



SILEX TECHNOLOGY AMERICA, INC. TEST REPORT FOR THE

WIRELESS ETHERNET BRIDGE, XRX-610 FCC PART 15 SUBPART C SECTION 15.247 & RSS-210 ISSUE 7

TESTING

DATE OF ISSUE: OCTOBER 27, 2009

PREPARED FOR: PREPARED BY:

Silex Technology America, Inc.

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South

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P.O. No.: 3354-00 Date of test: September 11-29, 2009 W.O. No.: 89951

Report No.: FC09-181

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Steve Behm, Director of Engineering Services

ADMINISTRATIVE INFORMATION

DATE OF TEST: September 11-29, 2009	DATE OF RECEIPT: September 11, 2009				
REPRESENTATIVE: Ron Tozaki					
MANUFACTURER: TEST LOCATION: Silex Technology America, Inc. CKC Laboratories, Inc. 110 Olinda Place Midvale, UT 84047 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 15.247 and RSS-210 devices.					
APPROVALS					
QUALITY ASSURANCE:	TEST PERSONNEL:				
	Shore				

Eddie Wong, Senior EMC Engineer



SUMMARY OF RESULTS

Test	Specification/Method	Results
Voltage Variation	FCC 15.31(e)	Pass
Conducted Emissions	FCC 15.207	Pass
6dB Bandwidth	FCC 15.247(a)(2)	Pass
RF Output Power	FCC 15.247(b)(3)	Pass
Power Spectral Density	FCC 15.247(e)	Pass
Spurious Emissions	FCC 15.247(d)/FCC 15.209	Pass
Bandedge	ITU-R 55/1	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.

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FCC 15.31(e) Voltage Variation

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

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 15.209/15.247 Radiated Emissions: 9 kHz – 25 GHz

EUT Operating Frequency

The EUT was operating at 2412MHz, 2437MHz, 2462MHz.

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 Wireless 802.11 a/b/g Ethernet Bridge

Manuf: APD Manuf: Silex Technology America, Inc.

Model: DA-24F12 Model: XRX-610 Serial: NA Serial: NA

PERIPHERAL DEVICES

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

Ethernet Hub 802.11 a/b/g Wireless Access Point

Manuf: Netgear Manuf: 3-Com Model: DS 108 Model: WL-526 Serial: NA Serial: NA

<u>Laptop</u> <u>Laptop</u>

Manuf: Sony Manuf: HP

Model: PCG-982L Model: Omnibook XE3 Serial: 8323330 Serial: TW13113065

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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 $dB\mu V/m$, the spectrum analyzer reading in $dB\mu V$ was corrected by using the following formula. This reading was then compared to the applicable specification limit.

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

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.

Ouasi-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.

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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 #: **89951** Date: 9/16/2009 Test Type: **Conducted Emissions** Time: 1:37:44 PM

Equipment: Wireless 802.11 a/b/g Ethernet Bridge. Sequence#: 8

Manufacturer: Silex Technology America, Inc. Tested By: E. Wong

Model: XRX-610 110V 60Hz

S/N: NA

Test Equipment:

1 cst 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 #21	05/12/2008	05/12/2010	P04358
Cable				

Equipment Under Test (* = EUT):

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

Support Devices:

Support Devices.			
Function	Manufacturer	Model #	S/N
Ethernet Hub	Netgear	DS108	NA
Laptop	HP	Omnibook XE3	TW13113065
802.11 a/b/g Wireless	3-Com	WL-526	NA
Access Point			
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: 2.4 GHz Modulation: 802.11 g 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.

2.4 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.

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Transducer Legend:

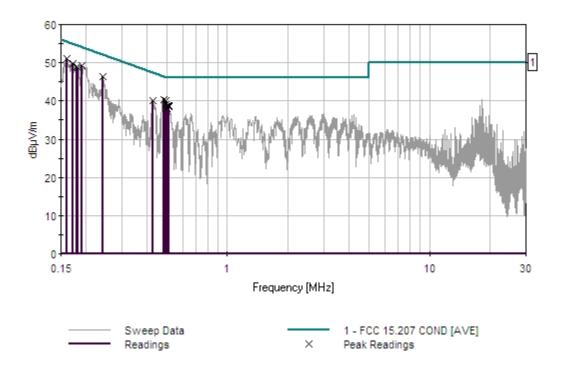
T1=150kHz HPF AN02610_010910	T2=6dB atten-P05886-101410.TRN
T3=Cable #21 -P04358- Site A 05/12/10	T4=L1 Insertion Loss AN00847_120910

Measur	rement Data:	Re	eading lis	ted by ma	argin.			Test Lead	d: Black		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\muV/m$	dB	Ant
1	160.908k	44.5	+0.6	+6.1	+0.0	+0.0	+0.0	51.2	55.4	-4.2	Black
2	191.451k	42.9	+0.3	+6.1	+0.0	+0.0	+0.0	49.3	54.0	-4.7	Black
3	172.543k	43.2	+0.4	+6.1	+0.0	+0.0	+0.0	49.7	54.8	-5.1	Black
	170 0001	10.7	.0.2	1	. 0. 0	. 0. 0	. 0. 0	40.1	545	<i>5.4</i>	D1 1
4	179.088k	42.7	+0.3	+6.1	+0.0	+0.0	+0.0	49.1	54.5	-5.4	Black
5	240.901k	40.2	+0.2	+6.1	+0.0	+0.0	+0.0	46.5	52.1	-5.6	Black
3	240.901K	40.2	+0.2	+0.1	+0.0	+0.0	+0.0	40.5	32.1	-5.0	Diack
6	182.724k	42.3	+0.3	+6.1	+0.0	+0.0	+0.0	48.7	54.4	-5.7	Black
	102.72 11	12.3	10.5	10.1	10.0	10.0	10.0	10.7	5 11 1	3.7	Bluck
7	493.968k	33.9	+0.2	+6.1	+0.0	+0.0	+0.0	40.2	46.1	-5.9	Black
8	482.333k	34.0	+0.2	+6.1	+0.0	+0.0	+0.0	40.3	46.3	-6.0	Black
9	496.150k	33.8	+0.2	+6.1	+0.0	+0.0	+0.0	40.1	46.1	-6.0	Black
10	499.059k	32.7	+0.2	+6.1	+0.0	+0.0	+0.0	39.0	46.0	-7.0	Black
11	510 co.41	22.5	0.0		0.0	0.0	0.0	20.0	460	7.0	D1 1
11	510.694k	32.5	+0.2	+6.1	+0.0	+0.0	+0.0	38.8	46.0	-7.2	Black
12	429.974k	33.7	+0.2	+6.1	+0.0	+0.0	+0.0	40.0	47.3	-7.3	Black
12	429.974K	33.7	+0.2	+0.1	+0.0	+0.0	+0.0	40.0	47.3	-1.3	Diack
13	508.513k	32.4	+0.2	+6.1	+0.0	+0.0	+0.0	38.7	46.0	-7.3	Black
	500.515K	32.4	10.2	10.1	10.0	10.0	10.0	30.7	10.0	7.5	Diuck
14	512.149k	32.2	+0.2	+6.1	+0.0	+0.0	+0.0	38.5	46.0	-7.5	Black
15	502.695k	31.8	+0.2	+6.1	+0.0	+0.0	+0.0	38.1	46.0	-7.9	Black

