63	488.933M	38.0	+18.0 +0.0 +0.0	+0.4 +0.0	+4.0 +0.0	-27.8 +0.0	+0.0	32.6	80.0	-47.4	Vert
64	725.047M	33.0	+21.2 +0.0 +0.0	+0.4 +0.0	+5.0 +0.0	-27.1 +0.0	+0.0	32.5	80.0	-47.5	Horiz
65	300.000M	43.7	+13.2 +0.0 +0.0	+0.3 +0.0	+3.0 +0.0	-27.8 +0.0	+0.0	32.4	80.0	-47.6	Vert
66	833.363M	30.7	+22.8 +0.0 +0.0	+0.6 +0.0	+5.4 +0.0	-27.1 +0.0	+0.0	32.4	80.0	-47.6	Horiz
67	711.163M	33.3	+20.9 +0.0 +0.0	+0.5 +0.0	+4.9 +0.0	-27.2 +0.0	+0.0	32.4	80.0	-47.6	Horiz
68	239.983M	44.4	+12.0 +0.0 +0.0	+0.3 +0.0	+2.7 +0.0	-27.8 +0.0	+0.0	31.6	80.0	-48.4	Horiz
69	768.100M	30.9	+22.0 +0.0 +0.0	+0.4 +0.0	+5.2 +0.0	-27.1 +0.0	+0.0	31.4	80.0	-48.6	Vert
70	519.950M	35.9	+18.6 +0.0 +0.0	+0.4 +0.0	+4.2 +0.0	-27.7 +0.0	+0.0	31.4	80.0	-48.6	Vert
71	366.750M	40.3	+15.2 +0.0 +0.0	+0.3 +0.0	+3.4 +0.0	-27.8 +0.0	+0.0	31.4	80.0	-48.6	Vert
72	533.383M	34.8	+18.8 +0.0 +0.0	+0.4 +0.0	+4.2 +0.0	-27.7 +0.0	+0.0	30.5	80.0	-49.5	Horiz
73	208.000M	44.7	+9.7 +0.0 +0.0	+0.3 +0.0	+2.5 +0.0	-28.0 +0.0	+0.0	29.2	80.0	-50.8	Horiz
74	425.067M	35.8	+16.6 +0.0 +0.0	+0.3 +0.0	+3.7 +0.0	-27.8 +0.0	+0.0	28.6	80.0	-51.4	Horiz
75	425.017M	35.8	+16.6 +0.0 +0.0	+0.3 +0.0	+3.7 +0.0	-27.8 +0.0	+0.0	28.6	80.0	-51.4	Vert

76	444.467M	35.1	+17.0 +0.0 +0.0	+0.3 +0.0	+3.8 +0.0	-27.8 +0.0	+0.0	28.4	80.0	-51.6	Horiz
77	466.700M	34.5	+17.5 +0.0 +0.0	+0.3 +0.0	+3.9 +0.0	-27.8 +0.0	+0.0	28.4	80.0	-51.6	Horiz
78	416.017M	34.9	+16.4 +0.0 +0.0	+0.4 +0.0	+3.7 +0.0	-27.8 +0.0	+0.0	27.6	80.0	-52.4	Vert

FCC 15.407(g) FREQUENCY STABILITY

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Temperature Chamber	NA	08/06/2008	08/06/2010	01878
20 Ch Thermalcouple module	US37603966	07/17/2008	07/17/2010	01849
Temperature Data logger	US70131892	07/17/2008	07/17/2010	01620
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946
Horn Antenna	6246	06/06/2008	06/06/2010	00849
Microwave Pre-amp	3123A00281	07/28/2008	07/28/2010	00786
2'-40GHz cable	NA	09/21/2009	09/21/2011	P2948
HeliAx Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
2'-40GHz cable	NA	09/14/2009	09/14/2011	P02947

Test Conditions

Setup : The Frequency point (F_l and F_h) at which the emission crosses the radiated emission limit line was obtained from the radiated bandedge plot. To ensure the emission is maintained in the band of operation under all condition of normal operation as specified in the user manual, the device was placed in a temperature chamber and the relative frequency drift was measured and added to the measured F_l and F_h.

Band of operation:
5150 – 5250 MHz
5725 – 5825 MHz

Manufacturer declared operating temperature: 0 – 50°C.

