



**FCC CFR47 PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 8**

CERTIFICATION TEST REPORT

**FOR
Electrolux Major Appliances North America
3100 Hutchinson McDonald Road
CHARLOTTE, NC 28269**

**EUT
Module**

MODEL NUMBER: 5430042

**FCC ID: 2ABHC-5430042
IC: 12012A-5430042**

REPORT NUMBER: 10147996

ISSUE DATE: 2014-07-23 Rev.1

Prepared for
**Electrolux Major Appliances North America
3100 Hutchinson McDonald Road
CHARLOTTE, NC 28269**

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NVLAP LAB CODE 100255-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	2014-06-10	Initial Issue	Joseph Danisi
1	2014-07-23	Recheck power, PSD, Output power, Correct plot information, Add Conducted Emissions, add duty cycle statement & plot, correct BE plot and typo error on power.	Joseph Danisi

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Electrolux Major Appliances North America
3100 Hutchinson McDonald Road
CHARLOTTE, NC 28269

EUT DESCRIPTION: Module

MODEL: 5430042

SERIAL NUMBER: Prototype

DATE TESTED: 2013-12-08 to 2014-07-22

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 Issue 8 Annex 8	Pass
INDUSTRY CANADA RSS-GEN Issue 3	Pass

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards, using test results reported in the test report documents referenced below and/or documentation furnished by the applicant. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations of these calculations. The results show that the equipment is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation, as described by the referenced documents. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL By:

Tested By:



Name: Michael Antola
Title: Project Lead
UL: Consumer Technology Division

Name: Joseph Danisi
Title: Project Lead
UL: Consumer Technology Division

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 1285 Walt Whitman Rd. Melville, NY 11747, USA.

UL Melville is accredited by NVLAP, Laboratory Code 100255-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/1002550.htm>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test	Uncertainty
Conducted Emissions (worst case 9kHz-30MHz)	± 2.0, k=2 (95%)
Radiated Emissions, 30-200MHz, Horizontal	± 3.6, k=2 (95%)
Radiated Emissions, 30-200MHz, Vertical	± 3.8, k=2 (95%)
Radiated Emissions, 200-1000MHz, Horizontal	± 2.8, k=2 (95%)
Radiated Emissions, 200-1000MHz, Vertical	± 3.7, k=2 (95%)
Radiated Emissions, 1-18GHz (worst case, sVSWR)	± 4.9, k=2 (95%)

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11b/g/n transceiver. The module is a small size module and consists of a Broadcom BCM43362 single-chip, a ST STM32F205 MCU. It provides for the highest level integration for electronic accessories featuring integrated IEEE 802.11b/g/n handheld device. It cannot simultaneously transmit at the same time each antenna ports are turned on individually.

The WiFi NIU is the electronic component that will be added to Electrolux household appliances and utilize the WiFi protocol to integrate them into a Home Area Network (HAN) for Energy Management and various user interface functions.

The WiFi NIU was developed as a module to interface an appliance with an Electrolux standard serial bus to a WiFi AP and eventually to an internet cloud. The NIU is certified as a module so that it requires no specific testing when installed in an appliance.

The module has two versions the DAAS which went through all applicable tests and the Macs version which only Radiated Emissions tests were performed the only difference is in the digital apparatus portion the RF circuits are identical. The difference is in how the serial interface is implemented. This only impacts the way the appliance physically communicates

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	16.92	49.20
2412 - 2462	802.11g	10.15	10.35
2412 - 2462	802.11n BPSK	10.2	10.47
2412 - 2462	802.11n QAM 16	9.97	9.93
2412 - 2462	802.11n QAM 64	9.64	9.20
2412 - 2462	802.11n QPSK	10.2	10.47

Note: Worst case power measurement are indicated in table above

Modulations: 11b = CCK
11g = OFDM
11n = BPSK, QPSK, 16QAM, 64QAM

Data Rates: 11b = 5.5 Mbps
11g = 6Mbps
11n BPSK = MCS0
11n QAM 16 = MCS3
11n QAM 64 = MCS5
11n QPSK = MCS1

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PCB (Fractal) antenna, with a maximum gain of 2 dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was Broadcom WICED Manufacturing Test Application, rev. Software Development Kit 2.4.

The EUT driver software installed during testing was not applicable no drivers per the client

The test utility software used during testing was Broadcom WICED Manufacturing Test Utility Application (wl.exe), rev. Software Development Kit 2.4.

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions were performed with the EUT set to transmit at the low, mid, high channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

Worst-case data rates as provided by power measurements at each modulation and data rate prior to testing:

Data Rates: 11b = 5.5 Mbps
11g = 6Mbps
11n BPSK = MCS0
11n QAM 16 = MCS3
11n QAM 64 = MCS5
11n QPSK = MCS1

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
DC power supply	Universal power source	6050A	N/A	none
Laptop	Compaq	Presario CQ56	N/A	none

I/O CABLES

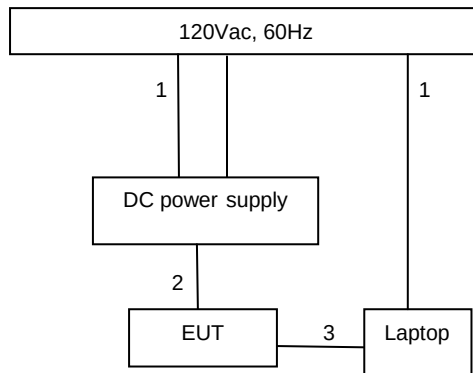
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	1	2	AC	wire	<1.5m	None
2	1	1	terminal	wire	<1.5m	None
3	1	1	USB	wire	<1.5m	None

TEST SETUP

The EUT is tested as a standalone module during the tests. Test software exercised the radio card.

Note: KDB 558074 measurement procedures were applied.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Radiated Emissions					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
30-1000MHz					
EMI Receiver	Rohde & Schwarz	ESCI7	75141	2014-01-29	2015-01-31
Log-P Antenna	Schaffner	UPA6109	44068	2013-04-03	2014-04-03
Bicon Antenna	Schaffner	VBA6106A	54	2013-04-03	2014-04-03
Log-P Antenna	Schaffner	UPA6109	44067	2013-07-09	2014-07-09
Switch Driver	HP	11713A	ME7A-627	N/A	N/A
System Controller	Sunol Sciences	SC99V	44396	N/A	N/A
Camera Controller	Panasonic	WV-CU254	44395	N/A	N/A
RF Switch Box	UL	1	44398	N/A	N/A
Measurement Software	UL	Version 9.5	44740	N/A	N/A
Multimeter	Fluke	83III	ME5B-305	2014-01-28	2015-01-31
Above 1GHz (Band Optimized System)					
Spectrum Analyzer	Agilent	E4446A	72823	2014-01-28	2015-01-31
Horn Antenna (1-2 GHz)	ETS	3161-01 (26°)**	51442	2008-03-28	See * below
Horn Antenna (2-4 GHz)	ETS	3161-02 (22°)**	48107	2007-09-27	See * below
Horn Antenna (4-8 GHz)	ETS	3161-03 (22°)**	48106	2007-09-27	See * below
Horn Antenna (8-12 GHz)	ETS	3160-07 (26°)**	8933	2008-11-24	See * below
Horn Antenna (12-18 GHz)	ETS	3160-08 (26°)**	8932	2007-09-27	See * below
Horn Antenna (18-26.5 GHz)	ETS	3160-09 (27°)**	8947	2007-09-26	See * below
Signal Path Controller	HP	11713A	50250	N/A	N/A
Gain Controller	HP	11713A	50251	N/A	N/A
RF Switch / Preamp Fixture	UL	BOMS1	50249	N/A	N/A
System Controller	UL	BOMS2	50252	N/A	N/A
Measurement Software	UL	Version 9.5	44740	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2012-12-22	2014-12-22
Multimeter	Fluke	83III	ME5B-305	2014-01-28	2015-01-31
* - Note: As allowed by the calibration standard ANSI C63.4 Section 4.4.2, standard gain horns need only a one-time calibration. Only if physical damage occurs will the horn antenna require re-calibration. Gain standard horn antennas (sometimes called standard gain horn antennas) need not be calibrated beyond that which is provided by the manufacturer unless they are damaged or deterioration is suspected, or they are used at a distance closer than $2D^2/\lambda$. Gain standard horn antennas have gains that are fixed by their dimensions and dimensional tolerances. ** - Number in parentheses denotes antenna beam width.					

Bench Tests					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
RF Room 1					
Spectrum Analyzer	Agilent	E4440A	82162	2013-08-14	2014-08-14
Power Sensor	Rohde & Schwarz	NRP-Z81	73137	2014-01-29	2015-01-31
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2012-12-22	2014-12-22
Multimeter	Fluke	83III	ME5B-305	2014-01-28	2015-01-31

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due
Conducted Emissions – GP 1					
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081	2014-01-28	2015-01-31
LISN	Solar	9252-50-R-24-BNC	ME5A-636	2014-01-28	2015-01-31
Switch Driver	HP	11713A	44397	N/A	N/A
RF Switch Box	UL	4	44404	N/A	N/A
Measurement Software	UL	Version 9.5	44736	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43734	2012-12-22	2014-12-22
Multimeter	Fluke	83V	43443	2014-01-28	2015-01-31

7. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

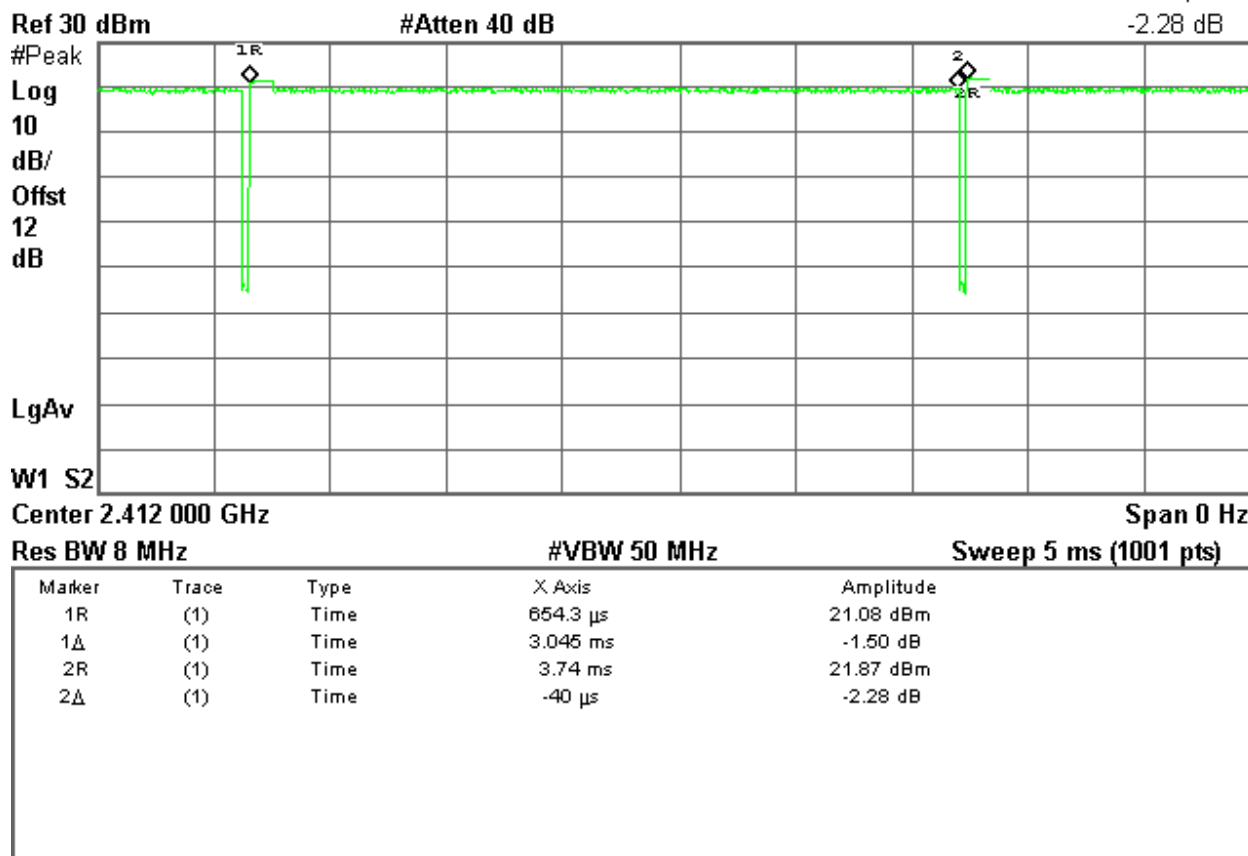
7.1.ON TIME AND DUTY CYCLE RESULTS

The manufacturer had the duty cycle on >98 % during the evaluation for all modes

* Agilent 10:53:04 Feb 6, 2014

R T

Δ Mkr2 -40 μs
-2.28 dB



8. ANTENNA PORT TEST RESULTS

8.1.802.11b MODE IN THE 2.4 GHz BAND

8.1.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set to 100 KHz and the VBW to 300 KHz $\geq 3 \times$ RBW, peak detector and max hold.

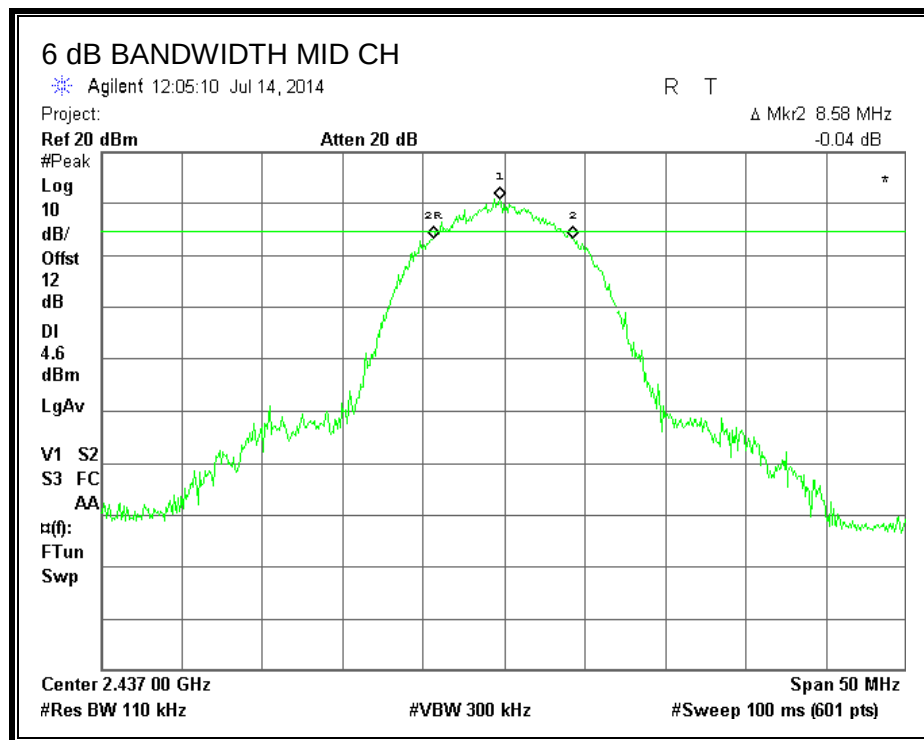
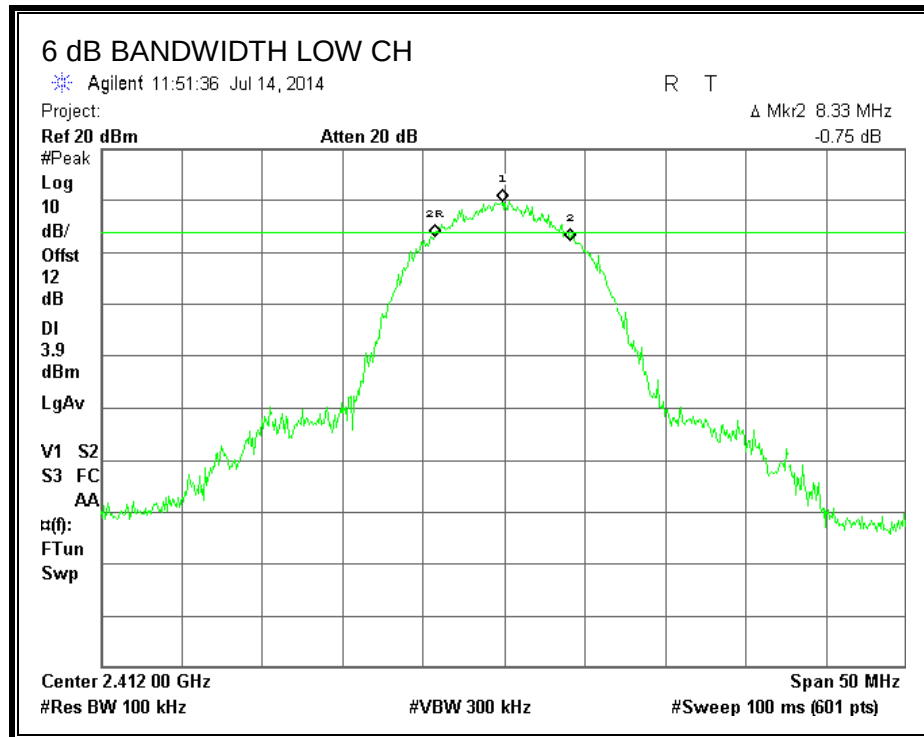
RESULTS ANTENNA PORT 1

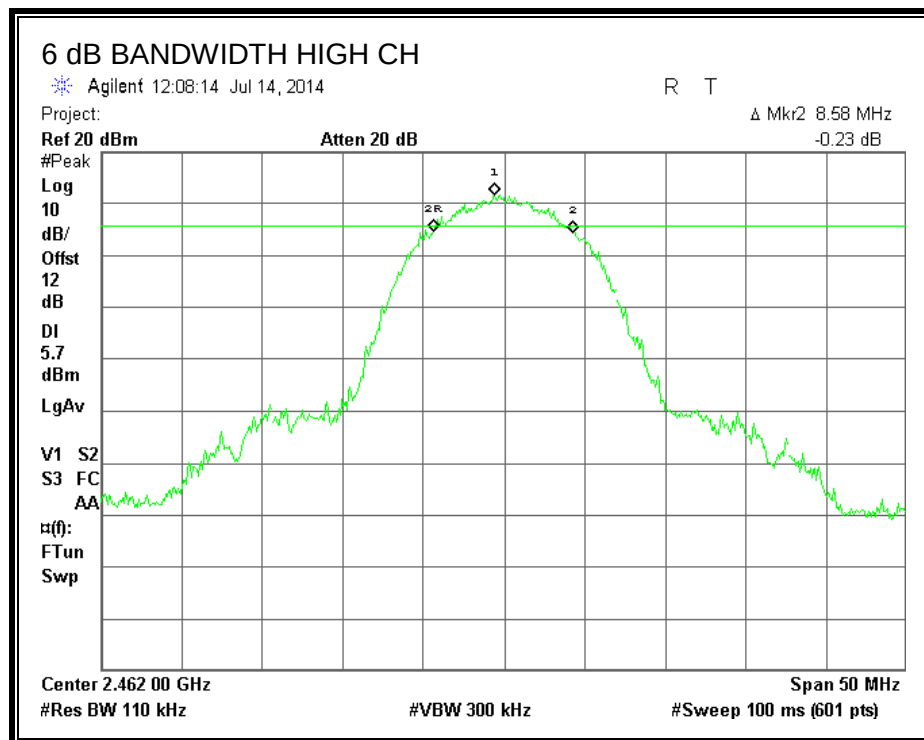
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	8.33	0.5
Mid	2437	8.58	0.5
High	2462	8.58	0.5

RESULTS ANTENNA PORT 2

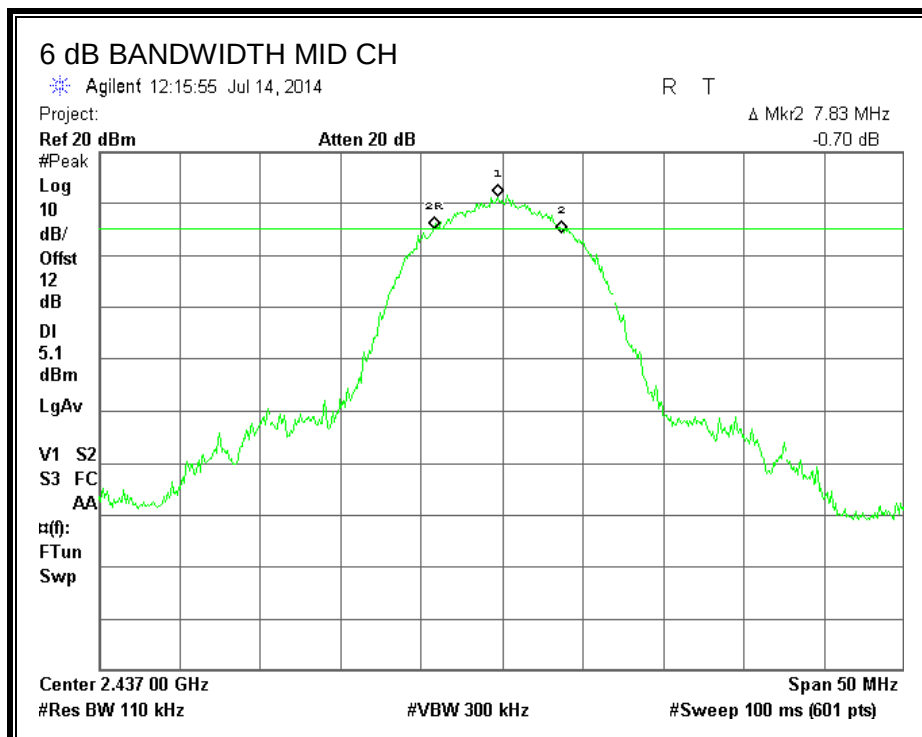
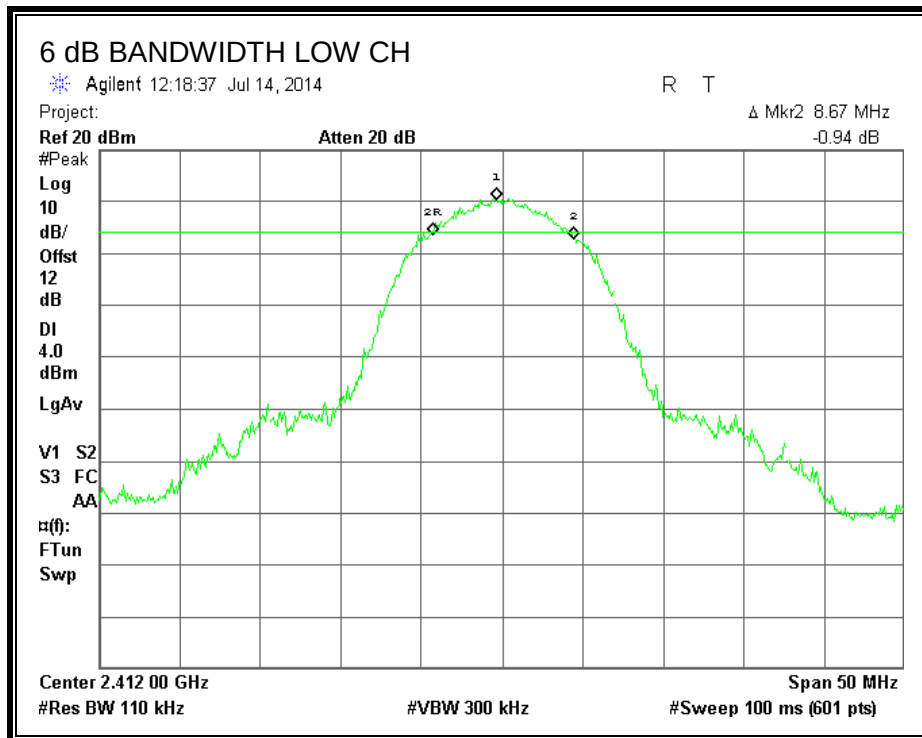
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	8.67	0.5
Mid	2437	7.83	0.5
High	2462	7.83	0.5

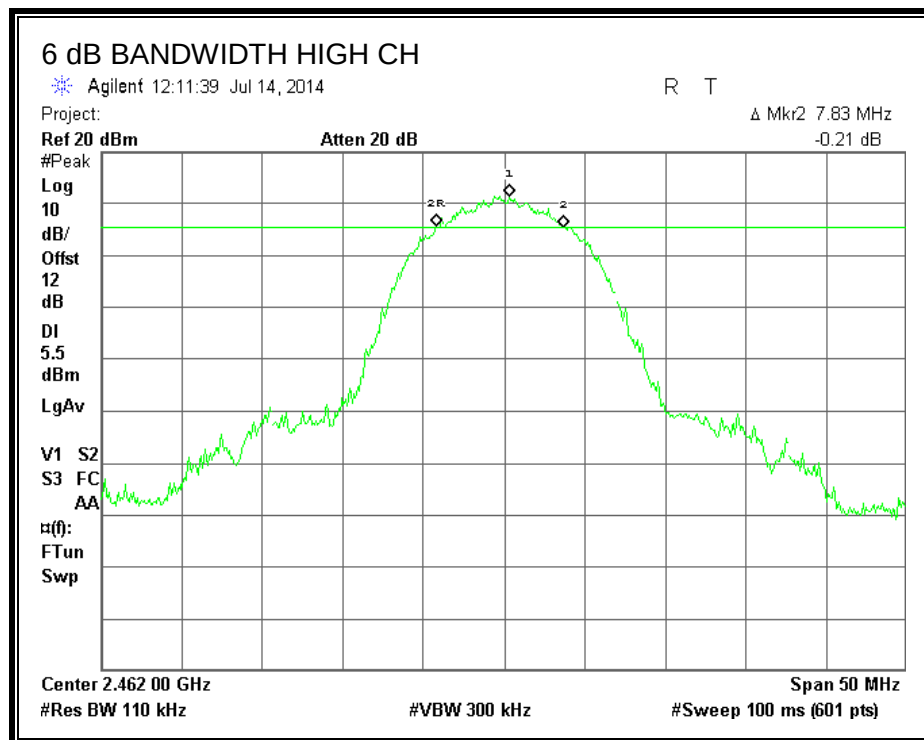
6 dB BANDWIDTH ANTENNA PORT 1





6 dB BANDWIDTH ANTENNA PORT 2





8.1.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

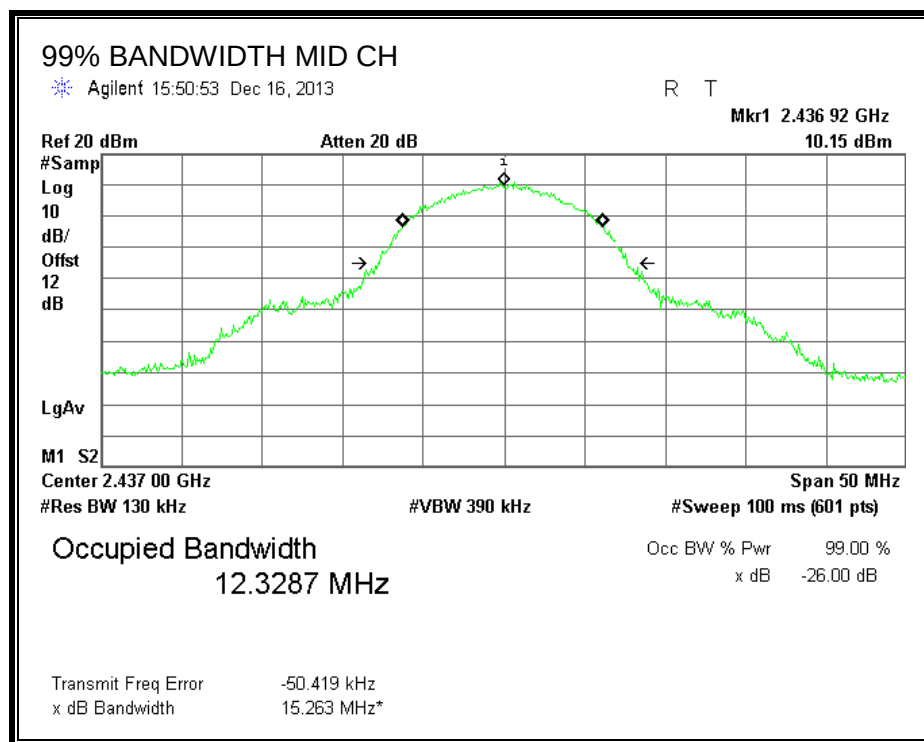
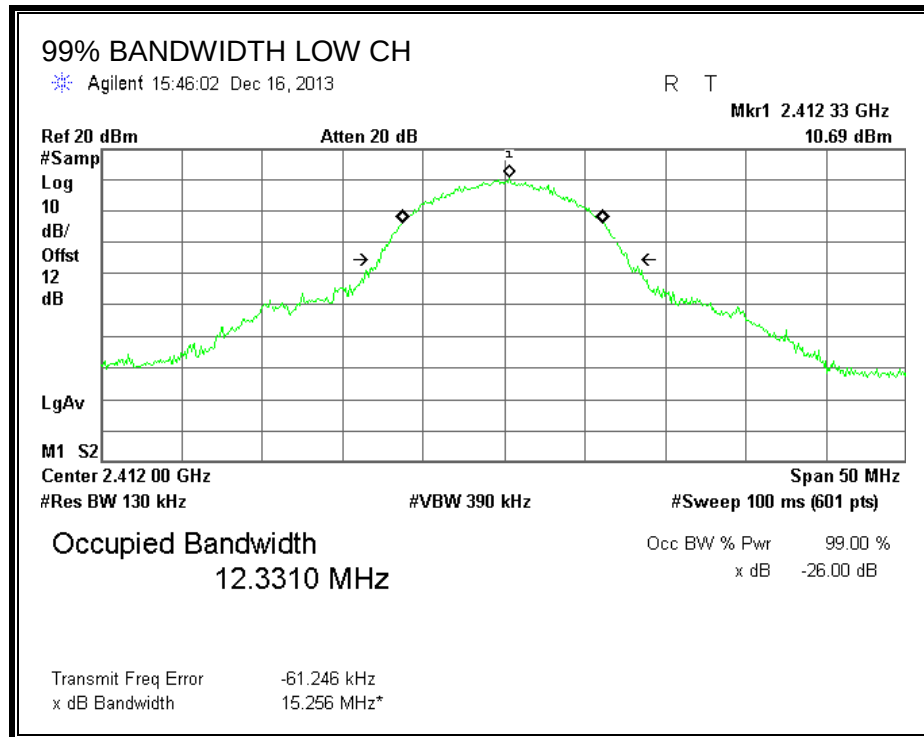
RESULTS ANTENNA PORT 1

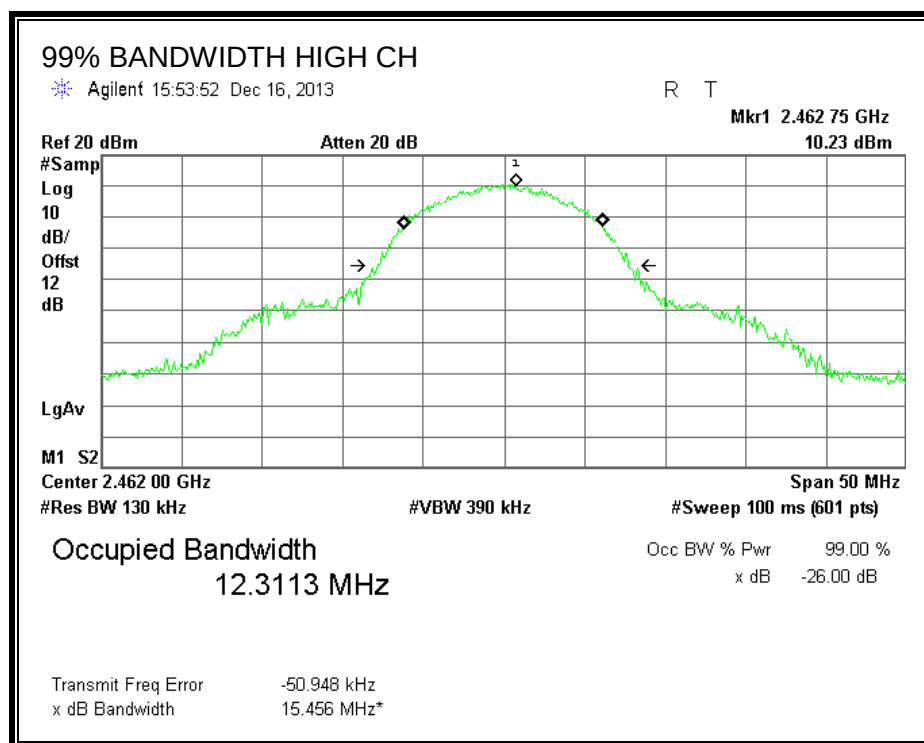
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	12.3310
Mid	2437	12.3287
High	2462	12.3113

RESULTS ANTENNA PORT 2

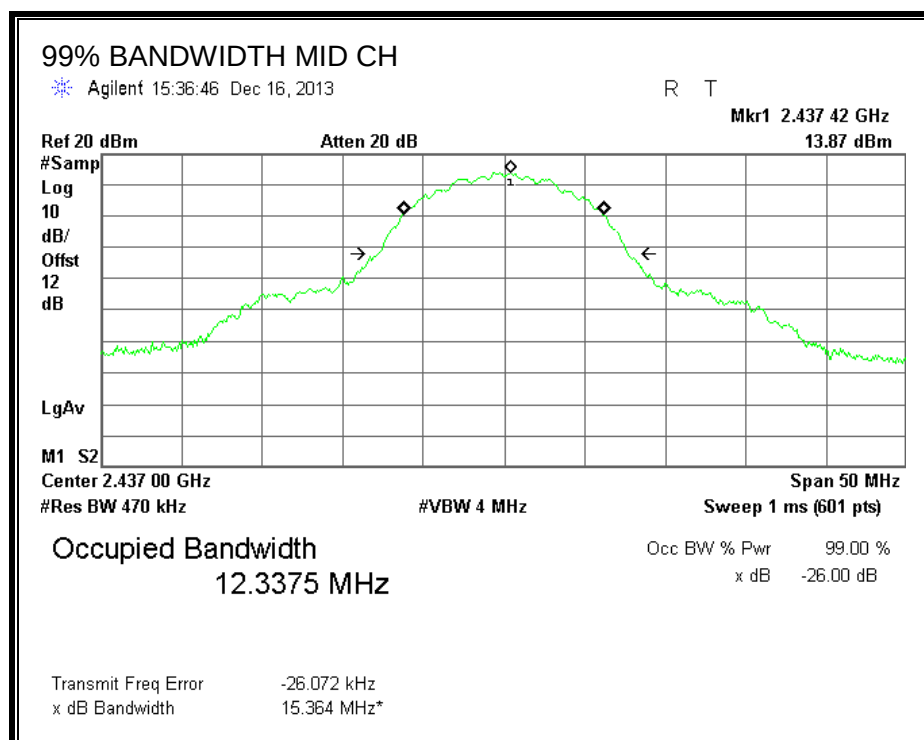
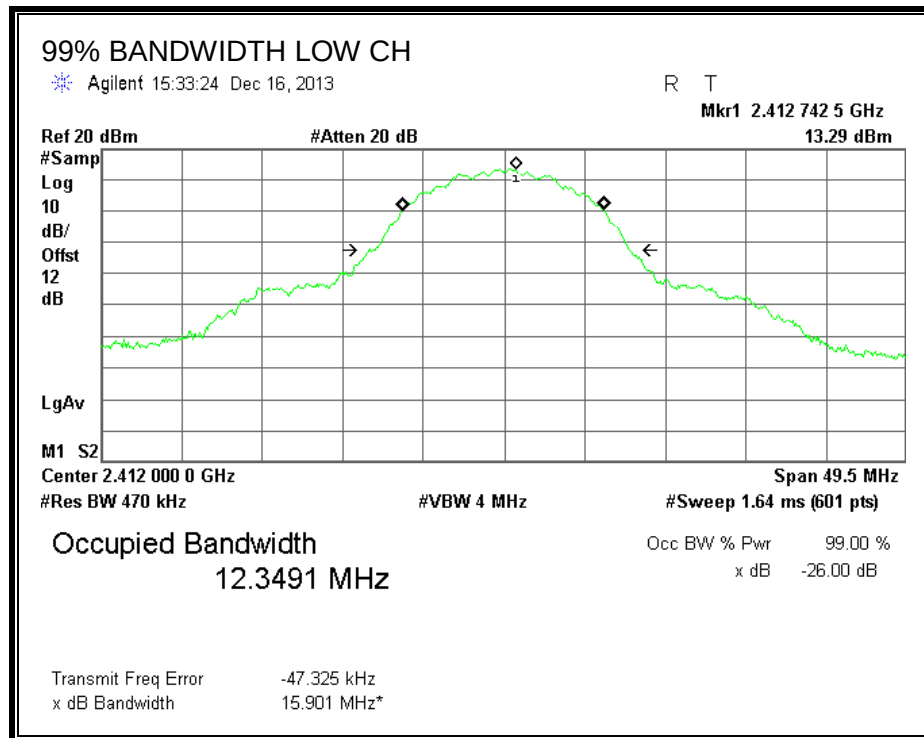
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	12.3491
Mid	2437	12.3375
High	2462	12.3132

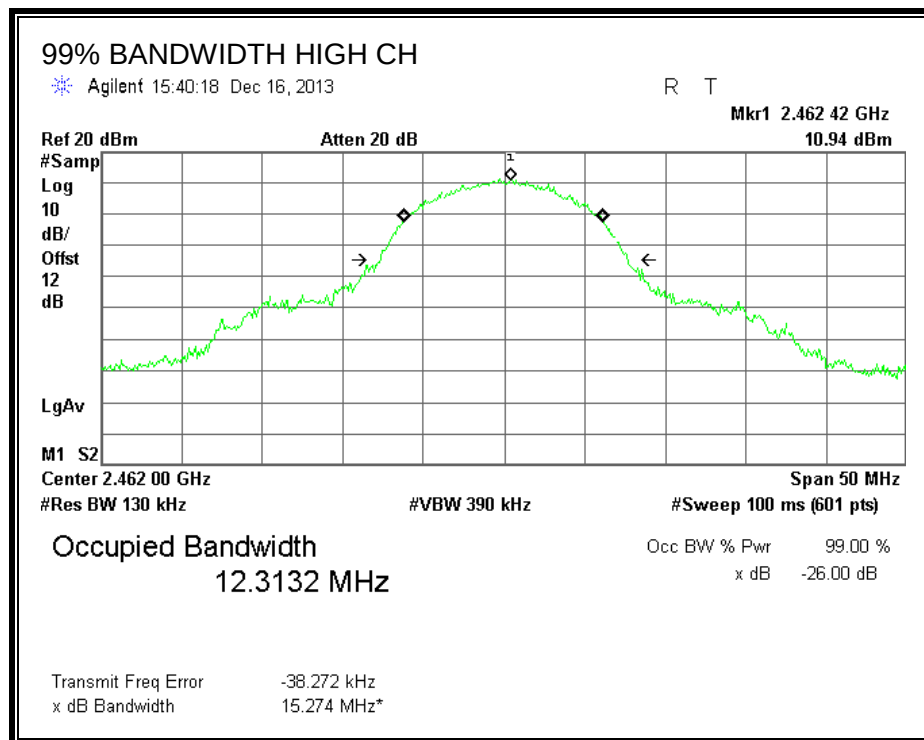
99% BANDWIDTH ANTENNA PORT 1





99% BANDWIDTH ANTENNA PORT 2





8.1.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS ANTENNA PORT 1

Channel	Frequency (MHz)	Power (dBm)
Low	2412	16.61
Mid	2437	16.70
High	2462	16.91

RESULTS ANTENNA PORT 2

Channel	Frequency (MHz)	Power (dBm)
Low	2412	16.26
Mid	2437	16.62
High	2462	16.92