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CKC Laboratories, Inc. Date: 9/16/2009 Time: 1:37:44 PM Silex Technology, America, Inc. WO#: 89951 FCC 15.207 COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 8 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]

XRX-610

Work Order #: 89951 Date: 9/16/2009
Test Type: Conducted Emissions Time: 1:41:52 PM

Equipment: Wireless 802.11 a/b/g Ethernet Bridge. Sequence#: 9
Manufacturer: Silex Technology America, Inc. Tested By: E. Wong

110V 60Hz

S/N: NA

Test Equipment:

Model:

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 #21	05/12/2008	05/12/2010	P04358
Cable				

Equipment Under Test (* = EUT):

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

Support Devices:

Support Devices.				
Function	Manufacturer	Model #	S/N	
Ethernet Hub	Netgear	DS108	NA	
Laptop	HP	Omnibook XE3	TW13113065	
802.11 a/b/g Wireless	3-Com	WL-526	NA	
Access Point				
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: 2.4 GHz Modulation: 802.11 g 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.

2.4 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.

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Transducer Legend:

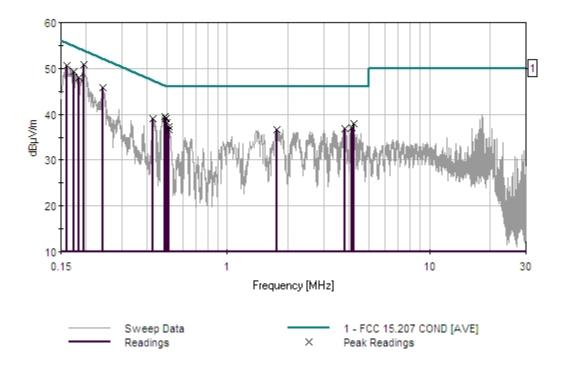
T1=150kHz HPF AN02610_010910	T2=6dB atten-P05886-101410.TRN
T3=Cable #21 -P04358- Site A 05/12/10	T4=L2 Insertion Loss AN00847_120910

Measur	rement Data:	Re	eading lis	ted by ma	argin.			Test Lead	d: White		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dBµV/m	dBμV/m	dB	Ant
1	195.087k	44.4	+0.2	+6.1	+0.0	+0.1	+0.0	50.8	53.8	-3.0	White
2	160.908k	43.9	+0.6	+6.1	+0.0	+0.0	+0.0	50.6	55.4	-4.8	White
3	173.998k	42.6	+0.4	+6.1	+0.0	+0.1	+0.0	49.2	54.8	-5.6	White
4	243.082k	39.5	+0.2	+6.1	+0.0	+0.1	+0.0	45.9	52.0	-6.1	White
5	183.452k	41.5	+0.3	+6.1	+0.0	+0.1	+0.0	48.0	54.3	-6.3	White
6	491.787k	33.1	+0.2	+6.1	+0.0	+0.0	+0.0	39.4	46.1	-6.7	White
7	499.059k	32.8	+0.2	+6.1	+0.0	+0.0	+0.0	39.1	46.0	-6.9	White
8	501.241k	31.8	+0.2	+6.1	+0.0	+0.0	+0.0	38.1	46.0	-7.9	White
9	4.220M	31.3	+0.2	+6.1	+0.1	+0.2	+0.0	37.9	46.0	-8.1	White
10	429.247k	32.7	+0.2	+6.1	+0.0	+0.0	+0.0	39.0	47.3	-8.3	White
11	510.694k	30.9	+0.2	+6.1	+0.0	+0.0	+0.0	37.2	46.0	-8.8	White
12	4.135M	30.5	+0.2	+6.1	+0.1	+0.2	+0.0	37.1	46.0	-8.9	White
13	3.799M	30.3	+0.2	+6.1	+0.1	+0.2	+0.0	36.9	46.0	-9.1	White
14	514.330k	30.4	+0.2	+6.1	+0.0	+0.0	+0.0	36.7	46.0	-9.3	White
15	1.762M	30.1	+0.2	+6.1	+0.1	+0.1	+0.0	36.6	46.0	-9.4	White

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CKC Laboratories, Inc. Date: 9/16/2009 Time: 1:41:52 PM Silex Technology, America, Inc. WO#: 89951 FCC 15.207 COND [AVE] Test Lead: White 110V 60Hz Sequence#: 9 XRX 610





FCC 15.247(a)(2) 6dB 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: 2.412- 2462MHz

Tx Frequency: 2412 MHz, 2437MHz, 2462MHz

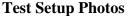
Ch 1, 6, 11

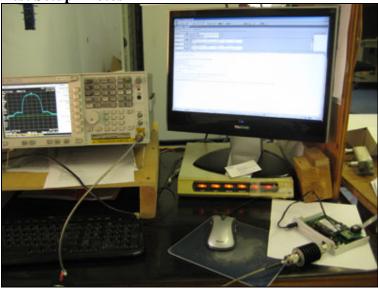
Modulation: 802.11 b (11 Mbps), 802.11 g (54Mpbs)

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.



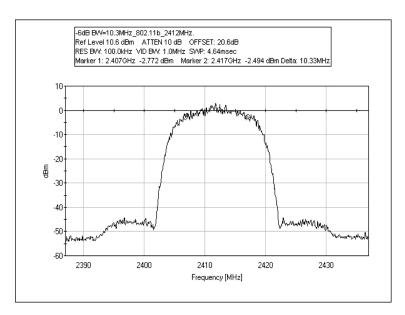


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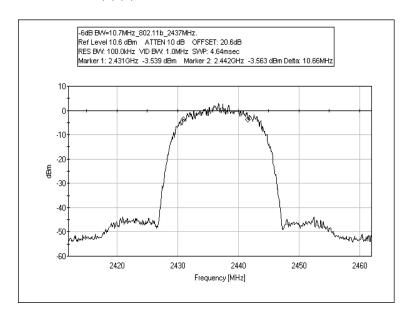