Result: The emission is maintained within the band of operation under all conditions of normal operation as specified in the user’s manual.

Test Setup Photos



Test Data

Frequency:	Fl	Fh
	5159.83	5249.43
Temp (C)		
0	5159.88	5249.45
10	5159.88	5249.45
20	5159.83	5249.43
30	5159.85	5249.45
40	5159.85	5249.45
50	5159.88	5249.45

Frequency:	Fl	Fh
	5735.17	5814.60
Temp (C)		
0	5735.20	5814.63
10	5735.17	5814.64
20	5735.17	5814.60
30	5735.20	5814.60
40	5735.17	5814.60
50	5735.20	5814.60

BANDEDGE

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
Horn Antenna	6246	06/06/2008	06/06/2010	00849
Microwave Pre-amp	3123A00281	07/28/2008	07/28/2010	00786
Heliacx Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
18-26GHz Horn	942126-003	11/12/2008	11/12/2010	01413
2'-40GHz cable	NA	09/14/2009	09/14/2011	P02947

Test Conditions

The EUT is placed on the wooden table lined with a Styrofoam surface of 5 cm thickness. The ethernet port is connected to remote laptop computer via a support ethernet hub.

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

Modulation: 802.11 a (54 mbps)

Firmware Power setting: 127

Power : 13.7 dBm 0.0230 watts

Antenna Gain: 2.1 dBi @ 5.825GHz (linear gain = 1.62)

The antenna is orientated in up right position.21°C, 55% relative humidity.

Delta marker method was applied to 802.11a, 5240 MHz plots, reduced bandwidth was used with amplitude correction applied. 5360 -5380 MHz, refer to data sheet for averaged measurement.