8.1.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS ANTENNA PORT 1

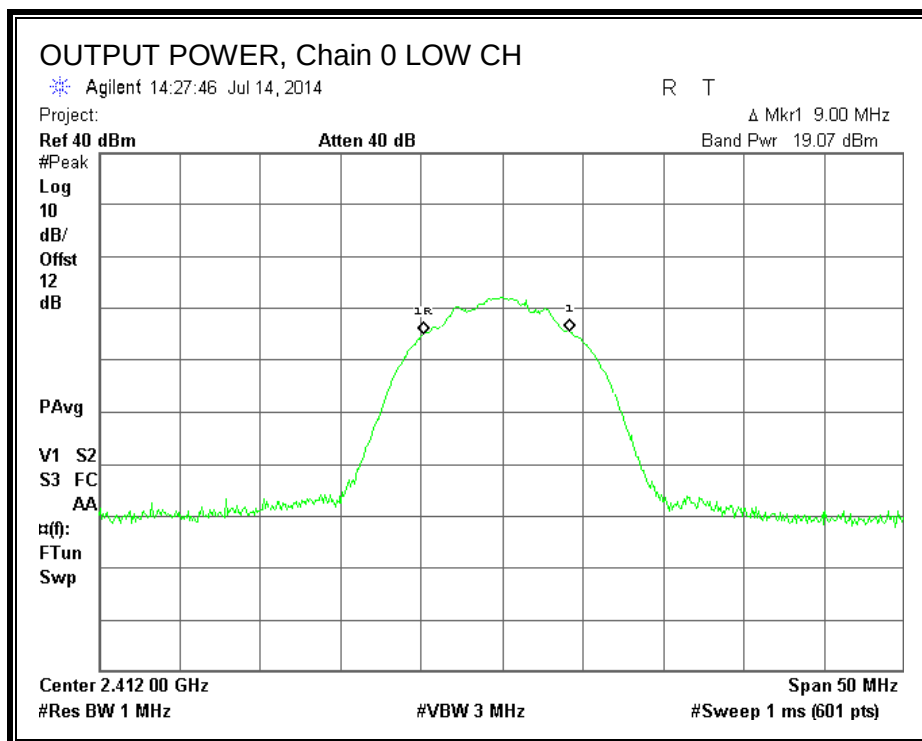
Limits

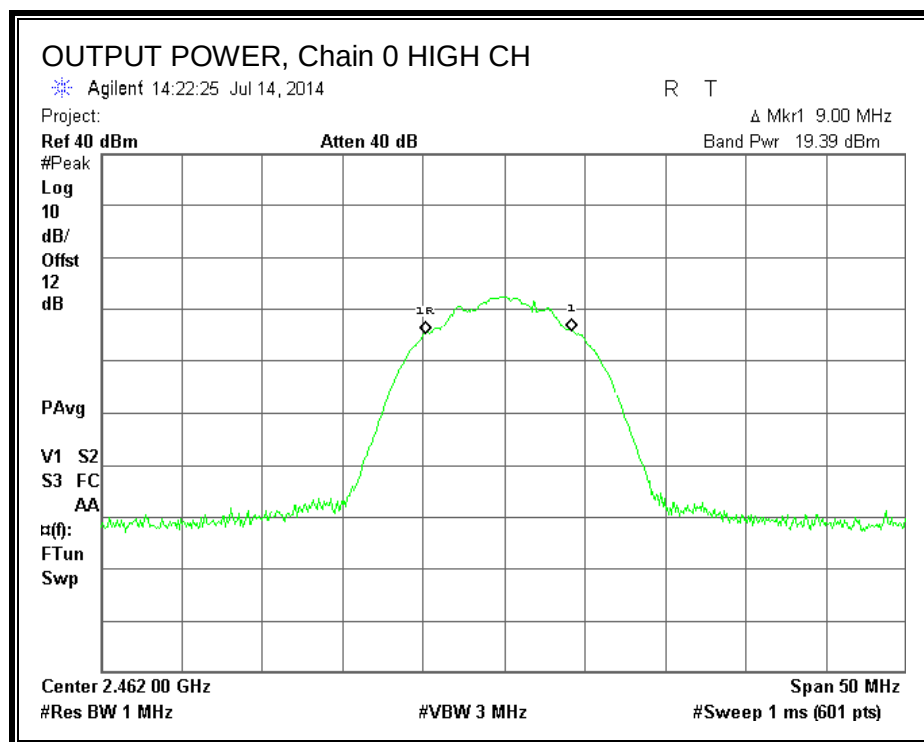
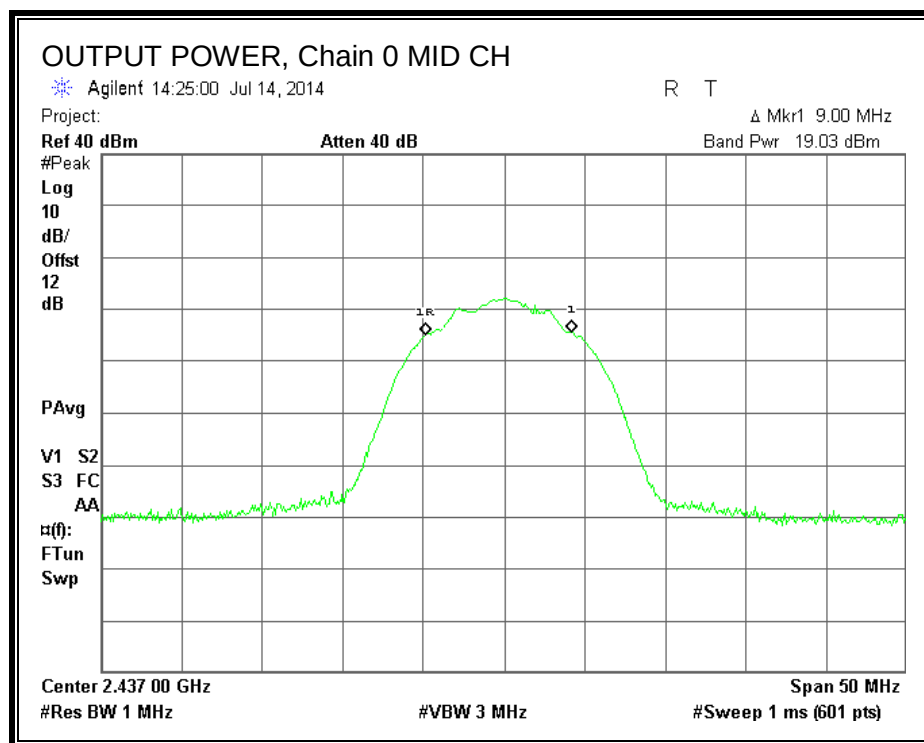
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	19.07	19.07	30.00	-10.93
Mid	2437	19.03	19.03	30.00	-10.97
High	2462	19.39	19.39	30.00	-10.61

OUTPUT POWER, Chain 0





RESULTS ANTENNA PORT 2

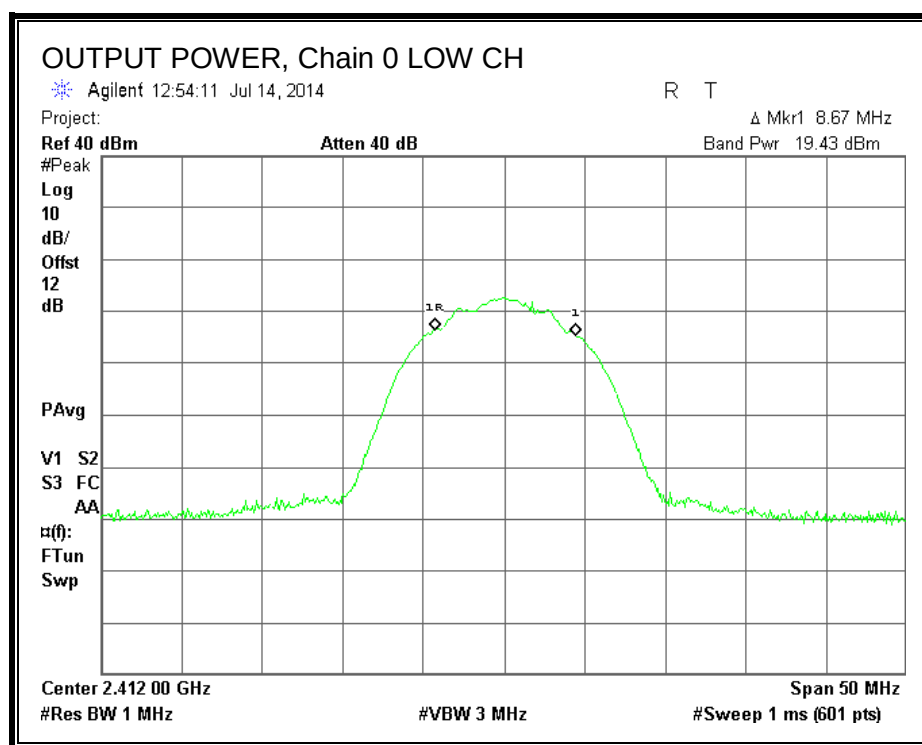
Limits

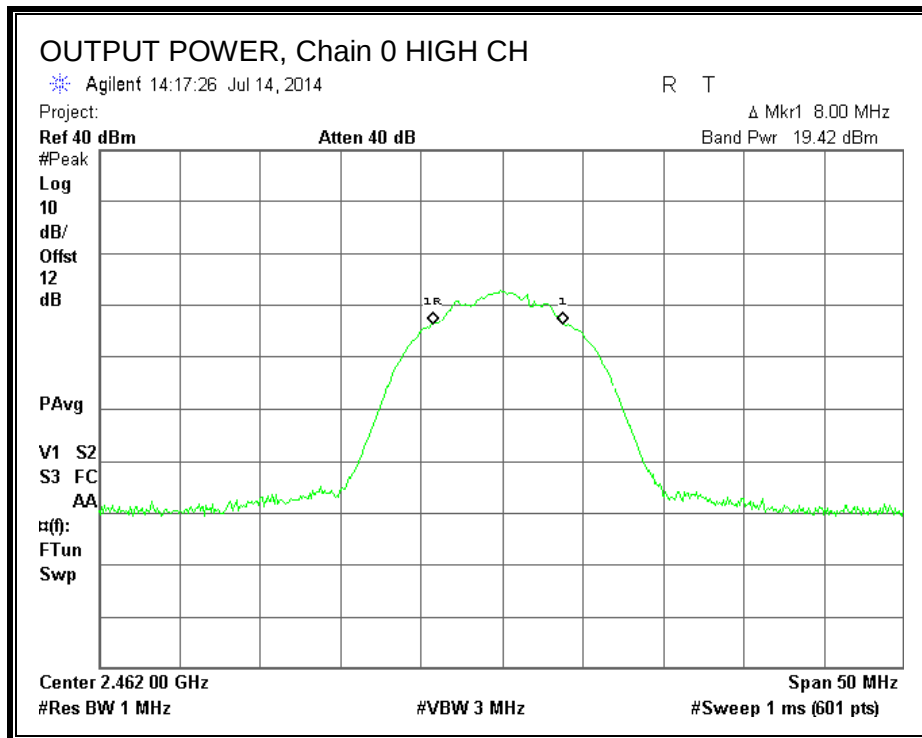
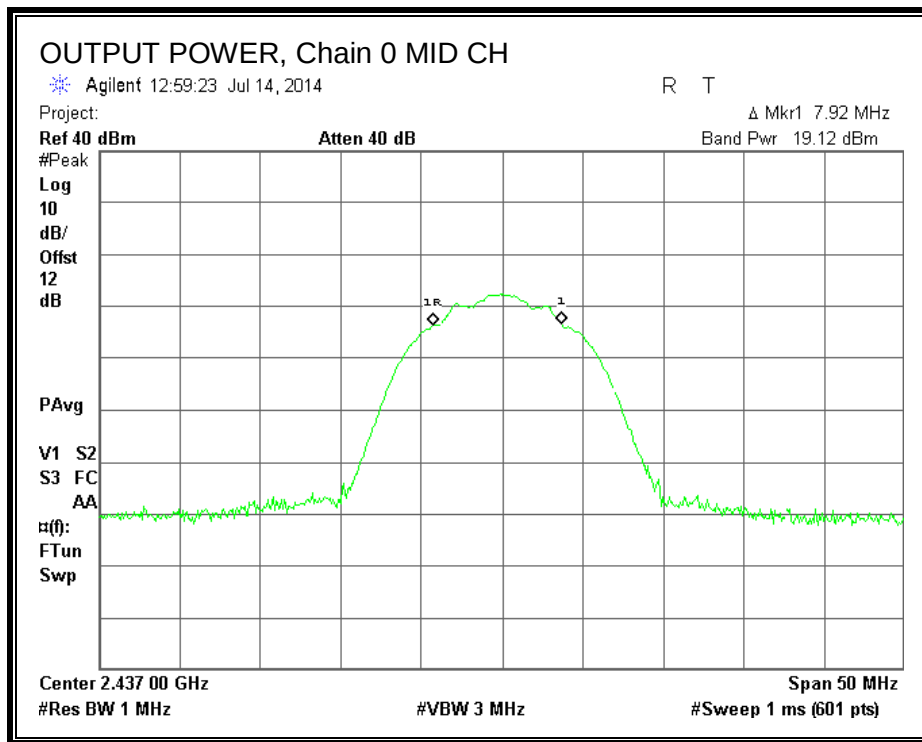
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	19.43	19.43	30.00	-10.57
Mid	2437	19.12	19.12	30.00	-10.88
High	2462	19.42	19.42	30.00	-10.58

OUTPUT POWER, Chain 0





8.1.5. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

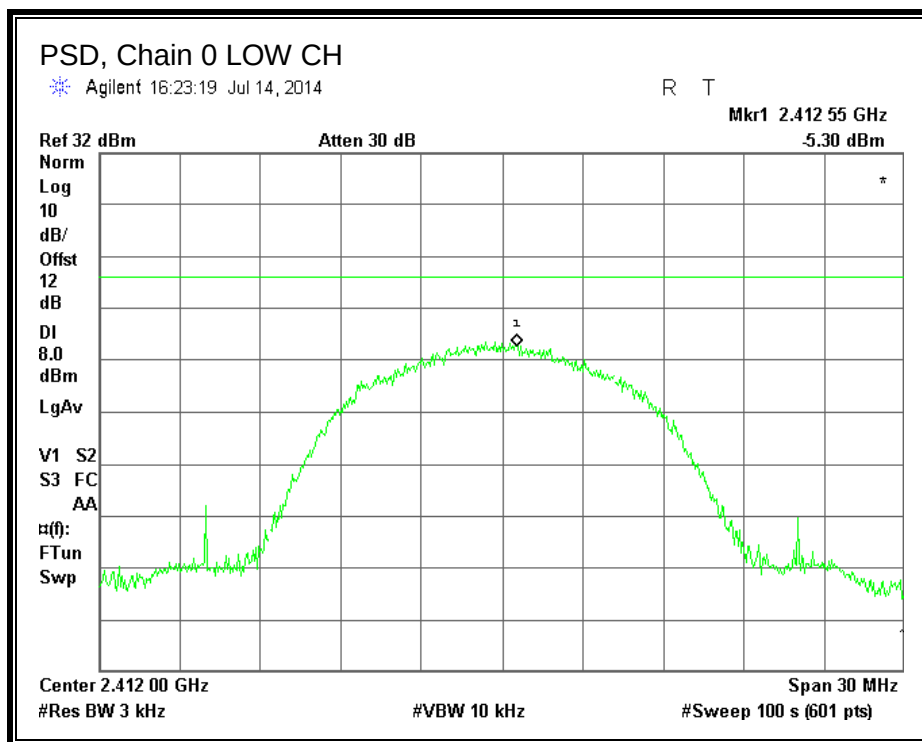
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

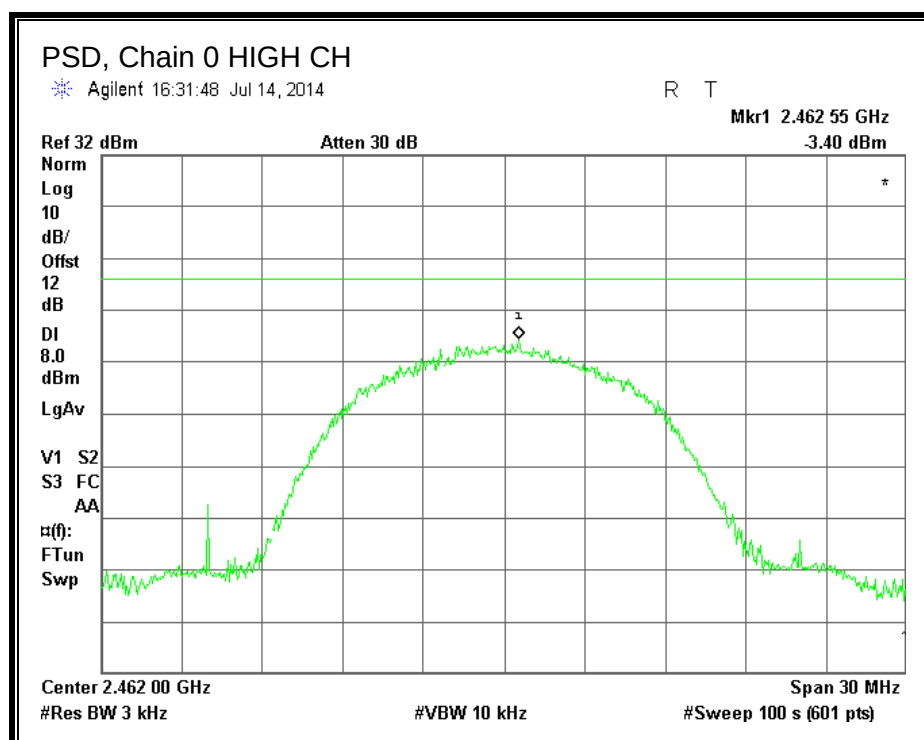
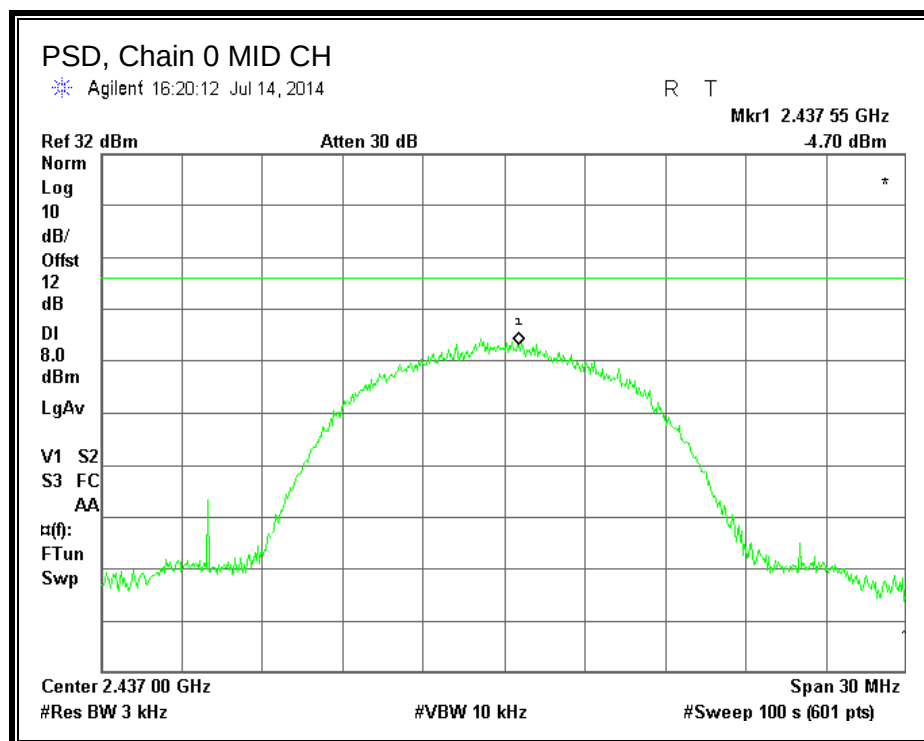
RESULTS ANTENNA PORT 1

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-5.30	8.0	-13.3
Mid	2437	-4.70	8.0	-12.7
High	2462	-3.44	8.0	-11.4

PSD, Chain 0



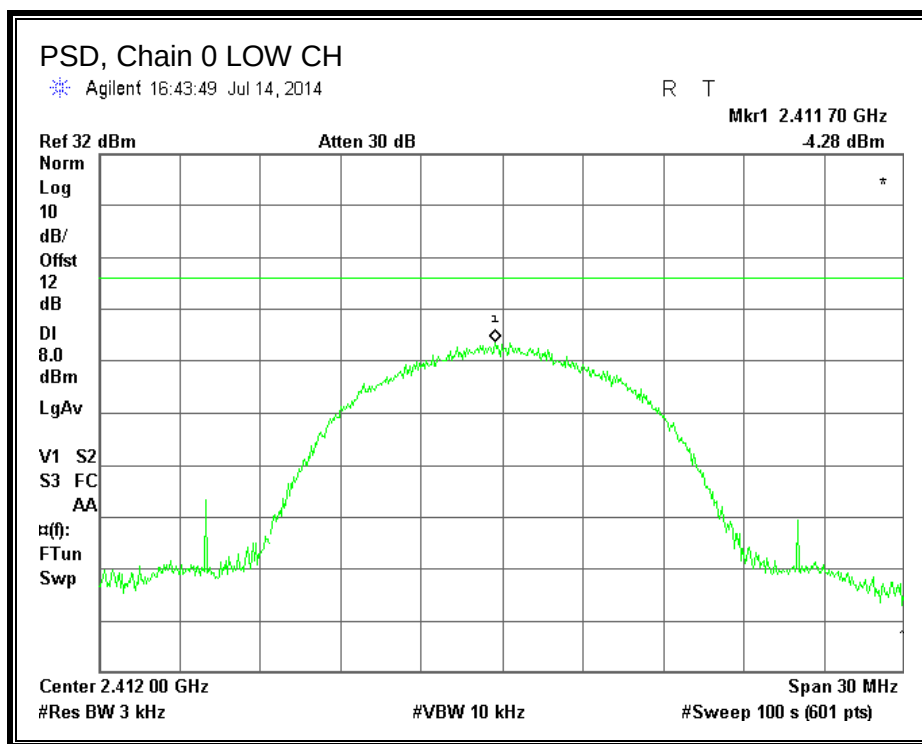


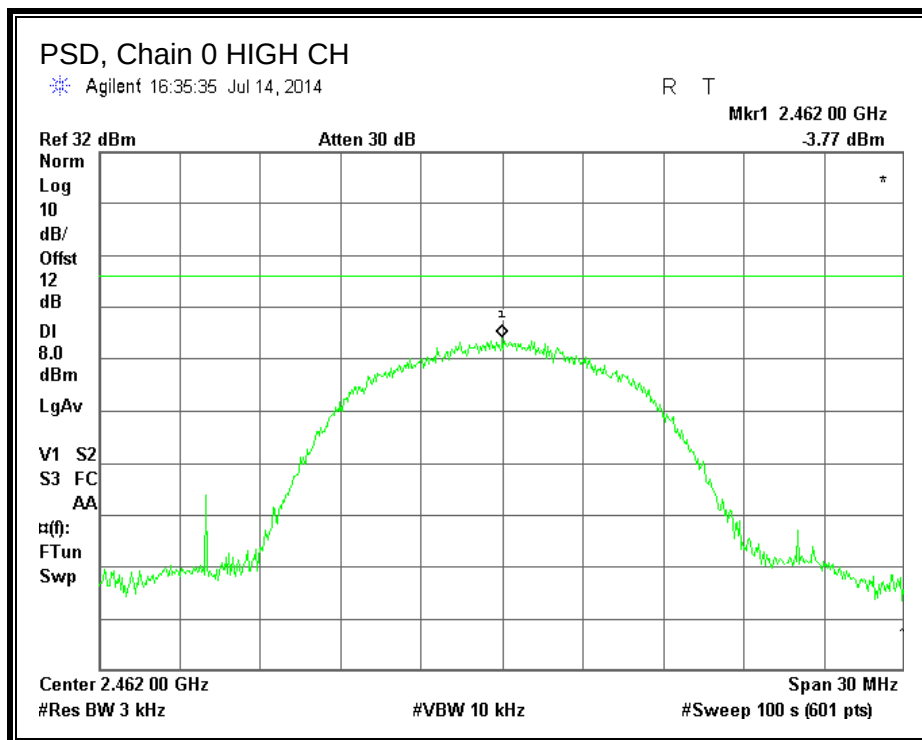
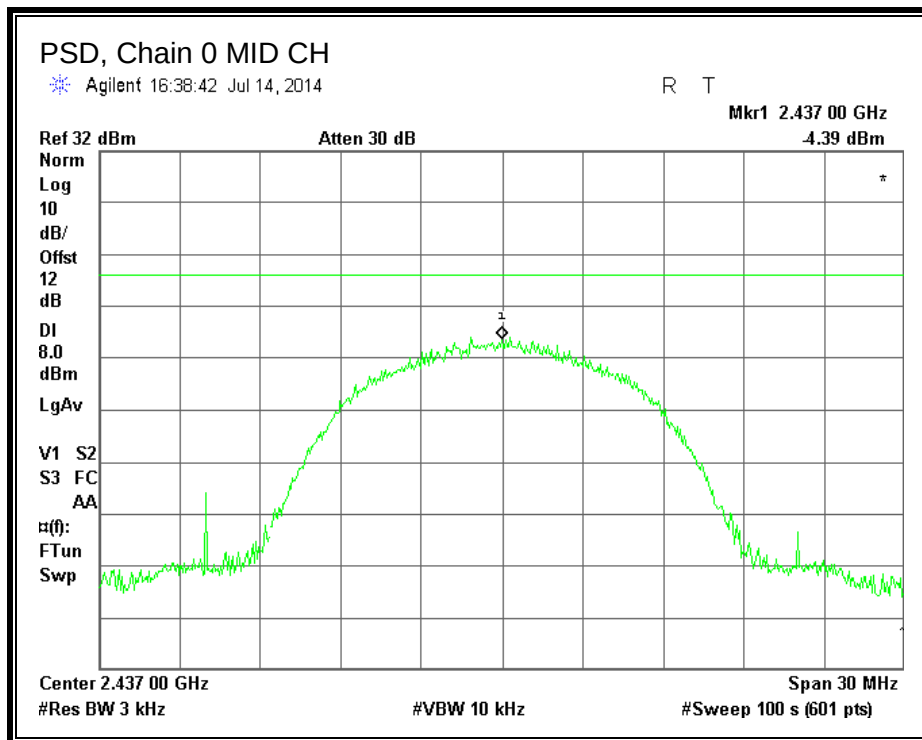
RESULTS ANTENNA PORT 2

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-4.28	8.0	-12.3
Mid	2437	-4.39	8.0	-12.4
High	2462	-3.77	8.0	-11.8

PSD, Chain 0





8.1.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

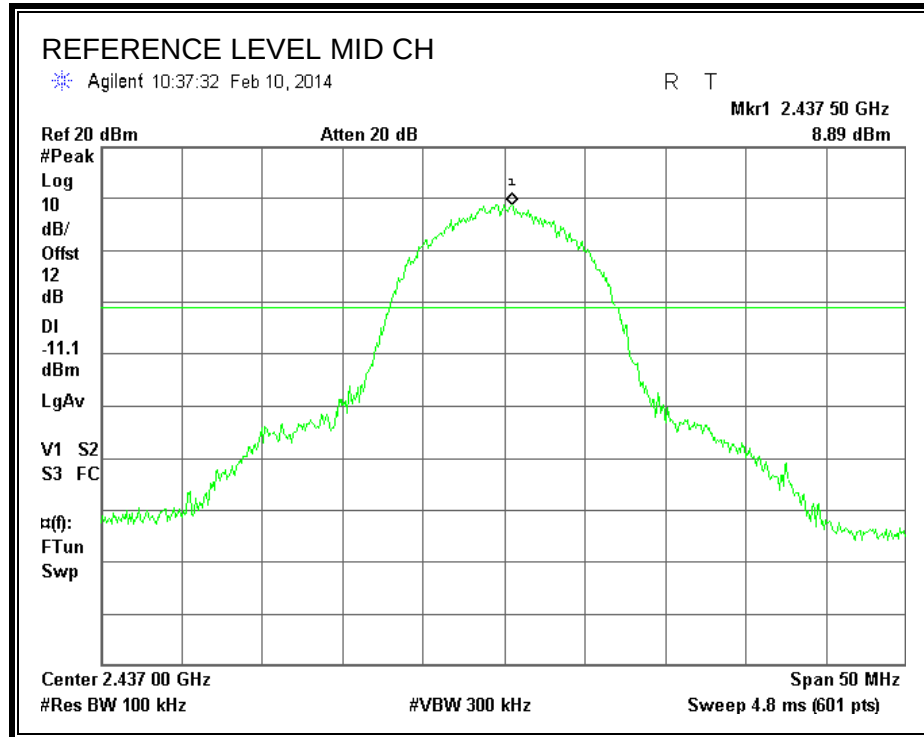
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

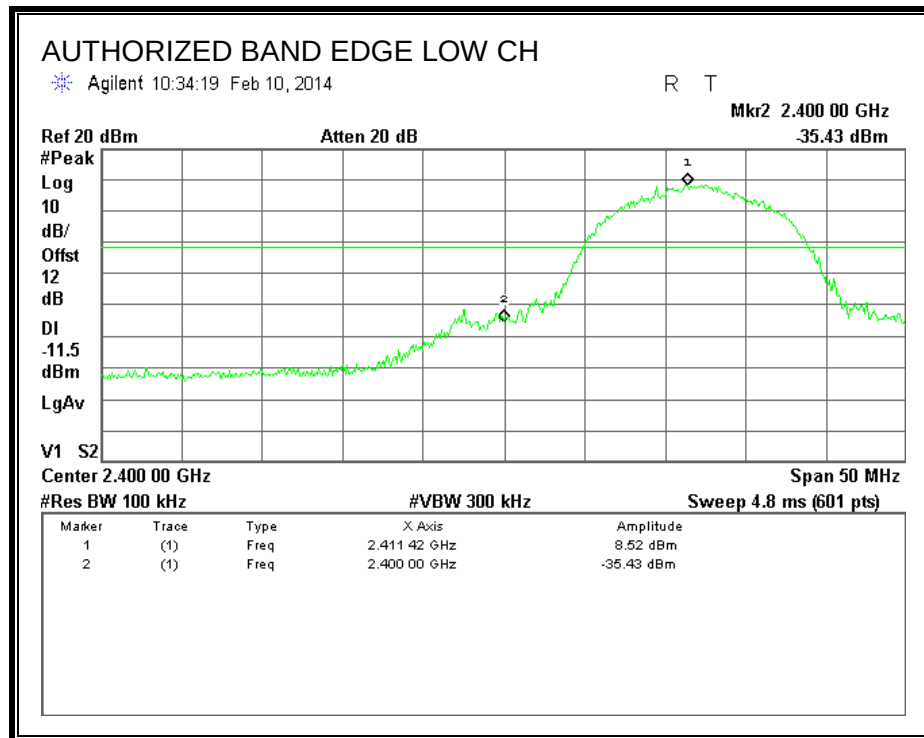
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS ANTENNA PORT 1

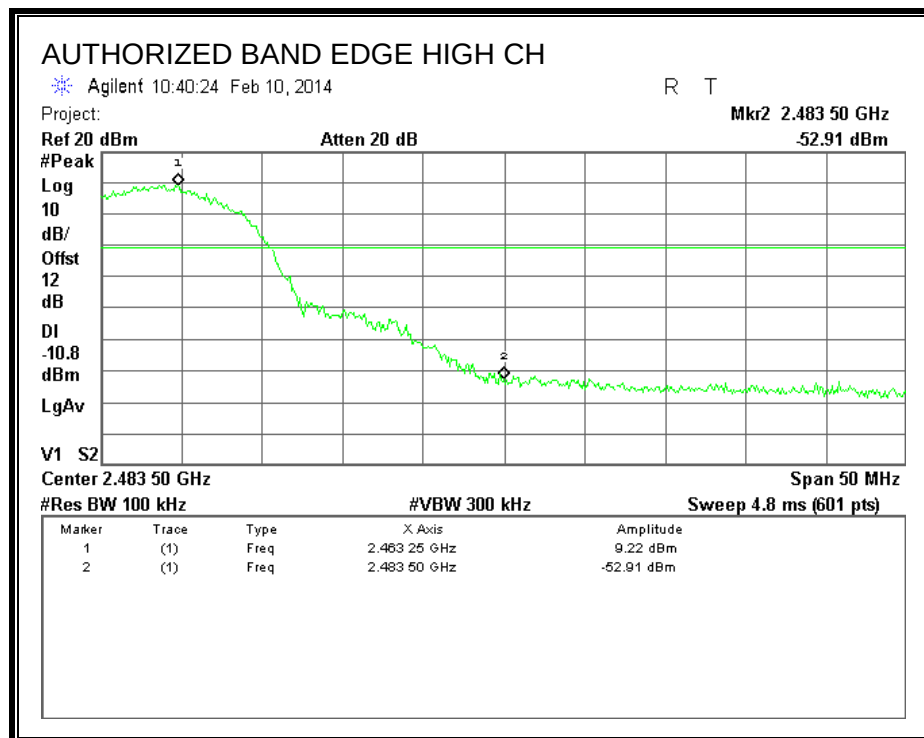
IN-BAND REFERENCE LEVEL



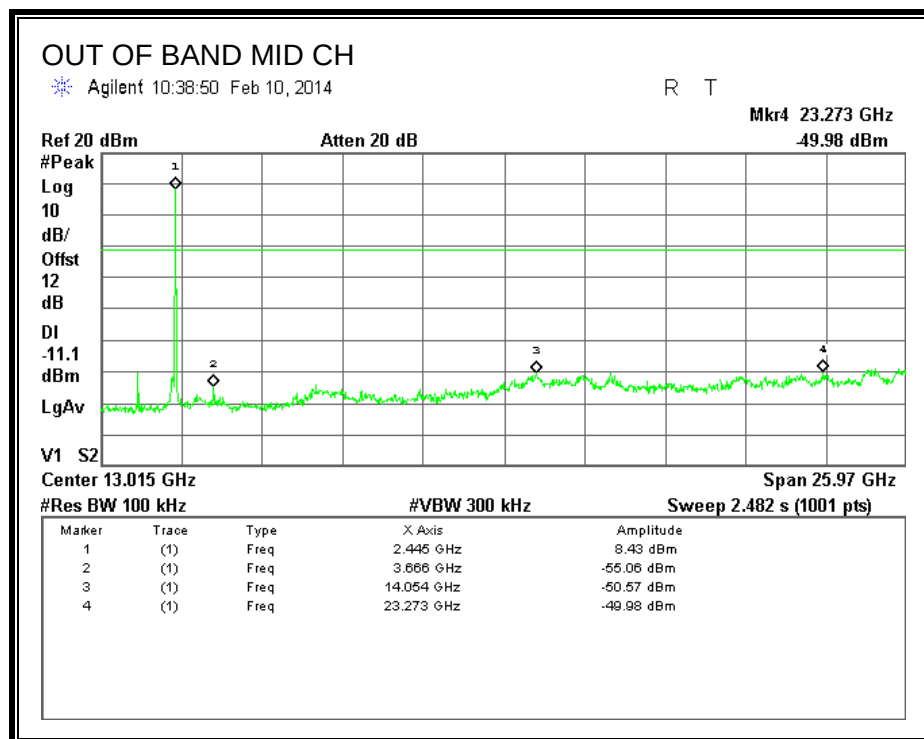
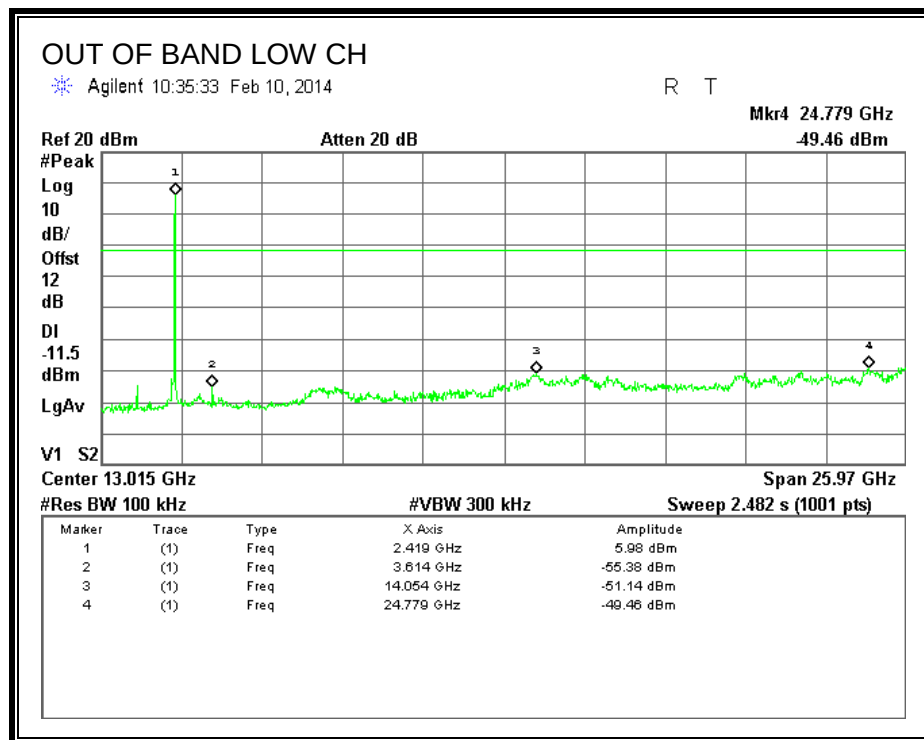
LOW CHANNEL BANDEDGE