Plots

FCC 15.247(a)(2) -6dB BANDWIDTH = 10.3MHz - 802.11b 2412MHz

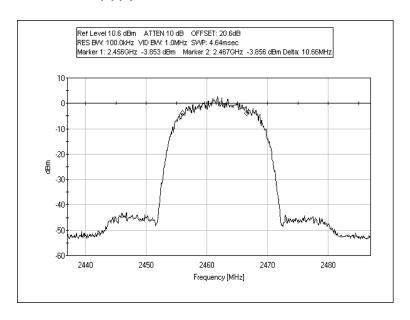


FCC 15.247(a)(2) -6dB BANDWIDTH = 10.7MHz - 802.11b 2437MHz

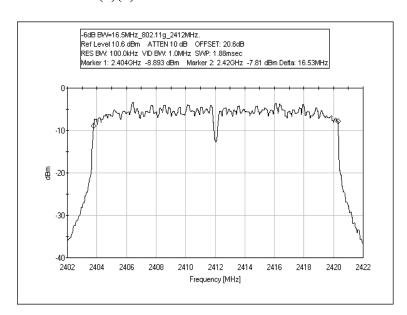




FCC 15.247(a)(2) -6dB BANDWIDTH = 10.7MHz - 802.11b 2462MHz



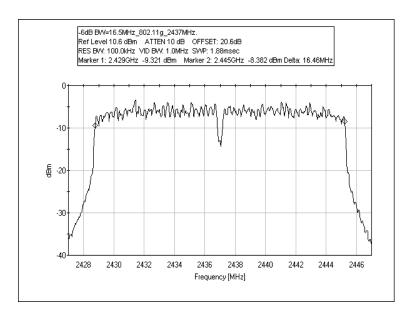
FCC 15.247(a)(2) -6dB BANDWIDTH = 16.5MHz - 802.11g 2412MHz



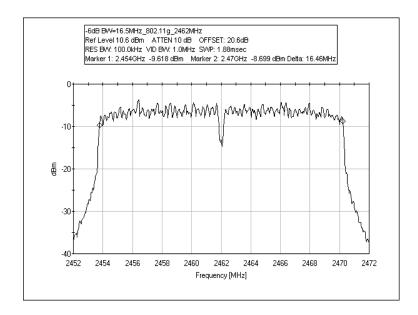
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FCC 15.247(a)(2) -6dB BANDWIDTH = 16.5MHz - 802.11g 2437MHz



FCC 15.247(a)(2) -6dB BANDWIDTH = 16.5MHz - 802.11g 2462MHz



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FCC 15.247(b)(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	345AMX / UPC32	03/23/2009	03/23/2011	01695/
Source				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 KDB Publication No. 558074, Power option 2, Method #1.

Frequency: 2.412- 2462MHz

Tx Frequency: 2412 MHz, 2437MHz, 2462MHz

Ch 1, 6, 11

Modulation: 802.11 b (11 Mbps), 802.11 g (54Mpbs)

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

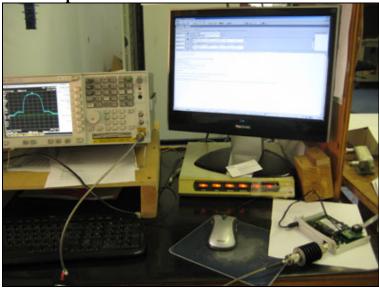
antenna cable.

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

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Test Setup Photos



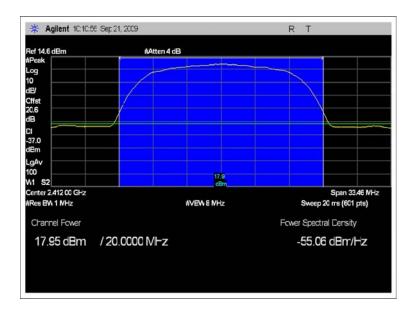
Data

Modulation	Frequency	Power	Power
802.11b	2412 MHz	18.0 dBm	0.0631W
802.11b	2437 MHz	17.8 dBm	0.0603W
802.11b	2462 MHz	17.7 dBm	0.0589W
802.11g	2412 MHz	15.8 dBm	0.0380W
802.11g	2437 MHz	15.8 dBm	0.0380W
802.11g	2462 MHz	15.4 dBm	0.0347W

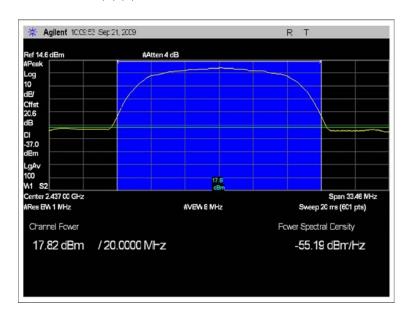
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FCC 15.247(b)(3) PEAK POWER - 802.11b 2412MHz

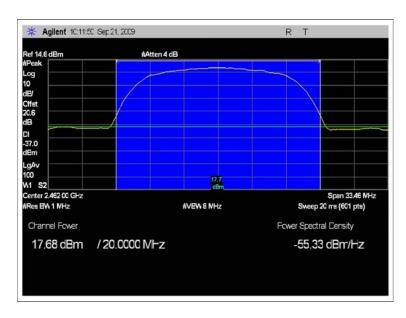


FCC 15.247(b)(3) PEAK POWER - 802.11b 2437MHz

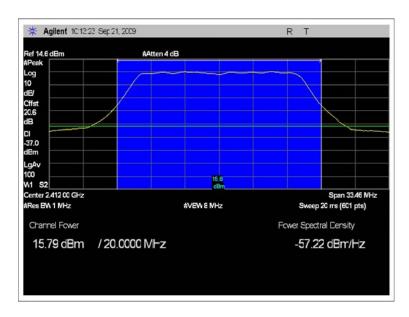




FCC 15.247(b)(3) PEAK POWER - 802.11b 2462MHz

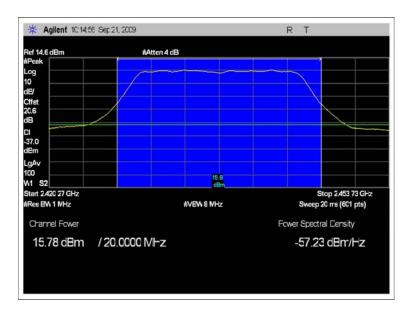


FCC 15.247(b)(3) PEAK POWER - 802.11g 2412MHz

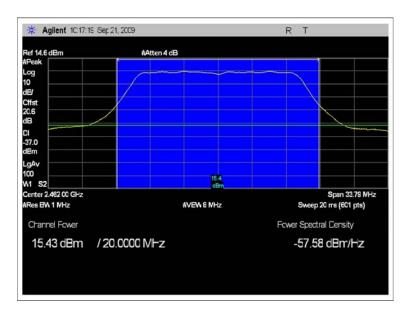




FCC 15.247(b)(3) PEAK POWER - 802.11g 2437MHz



FCC 15.247(b)(3) PEAK POWER - 802.11g 2462MHz



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FCC 15.247(d)/15.209 OATS SPURIOUS EMISSIONS