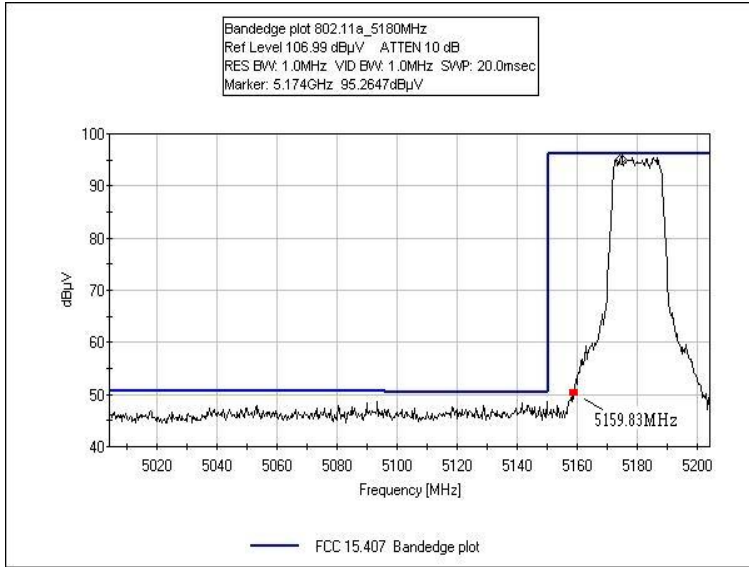
Test Setup Photos



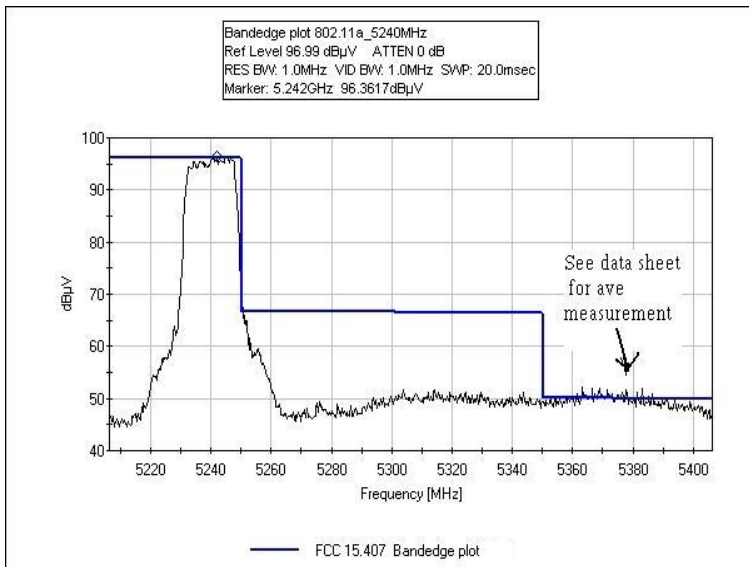


Plots

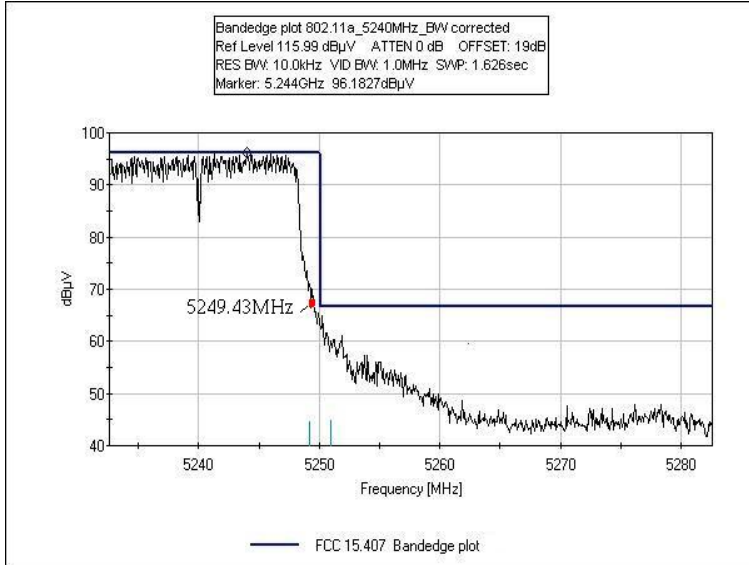
BANDEDGE 802.11A - 5180MHz



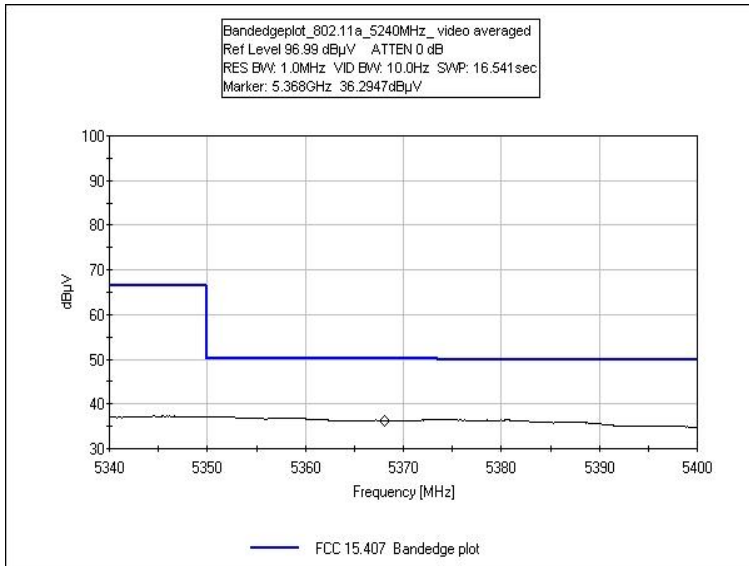
BANDEDGE 802.11A - 5240MHz



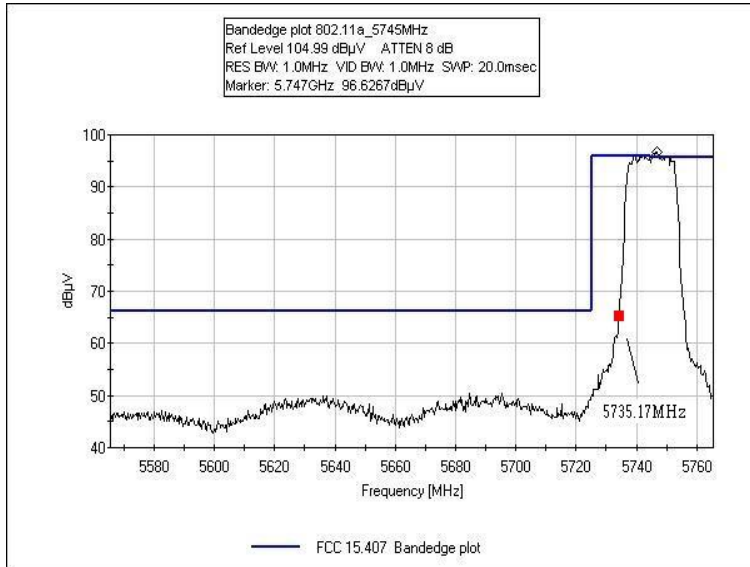
BANDEDGE 802.11A - 5240MHz BW CORRECTED



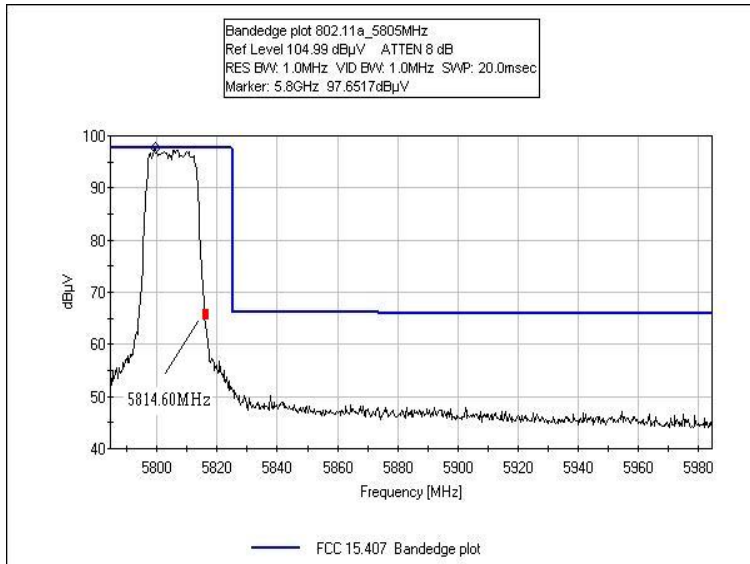
BANDEDGE 802.11A - 5240MHz VIDEO AVERAGED



BANDEDGE 802.11A - 5745MHz