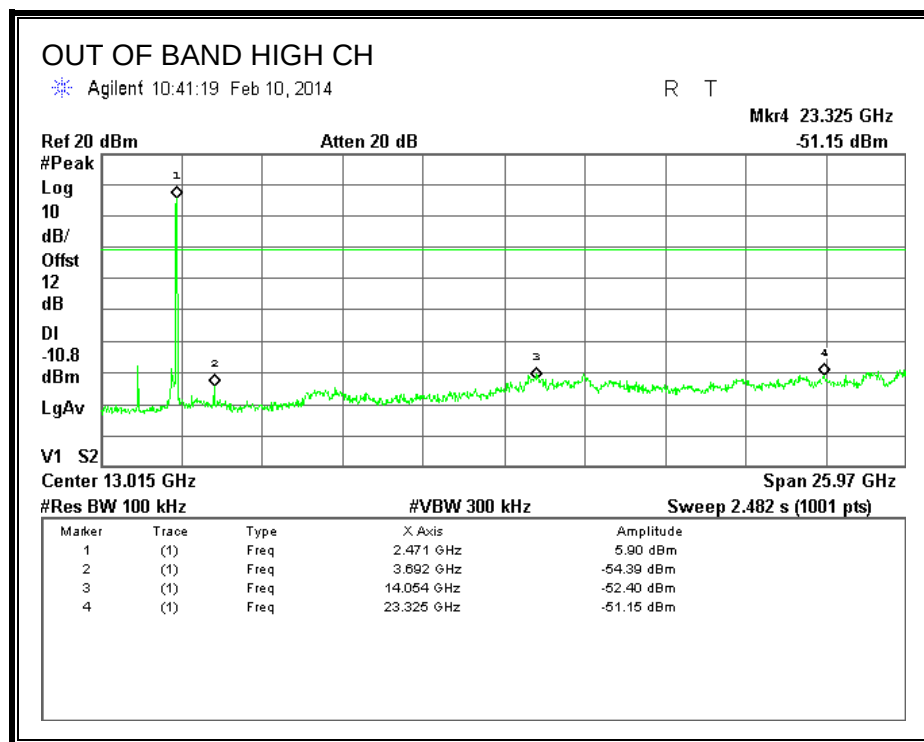


HIGH CHANNEL BANDEDGE



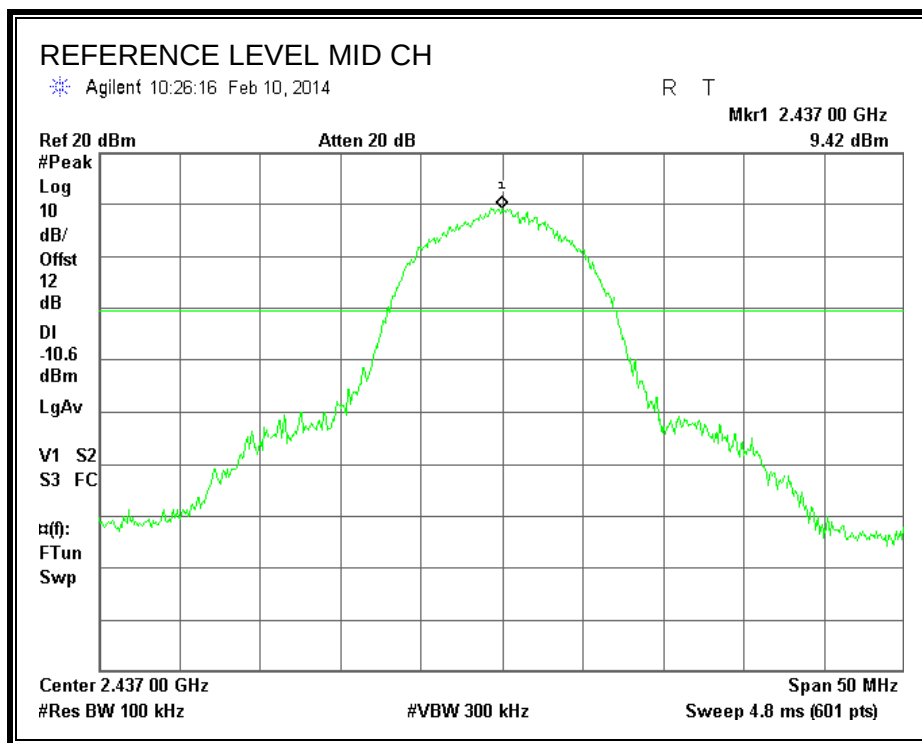
OUT-OF-BAND EMISSIONS



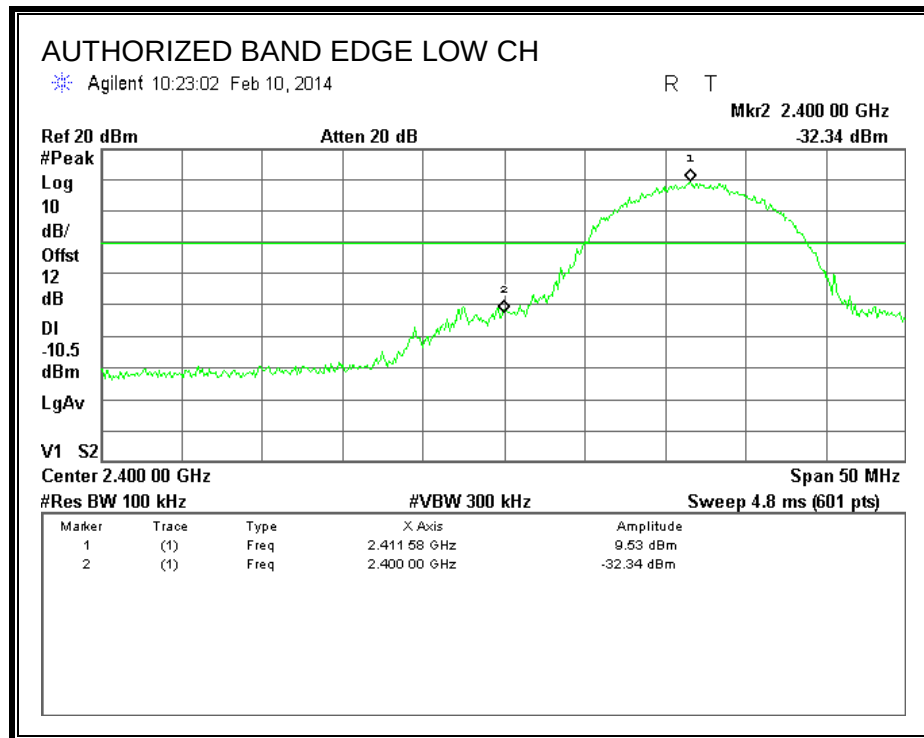


RESULTS ANTENNA PORT 2

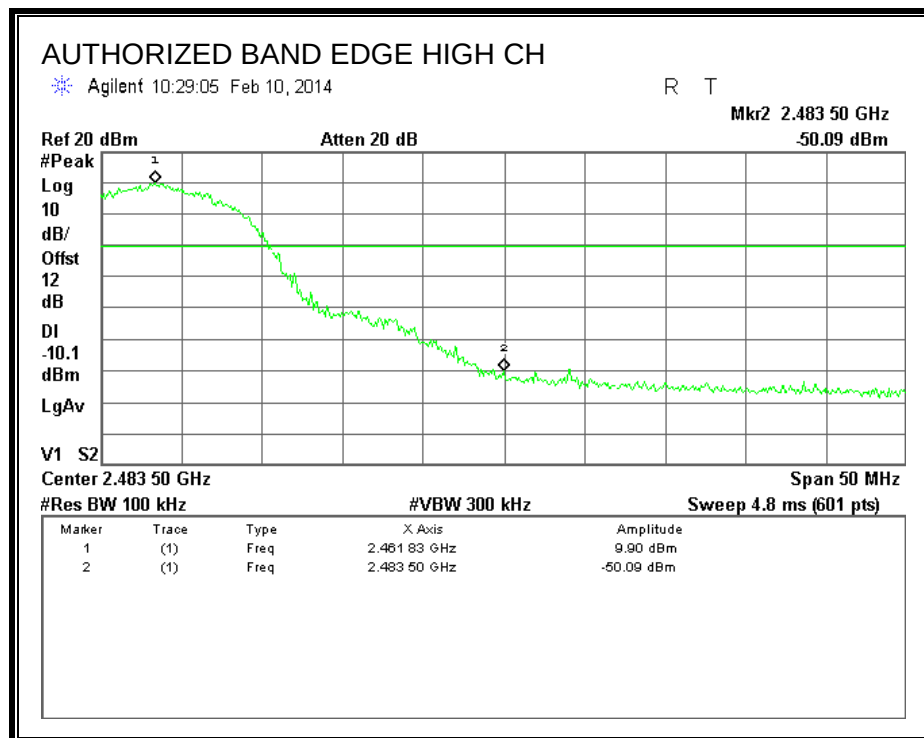
IN-BAND REFERENCE LEVEL



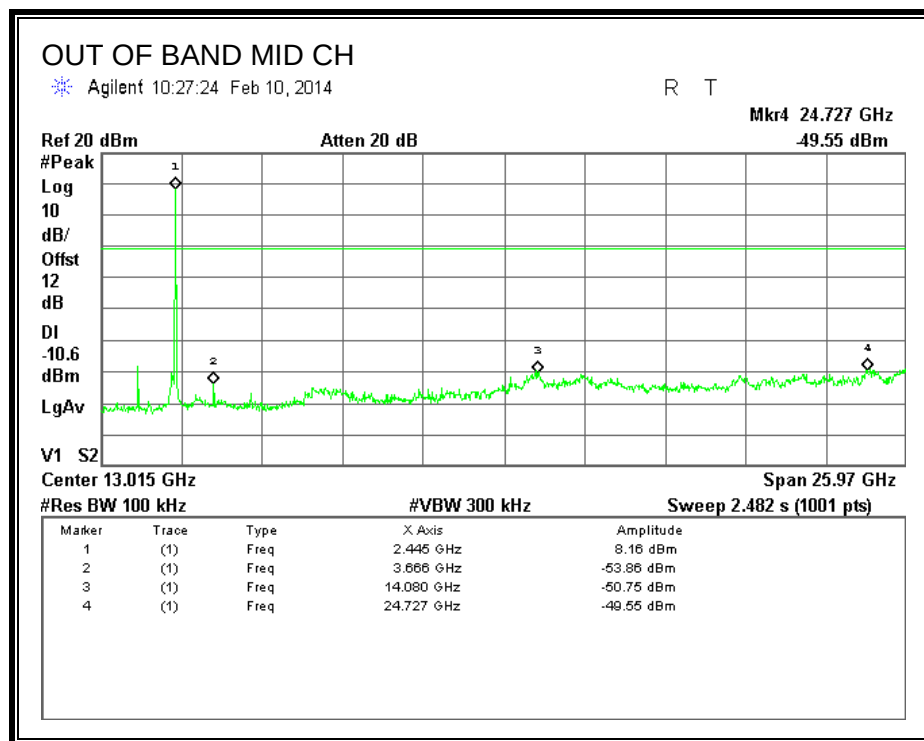
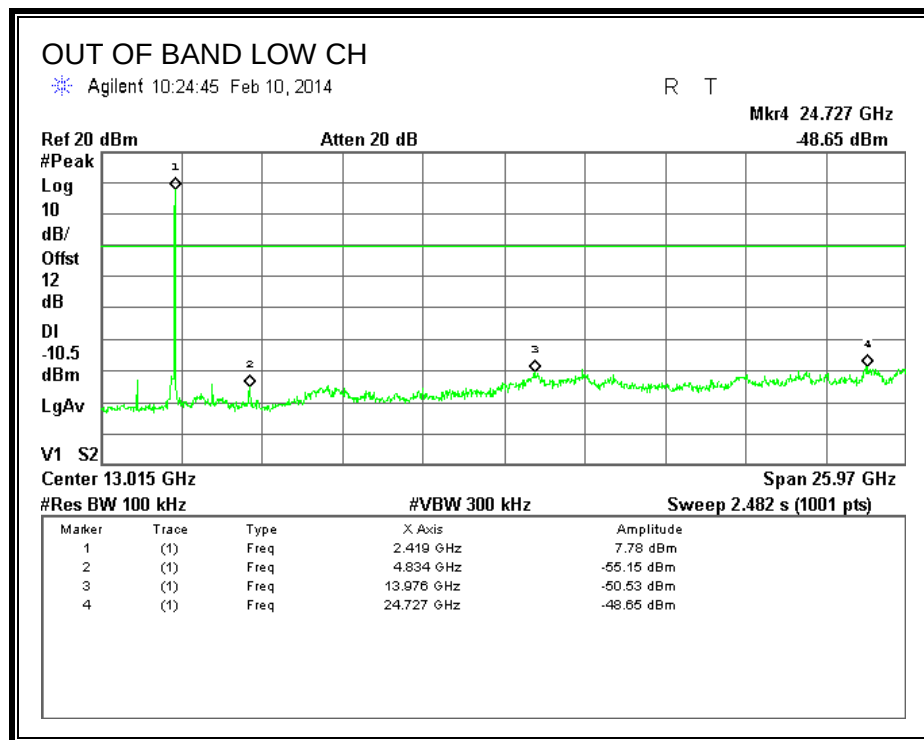
LOW CHANNEL BANDEDGE

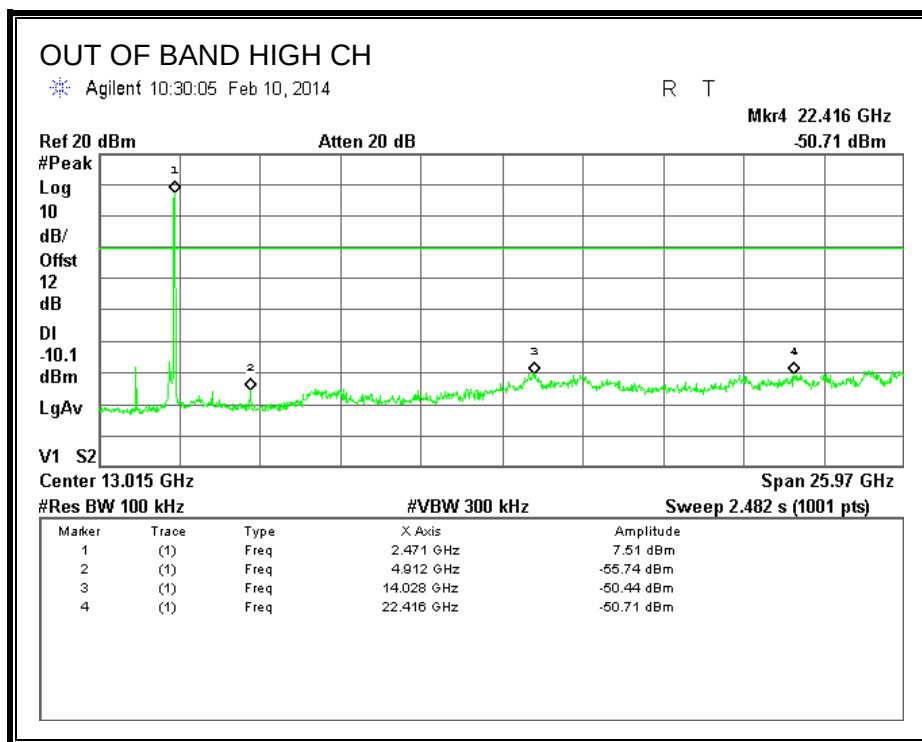


HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS





8.2.802.11g MODE IN THE 2.4 GHz BAND

8.2.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set to 100 KHz and the VBW to 300 KHz $\geq 3 \times$ RBW, peak detector and max hold.

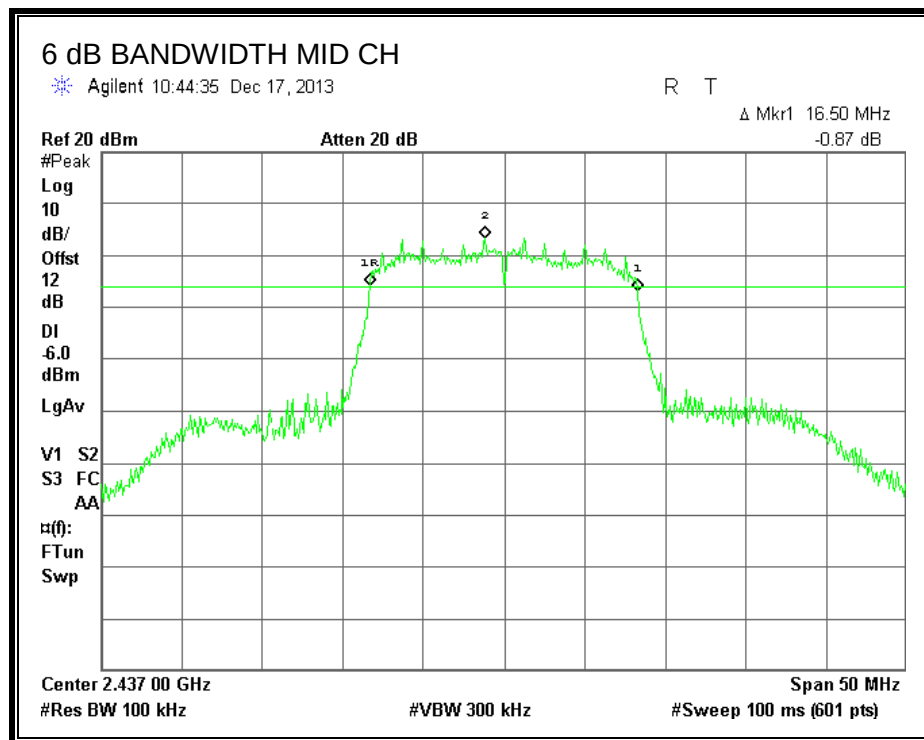
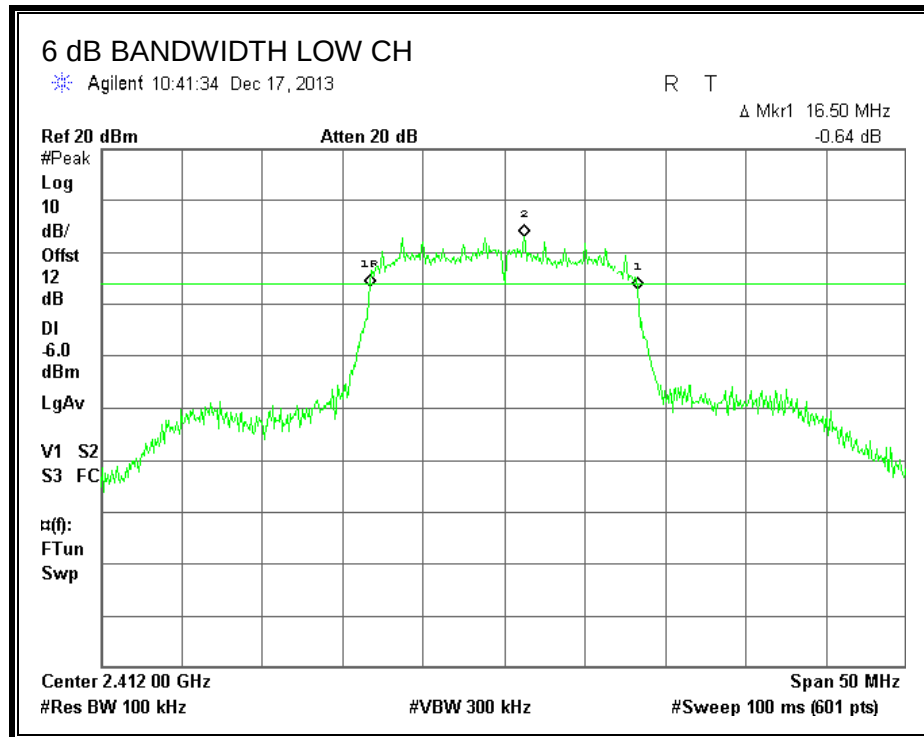
RESULTS ANTENNA PORT 1

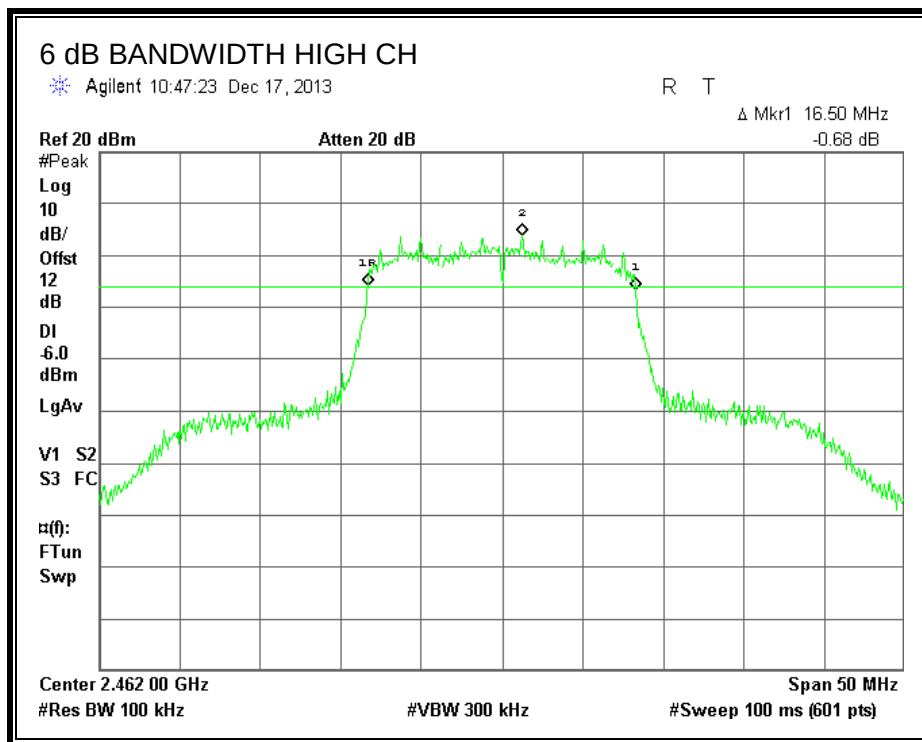
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.50	0.5
Mid	2437	16.50	0.5
High	2462	16.50	0.5

RESULTS ANTENNA PORT 2

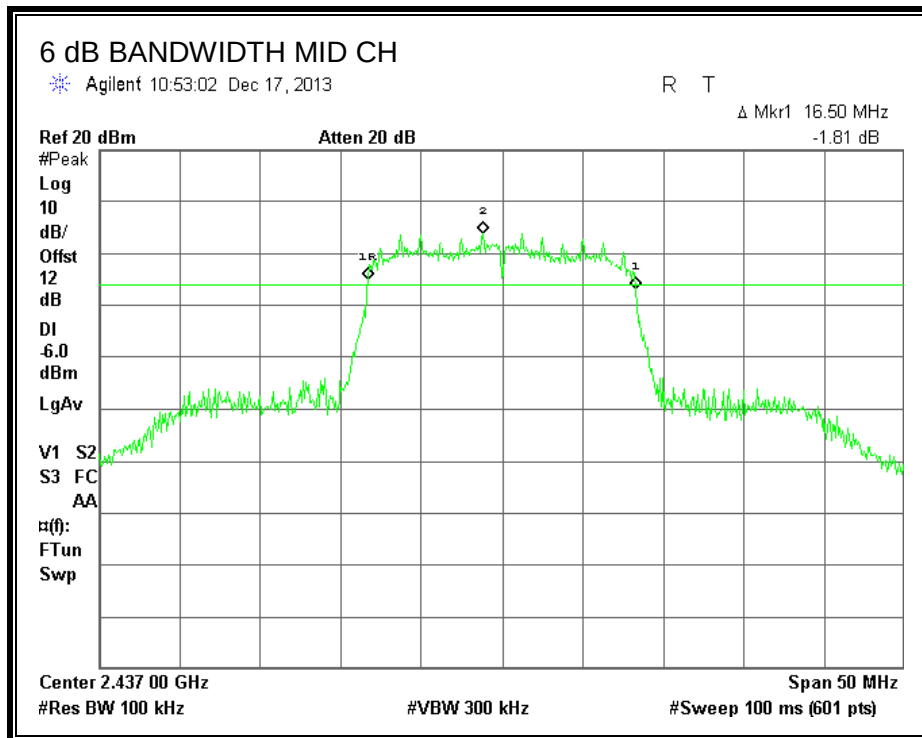
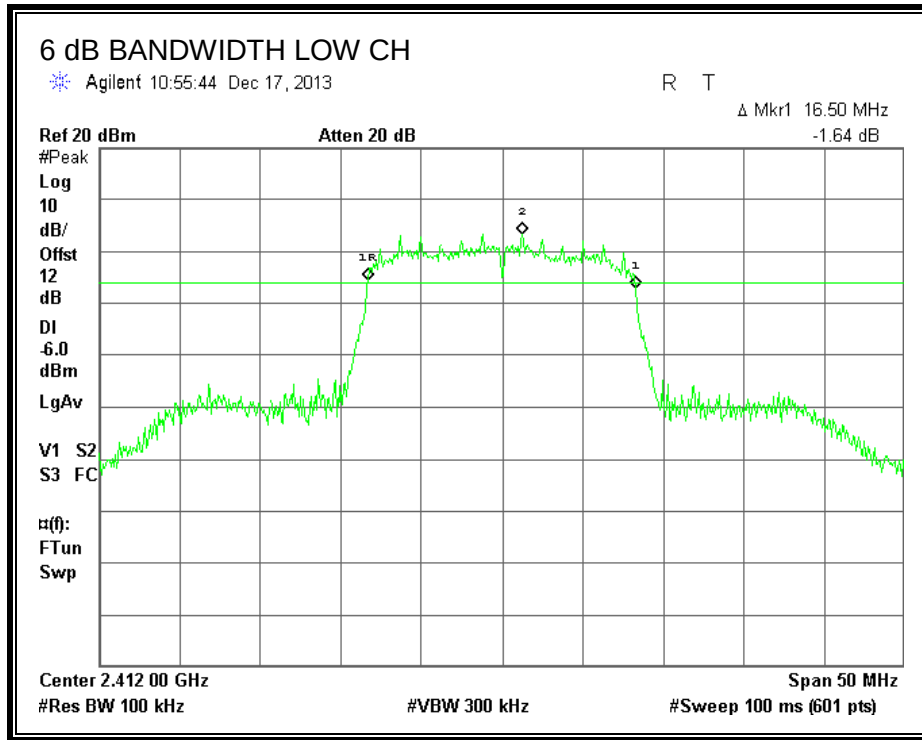
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.50	0.5
Mid	2437	16.50	0.5
High	2462	16.50	0.5

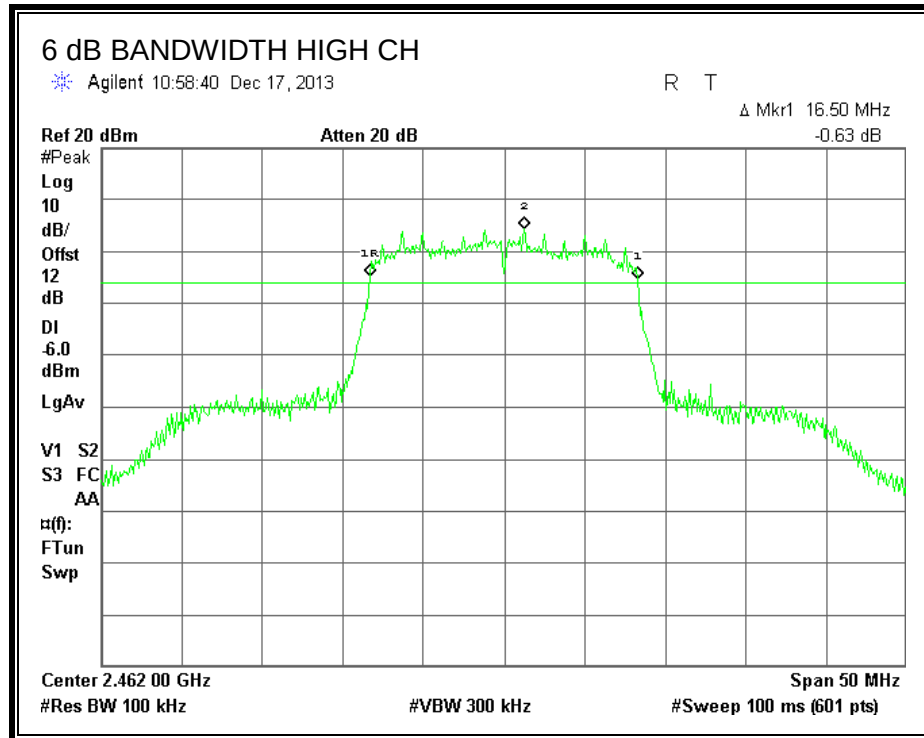
6 dB BANDWIDTH ANTENNA PORT 1





6 dB BANDWIDTH ANTENNA PORT 2





8.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

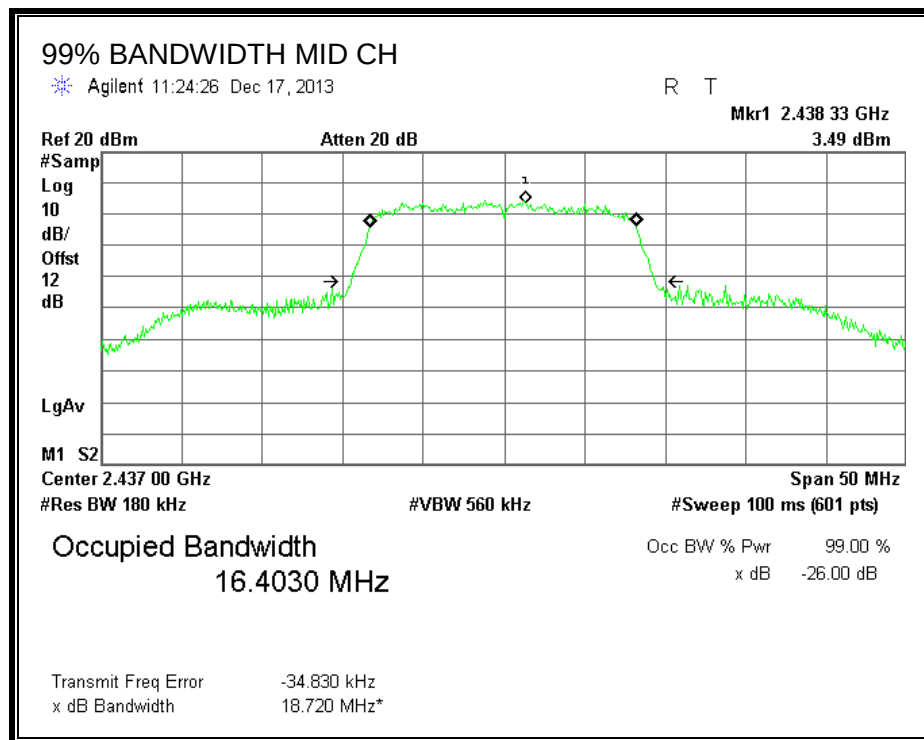
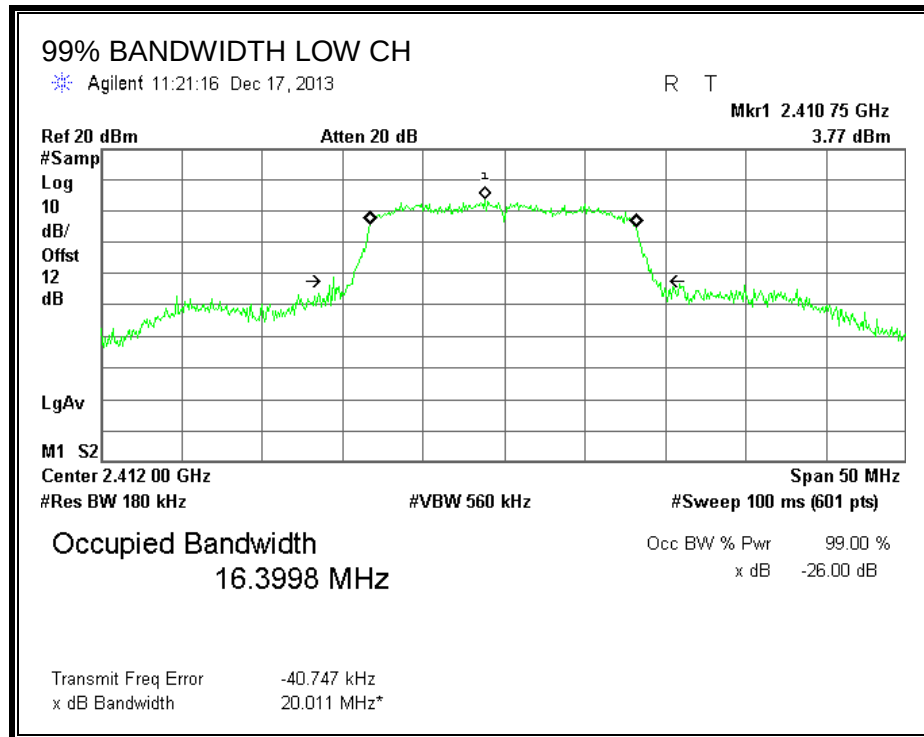
RESULTS ANTENNA PORT 1

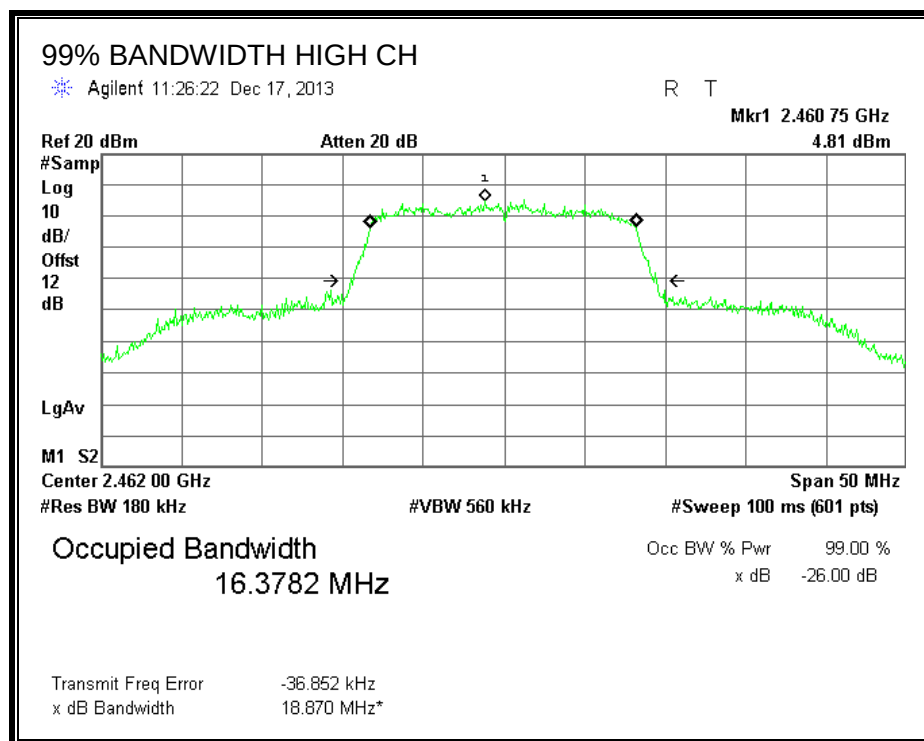
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.3998
Mid	2437	16.4030
High	2462	16.3782

RESULTS ANTENNA PORT 2

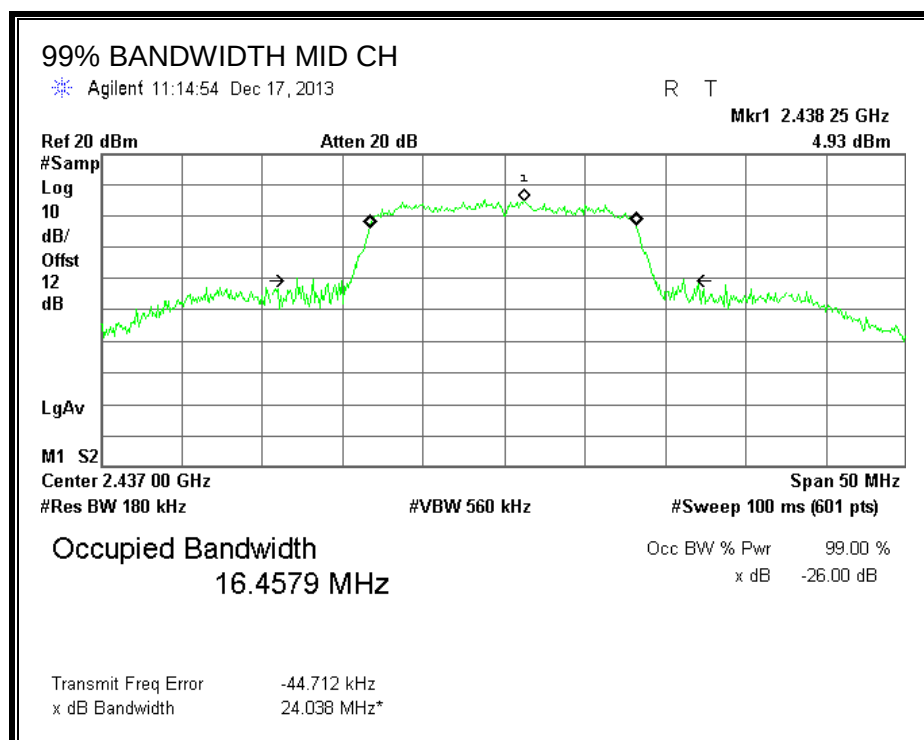
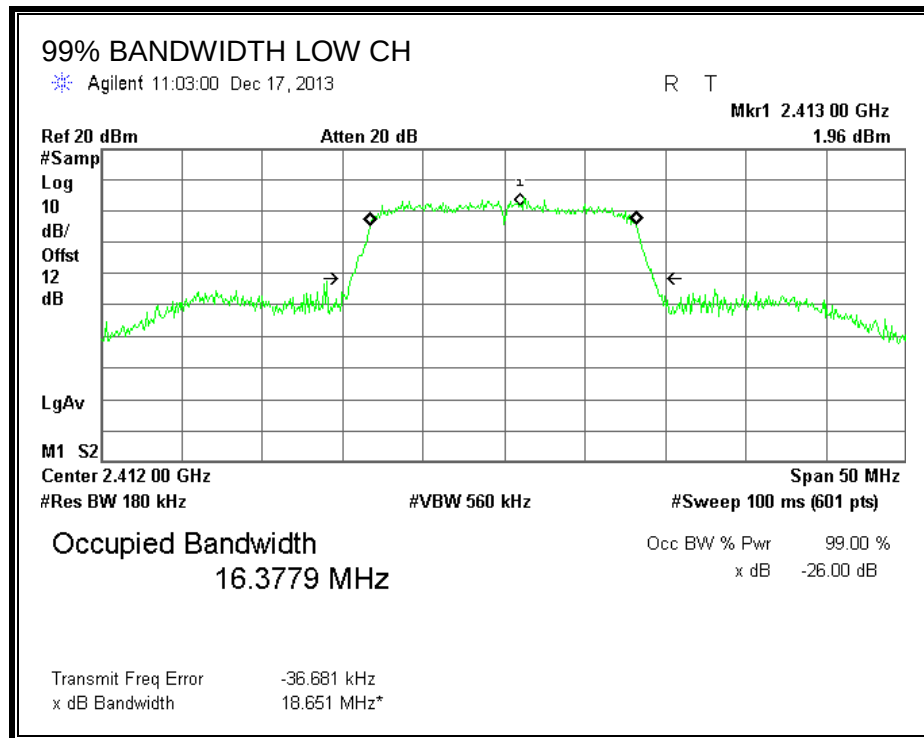
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.3779
Mid	2437	16.4579
High	2462	16.4128

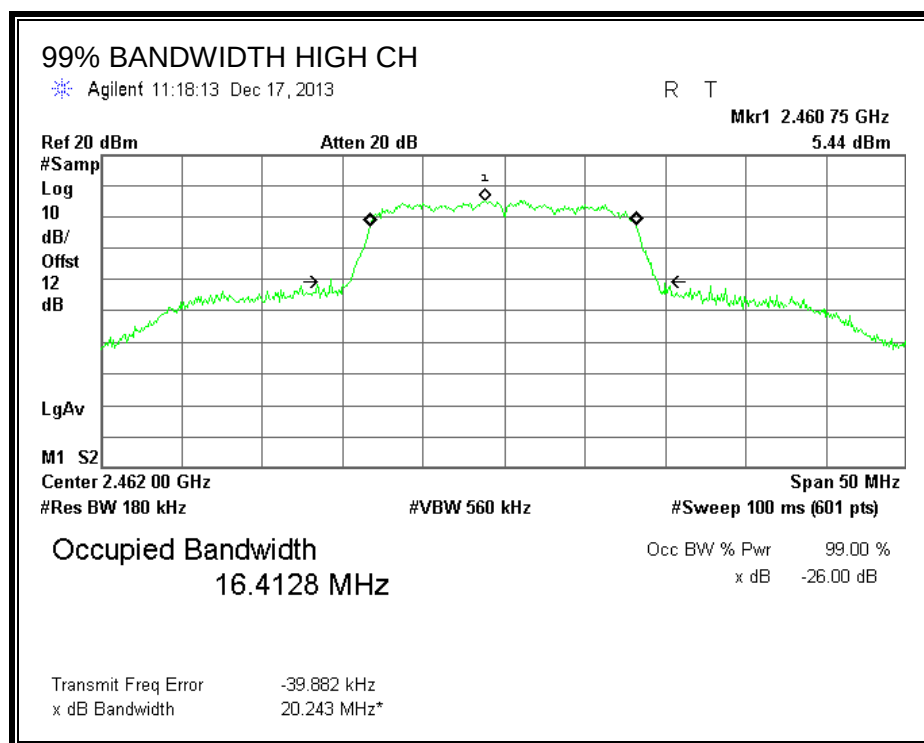
99% BANDWIDTH ANTENNA PORT 1





99% BANDWIDTH ANTENNA PORT 2





8.2.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 12 dB (including 10 dB pad and 2dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS ANTENNA PORT 1

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.34
Mid	2437	9.53
High	2462	9.67

RESULTS ANTENNA PORT 2

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.9
Mid	2437	10.12
High	2462	10.15