Test Setup Photos





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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 15.247 (d) (FCC 15.209)

Work Order #: 89951 Date: 9/18/2009
Test Type: Radiated Scan Time: 15:36:59
Equipment: Wireless 802.11 a/b/g Ethernet Bridge. Sequence#: 21
Manufacturer: Silex Technology America, Inc. Tested By: E. Wong

Model: XRX-610 S/N: NA

Test Equipment:

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
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
2'-40GHz cable	NA	09/21/2009	09/21/2011	P2948
Heliax Antenna Cable	P5565	09/04/2008	09/04/2010	P05565
26.5-40GHz Horn	1012	01/08/2008	01/08/2010	02045
Antenna				
18-26GHz Horn	942126-003	11/12/2008	11/12/2010	01413
3.0 GHz HPF	1	03/25/2008	03/25/2010	02744
Loop Antenna	2014	06/16/2008	06/16/2010	00314
3'-40GHz cable	NA	09/14/2009	09/14/2011	P02946
2'-40GHz cable	NA	09/14/2009	09/14/2011	P02947

Equipment Under Test (* = EUT):

=qpe 2 2 est (_
Function	Manufacturer	Model #	S/N
Power Supply	APD	DA-24F12	NA
Wireless 802.11 a/b/g	Silex Technology America,	XRX-610	NA
Ethernet Bridge.*	Inc.		

Support Devices:

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

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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: 2.412- 2462MHz

Tx Frequency: 2412 MHz, 2437MHz, 2462MHz

Ch 1, 6, 11

Modulation: 802.11 b (11 Mbps), 802.11 g (54Mpbs)

Firmware Power setting: 127

Power: (802.11b) 18dBm 0.0631 watt, (802.11 g) 15.8dBm, 0.0380W

Antenna Gain: 1.5dBi @2.5GHz

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- 25 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 - 26000 MHz RBW=1 MHz, VBW=1 MHz.

Transducer Legend:

Transaucer Legena.	
T1=Bilog-AN01995 BILOG_012110	T2=Cable #10 ANP05050 041611
T3=Cable #15_05198_ Site A, 010511	T4=Pre_amp_HP8447D-AN00309-050210
T5=Heliax Cable 54' ANP05565 090410	T6=HF_pre AMP-1-26GHz_AN00786-072810.TRN
T7=Hi Freq_40GHz_2ft-ANP02948-091809	T8=Horn Ant AN00849 060610
T0-HDF 3CH ₇ AN02744 032510	

Measu	rement Data:	Re	eading lis	ted by ma	argin.		Te	est Distance	e: 3 Meters	;	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9								
	MHz	dΒμV	dB	dB	dB	dB	Table	dBµV/m	dBμV/m	dB	Ant
1	950.083M	39.3	+24.1	+0.7	+5.9	-27.2	+0.0	42.8	46.0	-3.2	Horiz
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	950.075M	39.7	+24.1	+0.7	+5.9	-27.2	+0.0	43.2	46.0	-2.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
3	750.100M	42.4	+21.6	+0.4	+5.1	-27.0	+0.0	42.5	46.0	-3.5	Horiz
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	750.100M	44.2	+21.6	+0.4	+5.1	-27.0	+0.0	44.3	46.0	-1.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
5	666.708M	42.7	+20.4	+0.5	+4.8	-27.2	+0.0	41.2	46.0	-4.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
6	799.987M	39.8	+22.5	+0.4	+5.3	-27.2	+0.0	40.8	46.0	-5.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

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7	816.030M	38.8	+22.6	+0.5	+5.4	-27.1	+0.0	40.2	46.0	-5.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
8	750.083M	38.5	+21.6	+0.4	+5.1	-27.0	+0.0	38.6	46.0	-7.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
9	900.050M	35.6	+23.3	+0.7	+5.7	-27.2	+0.0	38.1	46.0	-7.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
	400.017M	45.7	+16.0	+0.4	+3.6	-27.8	+0.0	37.9	46.0	-8.1	Horiz
,	QP		+0.0	+0.0	+0.0	+0.0					
	400.0153.5	40.0	+0.0		2.5	25.0	0.0	40.2	46.0	7 0	TT .
^	400.017M	48.0	+16.0	+0.4	+3.6	-27.8	+0.0	40.2	46.0	-5.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
12	250.0153.5	40.5	+0.0	.0.2	. 2. 0	27.7	. 0. 0	27.5	46.0	0.5	TT .
12	250.017M	49.5	+12.6	+0.3	+2.8	-27.7	+0.0	37.5	46.0	-8.5	Horiz
			+0.0	+0.0	+0.0	+0.0					
12	050 1003 4	22.7	+0.0	.07		27.2	.0.0	27.2	46.0	0.0	VI 4
13	950.100M	33.7	+24.1	+0.7	+5.9	-27.2	+0.0	37.2	46.0	-8.8	Vert
			+0.0	+0.0	+0.0	+0.0					
1 /	539.992M	41.0	+0.0	LO 4	142	27.6	ι Ο Ο	27.0	16.0	0.0	IIoi-
14	539.992M	41.0	+18.9	+0.4	+4.3	-27.6	+0.0	37.0	46.0	-9.0	Horiz
			$+0.0 \\ +0.0$	+0.0	+0.0	+0.0					
15	360.000M	46.1	+15.0	+0.3	+3.4	-27.8	+0.0	37.0	46.0	-9.0	Horiz
13	300.000M	40.1	+15.0	+0.3	+3.4	-27.8 +0.0	+0.0	37.0	40.0	-9.0	HOHZ
			+0.0	10.0	10.0	10.0					
16	400.017M	44.5	+16.0	+0.4	+3.6	-27.8	+0.0	36.7	46.0	-9.3	Vert
10	-00.01/I VI		+0.0	+0.4	+0.0	+0.0	10.0	50.7	-1 0.0	-7.3	7 CI l
			+0.0	1 0.0	1 0.0	10.0					
17	900.058M	34.0	+23.3	+0.7	+5.7	-27.2	+0.0	36.5	46.0	-9.5	Horiz
1,	,	5 1.0	+0.0	+0.0	+0.0	+0.0	10.0	20.5	10.0	7.5	110112
			+0.0		. 0.0	. 0.0					
18	507.992M	41.5	+18.3	+0.4	+4.1	-27.8	+0.0	36.5	46.0	-9.5	Horiz
			+0.0	+0.0	+0.0	+0.0			. 3.0	,	
			+0.0								
19	250.033M	48.3	+12.6	+0.3	+2.8	-27.7	+0.0	36.3	46.0	-9.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
20	700.058M	37.4	+20.7	+0.5	+4.9	-27.3	+0.0	36.2	46.0	-9.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
21	300.000M	47.4	+13.2	+0.3	+3.0	-27.8	+0.0	36.1	46.0	-9.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
22	736.042M	36.3	+21.4	+0.4	+5.0	-27.1	+0.0	36.0	46.0	-10.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
23	375.000M	44.3	+15.4	+0.4	+3.5	-27.8	+0.0	35.8	46.0	-10.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