BANDEDGE 802.11A - 5805MHz



26dB BANDWIDTH

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946

Test Conditions

The EUT is placed on the test bench. The device is set in continuous transmit mode, the RF signal is measured at the antenna port .

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

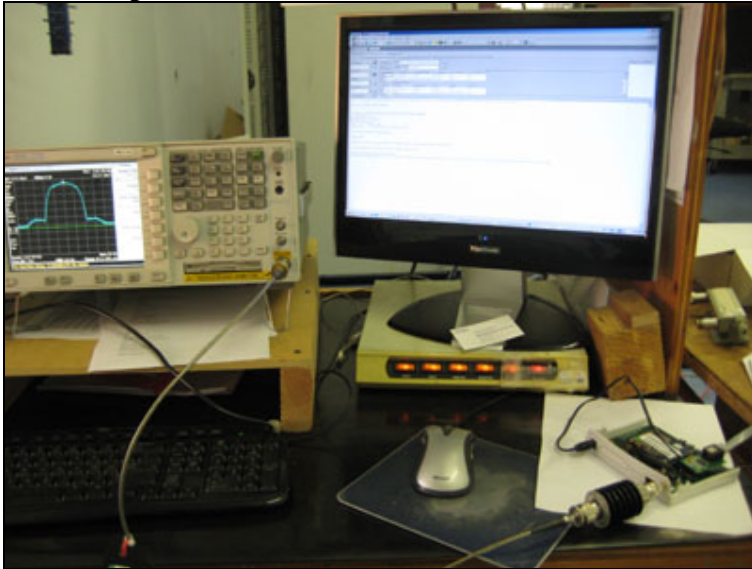
Modulation: 802.11a (54 mbps),

Firmware Power setting: 127

21°C, 55% relative humidity.