8.2.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS ANTENNA PORT 1

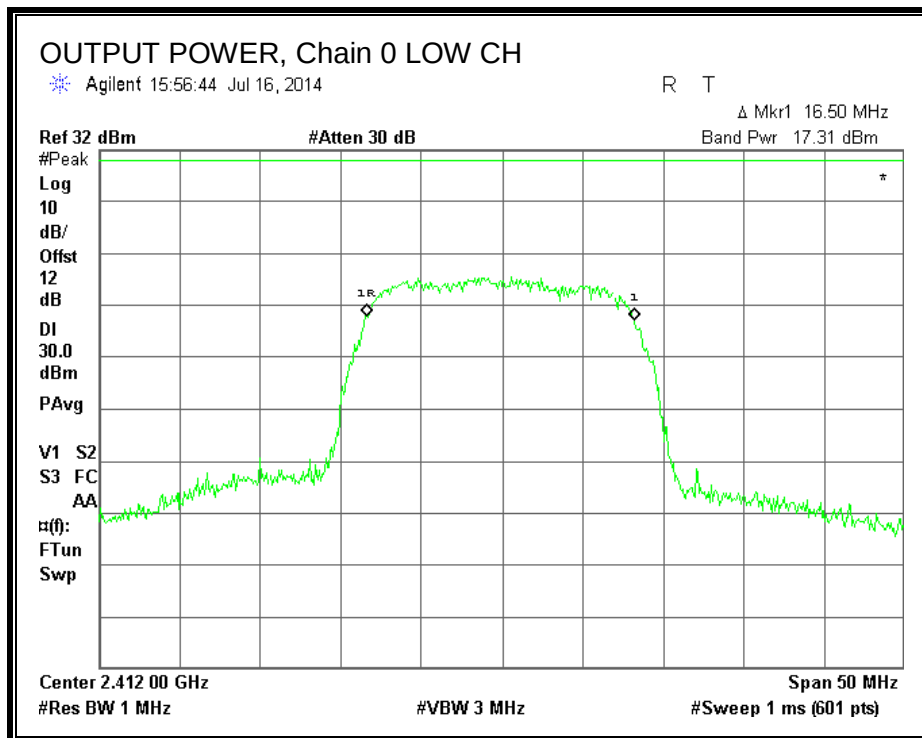
Limits

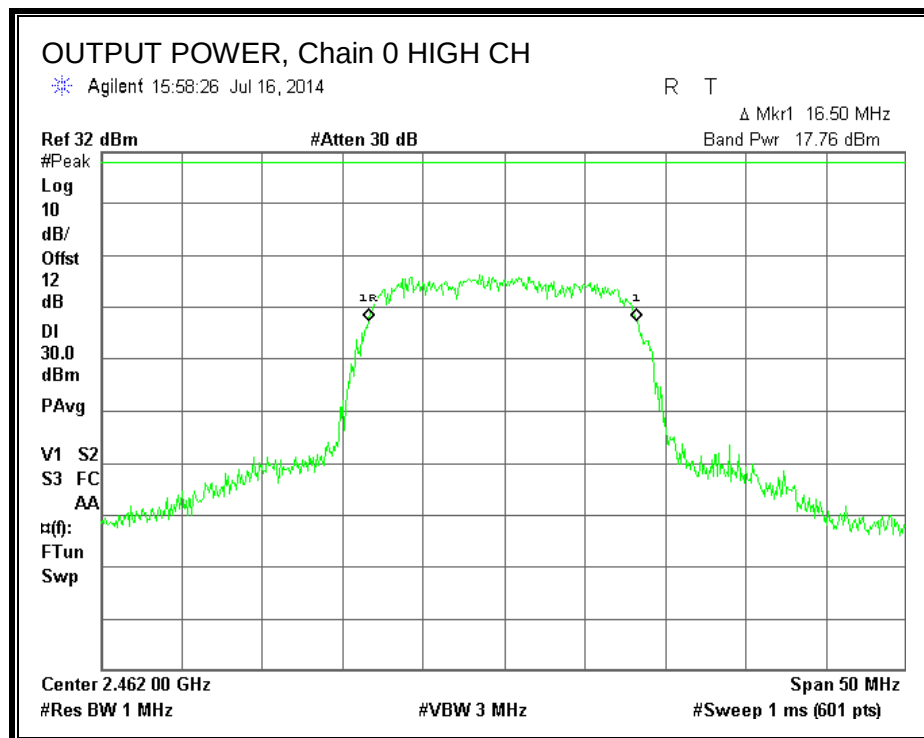
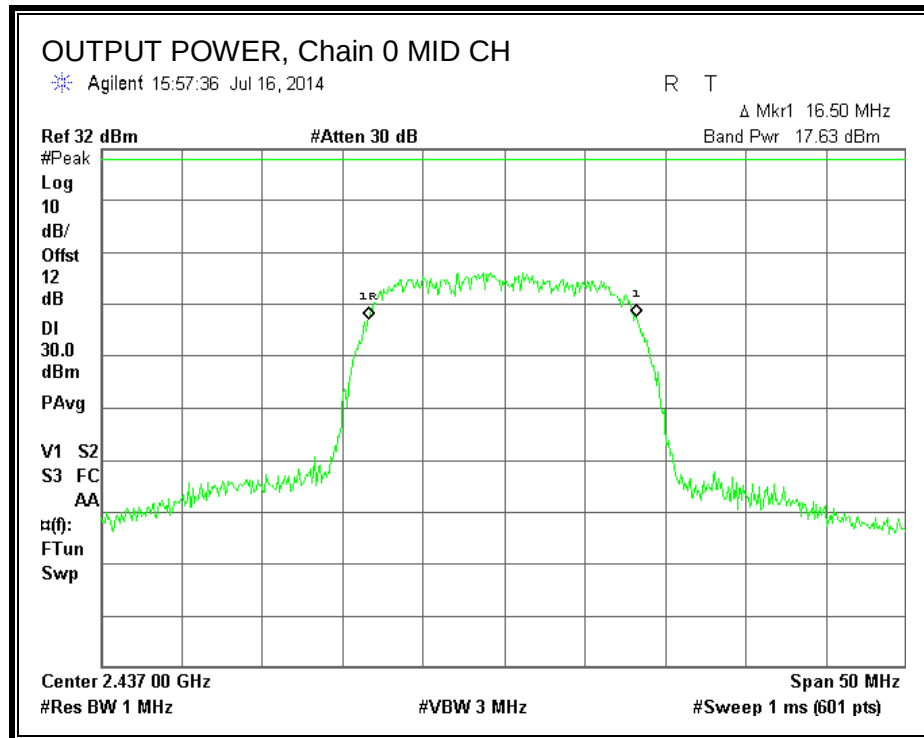
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	17.31	17.31	30.00	-12.69
Mid	2437	17.63	17.63	30.00	-12.37
High	2462	17.76	17.76	30.00	-12.24

OUTPUT POWER, Chain 0





RESULTS ANTENNA PORT 2

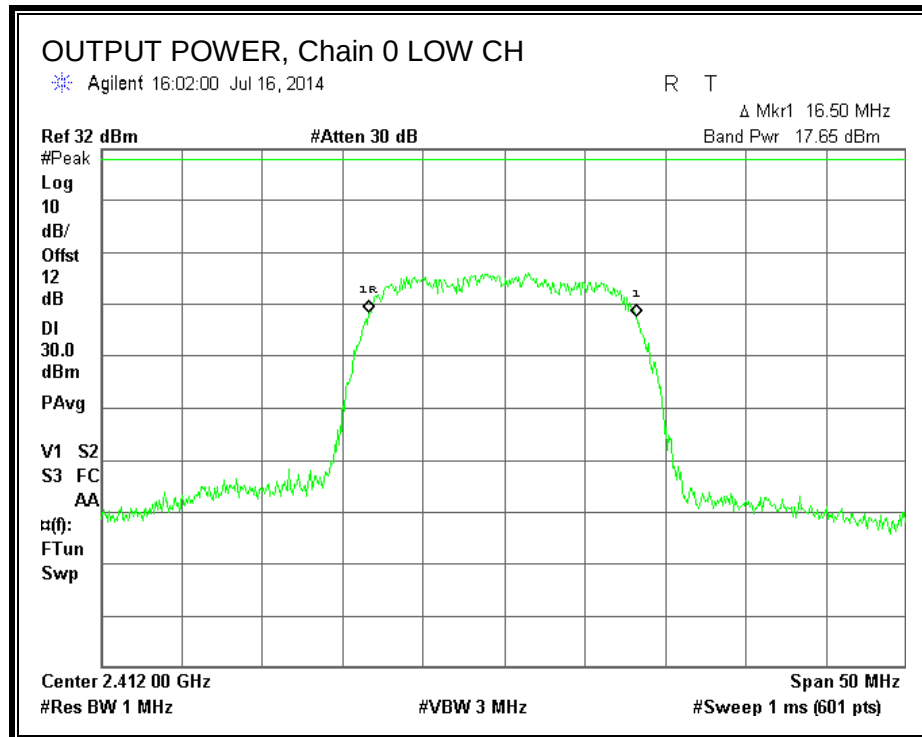
Limits

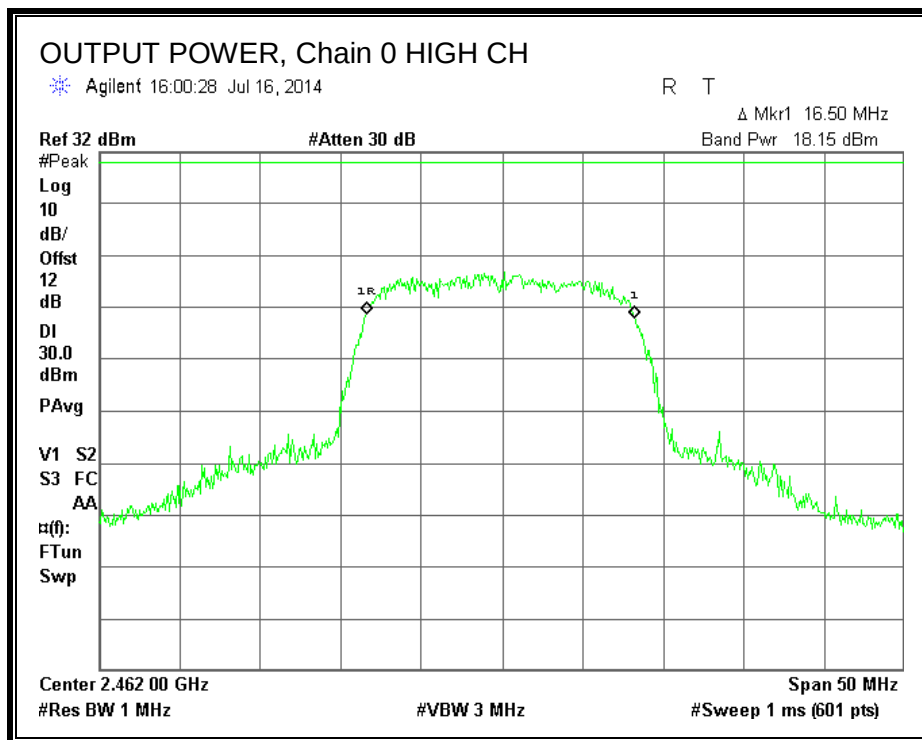
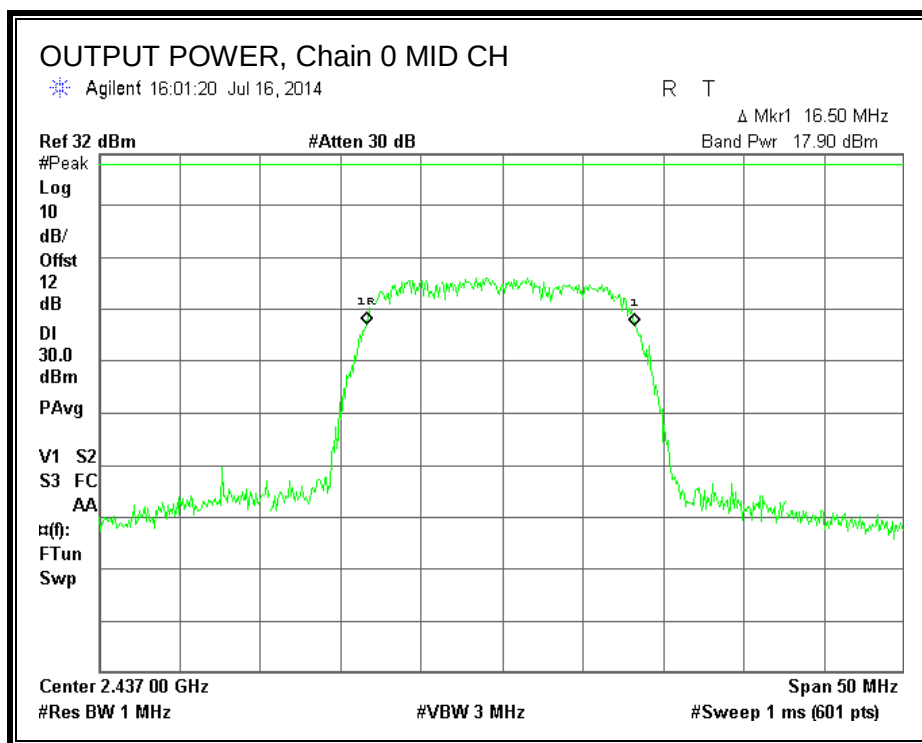
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	17.65	17.65	30.00	-12.35
Mid	2437	17.98	17.98	30.00	-12.02
High	2462	18.15	18.15	30.00	-11.85

OUTPUT POWER, Chain 0





8.2.5. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

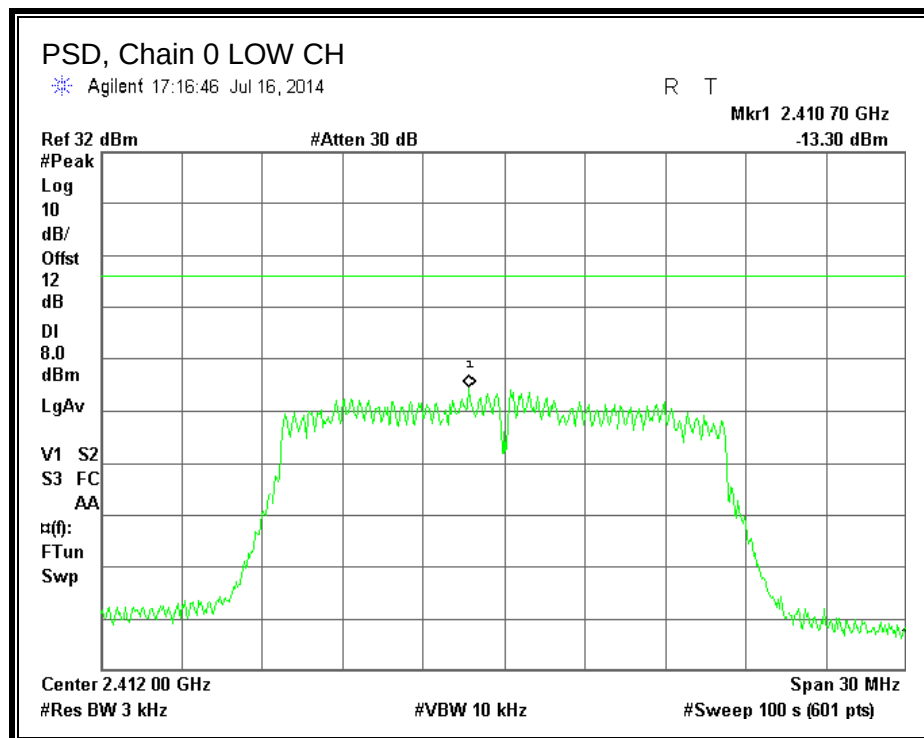
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

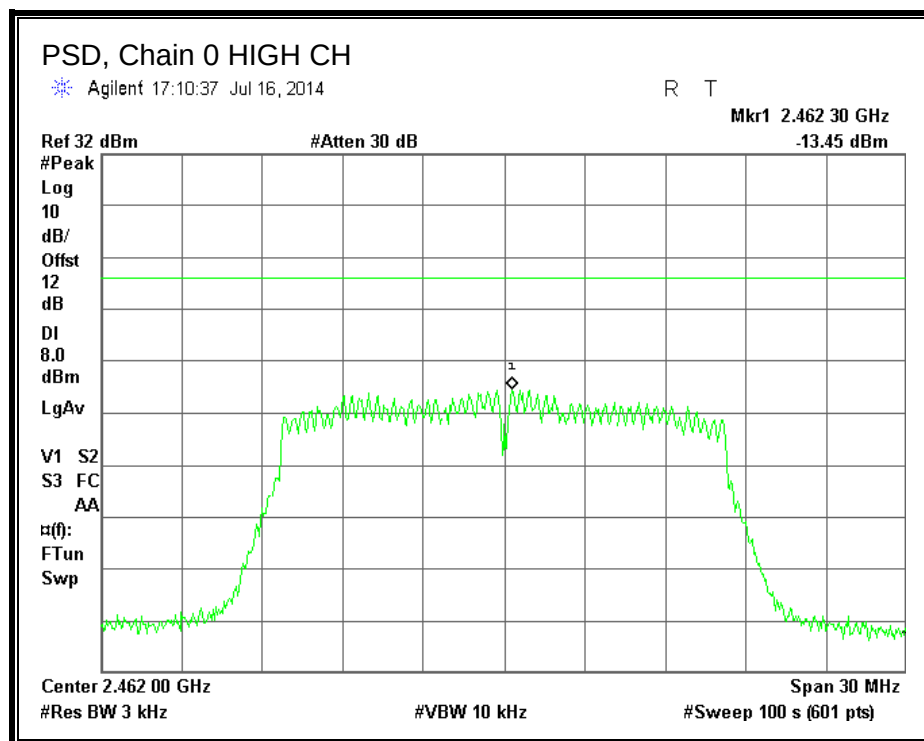
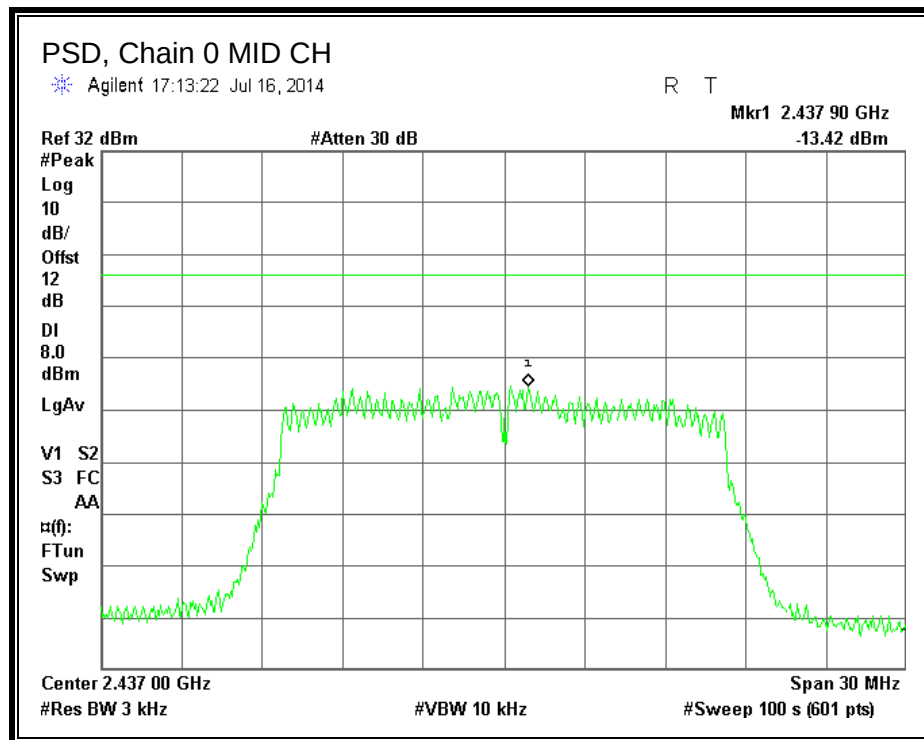
RESULTS ANTENNA PORT 1

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-13.30	8.0	-21.3
Mid	2437	-13.42	8.0	-21.4
High	2462	-13.45	8.0	-21.5

PSD, Chain 0



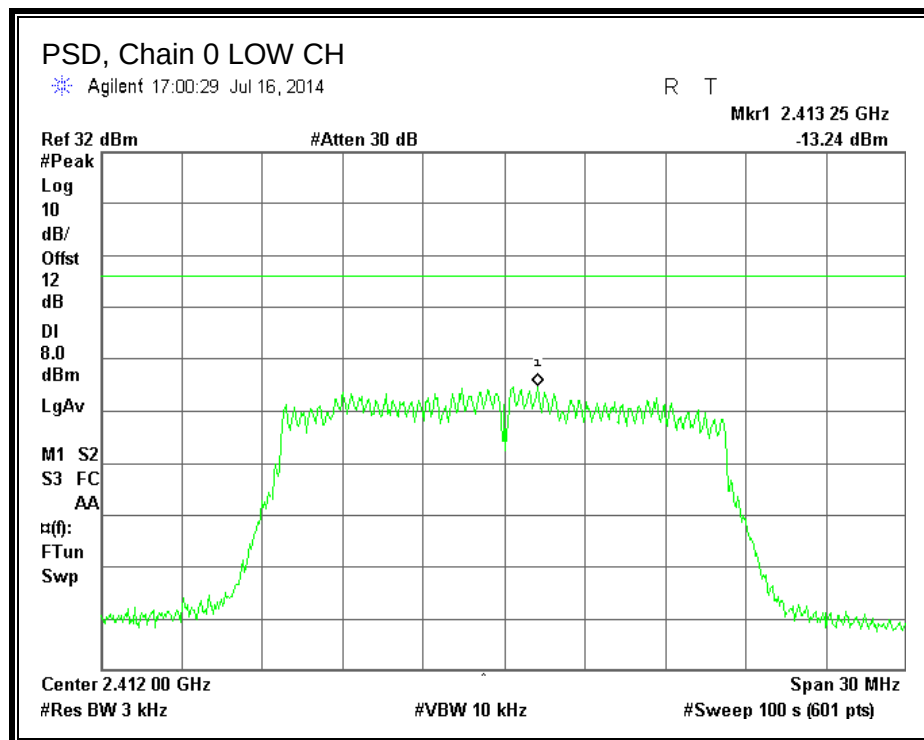


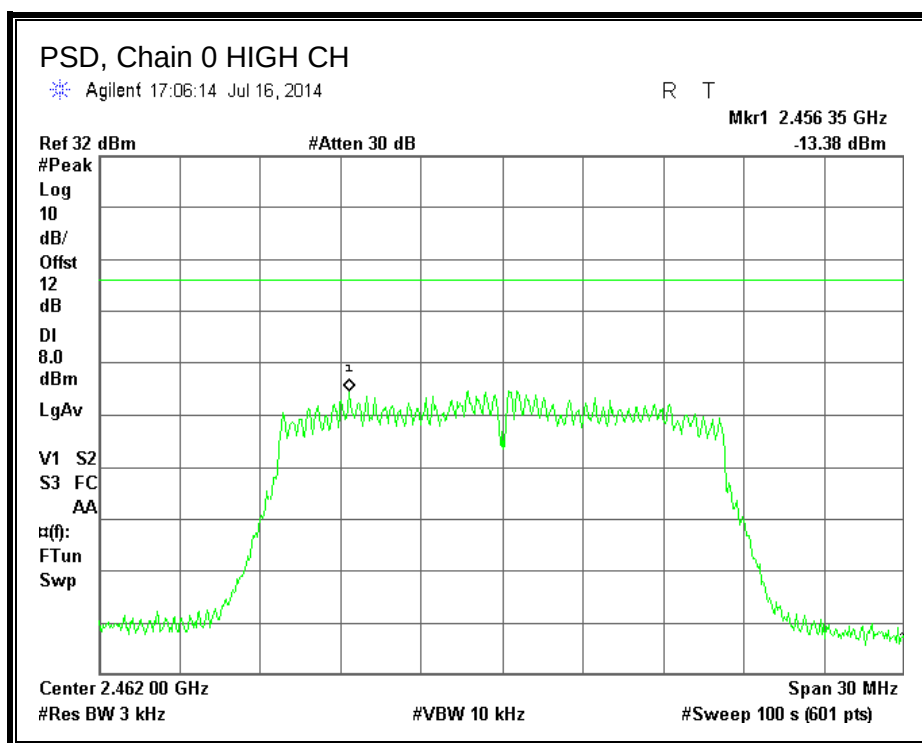
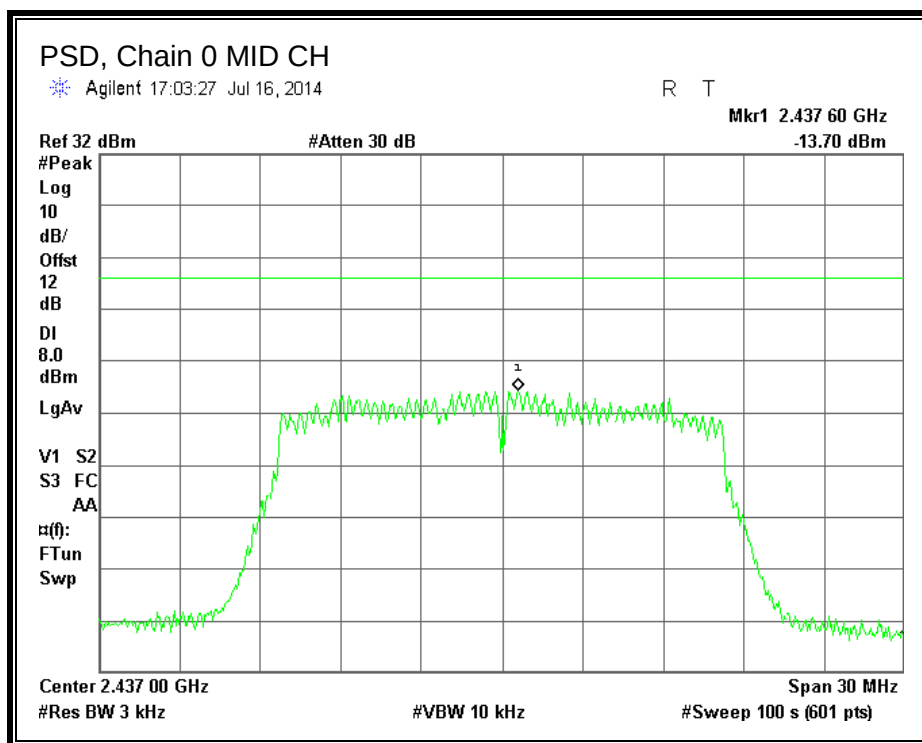
RESULTS ANTENNA PORT 2

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-13.24	8.0	-21.2
Mid	2437	-13.70	8.0	-21.7
High	2462	-13.38	8.0	-21.4

PSD, Chain 0





8.2.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

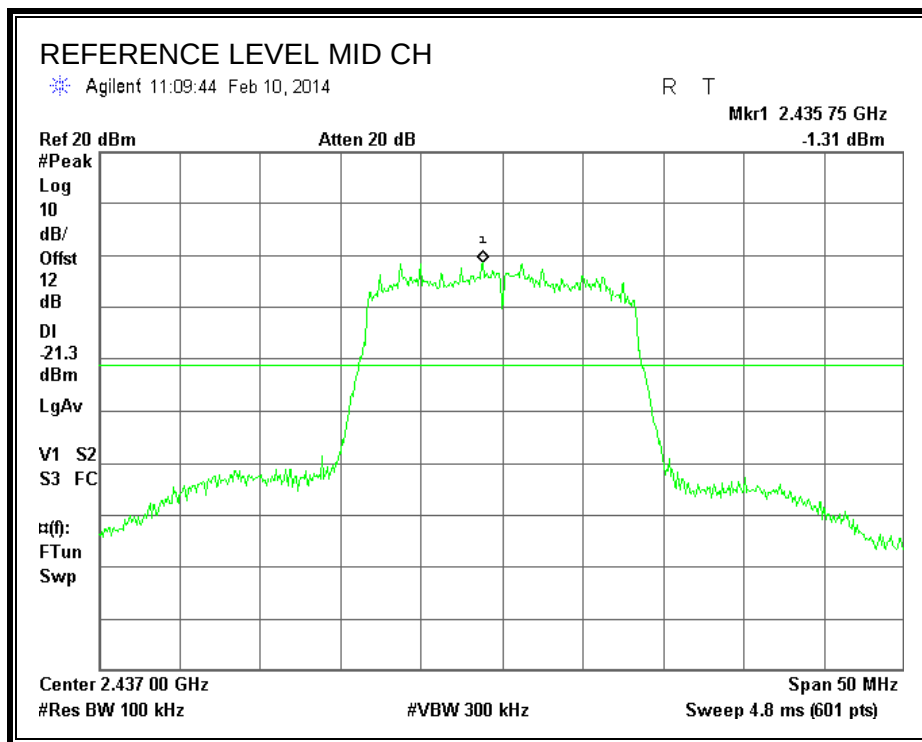
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

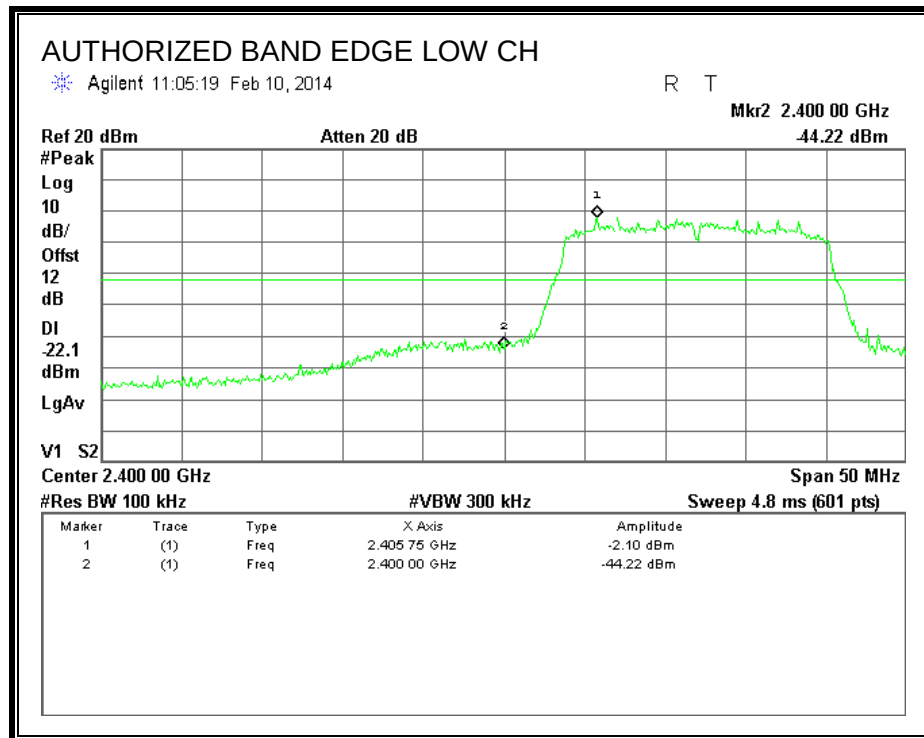
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS ANTENNA PORT 1

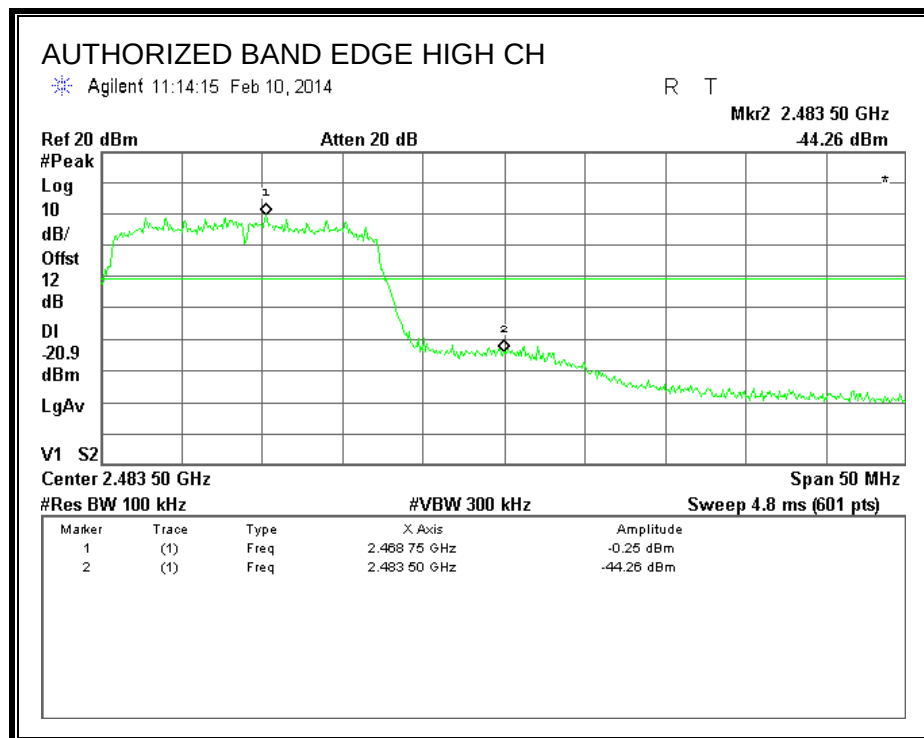
IN-BAND REFERENCE LEVEL



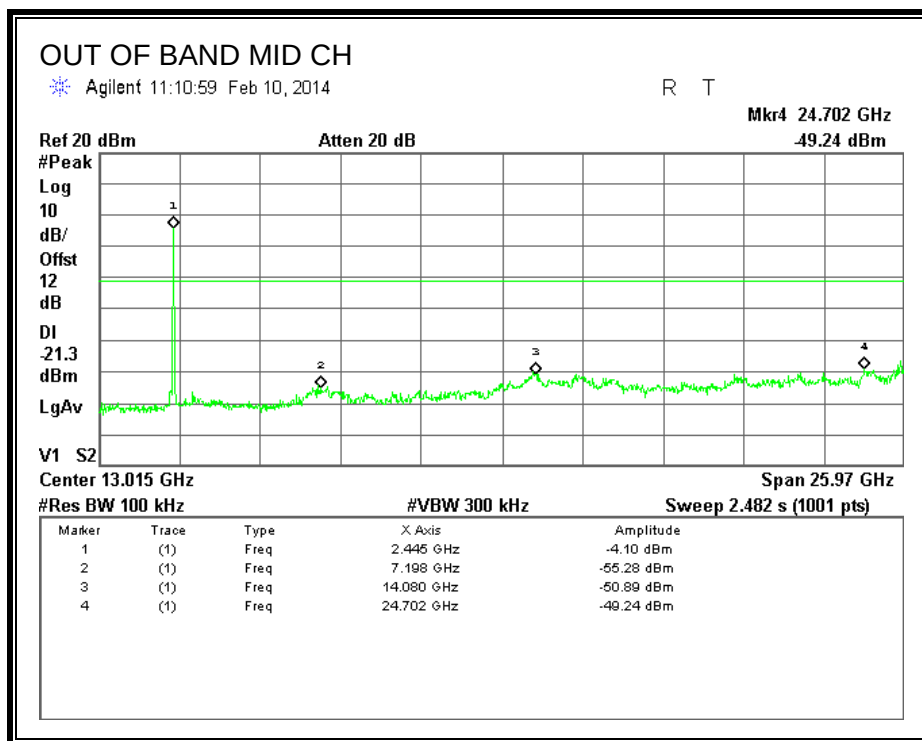
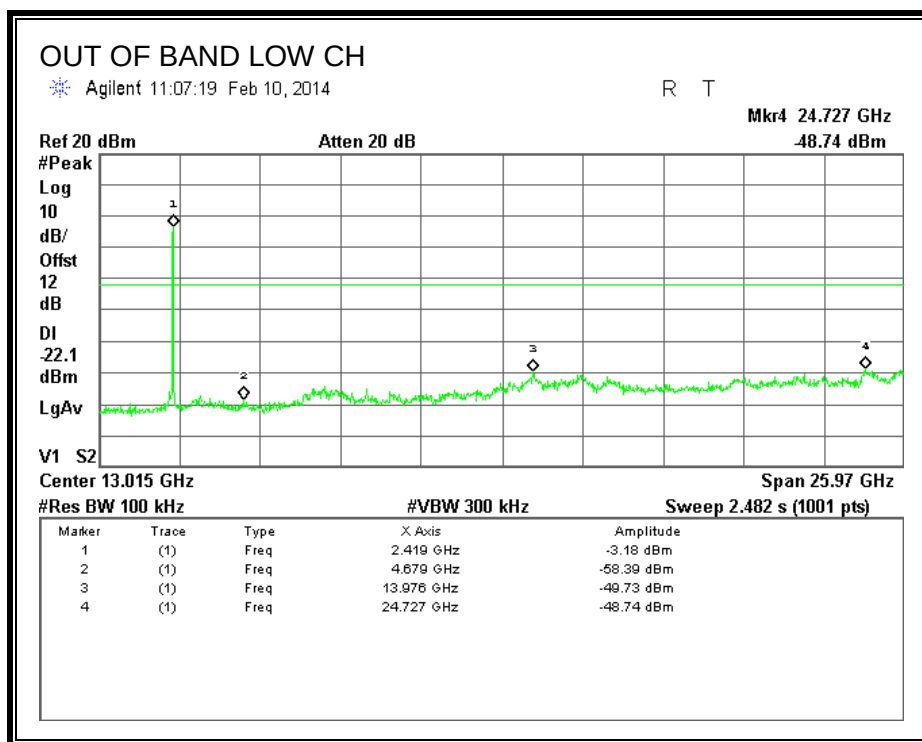
LOW CHANNEL BANDEDGE