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24	768.025M	35.1	+22.0	+0.4	+5.2	-27.1	+0.0	35.6	46.0	-10.4	Horiz
2.	700.023111	33.1	+0.0 +0.0	+0.0	+0.0	+0.0	10.0	23.0	10.0	10.1	110112
25	479.992M	41.2	+17.8	+0.4	+4.0	-27.8	+0.0	35.6	46.0	-10.4	Horiz
	.,,,,,,		+0.0	+0.0	+0.0	+0.0					
			+0.0								
26	768.083M	34.9	+22.0	+0.4	+5.2	-27.1	+0.0	35.4	46.0	-10.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
27	266.717M	46.6	+12.8	+0.3	+2.9	-27.8	+0.0	34.8	46.0	-11.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
•			+0.0						4.5.0		
28	544.042M	38.5	+19.0	+0.4	+4.3	-27.6	+0.0	34.6	46.0	-11.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
20	225 00014	40.7	+0.0	.02	.2.6	27.0	.0.0	24.6	46.0	11.4	II
29	225.000M	48.7	+10.9	$+0.3 \\ +0.0$	+2.6 +0.0	-27.9 +0.0	+0.0	34.6	46.0	-11.4	Horiz
			+0.0 +0.0	+0.0	+0.0	+0.0					
30	480.017M	40.1	+17.8	+0.4	+4.0	-27.8	+0.0	34.5	46.0	-11.5	Vert
30	400.017WI	40.1	+0.0	+0.4	+0.0	+0.0	+0.0	34.3	40.0	-11.5	VCIT
			+0.0	10.0	10.0	10.0					
31	120.000M	46.3	+11.6	+0.2	+1.8	-27.9	+0.0	32.0	43.5	-11.5	Horiz
0.1	120,000111		+0.0	+0.0	+0.0	+0.0	. 0.0	02.0		11.0	110112
			+0.0								
32	324.933M	44.6	+14.0	+0.3	+3.2	-27.8	+0.0	34.3	46.0	-11.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
33	325.000M	44.5	+14.0	+0.3	+3.2	-27.8	+0.0	34.2	46.0	-11.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
	9848.000M	31.7	+0.0	+0.0	+0.0	+0.0	+0.0	42.2	54.0	-11.8	Vert
	Ave		+8.4	-36.7	+0.7	+37.8			802.11g,	2462MHz	
			+0.3								
^	9848.000M	41.0	+0.0	+0.0	+0.0	+0.0	+0.0	51.5	54.0	-2.5	Vert
			+8.4	-36.7	+0.7	+37.8			802.11g,	2462MHz	
^	0047.06714	20.2	+0.3	. 0. 0	. 0. 0	. 0. 0	.0.0	40.0	510	4.2	V 1 4
^	9847.967M	39.3	+0.0	+0.0	+0.0	+0.0	+0.0	49.8	54.0	-4.2	Vert
			+8.4 +0.3	-36.7	+0.7	+37.8			802.110,	2462MHz	
37	833.442M	32.4	+22.8	+0.6	+5.4	-27.1	+0.0	34.1	46.0	-11.9	Horiz
31	655.442IVI	32.4	+22.8 $+0.0$	+0.0 +0.0	+0.0	+0.0	+0.0	34.1	40.0	-11.9	HOHZ
			+0.0	10.0	10.0	10.0					
38	512.067M	38.7	+18.4	+0.4	+4.2	-27.7	+0.0	34.0	46.0	-12.0	Vert
	012.007111	00.7	+0.0	+0.0	+0.0	+0.0	. 0.0	2		12.0	, 510
			+0.0								
39	9847.967M	31.5	+0.0	+0.0	+0.0	+0.0	+0.0	42.0	54.0	-12.0	Vert
	Ave		+8.4	-36.7	+0.7	+37.8				2462MHz	
			+0.3								
40	120.017M	45.7	+11.6	+0.2	+1.8	-27.9	+0.0	31.4	43.5	-12.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

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41 533.417M	38.0	+18.8	+0.4	+4.2	-27.7	+0.0	33.7	46.0	-12.3	Vert
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
42 199.967M	47.4	+9.1	+0.3	+2.4	-28.0	+0.0	31.2	43.5	-12.3	Horiz
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
43 660.025M	34.9	+20.4	+0.5	+4.7	-27.2	+0.0	33.3	46.0	-12.7	Horiz
		+0.0	+0.0	+0.0	+0.0					
		+0.0							1.0	
44 375.033M	41.7	+15.4	+0.4	+3.5	-27.8	+0.0	33.2	46.0	-12.8	Vert
		+0.0	+0.0	+0.0	+0.0					
45 240 00014	45.0	+0.0	.0.2	. 2.7	27.0	.0.0	22.0	46.0	12.0	TT
45 240.000M	45.8	+12.0	$+0.3 \\ +0.0$	+2.7 +0.0	-27.8 +0.0	+0.0	33.0	46.0	-13.0	Horiz
		+0.0 +0.0	+0.0	+0.0	+0.0					
46 225.017M	47.0	+10.9	+0.3	+2.6	-27.9	+0.0	32.9	46.0	-13.1	Vert
40 223.017W	47.0	+10.9	+0.0	+0.0	+0.0	+0.0	32.9	40.0	-13.1	VEIL
		+0.0	10.0	10.0	10.0					
47 266.700M	44.6	+12.8	+0.3	+2.9	-27.8	+0.0	32.8	46.0	-13.2	Vert
17 200.700141	11.0	+0.0	+0.0	+0.0	+0.0	10.0	32.0	10.0	13.2	VOIT
		+0.0								
48 520.025M	36.7	+18.6	+0.4	+4.2	-27.7	+0.0	32.2	46.0	-13.8	Horiz
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
49 9748.000M	29.7	+0.0	+0.0	+0.0	+0.0	+0.0	40.2	54.0	-13.8	Vert
Ave		+8.4	-36.6	+0.7	+37.7			802.11b,	2437MHz	
		+0.3								
50 9747.975M	29.3	+0.0	+0.0	+0.0	+0.0	+0.0	39.8	54.0	-14.2	Vert
Ave		+8.4	-36.6	+0.7	+37.7			802.11g,	2437MHz	
		+0.3								
^ 9748.000M	39.6	+0.0	+0.0	+0.0	+0.0	+0.0	50.1	54.0	-3.9	Vert
		+8.4	-36.6	+0.7	+37.7			802.11b,	2437MHz	
	20.2	+0.3	0.0	0.0	0.0	0.0	40.0	7.4.0		**
^ 9747.975M	38.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.8	54.0	-5.2	Vert
		+8.4	-36.6	+0.7	+37.7			802.11g,	2437MHz	
53 195.000M	45.4	+0.3	+0.3	+2.4	-28.0	+0.0	29.2	43.5	-14.3	Horiz
33 193.000M	43.4	+9.1	+0.5	+0.0	+0.0	+0.0	29.2	43.3	-14.3	попи
		+0.0	+0.0	+0.0	+0.0					
54 9648.136M	29.1	+0.0	+0.0	+0.0	+0.0	+0.0	39.7	54.0	-14.3	Vert
Ave	27.1	+8.4	-36.5	+0.7	+37.6	10.0	37.1		2412MHz	V 011
11.0		+0.4	2010					002.1110,		
^ 9648.135M	39.5	+0.0	+0.0	+0.0	+0.0	+0.0	50.1	54.0	-3.9	Vert
		+8.4	-36.5	+0.7	+37.6				2412MHz	
		+0.4						,		
56 511.992M	36.5	+18.4	+0.4	+4.1	-27.8	+0.0	31.6	46.0	-14.4	Horiz
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
57 208.017M	44.5	+9.7	+0.3	+2.5	-28.0	+0.0	29.0	43.5	-14.5	Horiz
		+0.0	+0.0	+0.0	+0.0					
		+0.0								