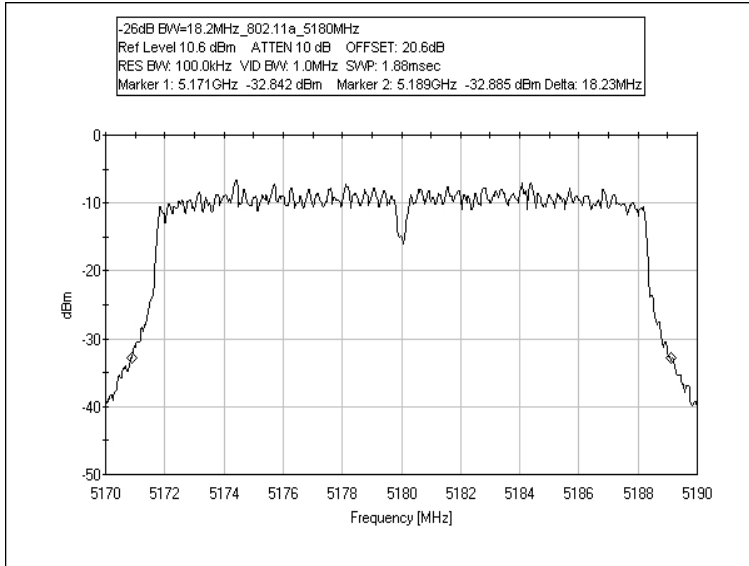
Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to the antenna cable.

Test Setup Photos

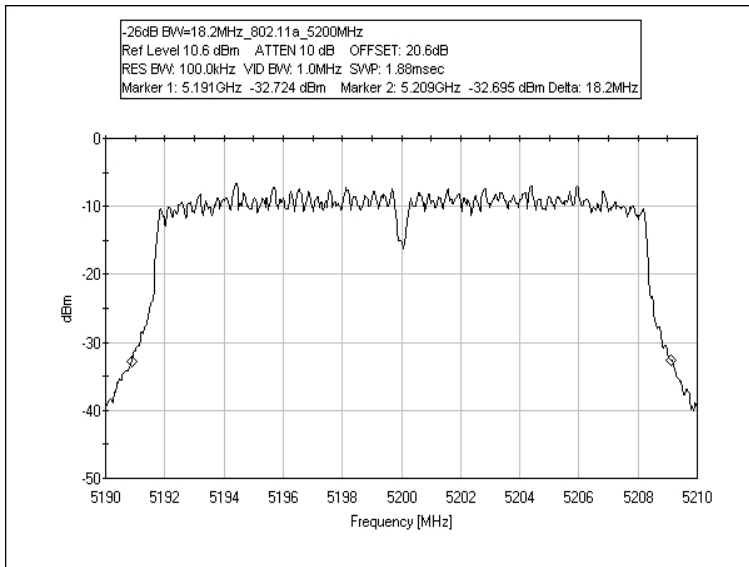


Plots

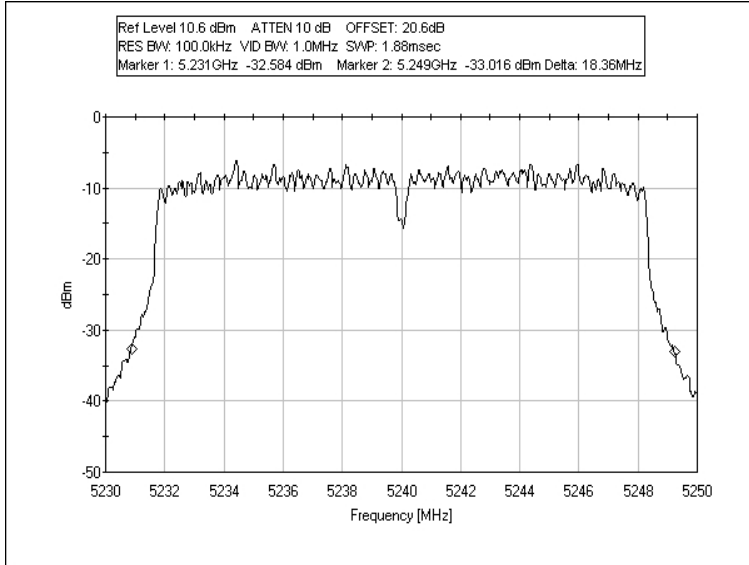
-26dB BANDWIDTH = 18.2MHz 802.11A - 5180MHz