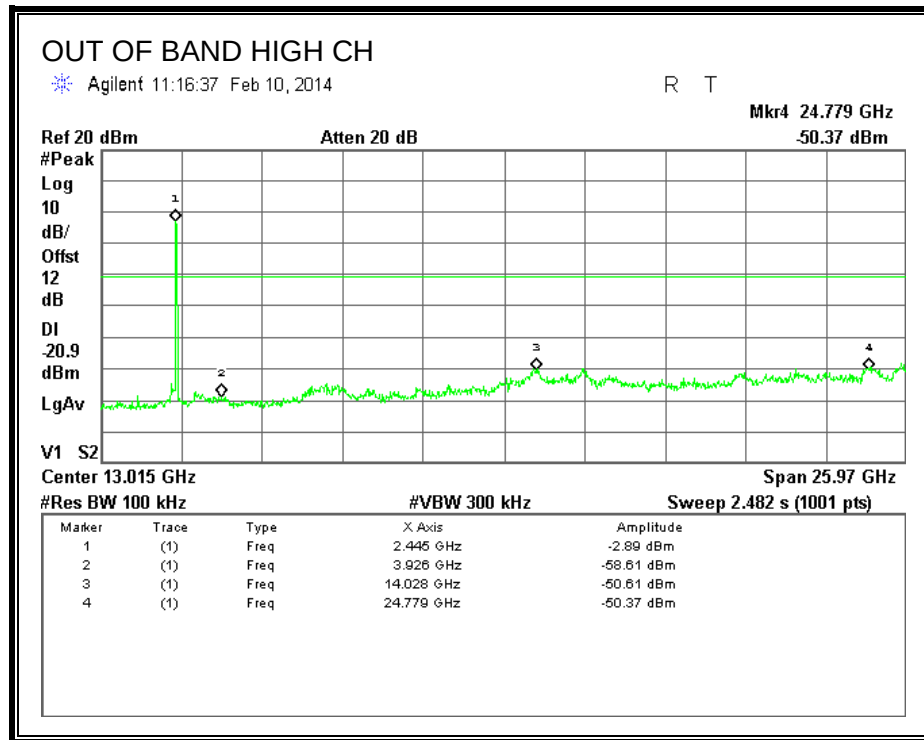


HIGH CHANNEL BANDEDGE



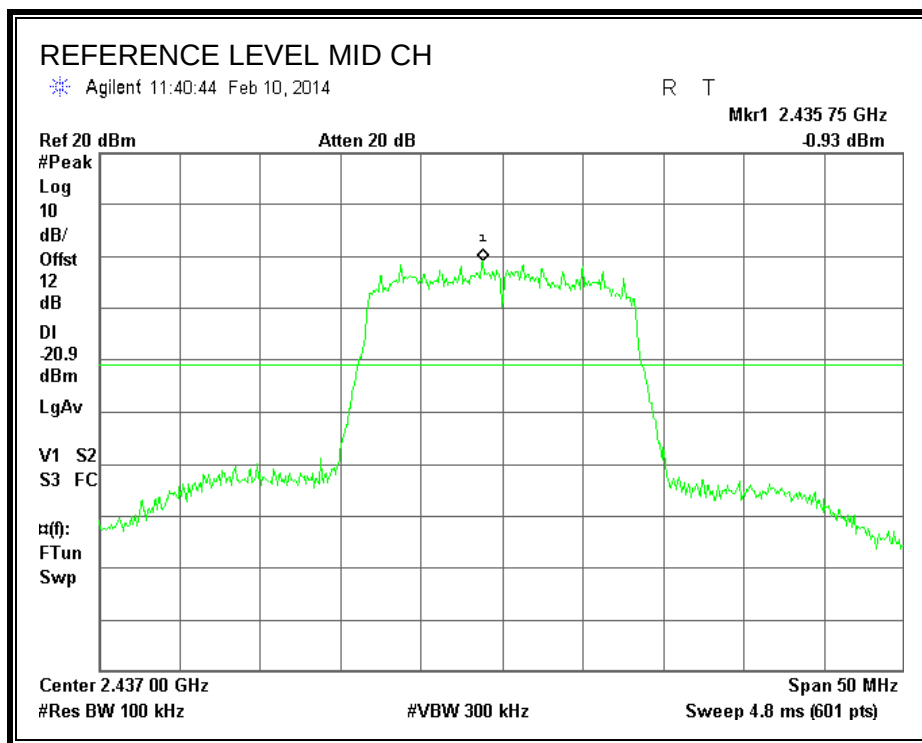
OUT-OF-BAND EMISSIONS



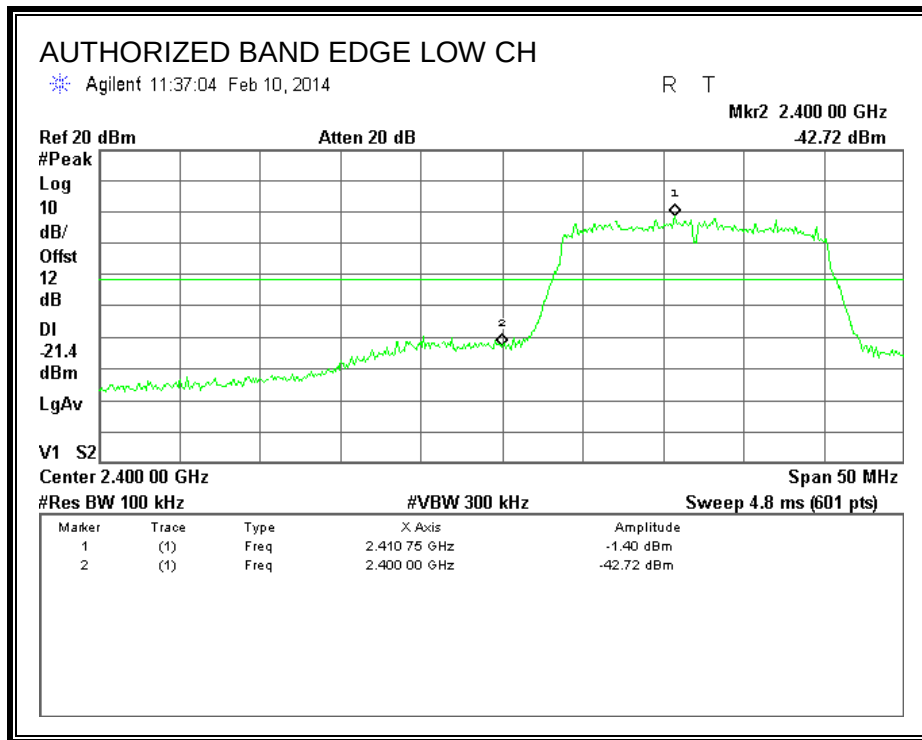


RESULTS ANTENNA PORT 2

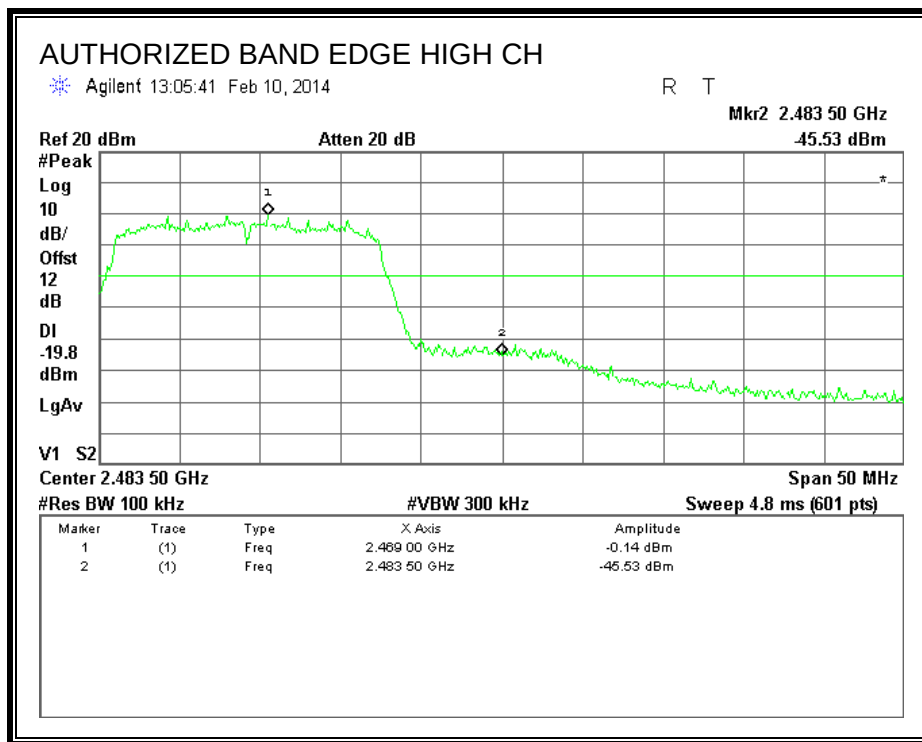
IN-BAND REFERENCE LEVEL



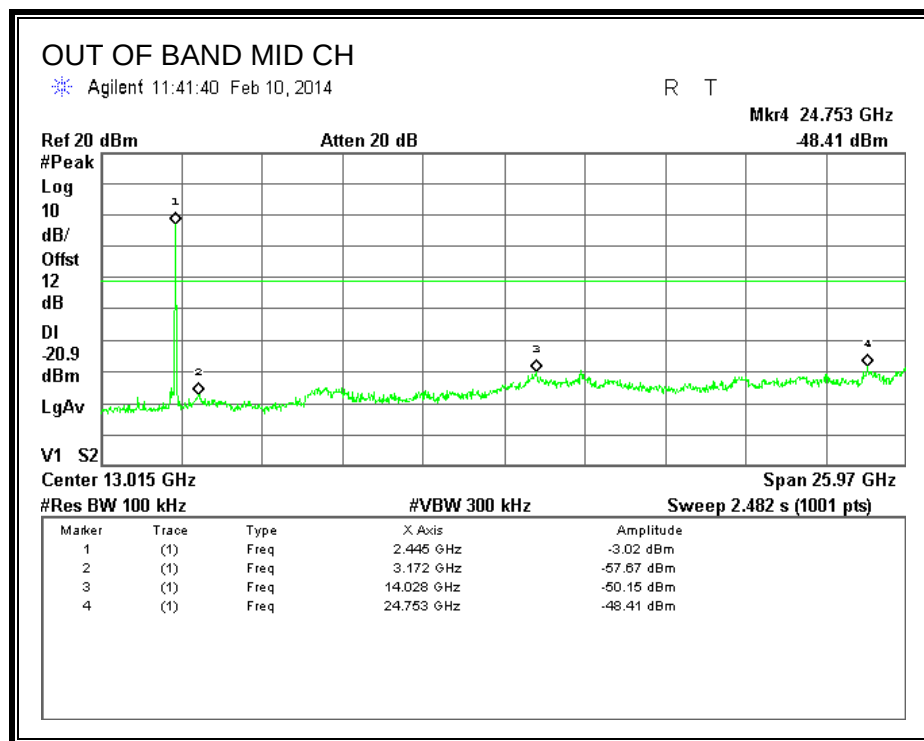
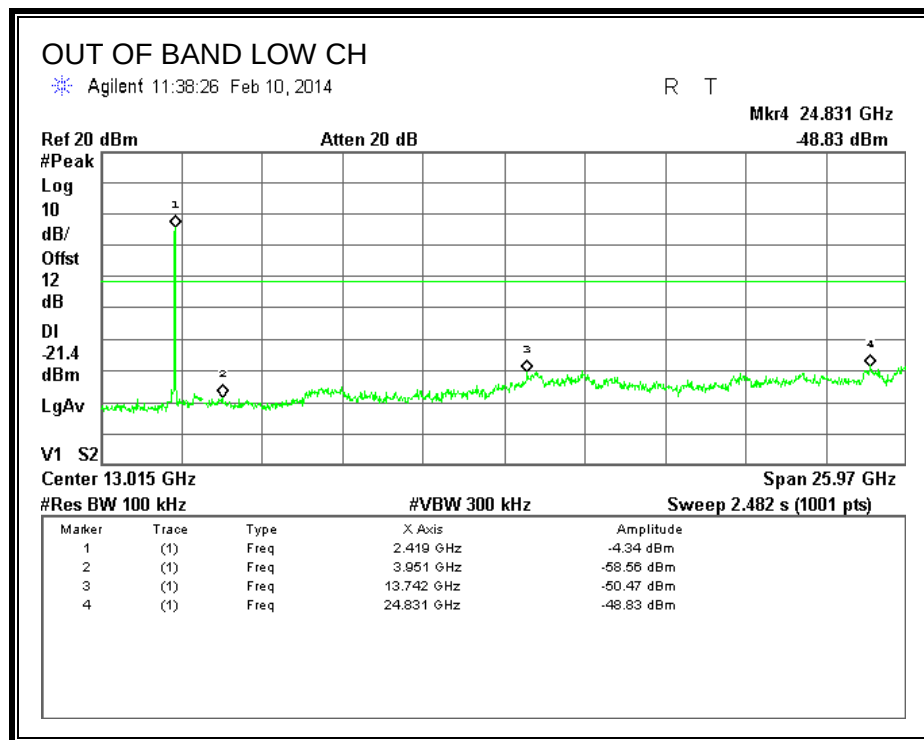
LOW CHANNEL BANDEDGE

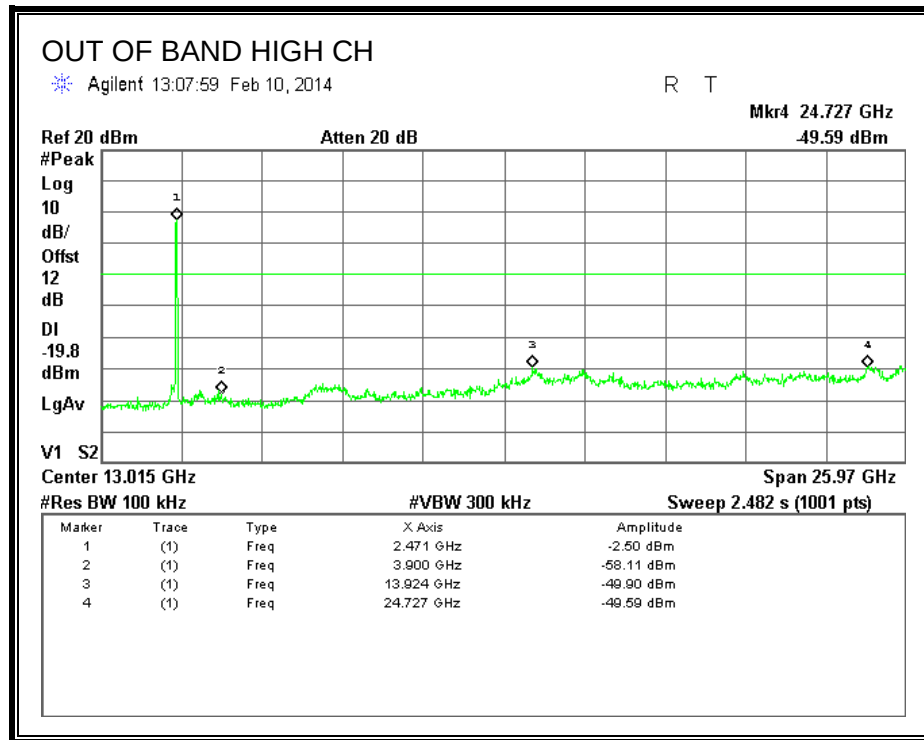


HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS





8.3.802.11n BPSK MODE IN THE 2.4 GHz BAND

8.3.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set to 100 KHz and the VBW to 300 KHz $\geq 3 \times$ RBW, peak detector and max hold.

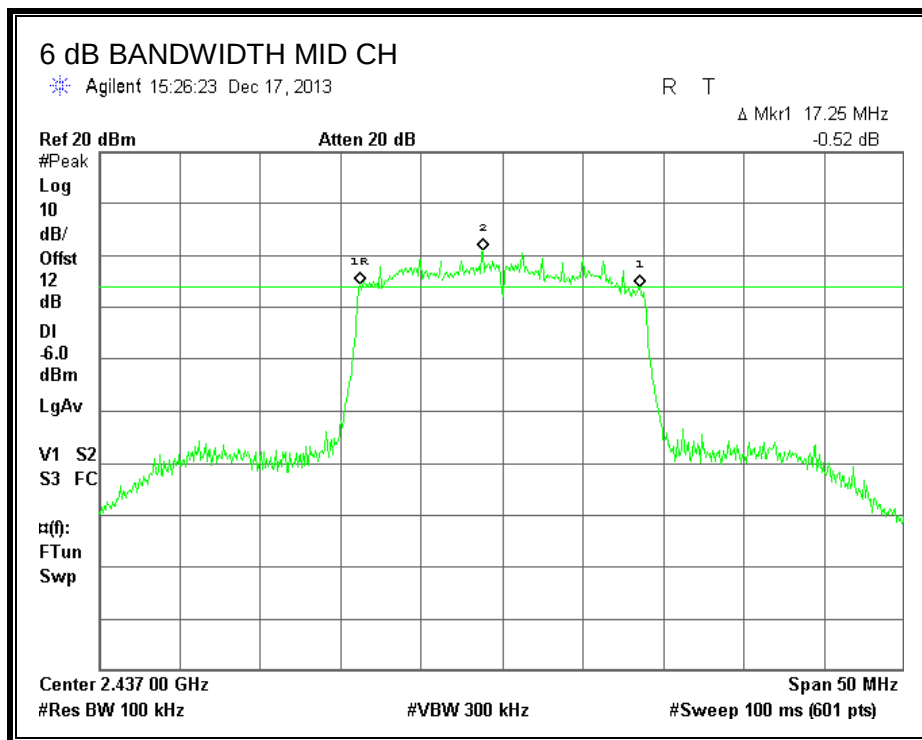
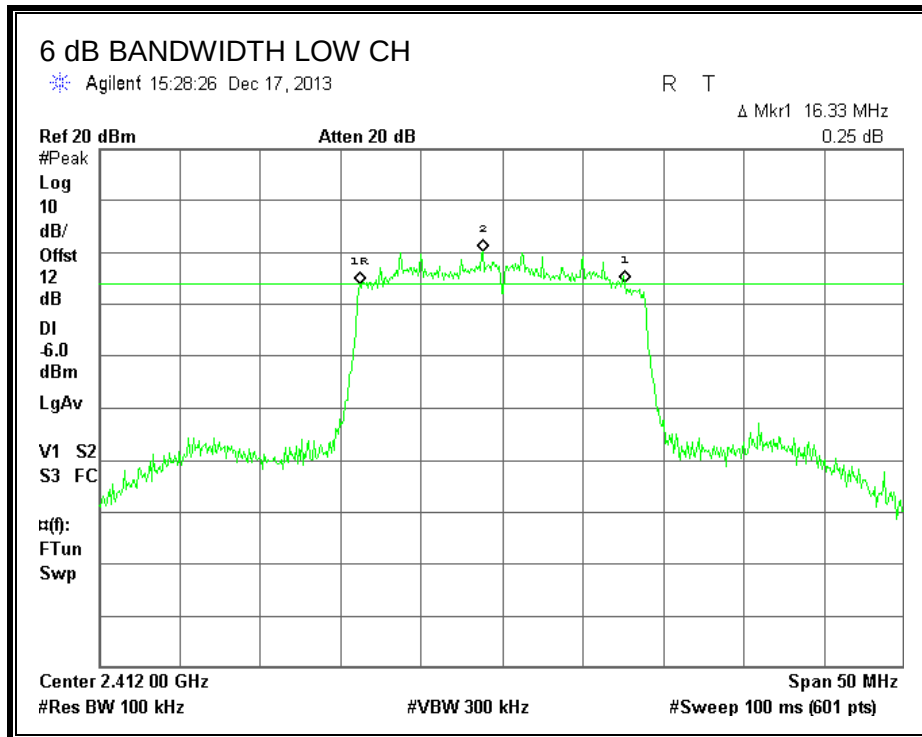
RESULTS ANTENNA PORT 1

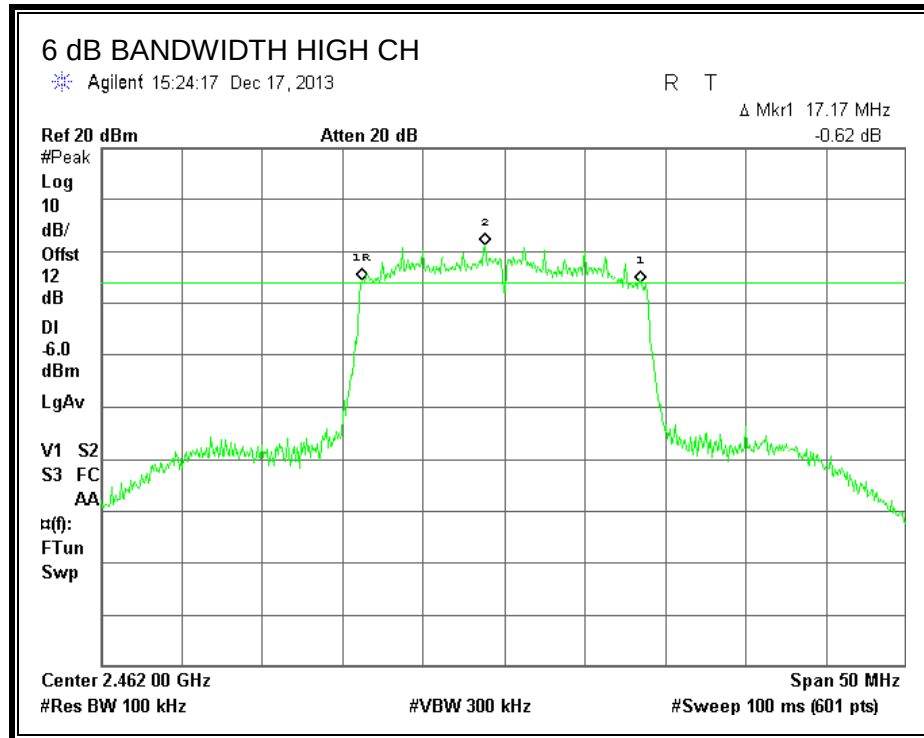
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.330	0.5
Mid	2437	17.250	0.5
High	2462	17.170	0.5

RESULTS ANTENNA PORT 2

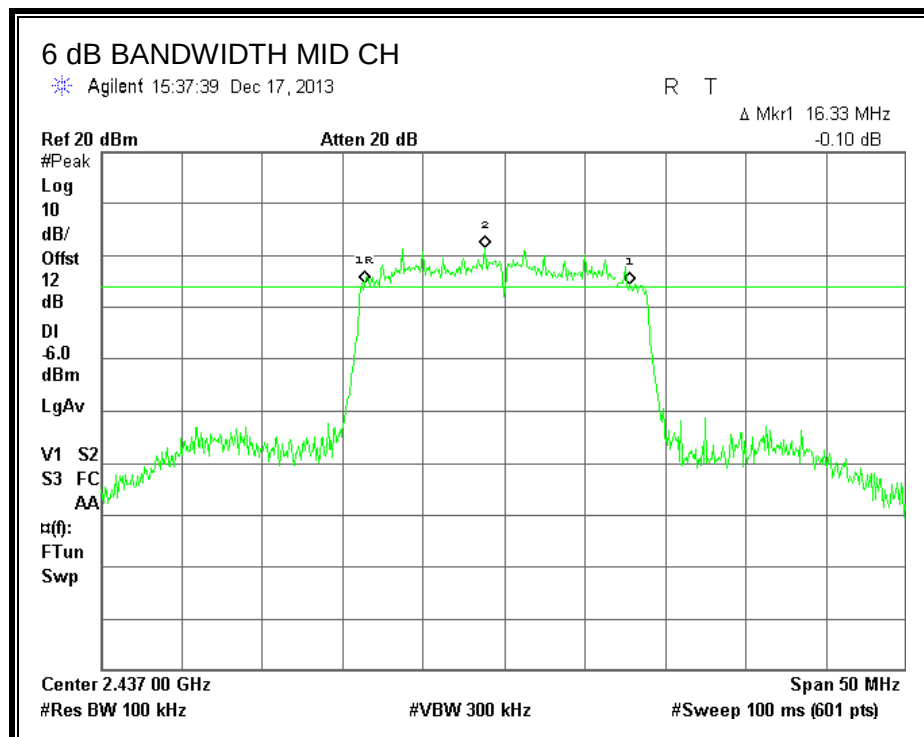
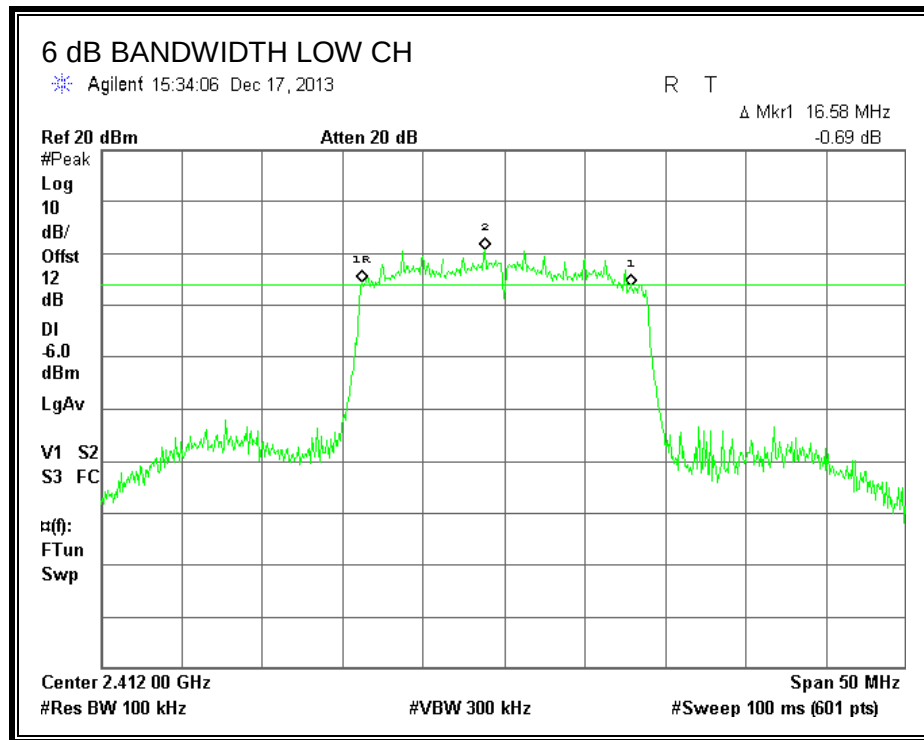
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.580	0.5
Mid	2437	16.330	0.5
High	2462	17.580	0.5

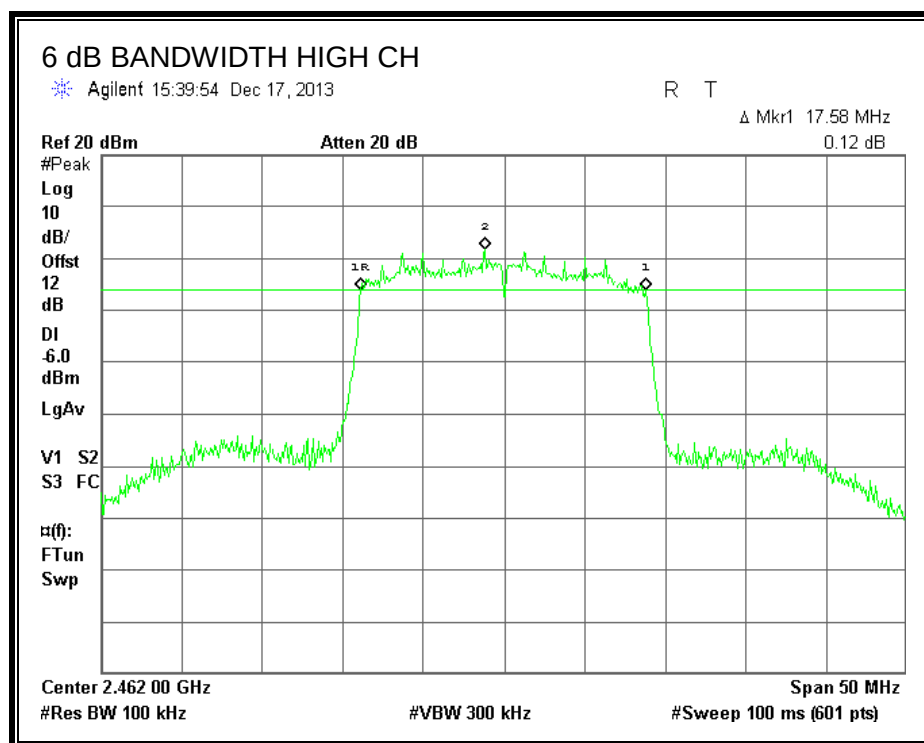
6 dB BANDWIDTH ANTENNA PORT 1





6 dB BANDWIDTH ANTENNA PORT 2





8.3.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

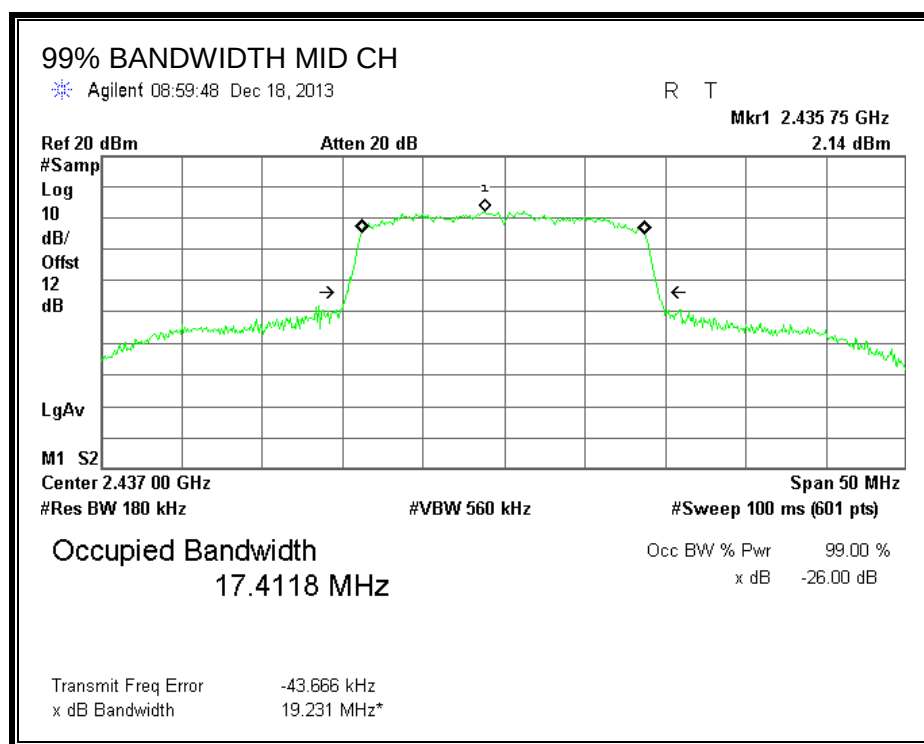
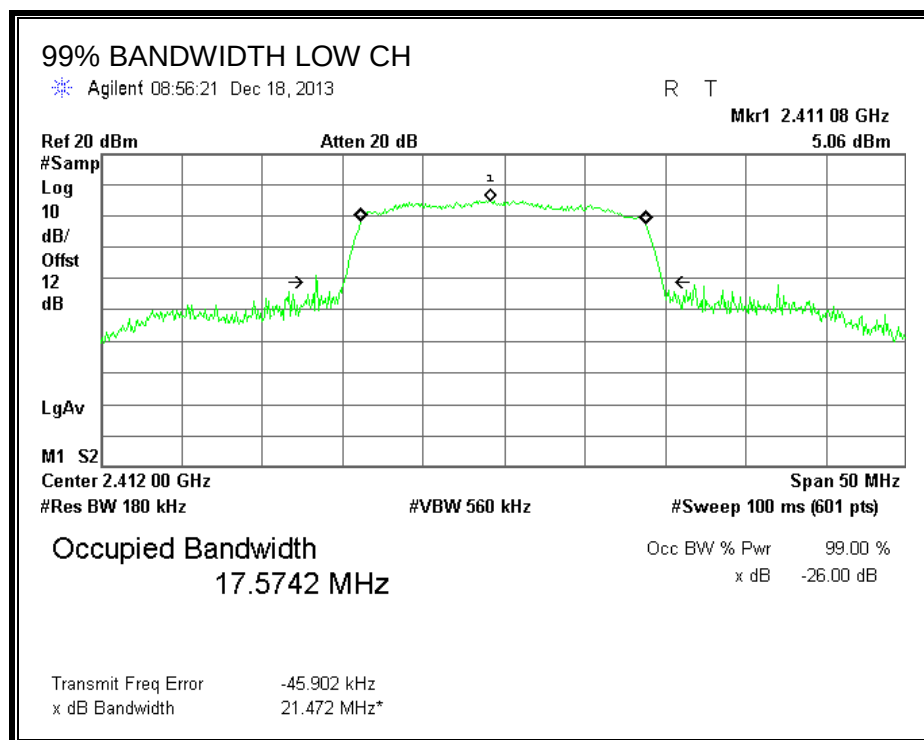
RESULTS ANTENNA PORT 1

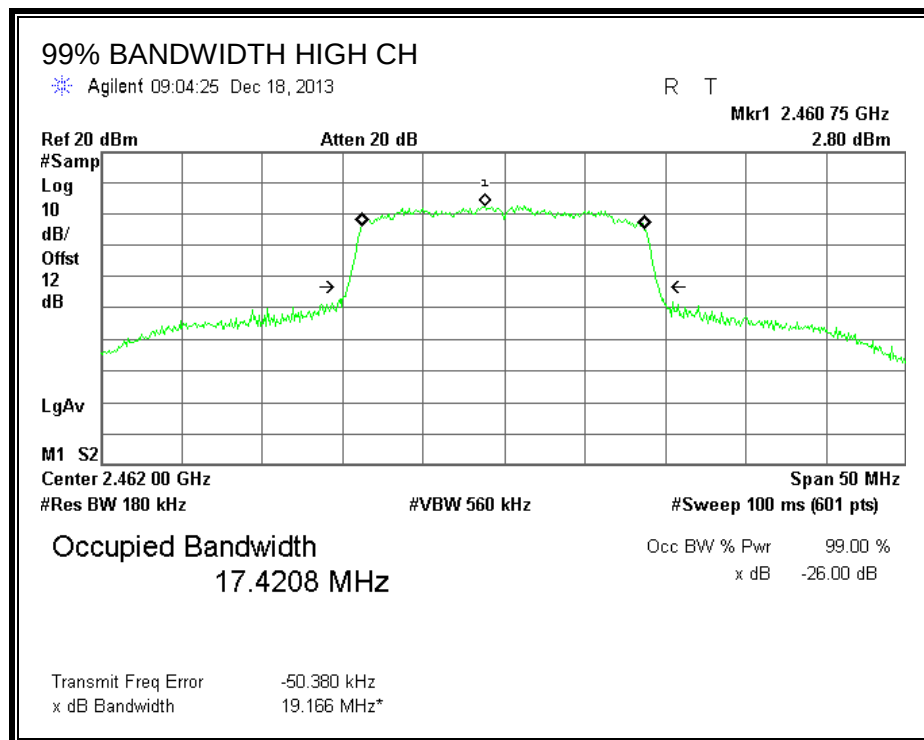
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.5742
Mid	2437	17.4118
High	2462	17.4208

RESULTS ANTENNA PORT 2

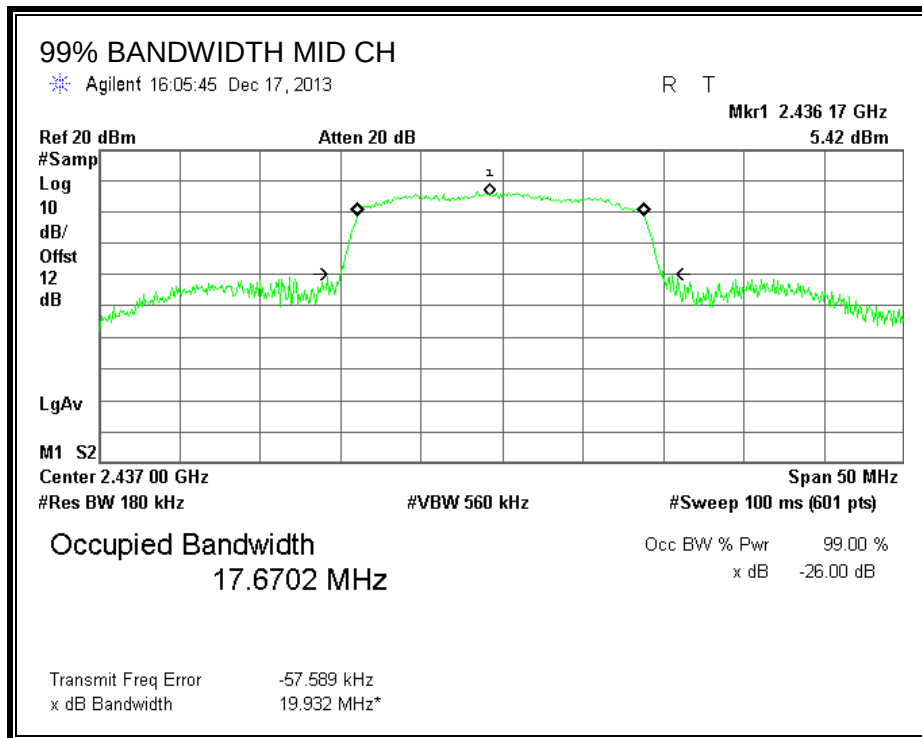
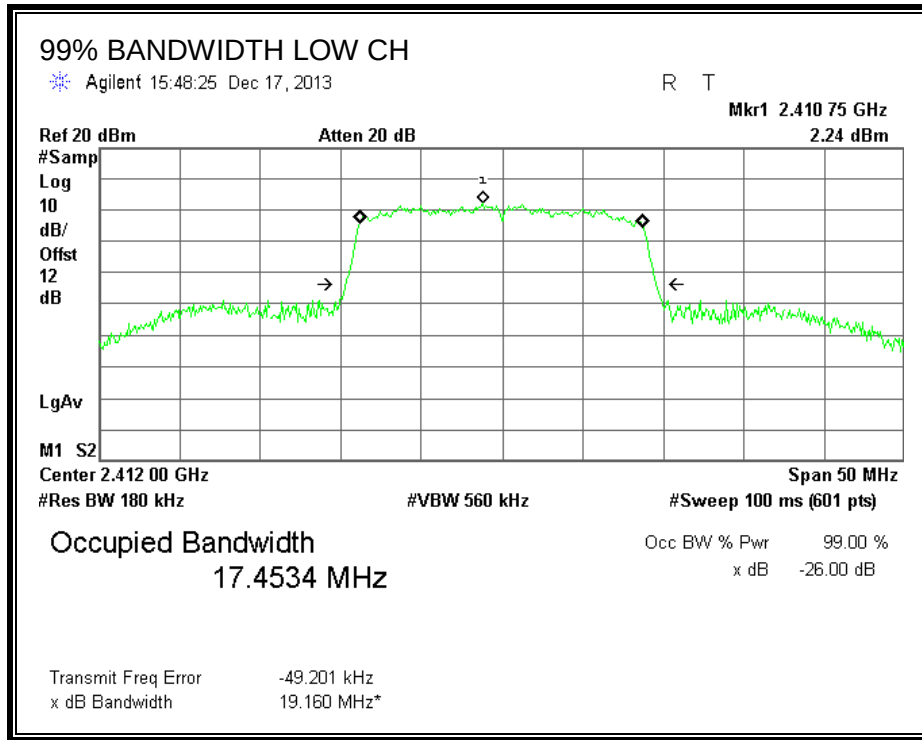
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.4534
Mid	2437	17.6702
High	2462	17.4494

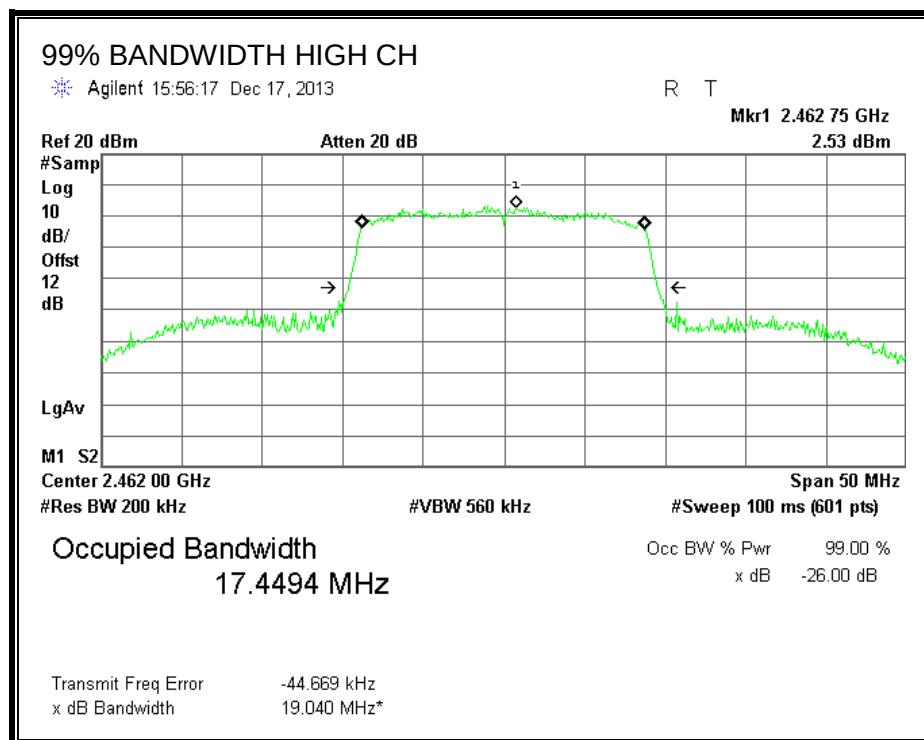
99% BANDWIDTH ANTENNA PORT 1





99% BANDWIDTH ANTENNA PORT 2





8.3.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS ANTENNA PORT 1

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.63
Mid	2437	9.83
High	2462	9.95

RESULTS ANTENNA PORT 2

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.84
Mid	2437	10.2
High	2462	10.00

8.3.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS ANTENNA PORT 1

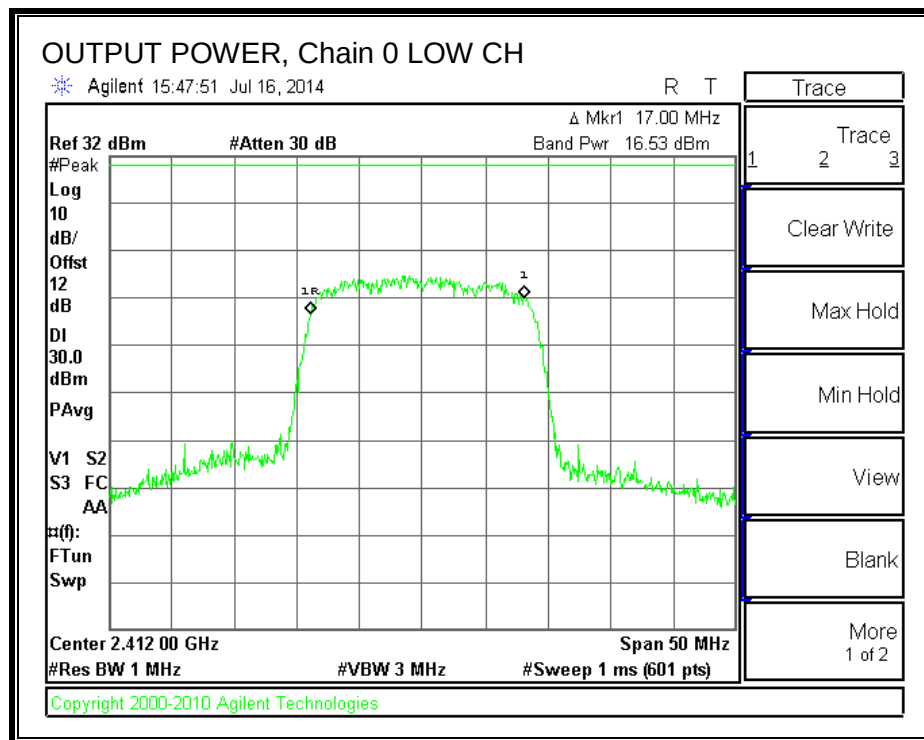
Limits

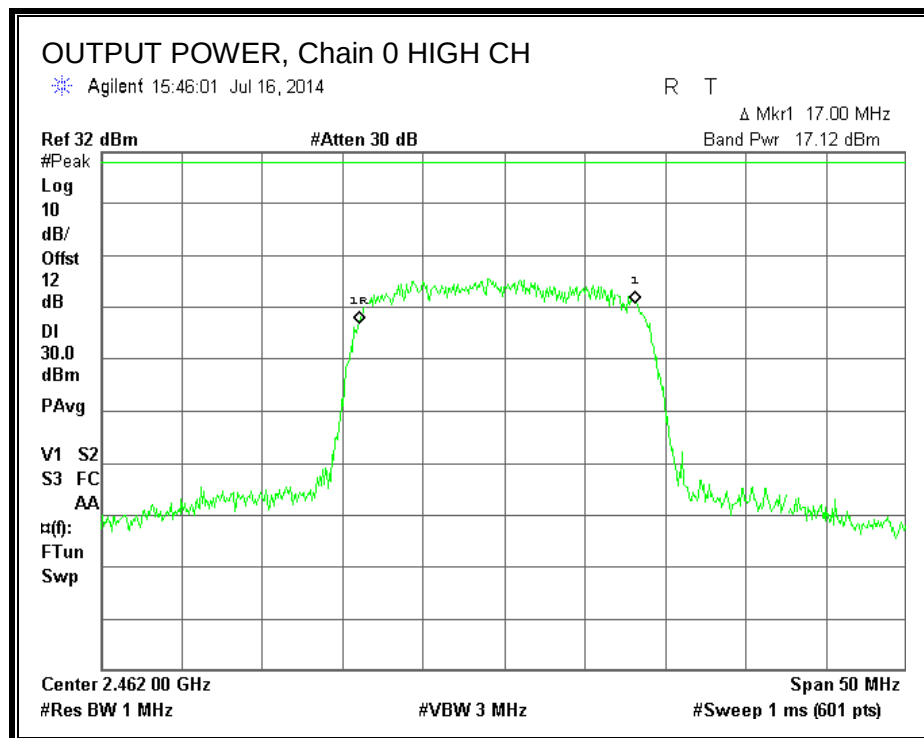
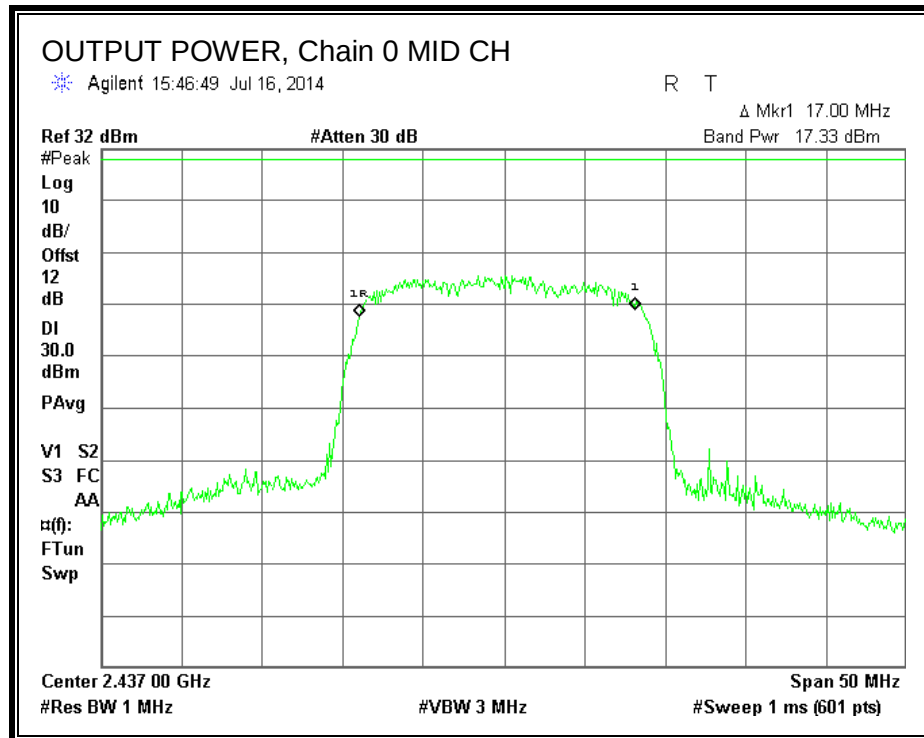
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	16.53	16.53	30.00	-13.47
Mid	2437	17.33	17.33	30.00	-12.67
High	2462	17.12	17.12	30.00	-12.88