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58	711.167M	32.3	+20.9	+0.5	+4.9	-27.2	+0.0	31.4	46.0	-14.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
59	320.017M	41.5	+13.8	+0.3	+3.1	-27.8	+0.0	30.9	46.0	-15.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
60	240.000M	43.7	+12.0	+0.3	+2.7	-27.8	+0.0	30.9	46.0	-15.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
61	9648.000M	28.1	+0.0	+0.0	+0.0	+0.0	+0.0	38.7	54.0	-15.3	Vert
	Ave		+8.4	-36.5	+0.7	+37.6			802.11g, 24	412MHz	
			+0.4								
^	9648.000M	39.0	+0.0	+0.0	+0.0	+0.0	+0.0	49.6	54.0	-4.4	Vert
			+8.4	-36.5	+0.7	+37.6			802.11g, 24	412MHz	
			+0.4								
63	533.325M	34.8	+18.8	+0.4	+4.2	-27.7	+0.0	30.5	46.0	-15.5	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
64	440.000M	37.2	+16.9	+0.3	+3.8	-27.8	+0.0	30.4	46.0	-15.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
65	384.017M	38.3	+15.6	+0.4	+3.5	-27.8	+0.0	30.0	46.0	-16.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
66	975.100M	33.9	+24.4	+0.7	+6.1	-27.3	+0.0	37.8	54.0	-16.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
67	320.000M	40.4	+13.8	+0.3	+3.1	-27.8	+0.0	29.8	46.0	-16.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
68	280.000M	41.2	+13.0	+0.3	+2.9	-27.8	+0.0	29.6	46.0	-16.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
69	439.975M	36.2	+16.9	+0.3	+3.8	-27.8	+0.0	29.4	46.0	-16.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
70	350.000M	38.7	+14.7	+0.3	+3.3	-27.8	+0.0	29.2	46.0	-16.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
71	960.067M	33.5	+24.2	+0.7	+6.0	-27.2	+0.0	37.2	54.0	-16.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
	204.0007.5		+0.0	- ·		27.0	0.0	2001	4 - 0	4.50	**
72	384.000M	37.4	+15.6	+0.4	+3.5	-27.8	+0.0	29.1	46.0	-16.9	Vert
			+0.0	+0.0	+0.0	+0.0					
	4.50.0000	40 =	+0.0			27.0	0.0	2 - 2		4	** .
73	150.000M	40.7	+11.2	+0.3	+2.0	-27.9	+0.0	26.3	43.5	-17.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
	275 2453 5	40.2	+0.0	0.2	2.0	27.0	.0.0	20	460	17.1	T7 :
74	275.017M	40.3	+12.9	+0.3	+2.9	-27.8	+0.0	28.6	46.0	-17.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

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75	350.000M	38.1	+14.7	+0.3	+3.3	-27.8	+0.0	28.6	46.0	-17.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
76	448.008M	34.6	+17.1	+0.3	+3.8	-27.8	+0.0	28.0	46.0	-18.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
77	416.025M	35.3	+16.4	+0.4	+3.7	-27.8	+0.0	28.0	46.0	-18.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
78	194.900M	41.6	+9.1	+0.3	+2.4	-28.0	+0.0	25.4	43.5	-18.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
79	960.070M	32.0	+24.2	+0.7	+6.0	-27.2	+0.0	35.7	54.0	-18.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
80	408.008M	34.2	+16.2	+0.4	+3.6	-27.8	+0.0	26.6	46.0	-19.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
81	433.417M	33.3	+16.8	+0.3	+3.7	-27.8	+0.0	26.3	46.0	-19.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
82	280.050M	35.8	+13.0	+0.3	+2.9	-27.8	+0.0	24.2	46.0	-21.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								



FCC 15.247(e) 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 measure at the antenna port in accordance with KDB Publication No. 558074, PSD option 2.

Two plots at each frequency point were captured and displayed, with the second plot presenting detailed peak reading.