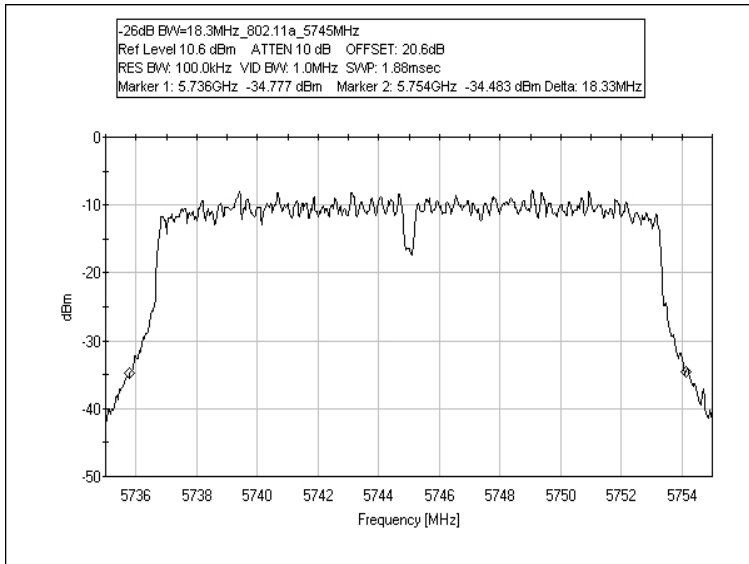
-26dB BANDWIDTH = 18.2MHz 802.11A - 5200MHz



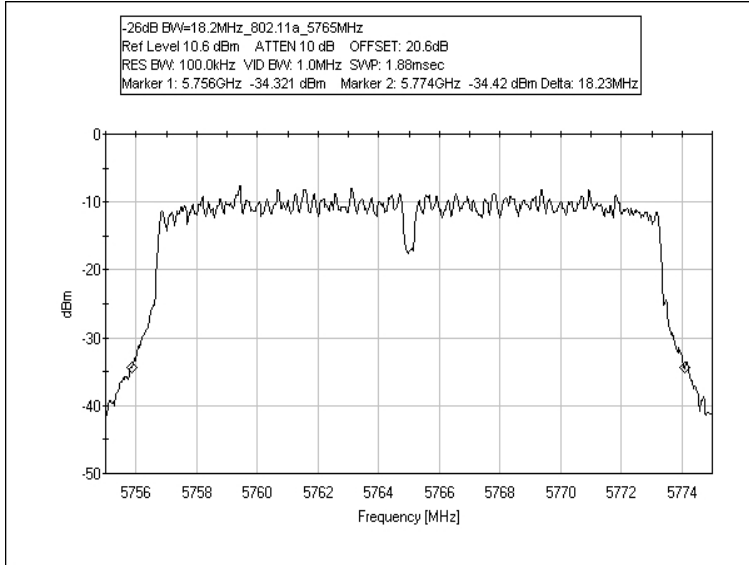
-26dB BANDWIDTH = 18.4MHz 802.11A - 5240MHz



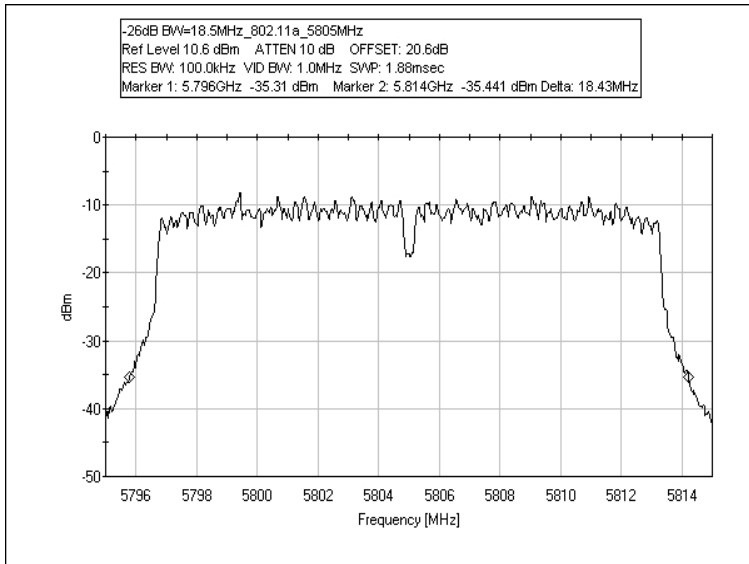
-26dB BANDWIDTH = 18.3MHz 802.11A - 5745MHz



-26dB BANDWIDTH = 18.2MHz 802.11A - 5765MHz



-26dB BANDWIDTH = 18.5MHz 802.11A - 5805MHz



RSS-210 99% BANDWIDTH

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	07/23/2008	07/23/2010	02672
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946

Test Conditions

The EUT is placed on the test bench. The device is set in continuous transmit mode, the RF signal is measured at the antenna port .