OUTPUT POWER, Chain 0





RESULTS ANTENNA PORT 2

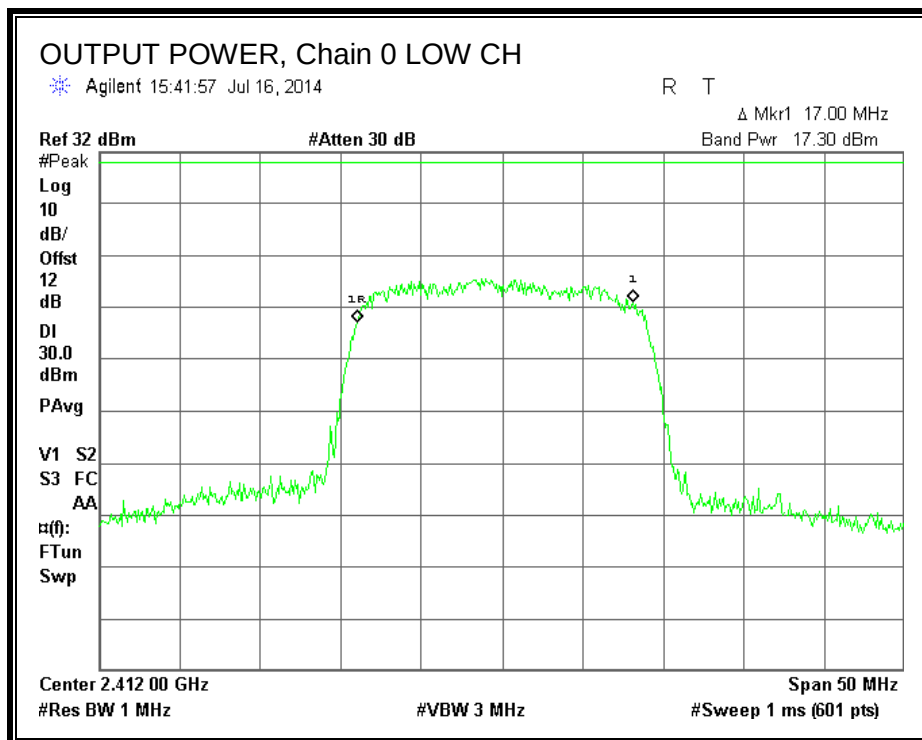
Limits

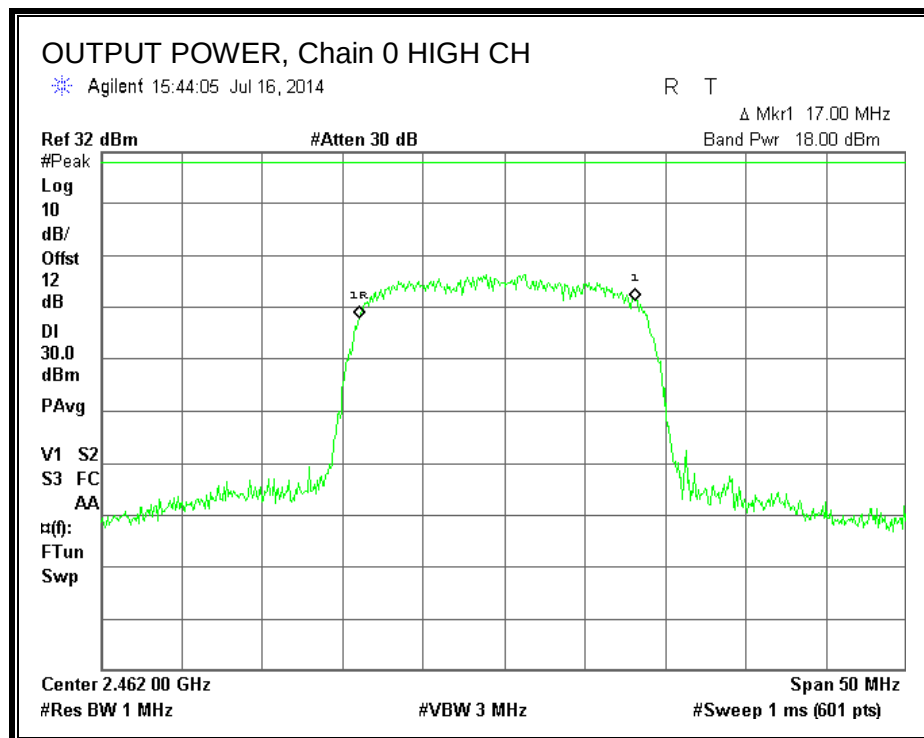
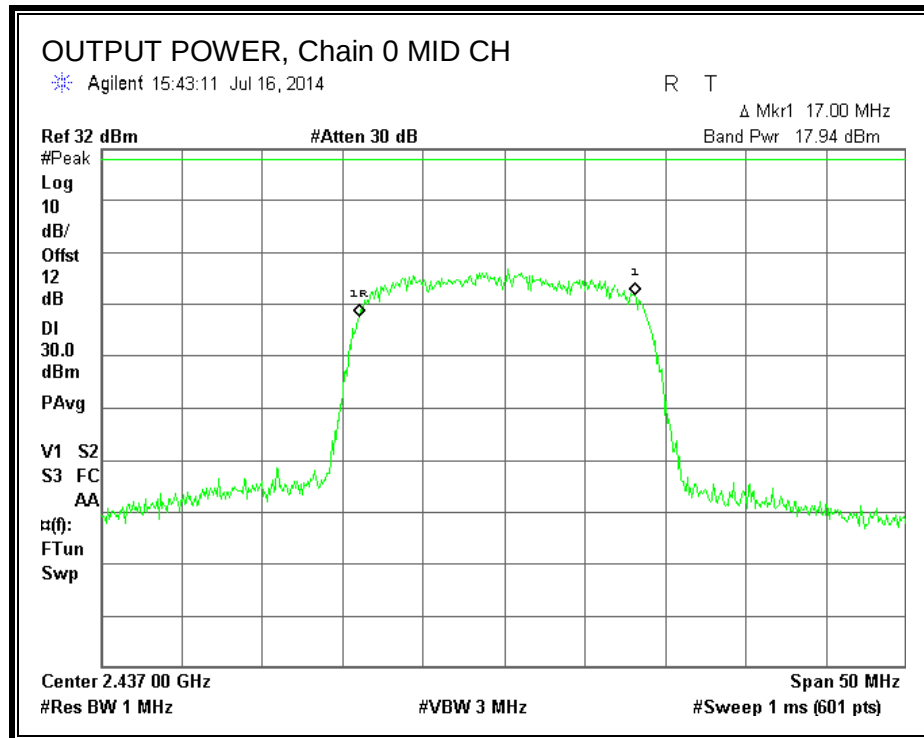
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	17.30	17.30	30.00	-12.70
Mid	2437	17.94	17.94	30.00	-12.06
High	2462	18.00	18.00	30.00	-12.00

OUTPUT POWER, Chain 0





8.3.5. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

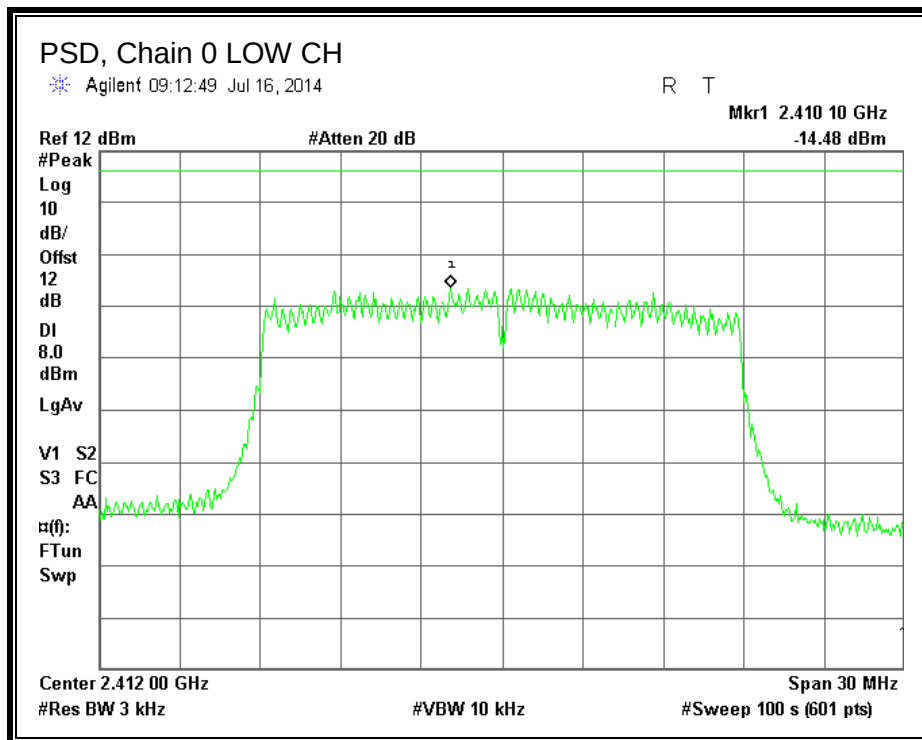
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

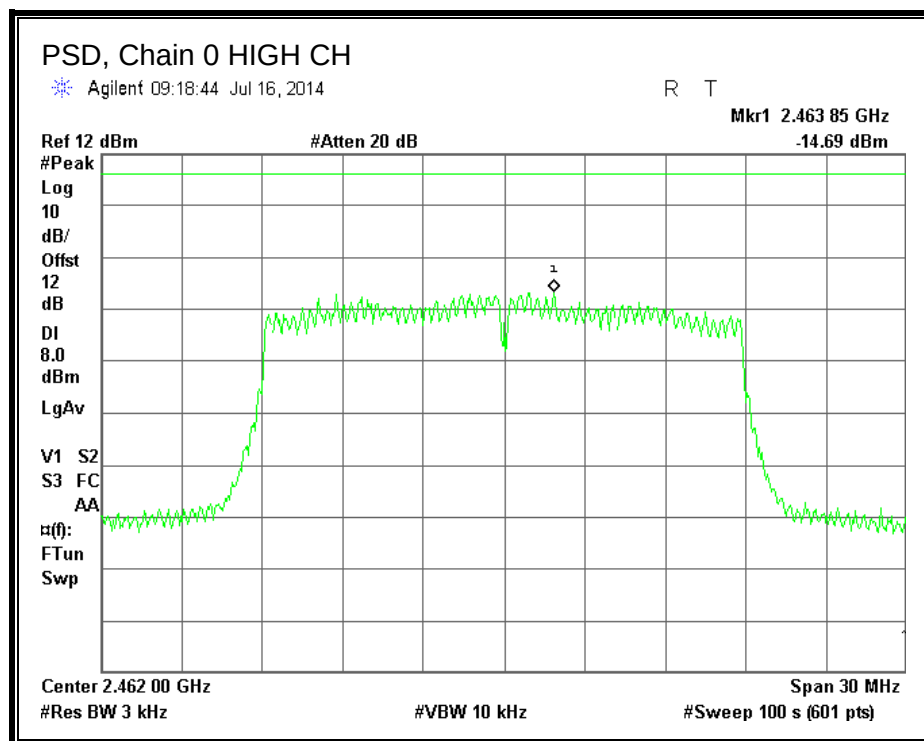
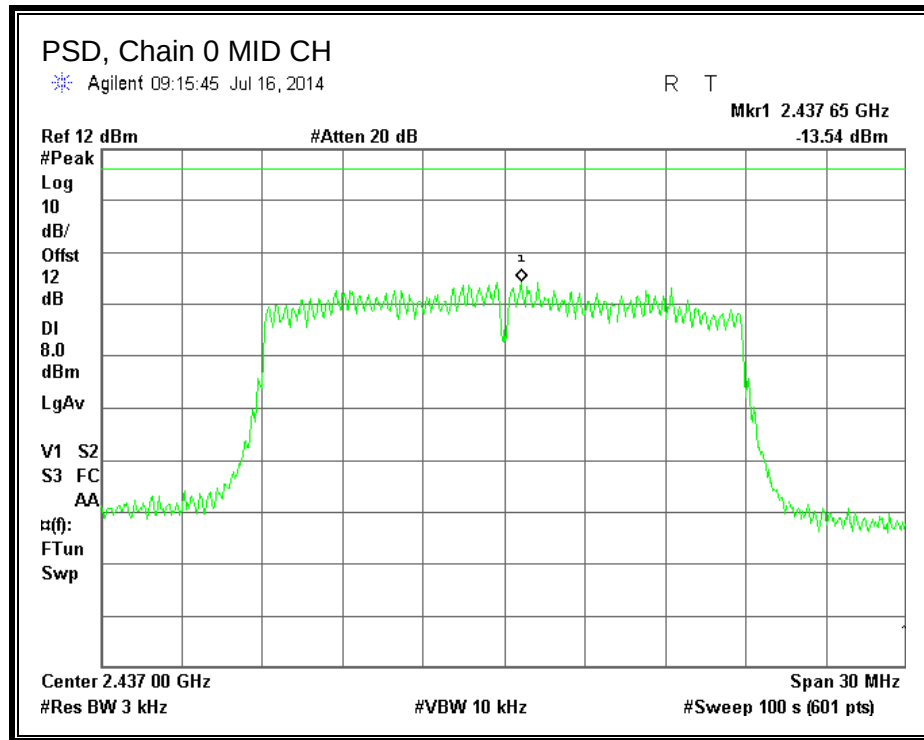
RESULTS ANTENNA PORT 1

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.48	8.0	-22.5
Mid	2437	-13.54	8.0	-21.5
High	2462	-14.69	8.0	-22.7

PSD, Chain 0



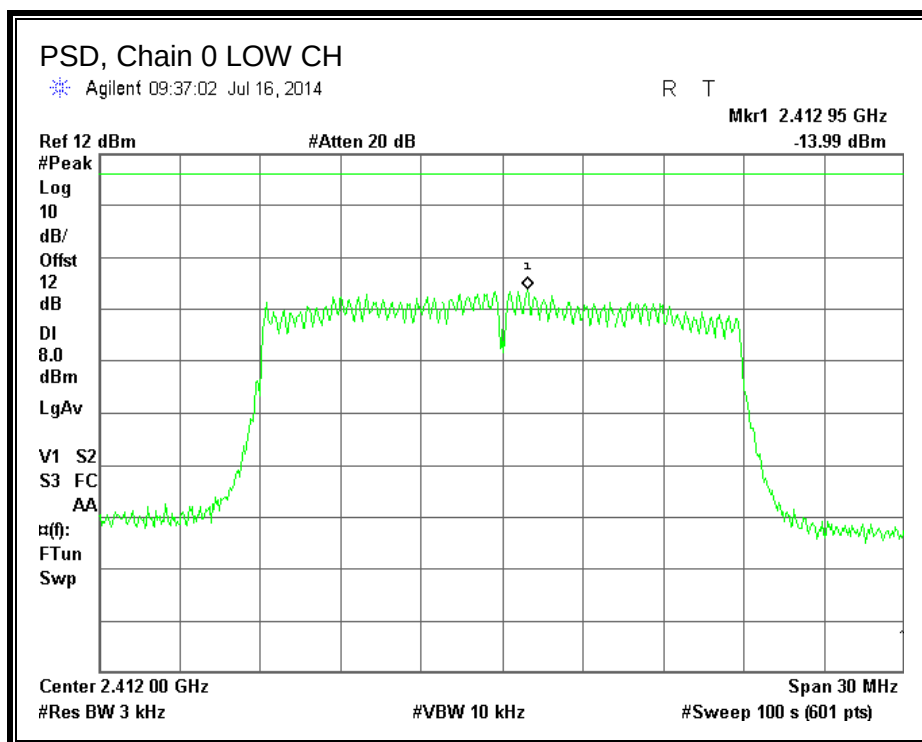


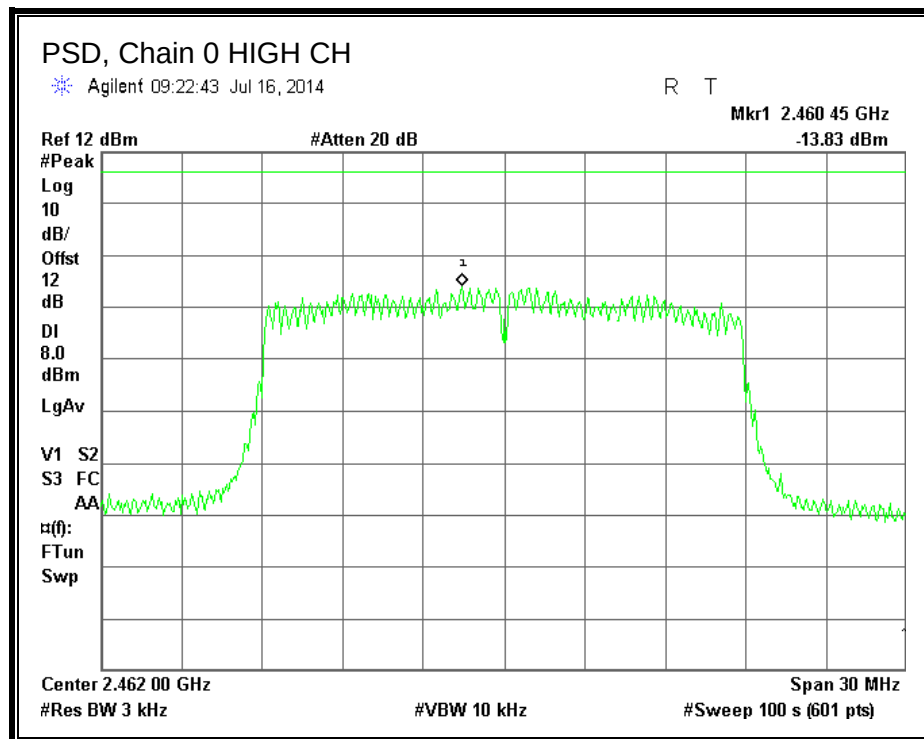
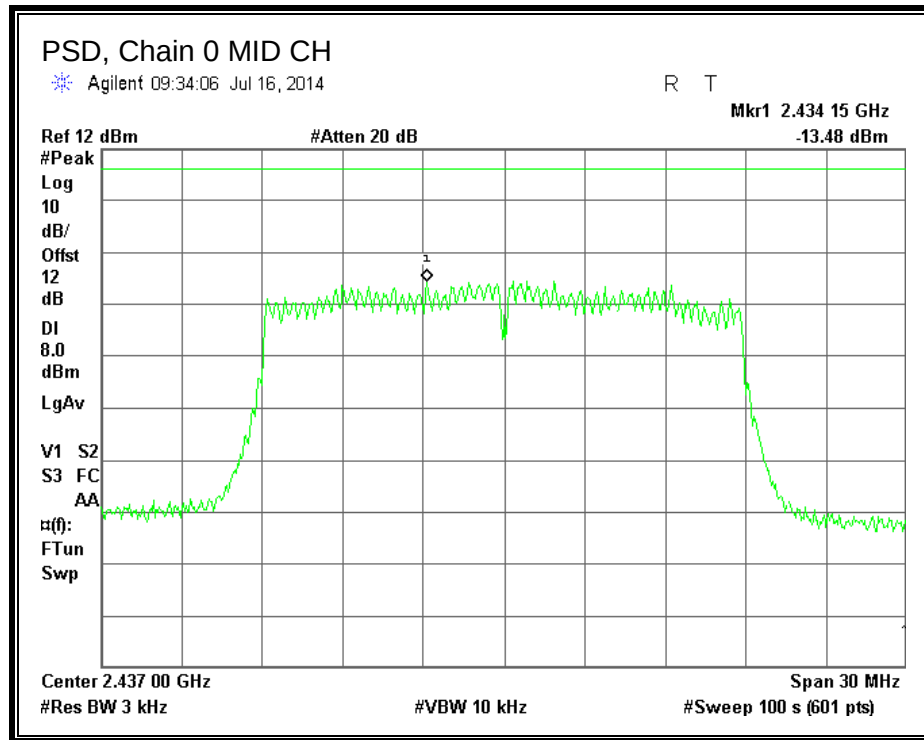
RESULTS ANTENNA PORT 2

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-13.99	8.0	-22.0
Mid	2437	-13.48	8.0	-21.5
High	2462	-13.83	8.0	-21.8

PSD, Chain 0





8.3.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

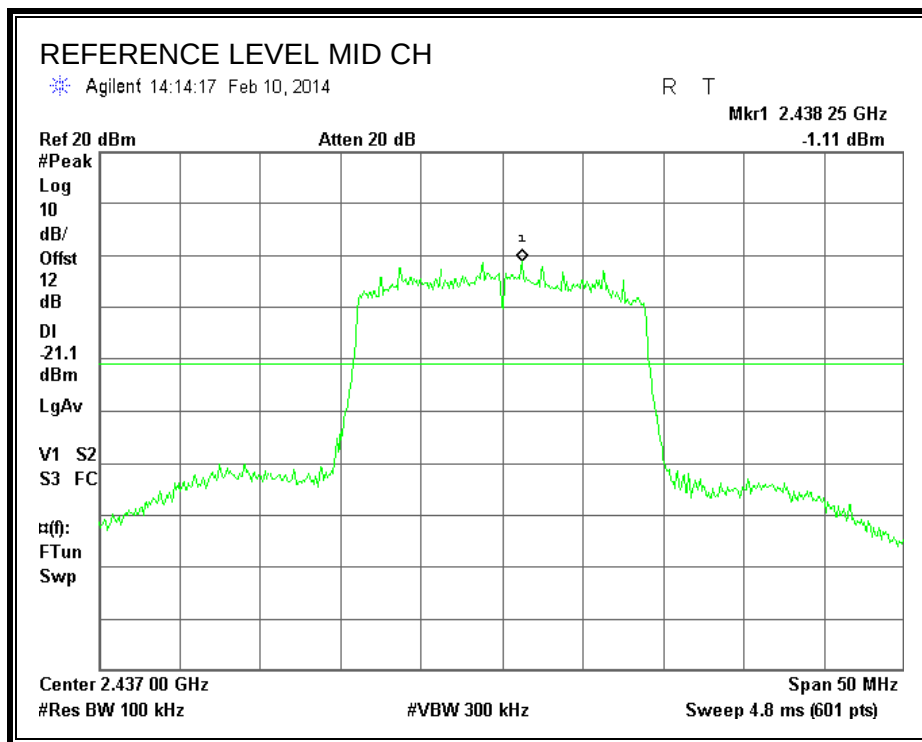
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

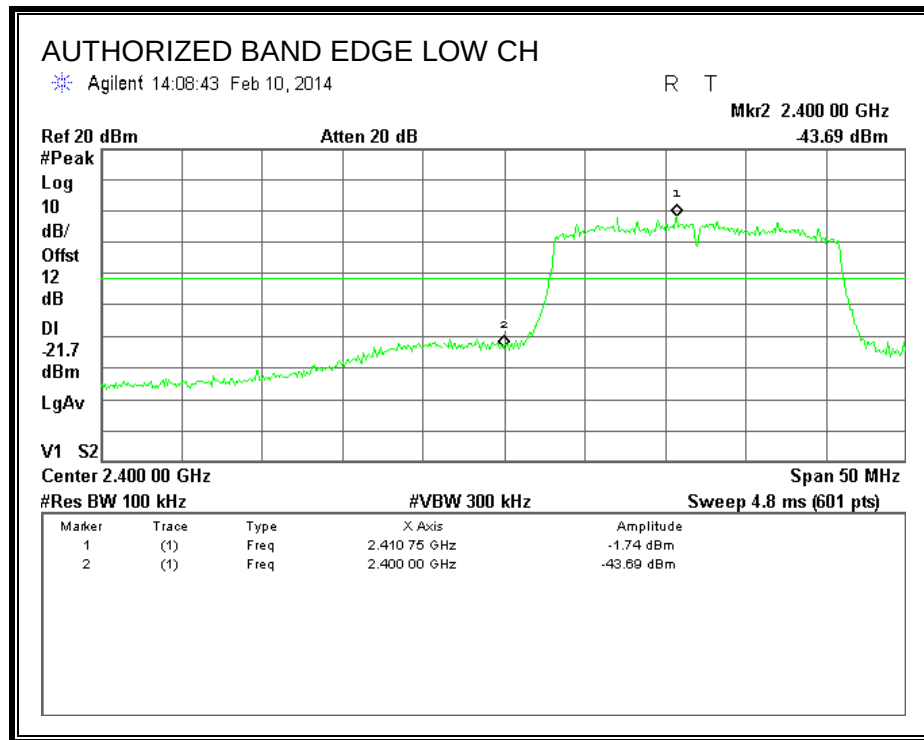
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS ANTENNA PORT 1

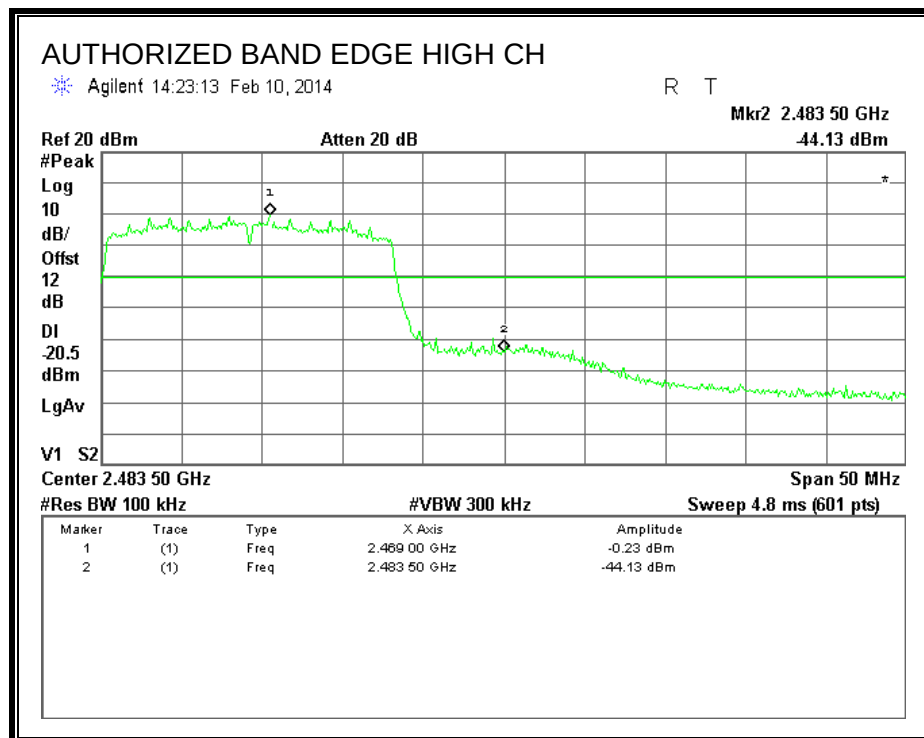
IN-BAND REFERENCE LEVEL



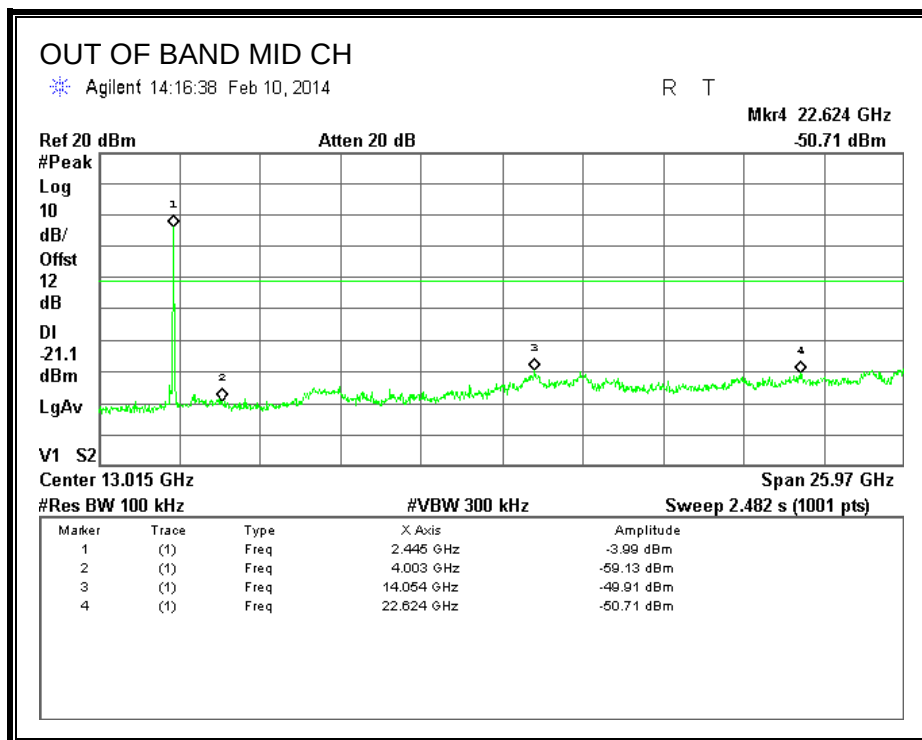
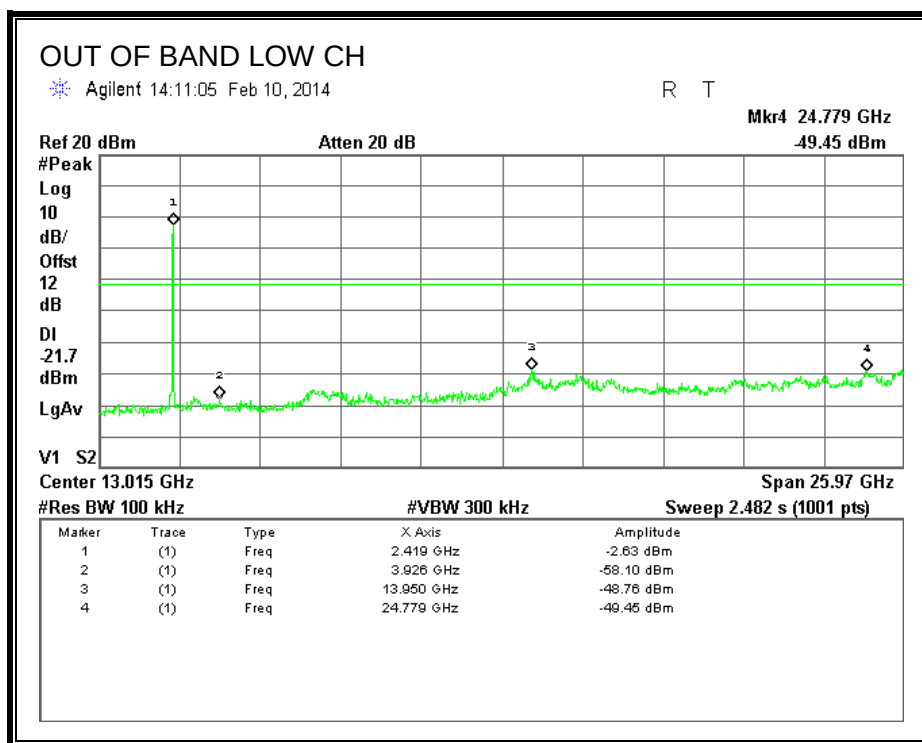
LOW CHANNEL BANDEDGE

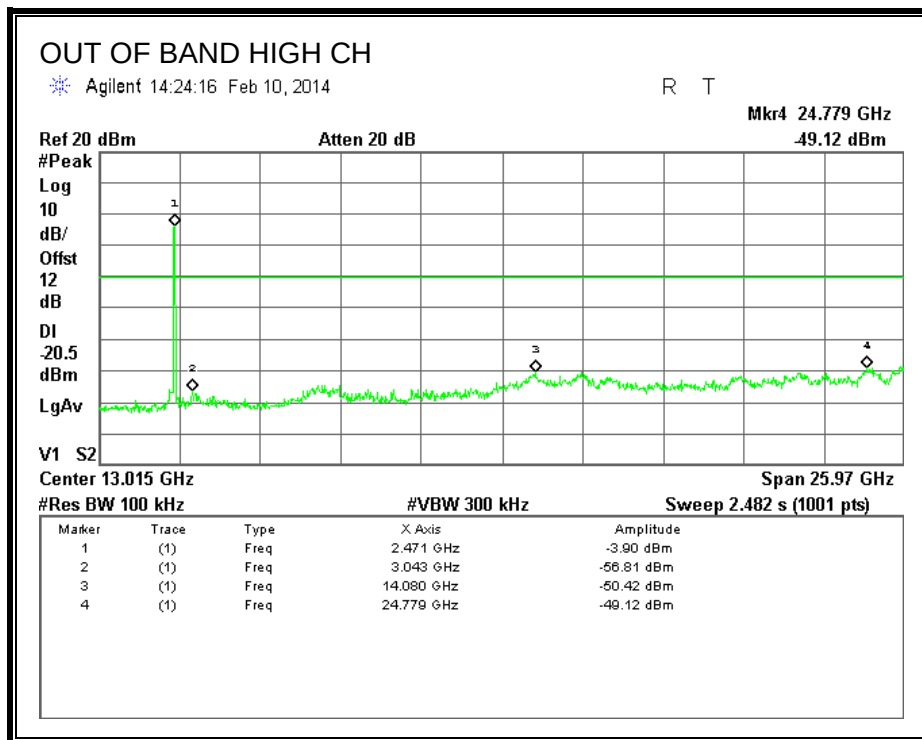


HIGH CHANNEL BANDEDGE



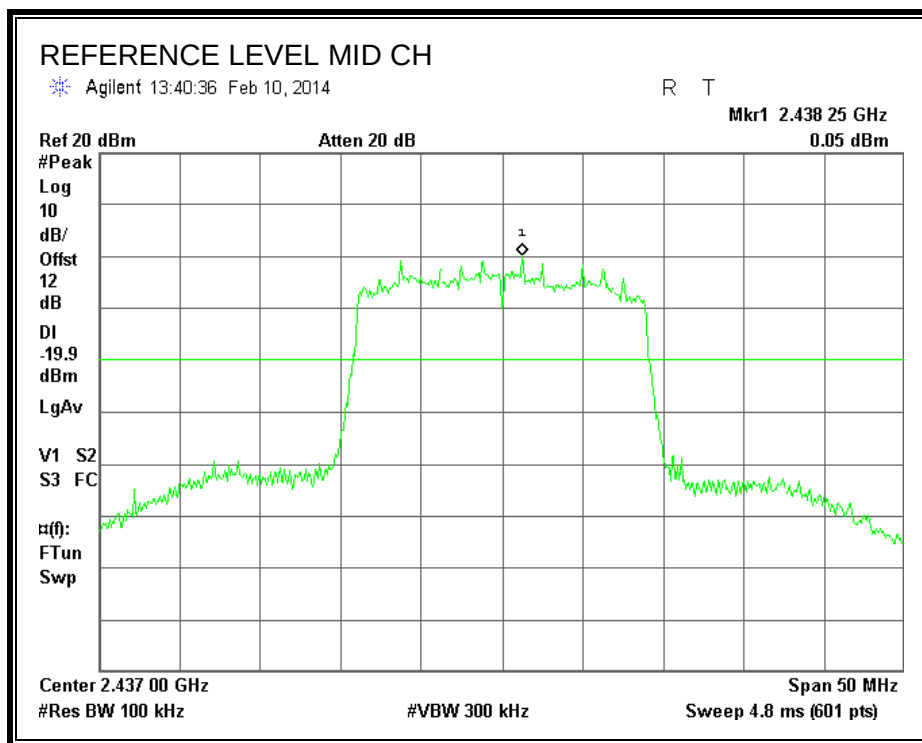
OUT-OF-BAND EMISSIONS



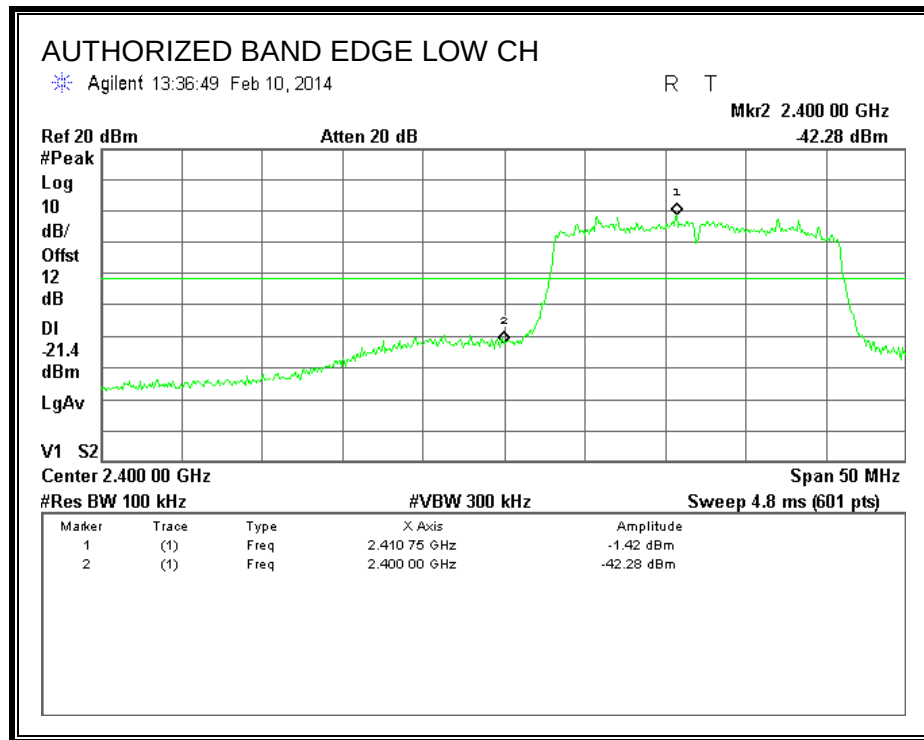


RESULTS ANTENNA PORT 2

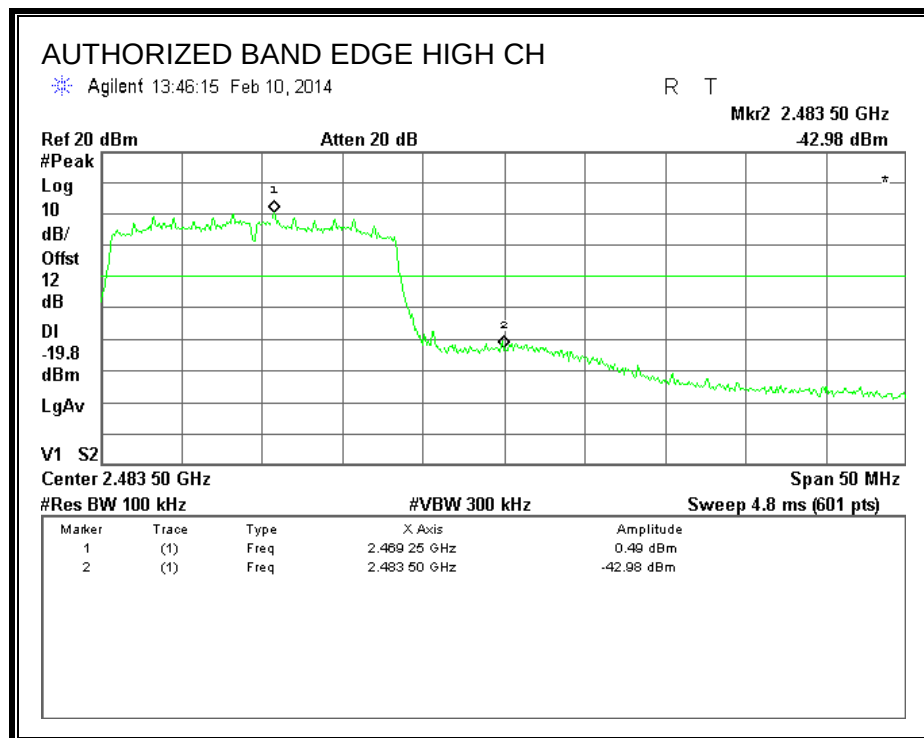
IN-BAND REFERENCE LEVEL



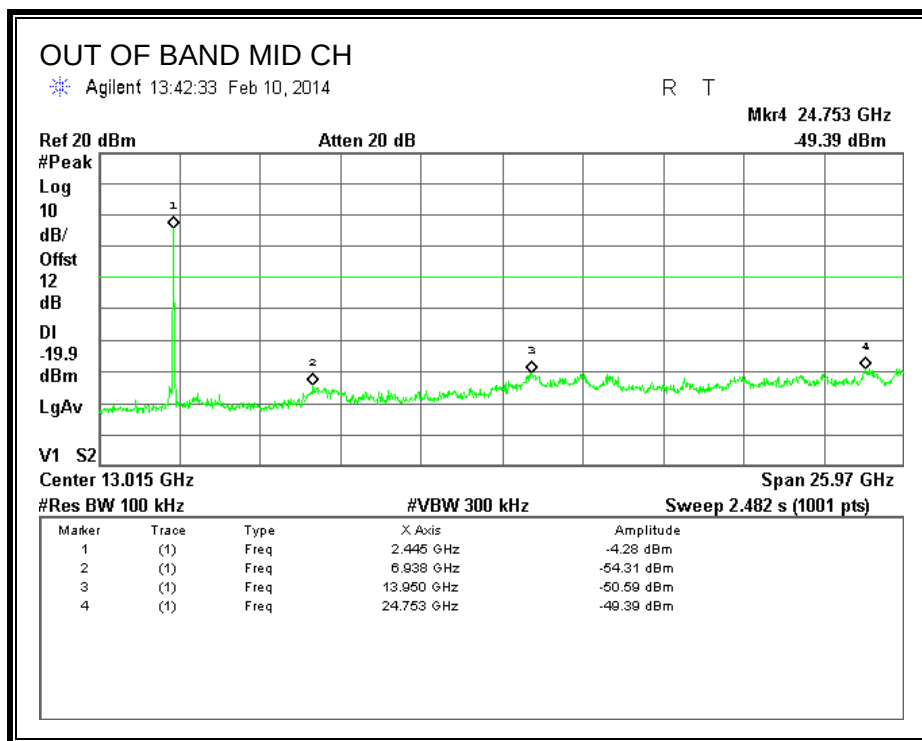
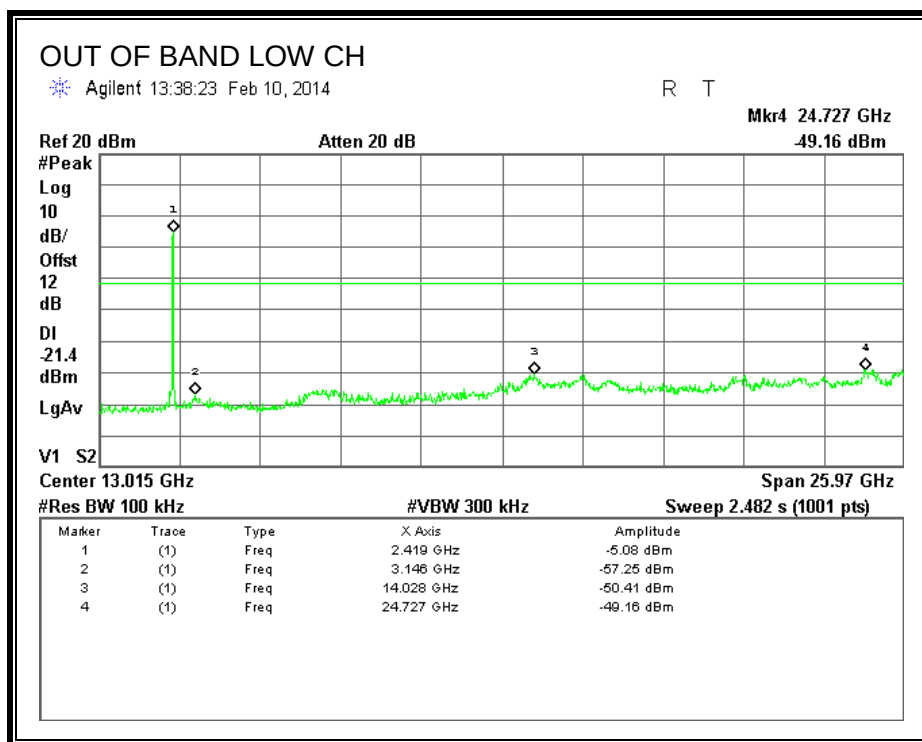
LOW CHANNEL BANDEDGE