Frequency: 2.412- 2462MHz

Tx Frequency: 2412 MHz, 2437MHz, 2462MHz

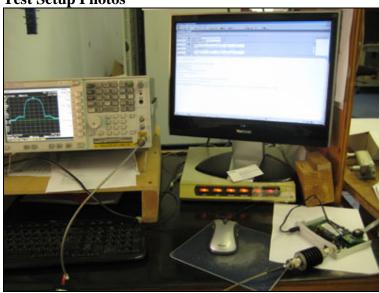
Ch 1, 6, 11

Modulation: 802.11 b (11 Mbps), 802.11 g (54Mpbs)

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

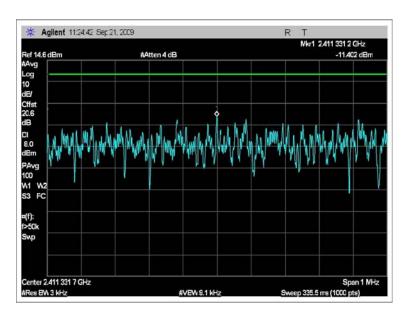


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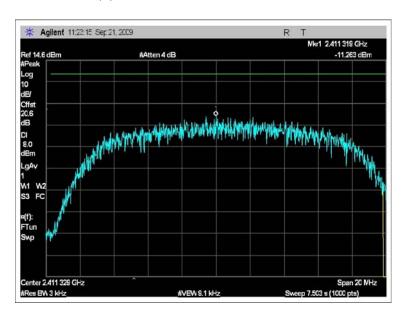


Plots

FCC 15.247(d) POWER SPECTRAL DENSITY-802.11b 2412MHz

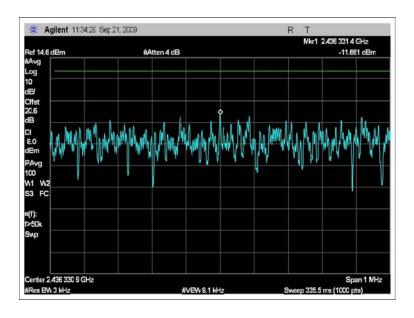


FCC 15.247(d) POWER SPECTRAL DENSITY-802.11b 2412MHz RAW

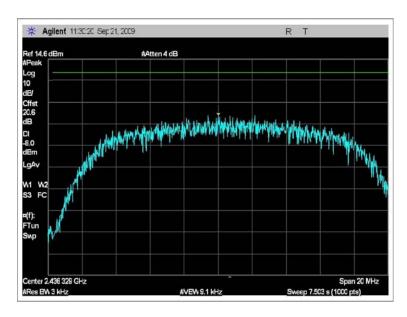




FCC 15.247(d) POWER SPECTRAL DENSITY- 802.11b 2437MHz



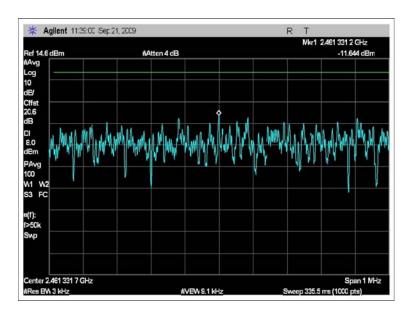
FCC 15.247(d) POWER SPECTRAL DENSITY-802.11b 2437MHz RAW



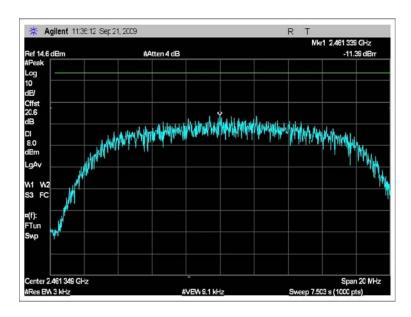
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FCC 15.247(d) POWER SPECTRAL DENSITY-802.11b 2462MHz



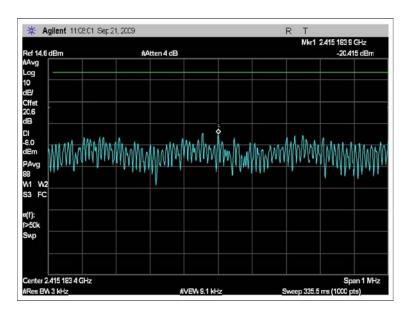
FCC 15.247(d) POWER SPECTRAL DENSITY-802.11b 2462MHz RAW



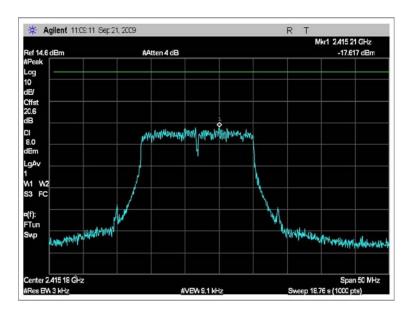
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FCC 15.247(d) POWER SPECTRAL DENSITY- 802.11g 2412MHz



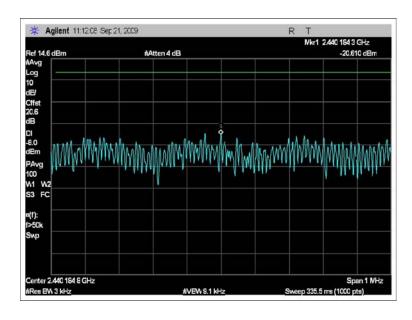
FCC 15.247(d) POWER SPECTRAL DENSITY- 802.11g 2412MHz RAW



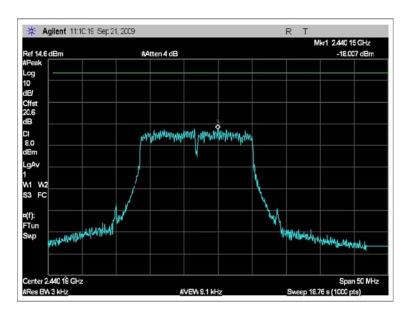
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FCC 15.247(d) POWER SPECTRAL DENSITY-802.11g 2437MHz



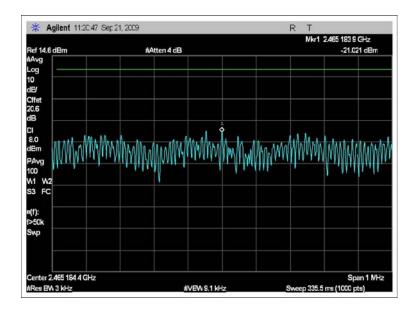
FCC 15.247(d) POWER SPECTRAL DENSITY- 802.11g 2437MHz RAW



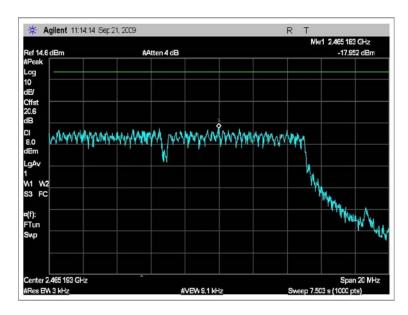
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FCC 15.247(d) POWER SPECTRAL DENSITY-802.11g 2462MHz