Frequency: 5.15 - 5.25GHz, 5.725 - 5.825GHz

Tx Frequency: 5180MHz, 5200MHz, 5240MHz, 5745MHz, 5765MHz, 5805MHz.

Ch 36,40,48, 149, 153, 161.

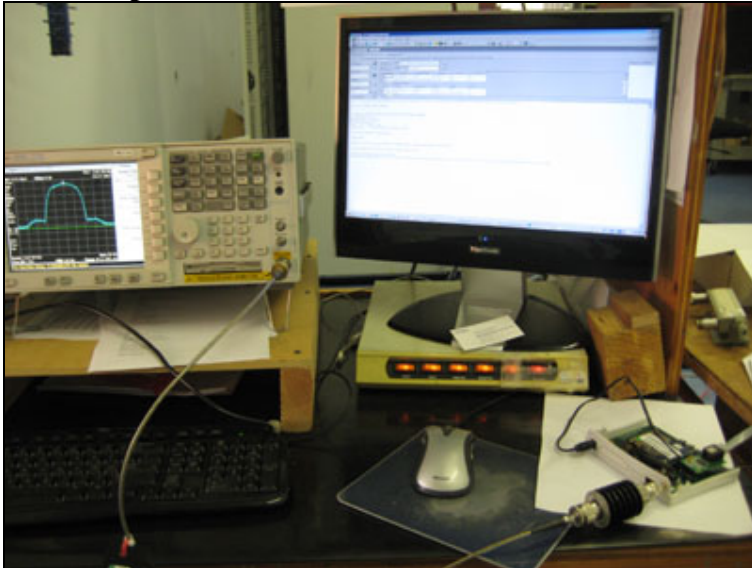
Modulation: 802.11a (54 mbps),

Firmware Power setting: 127

21°C, 55% relative humidity.

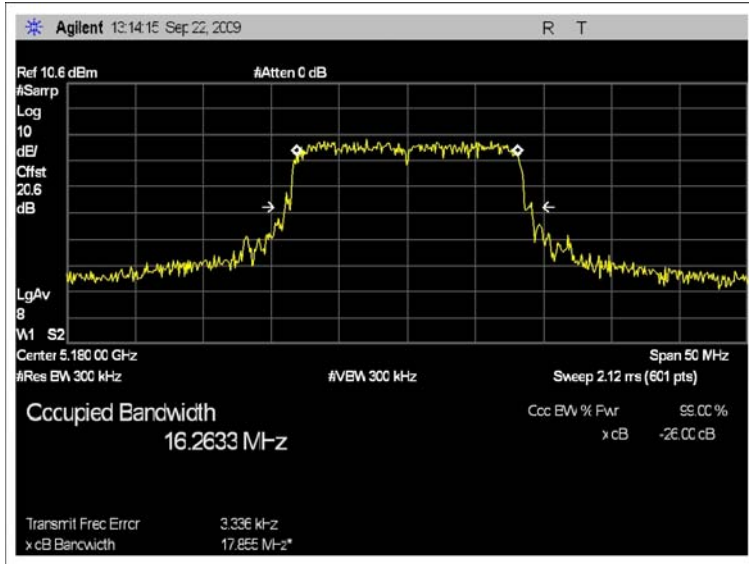
Modification: 30 pF shunt capacitors added to the ethernet traces. Two ferrite beads added to the antenna cable.