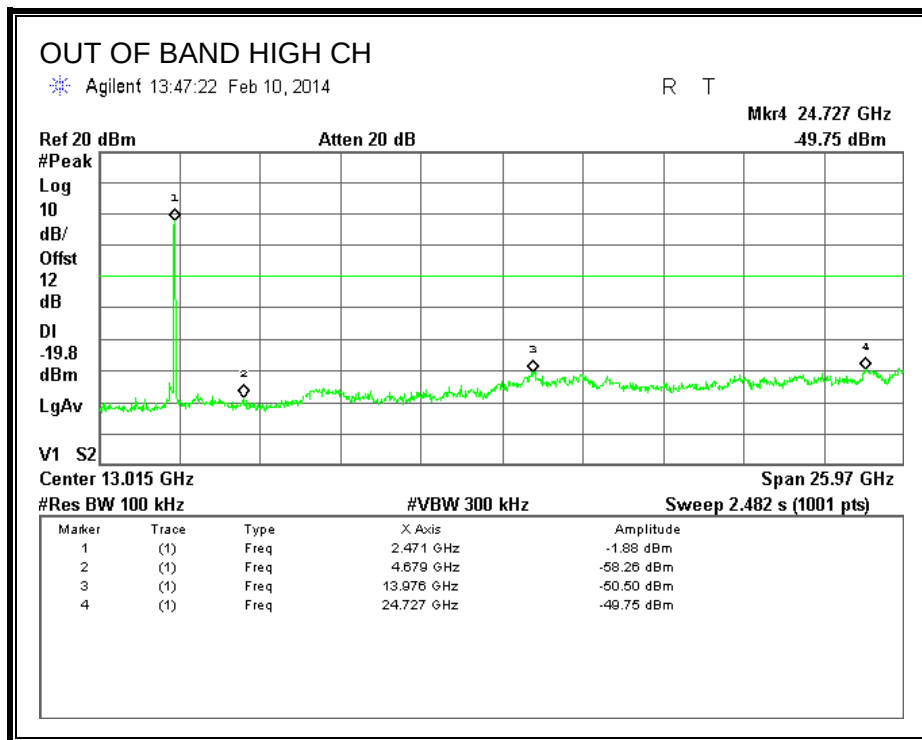


HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS





8.4.802.11n QAM 16 MODE IN THE 2.4 GHz BAND

8.4.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set to 100 KHz and the VBW to 300 KHz $\geq 3 \times$ RBW, peak detector and max hold.

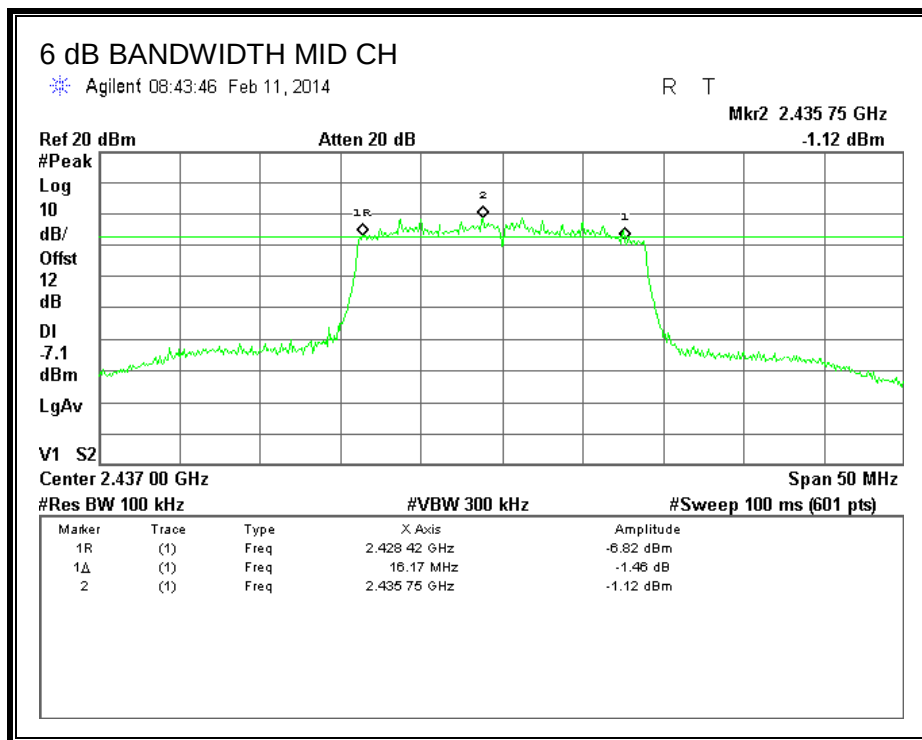
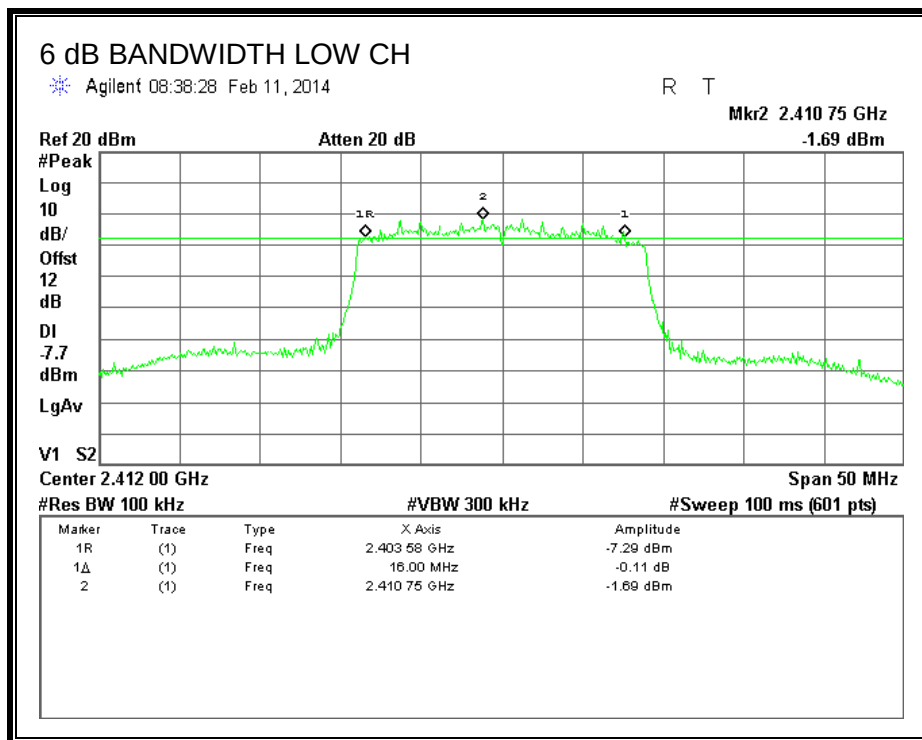
RESULTS ANTENNA PORT 1

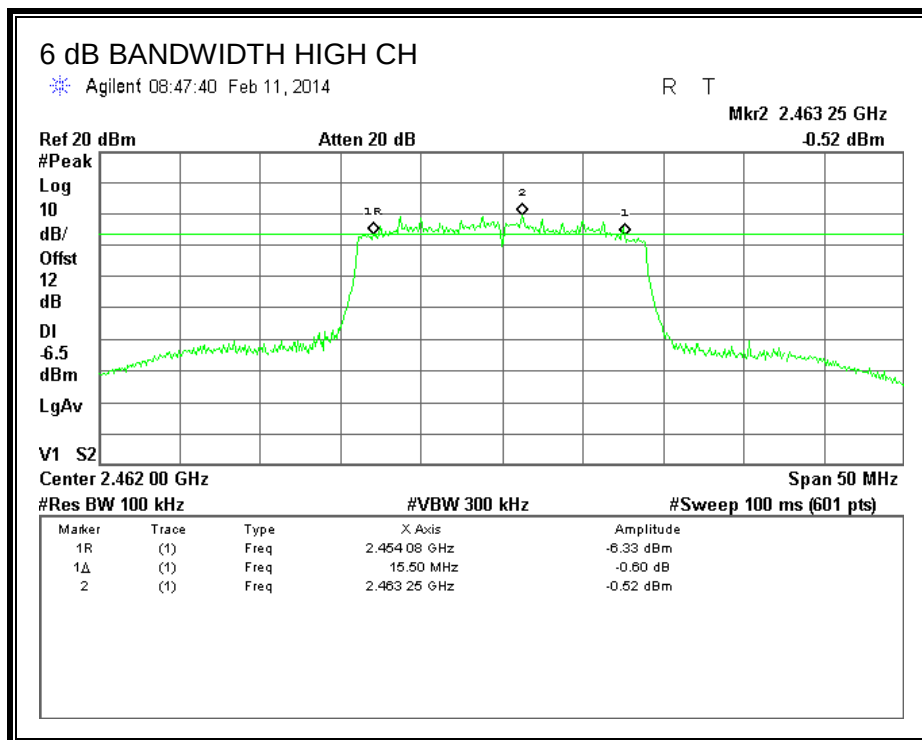
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.000	0.5
Mid	2437	16.170	0.5
High	2462	15.500	0.5

RESULTS ANTENNA PORT 2

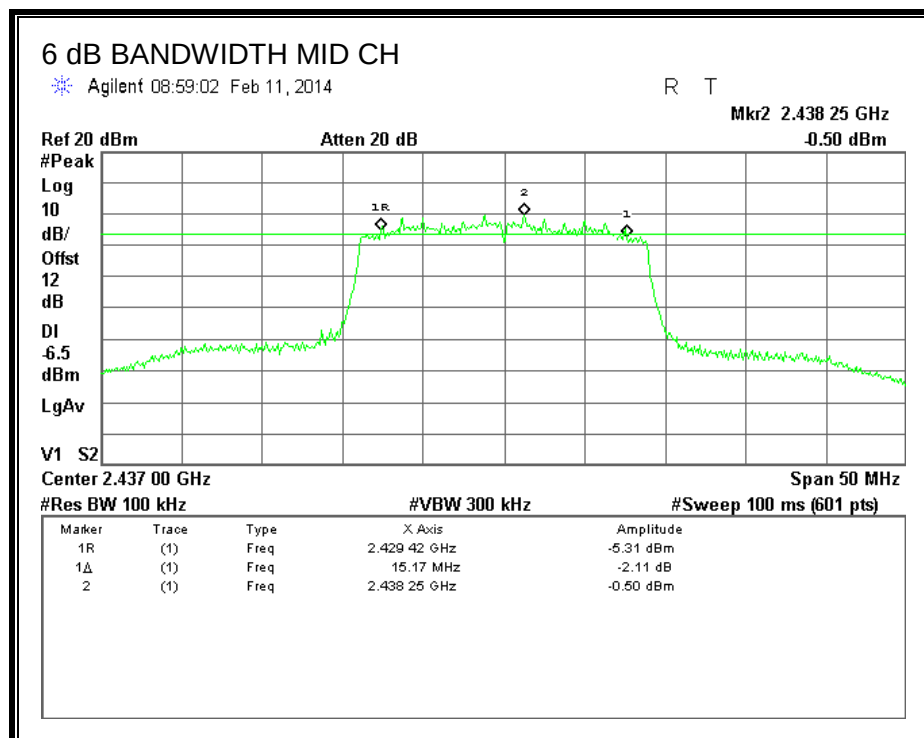
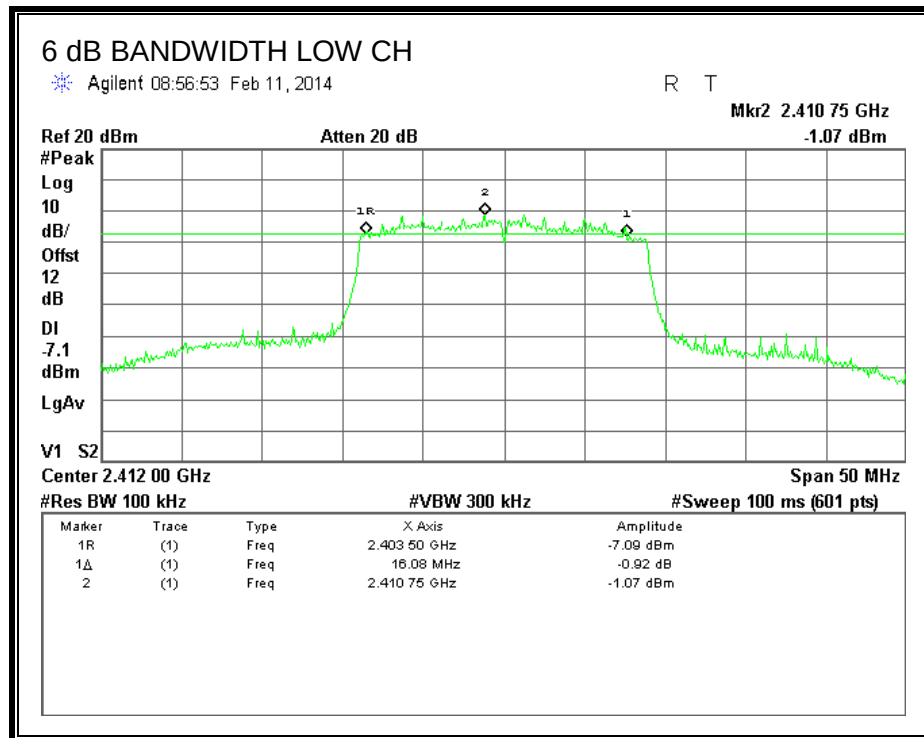
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.080	0.5
Mid	2437	15.170	0.5
High	2462	16.000	0.5

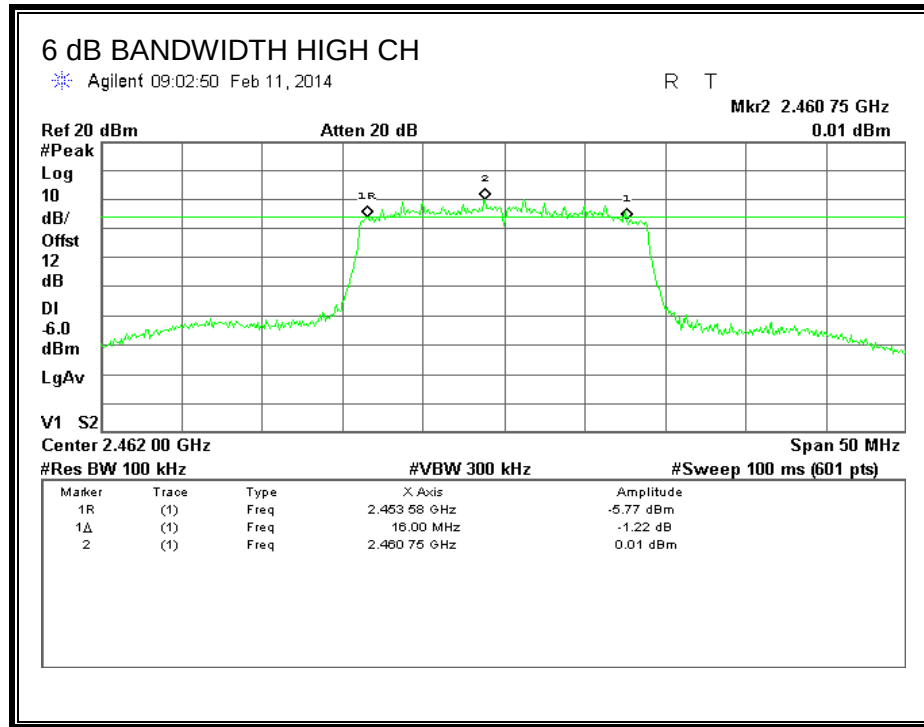
6 dB BANDWIDTH ANTENNA PORT 1





6 dB BANDWIDTH ANTENNA PORT 2





8.4.2 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

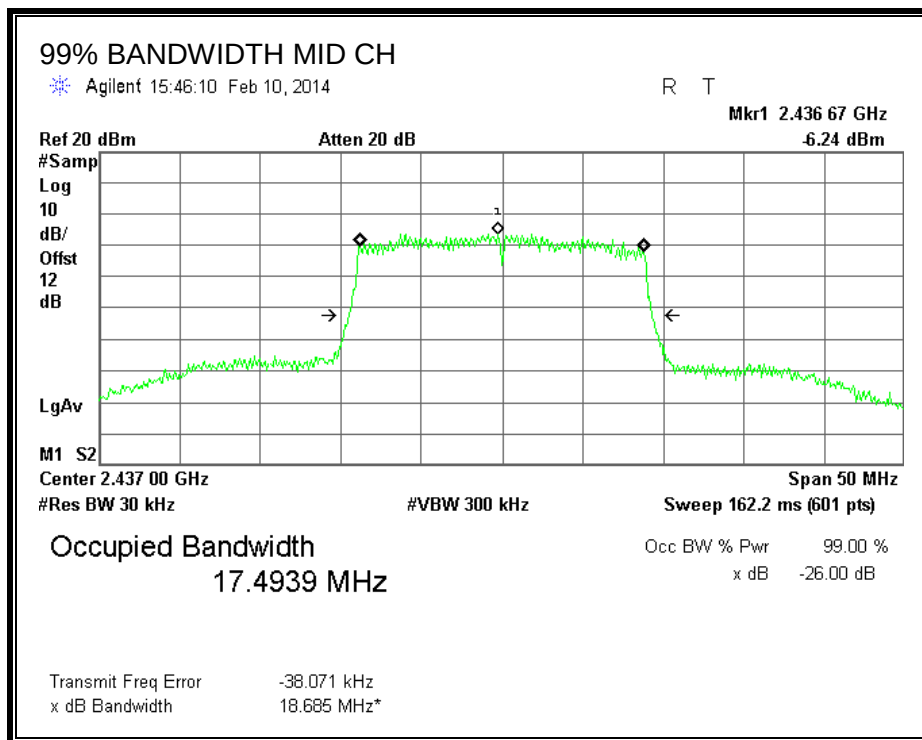
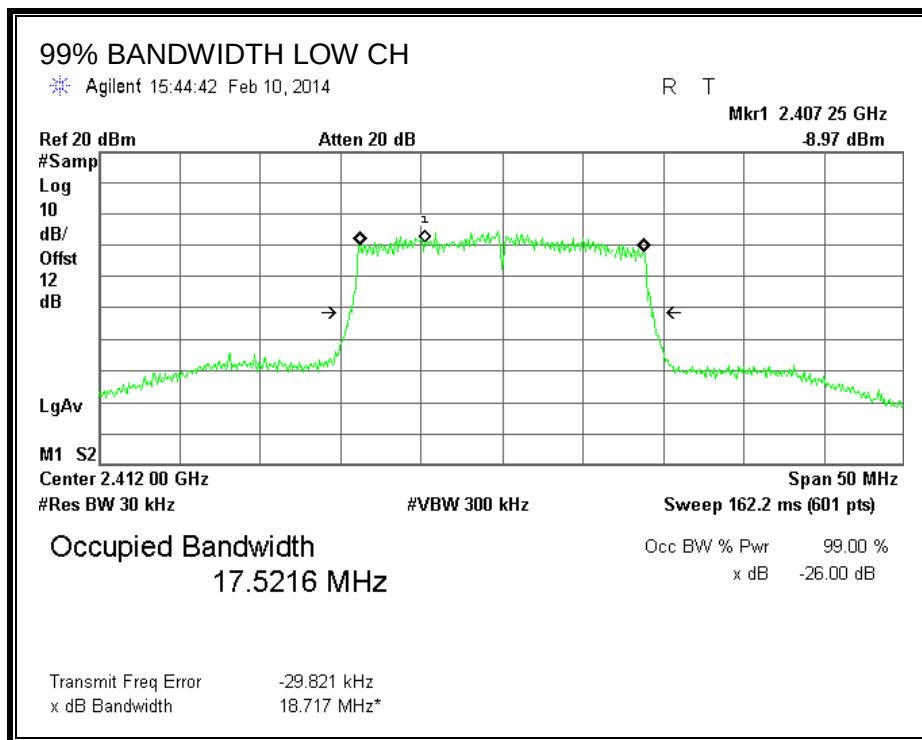
RESULTS ANTENNA PORT 1

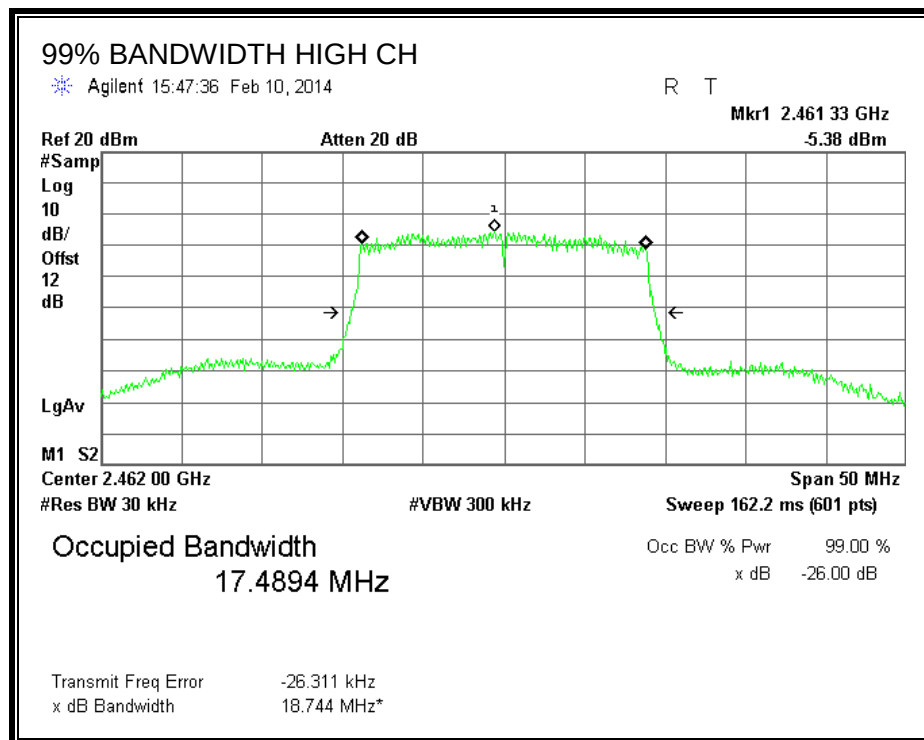
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.5216
Mid	2437	17.4939
High	2462	17.4894

RESULTS ANTENNA PORT 2

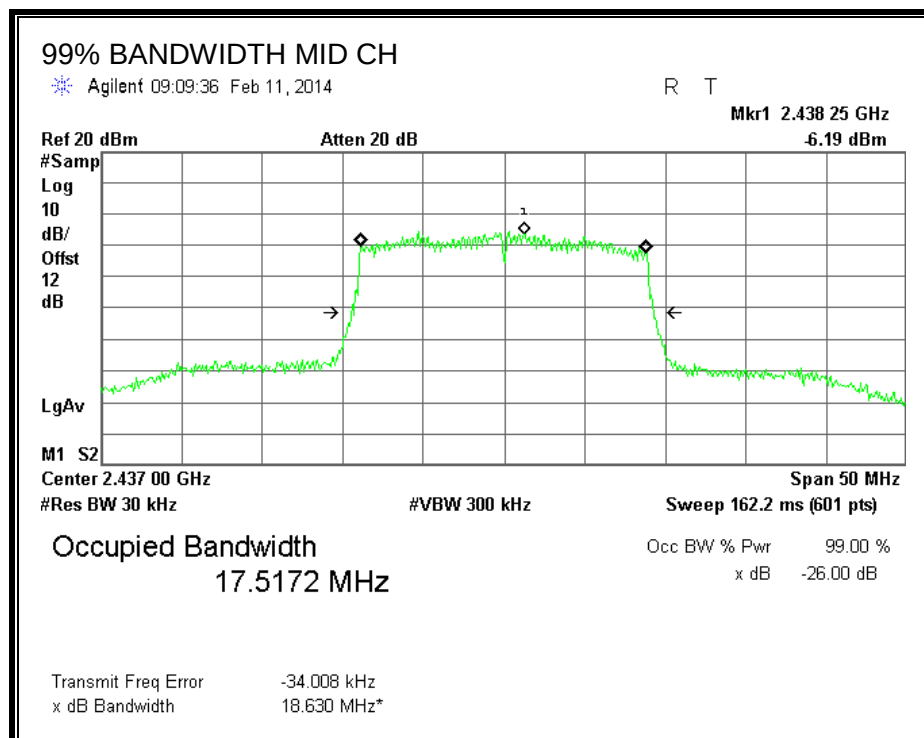
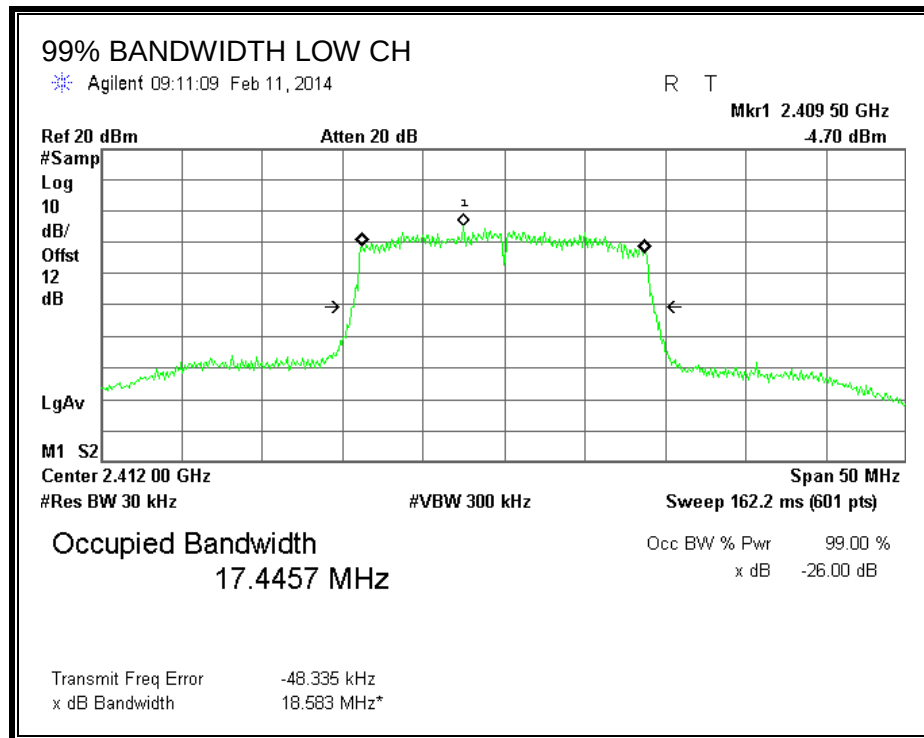
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.4457
Mid	2437	17.5172
High	2462	17.4859

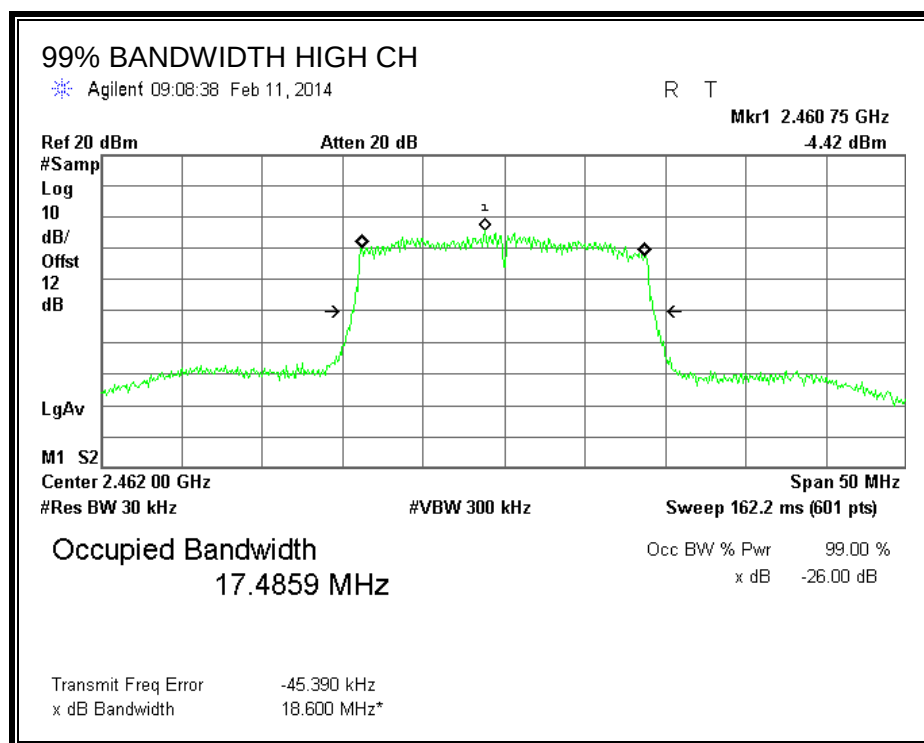
99% BANDWIDTH ANTENNA PORT 1





99% BANDWIDTH ANTENNA PORT 2





8.4.3 AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS ANTENNA PORT 1

Channel	Frequency (MHz)	Power (dBm)
Low	2412	8.52
Mid	2437	9.54
High	2462	9.72

RESULTS ANTENNA PORT 2

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.65
Mid	2437	9.97
High	2462	9.85

8.4.4 OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS ANTENNA PORT 1

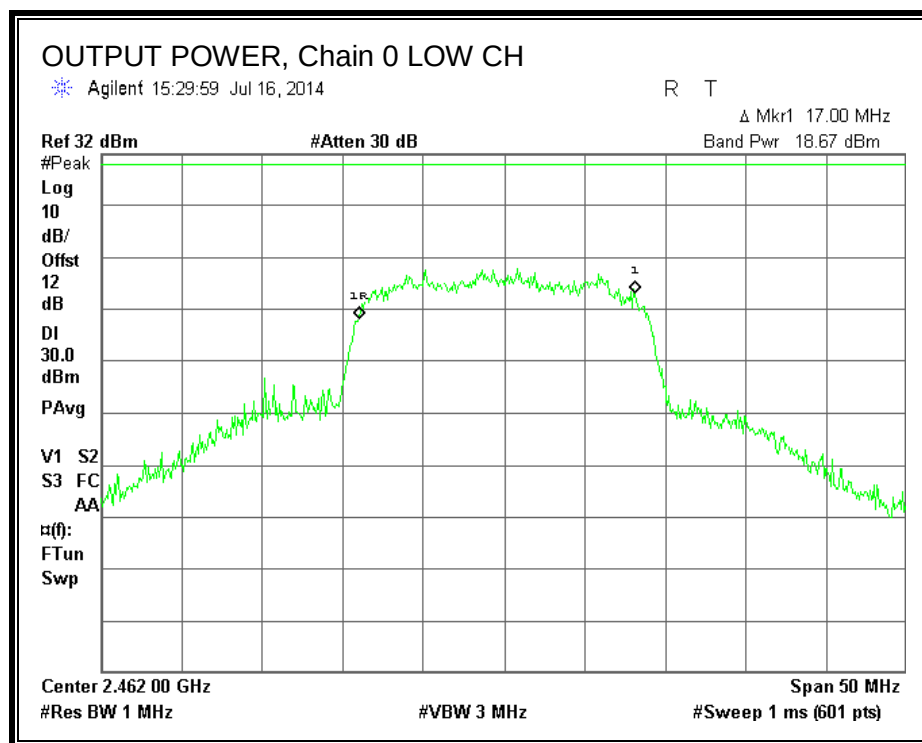
Limits

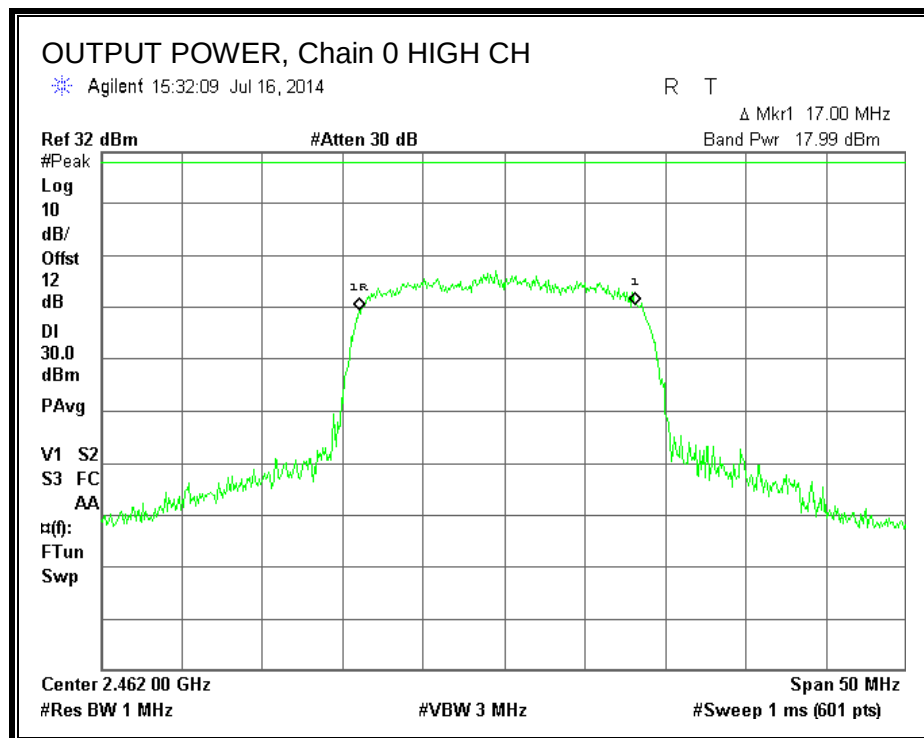
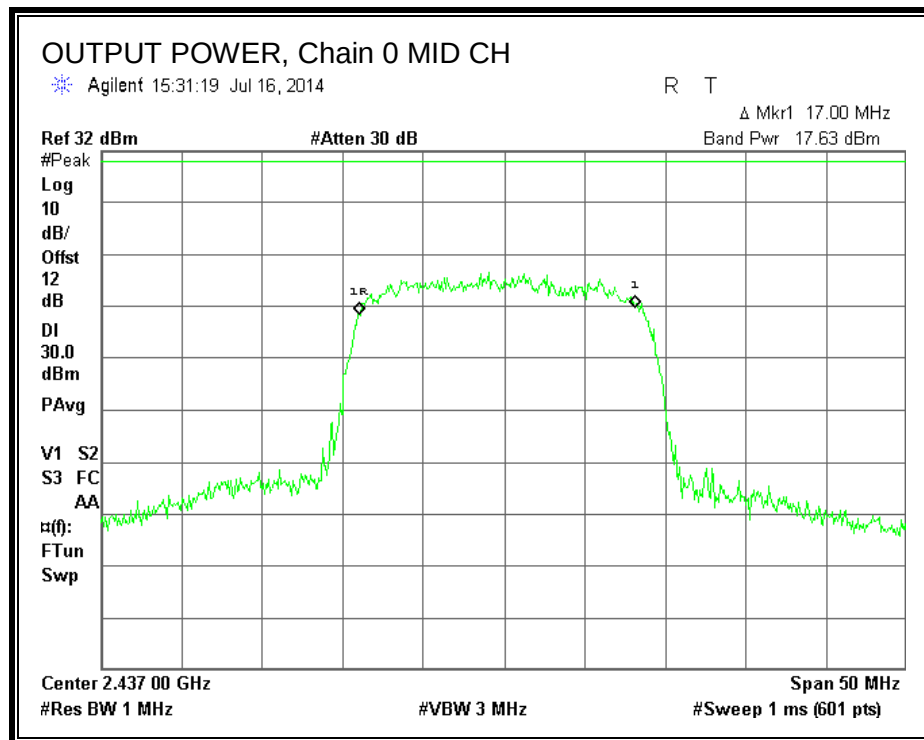
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	18.67	18.67	30.00	-11.33
Mid	2437	17.63	17.63	30.00	-12.37
High	2462	17.99	17.99	30.00	-12.01