FCC 15.247(d) POWER SPECTRAL DENSITY- 802.11g 2462MHz RAW



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BANDEDGE

Test Equipment

S/N	Calibration Date	Cal Due Date	Asset #
US44300438	07/23/2008	07/23/2010	02672
6246	06/06/2008	06/06/2010	00849
3123A00281	07/28/2008	07/28/2010	00786
P5565	09/04/2008	09/04/2010	P05565
942126-003	11/12/2008	11/12/2010	01413
NA	09/14/2009	09/14/2011	P02947
[]	JS44300438 6246 8123A00281 25565 042126-003	JS44300438 07/23/2008 6246 06/06/2008 8123A00281 07/28/2008 95565 09/04/2008 042126-003 11/12/2008	JS44300438 07/23/2008 07/23/2010 6246 06/06/2008 06/06/2010 3123A00281 07/28/2008 07/28/2010 25565 09/04/2008 09/04/2010 042126-003 11/12/2008 11/12/2010

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: 2.412- 2462MHz

Tx Frequency: 2412 MHz, 2437MHz, 2462MHz

Ch 1, 6, 11

Modulation: 802.11 b (11 Mbps), 802.11 g (54Mpbs)

Firmware Power setting: 127

Power: (802.11b) 18dBm 0.0631 watt, (802.11 g) 15.8dBm, 0.0380W

Antenna Gain: 1.5dBi @2.5GHz

The antenna is orientated in upright position.

21°C, 55% relative humidity.

Test Setup Photos



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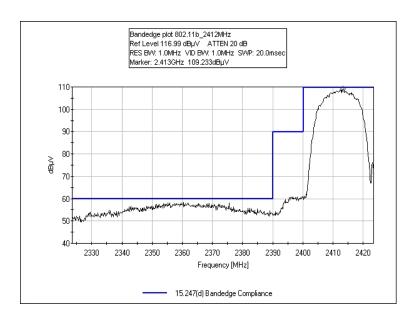




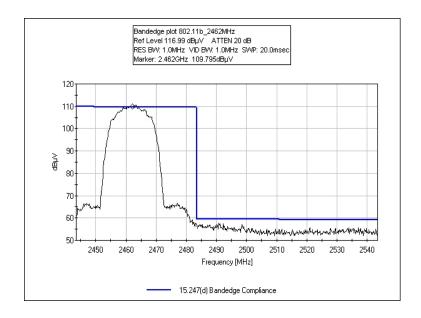


Plots

BANDEDGE 802.11b 2412MHz



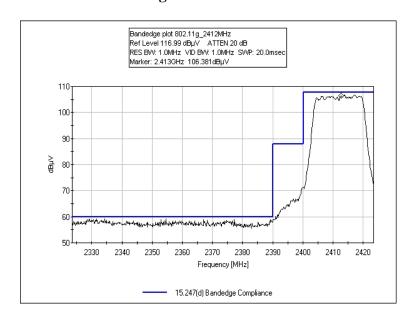
BANDEDGE 802.11b 2462MHz



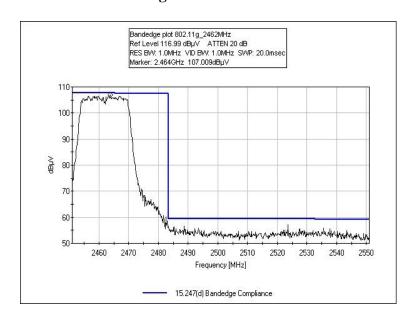
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BANDEDGE 802.11g 2412MHz



BANDEDGE 802.11g 2462MHz





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: 2.412- 2462MHz

Tx Frequency: 2412 MHz, 2437MHz, 2462MHz

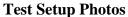
Ch 1, 6, 11

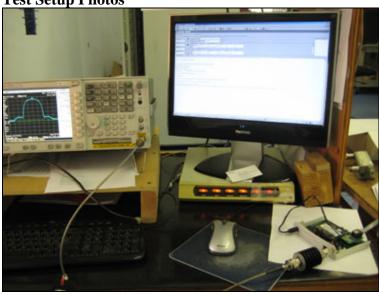
Modulation: 802.11 b (11 Mbps), 802.11 g (54Mpbs)

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.



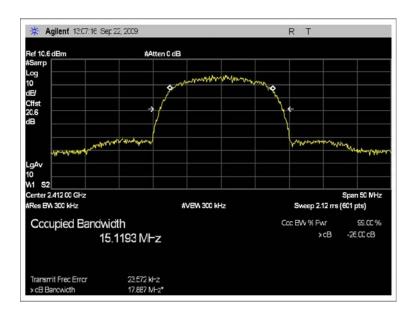


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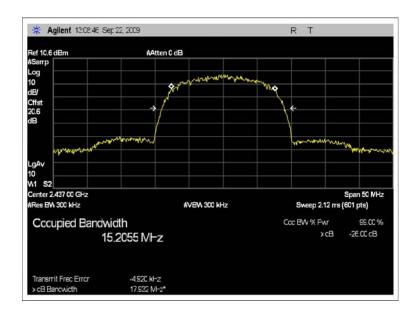


Plots

RSS-210 99% BANDWIDTH = 15.1MHz - 802.11b 2412MHz

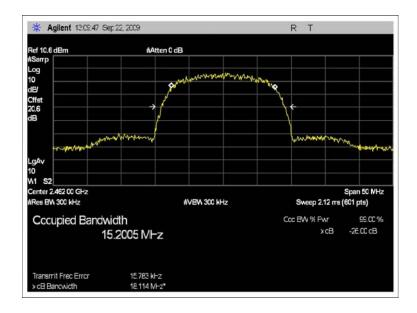


RSS-210 99% BANDWIDTH = 15.2MHz - 802.11b 2437MHz

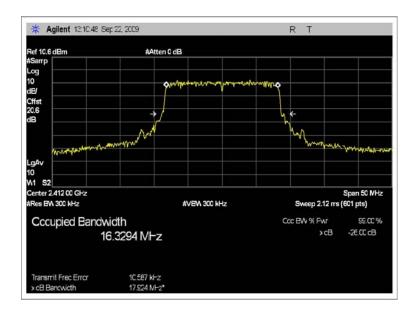




RSS-210 99% BANDWIDTH = 15.2MHz - 802.11b 2462MHz



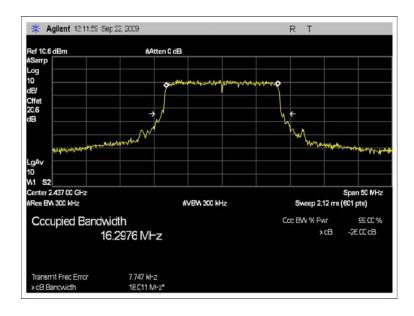
RSS-210 99% BANDWIDTH = 16.3MHz - 802.11g 2412MHz\



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RSS-210 99% BANDWIDTH = 16.3MHz - 802.11g 2437MHz



RSS-210 99% BANDWIDTH = 16.4MHz - 802.11g 2462MHz