Test Setup Photos



Plots

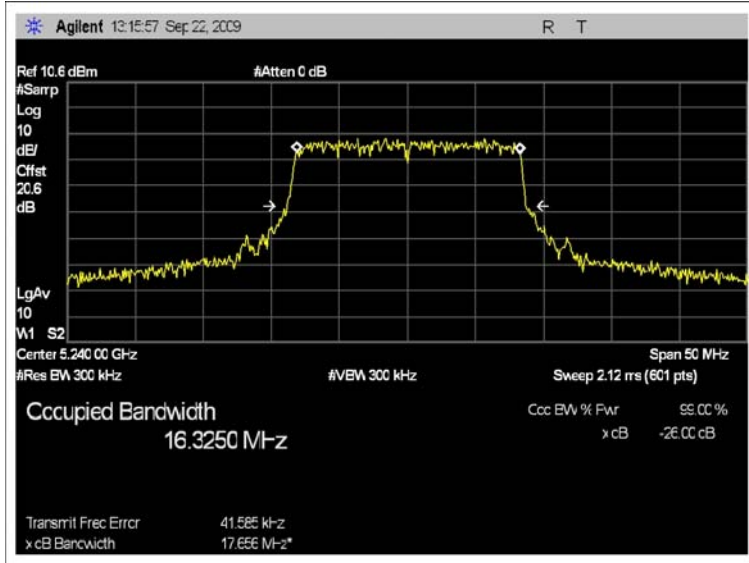
RSS-210 99% BANDWIDTH = 16.3MHz 802.11a - 5180MHz



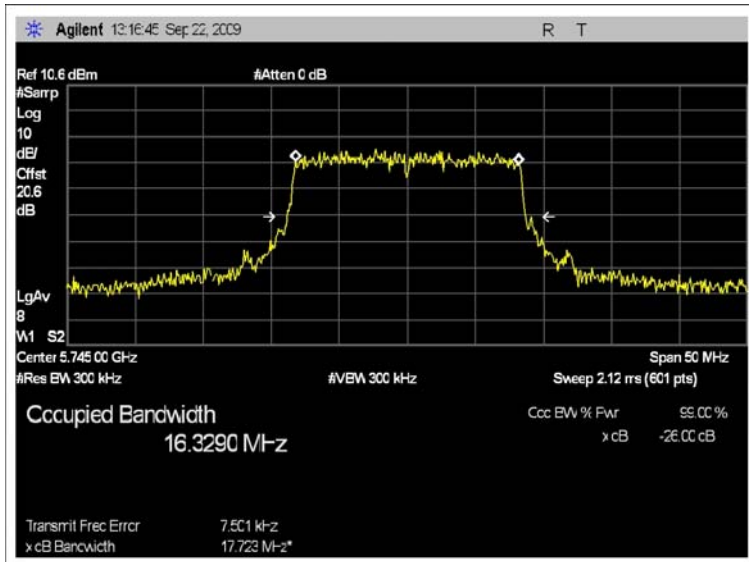
RSS-210 99% BANDWIDTH = 16.3MHz 802.11a - 5200MHz



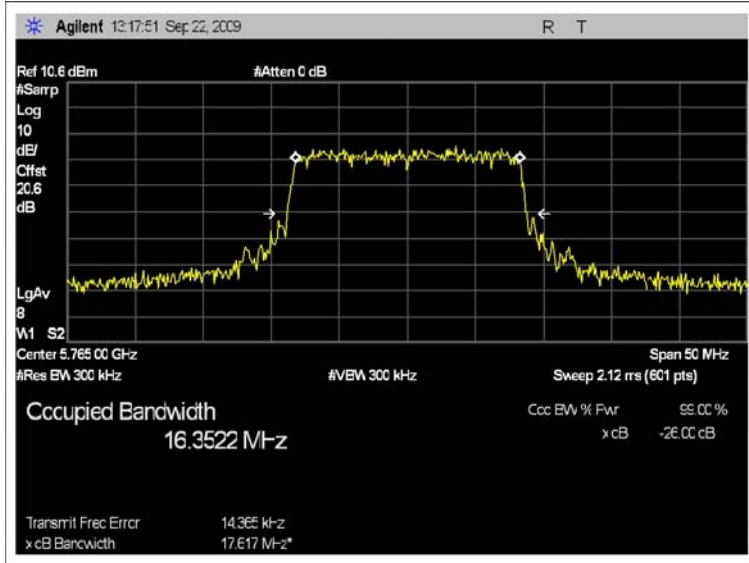
RSS-210 99% BANDWIDTH = 16.3MHz 802.11a - 5240MHz



RSS-210 99% BANDWIDTH = 16.3MHz 802.11a - 5245MHz



RSS-210 99% BANDWIDTH = 16.3MHz 802.11a - 5265MHz



RSS-210 99% BANDWIDTH = 16.3MHz 802.11a - 5805MHz