OUTPUT POWER, Chain 0





RESULTS ANTENNA PORT 2

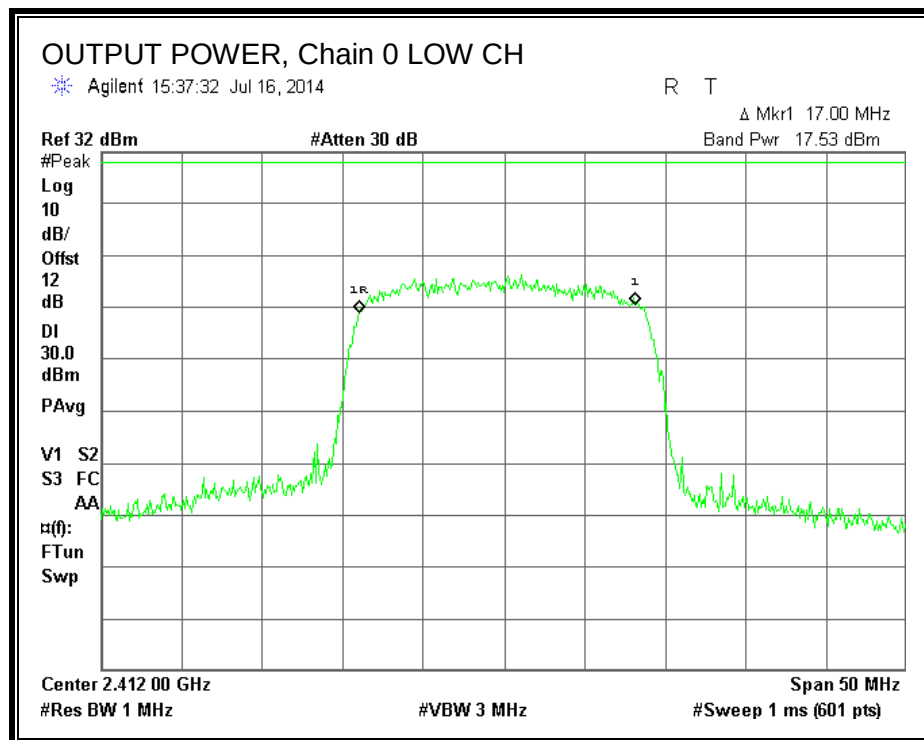
Limits

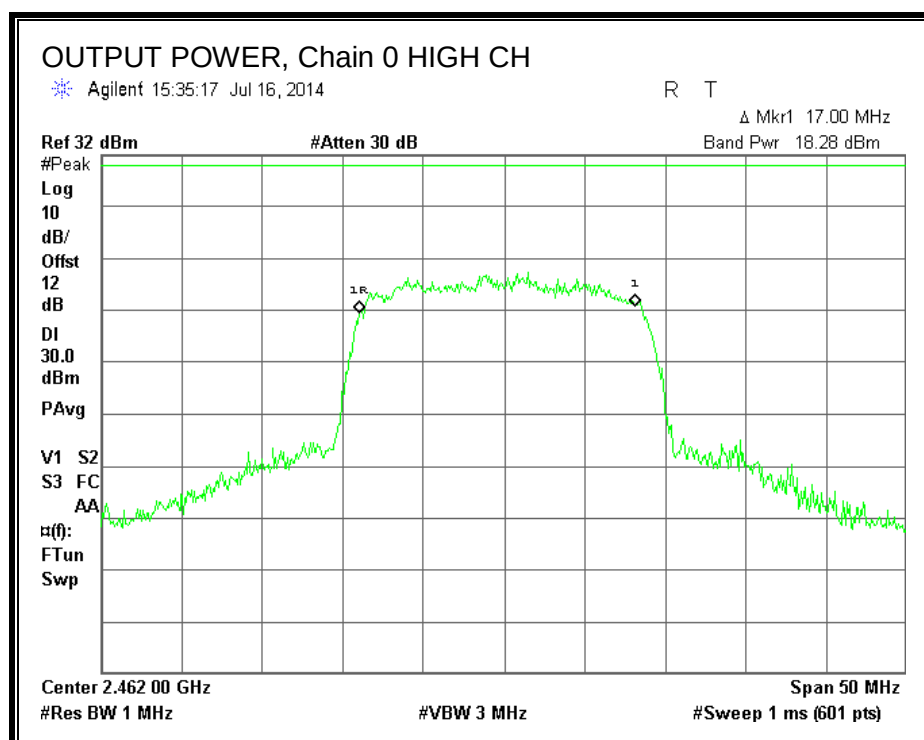
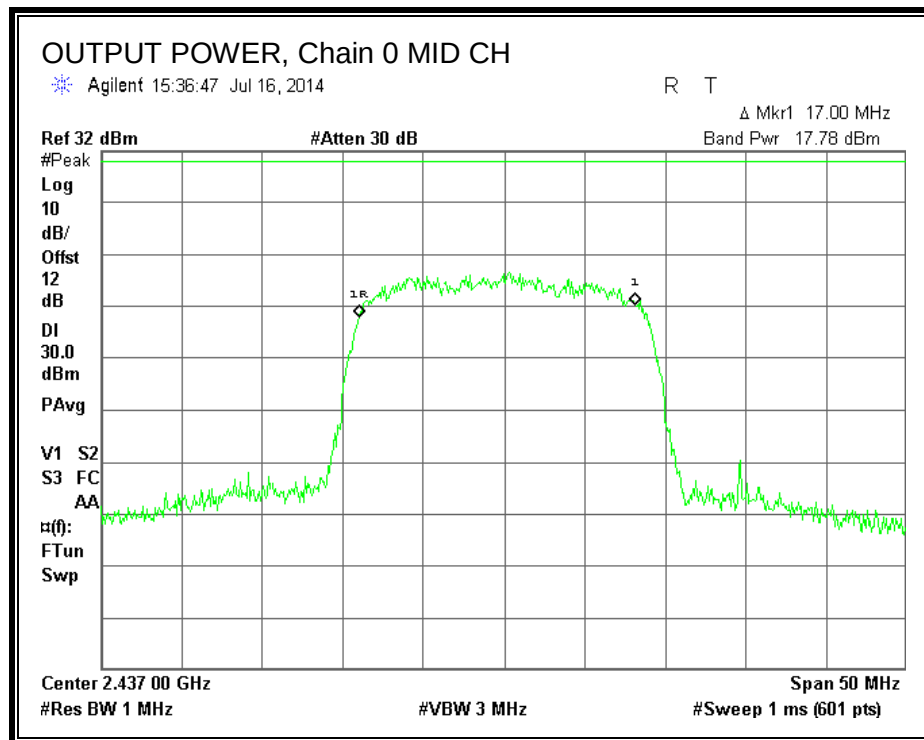
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	17.53	17.53	30.00	-12.47
Mid	2437	17.78	17.78	30.00	-12.22
High	2462	18.28	18.28	30.00	-11.72

OUTPUT POWER, Chain 0





8.4.5 PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

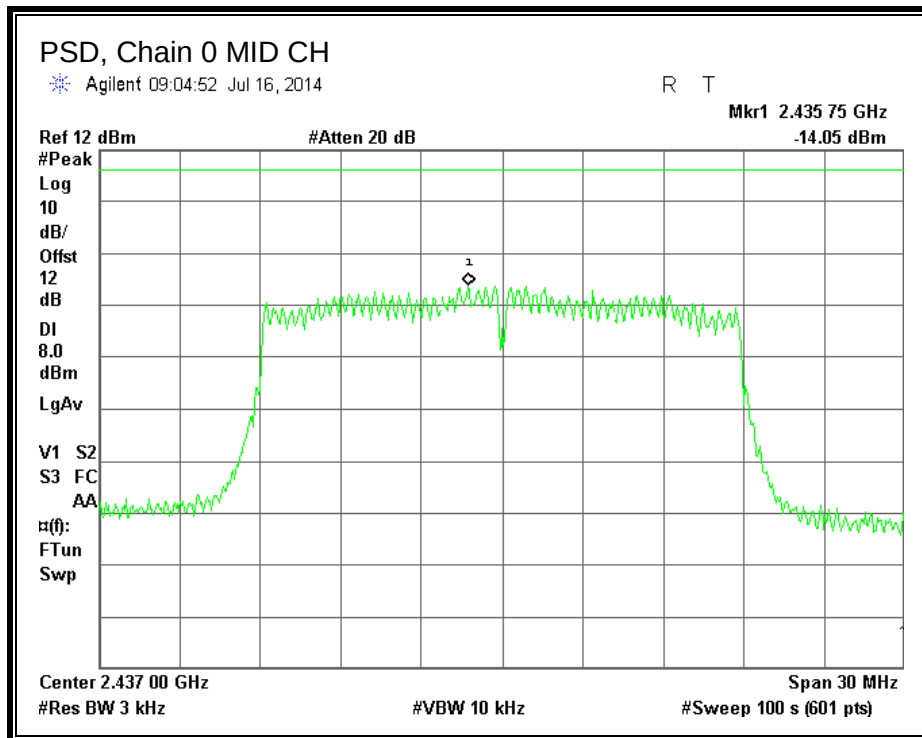
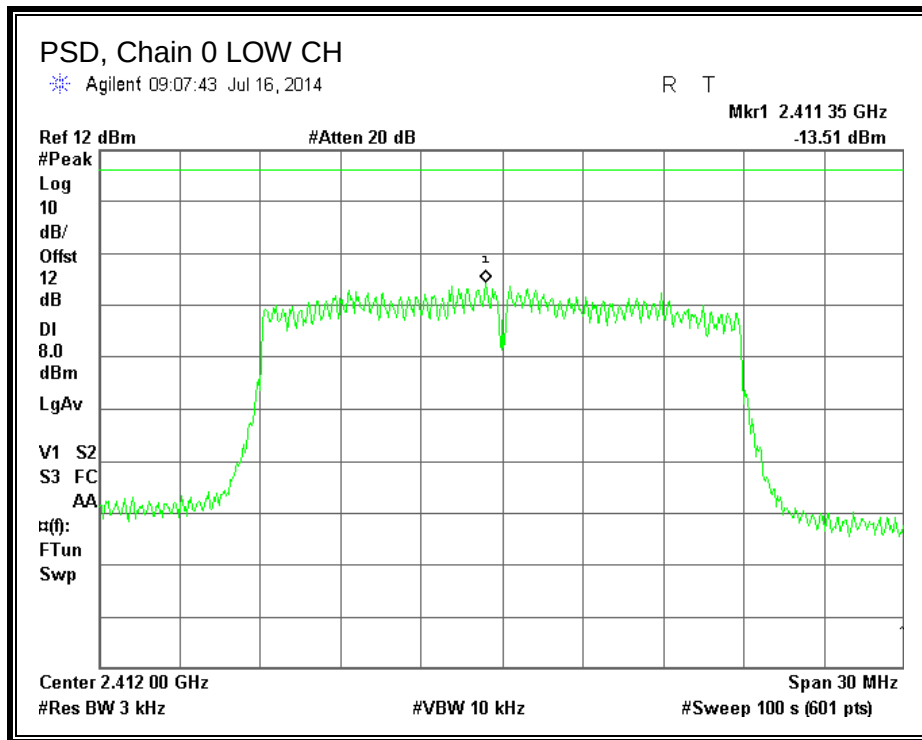
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

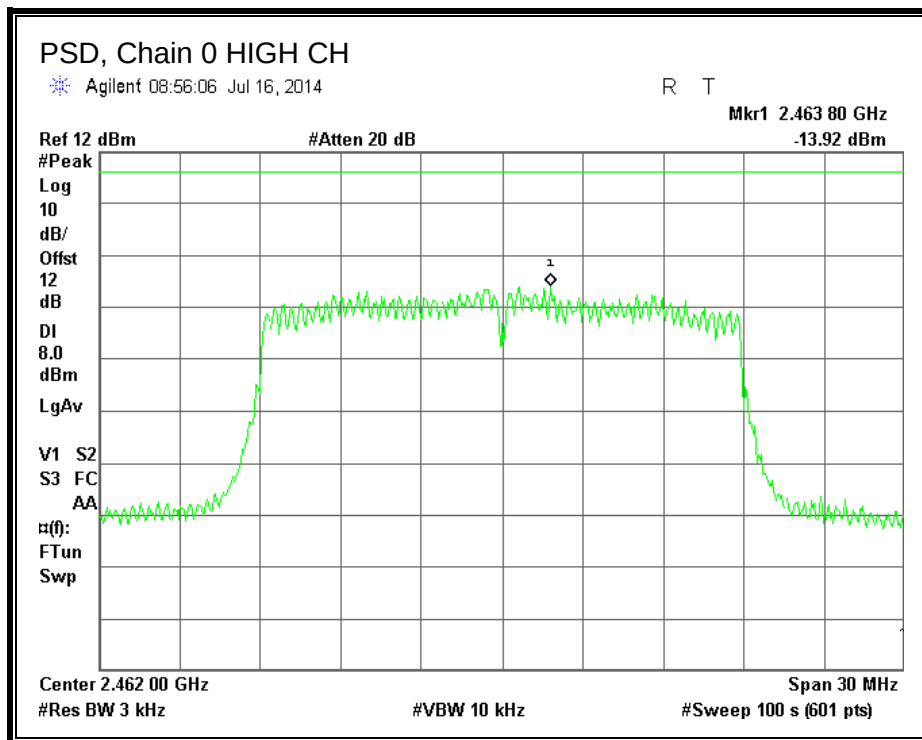
RESULTS ANTENNA PORT 1

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-13.51	8.0	-21.5
Mid	2437	-14.05	8.0	-22.1
High	2462	-13.92	8.0	-21.9

PSD, Chain 0



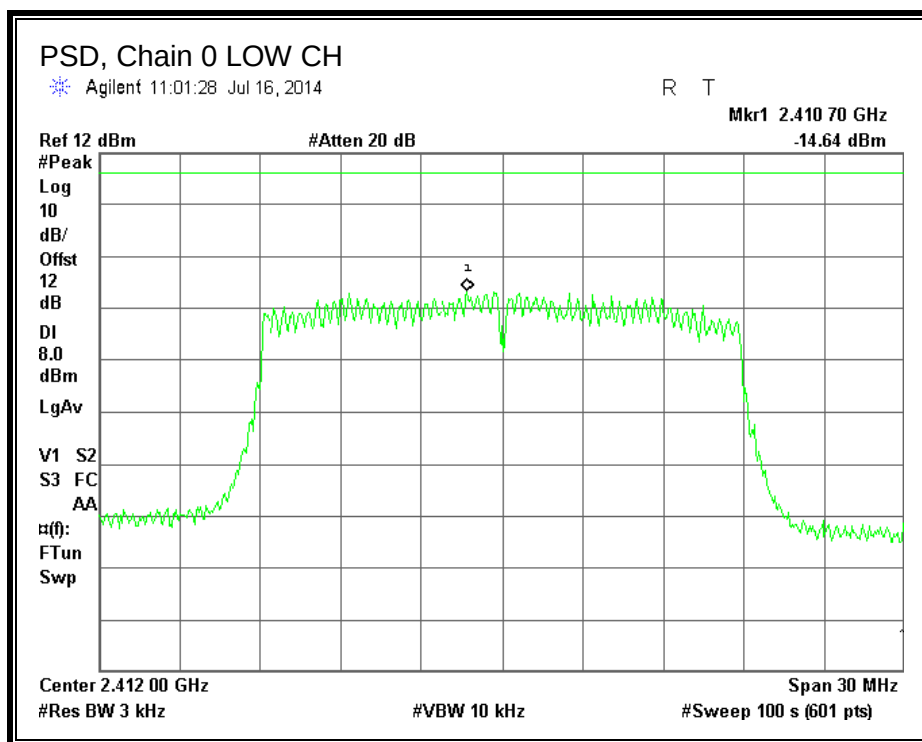


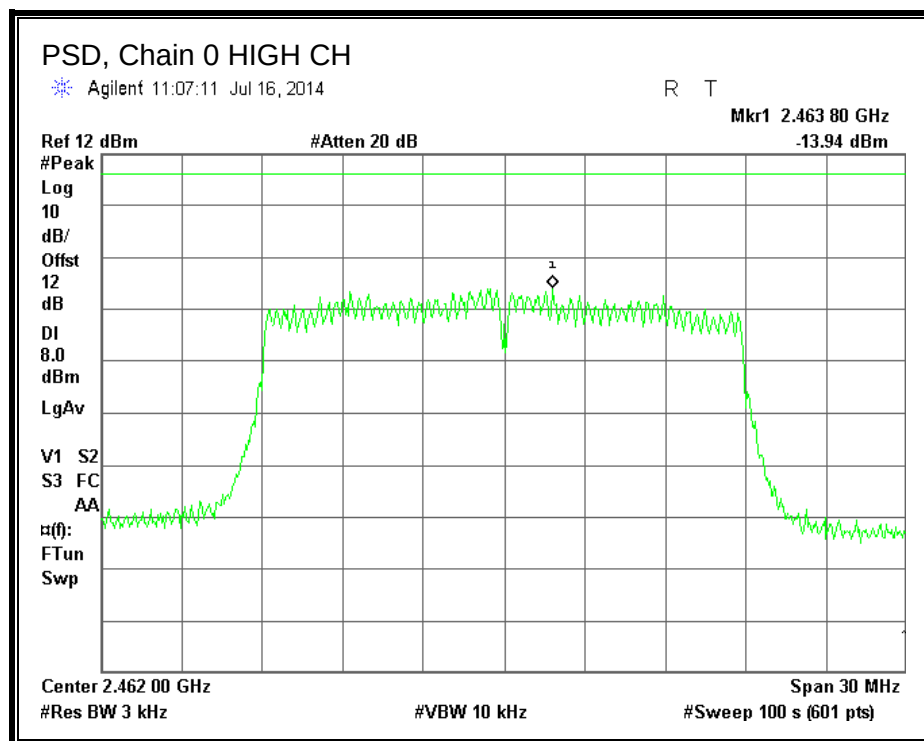
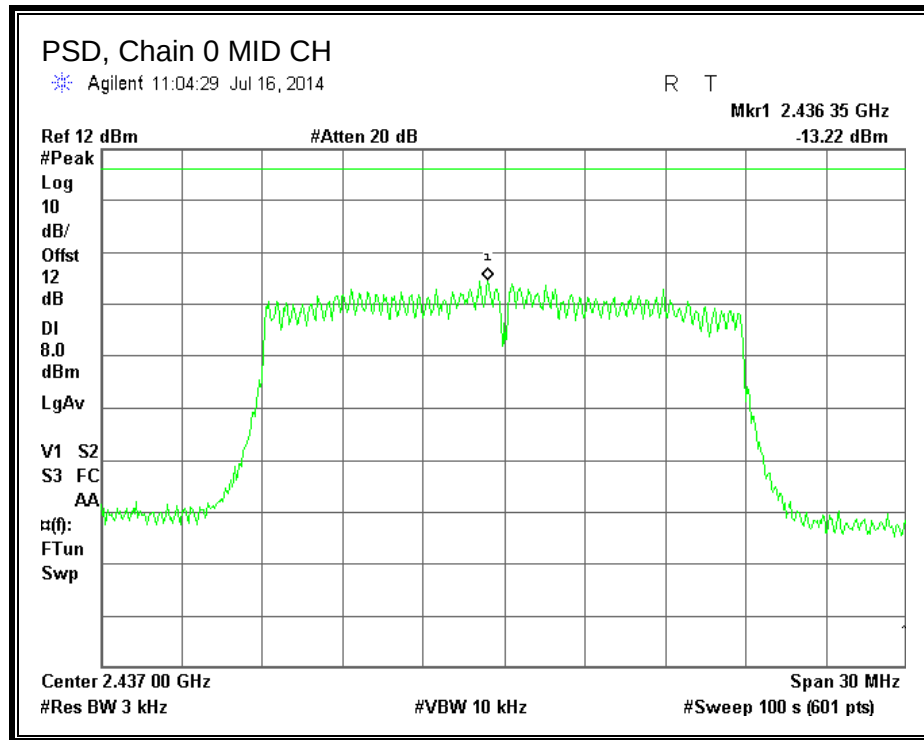
RESULTS ANTENNA PORT 2

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.64	8.0	-22.6
Mid	2437	-13.22	8.0	-21.2
High	2462	-13.94	8.0	-21.9

PSD, Chain 0





8.4.6 OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

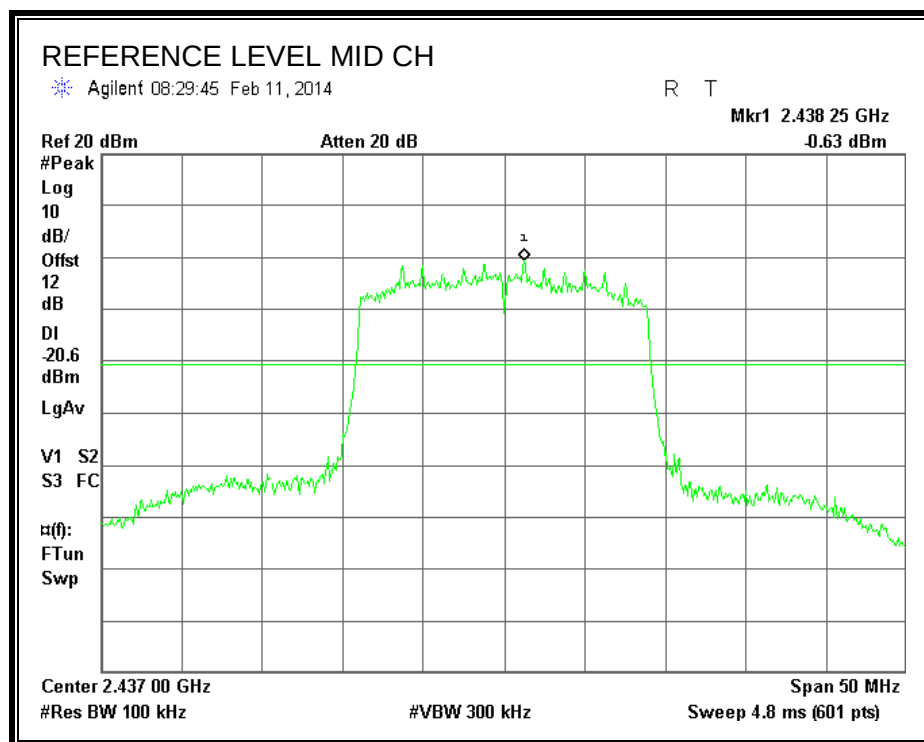
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

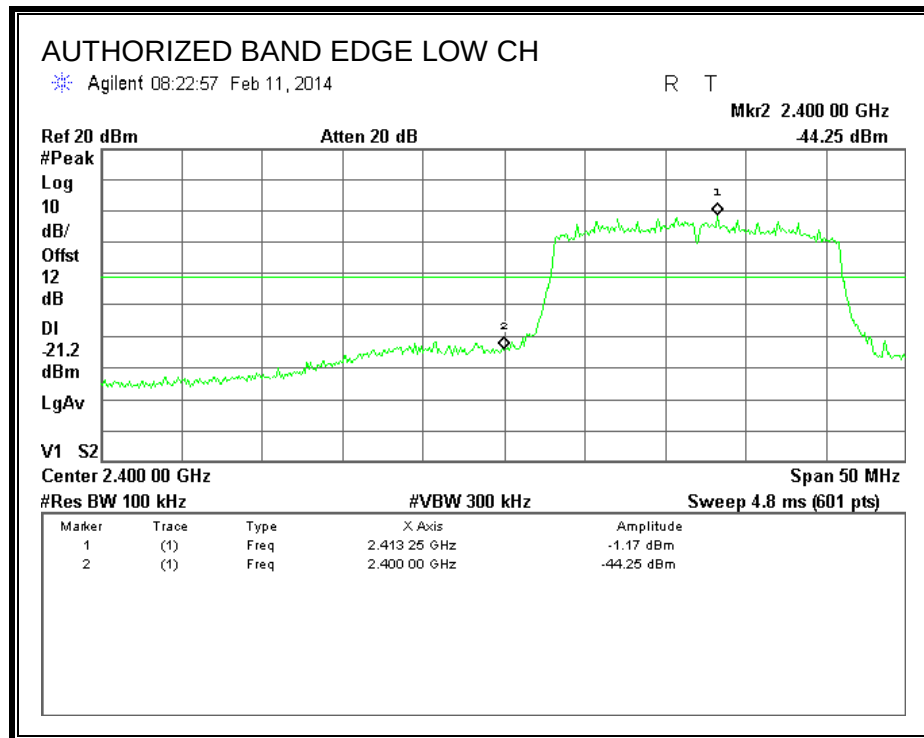
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS ANTENNA PORT 1

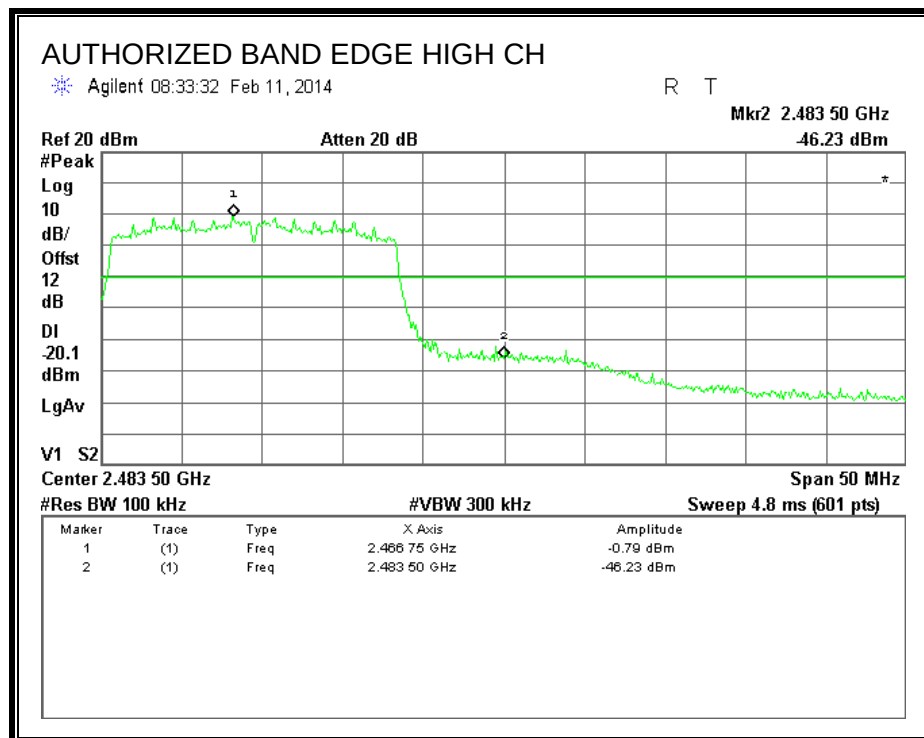
IN-BAND REFERENCE LEVEL



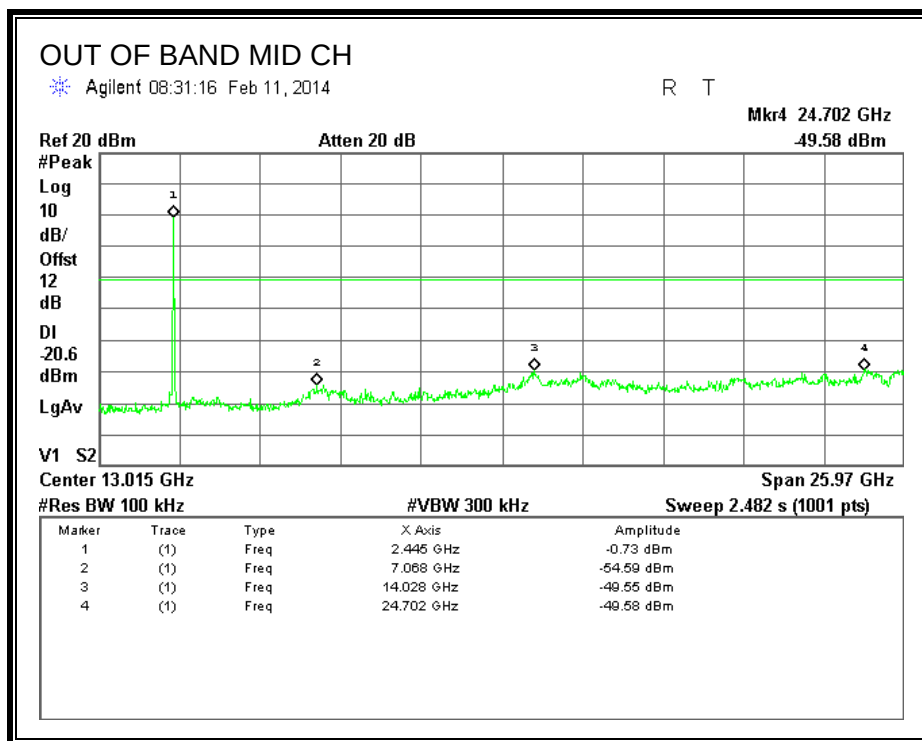
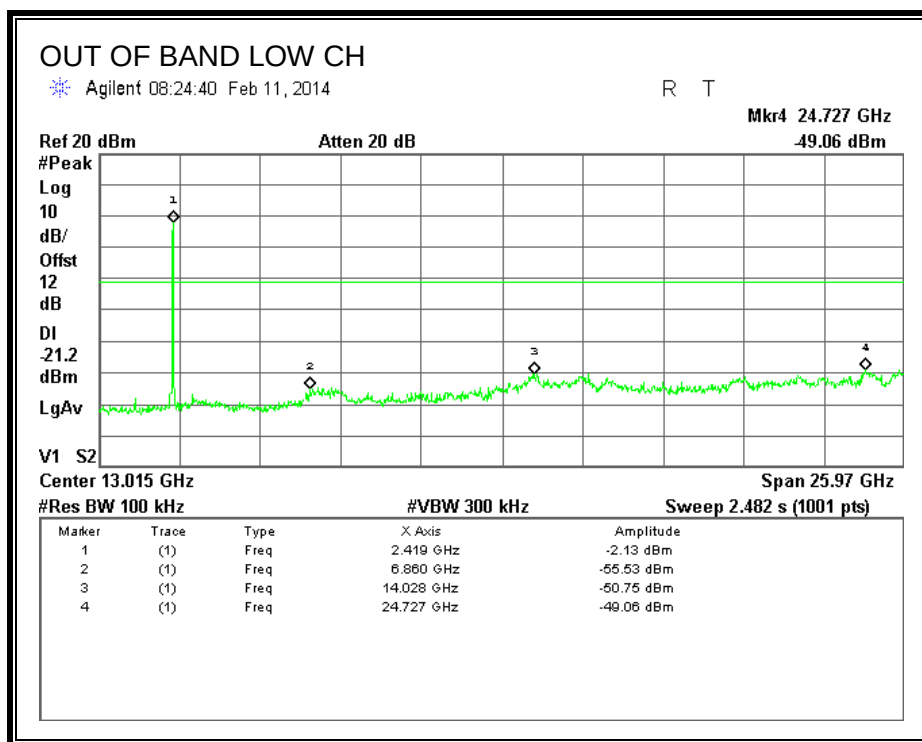
LOW CHANNEL BANDEDGE

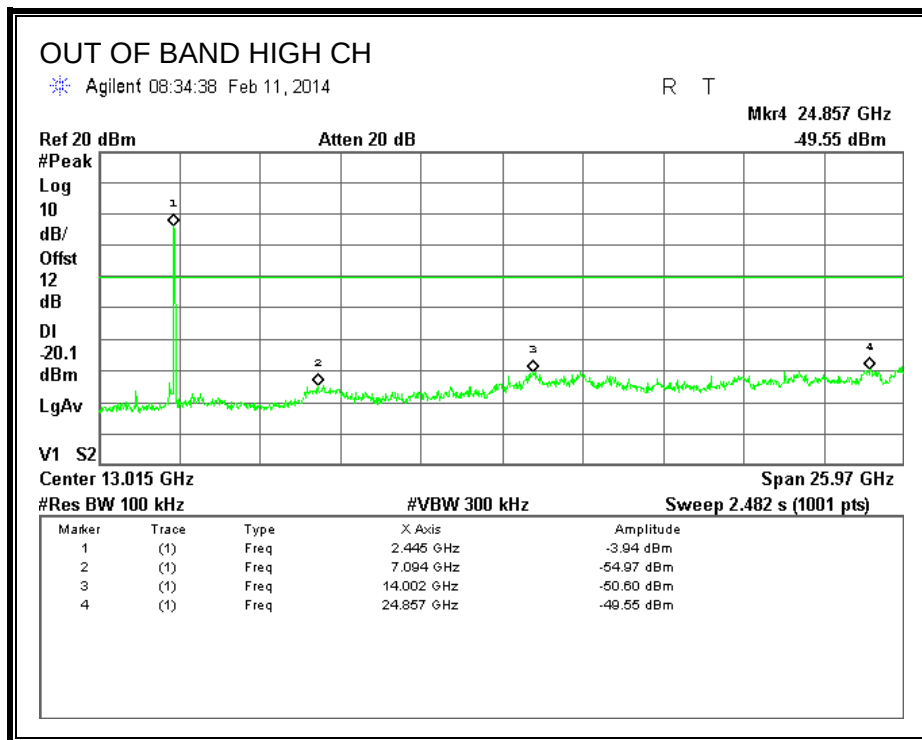


HIGH CHANNEL BANDEDGE



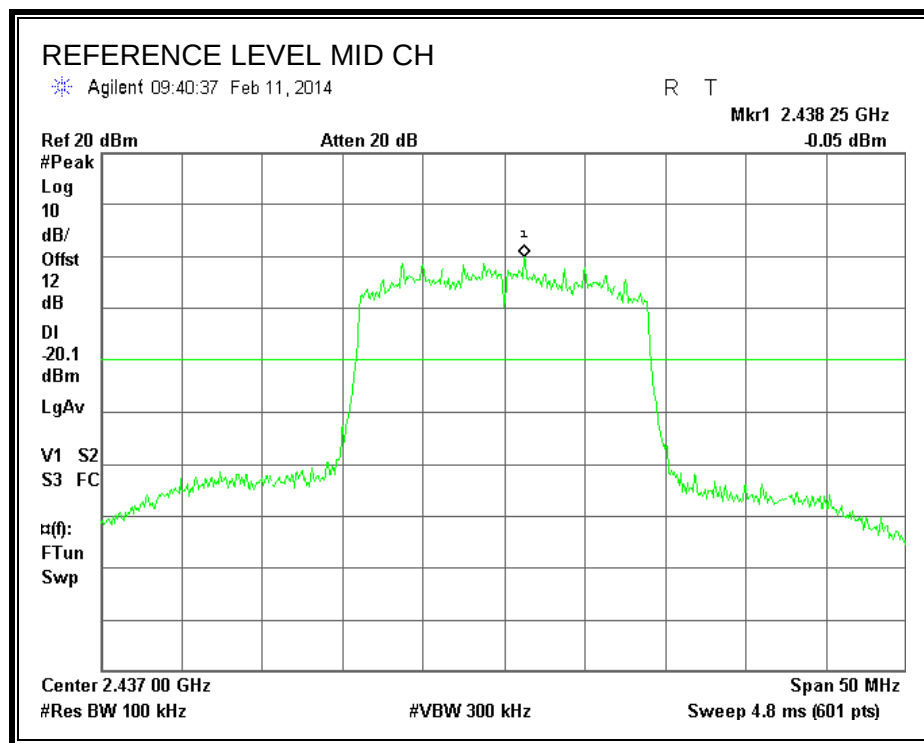
OUT-OF-BAND EMISSIONS



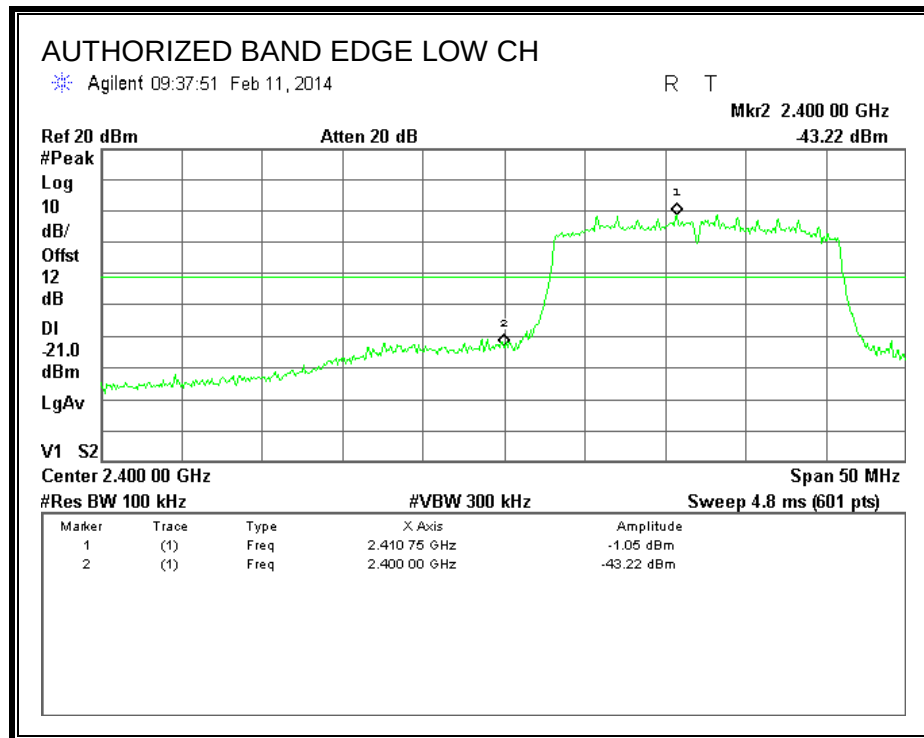


RESULTS ANTENNA PORT 2

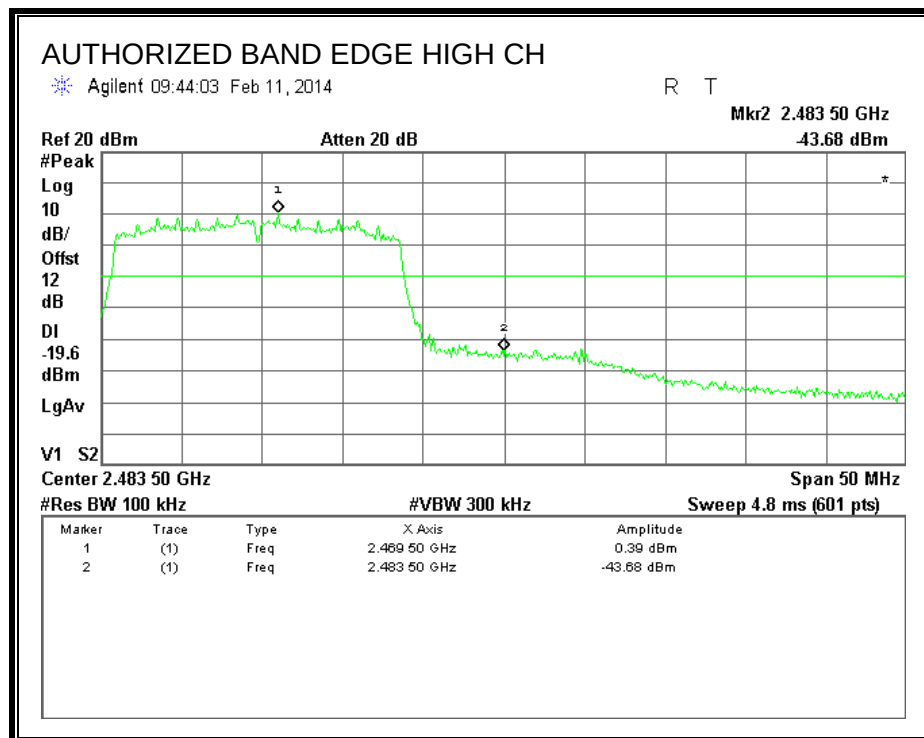
IN-BAND REFERENCE LEVEL



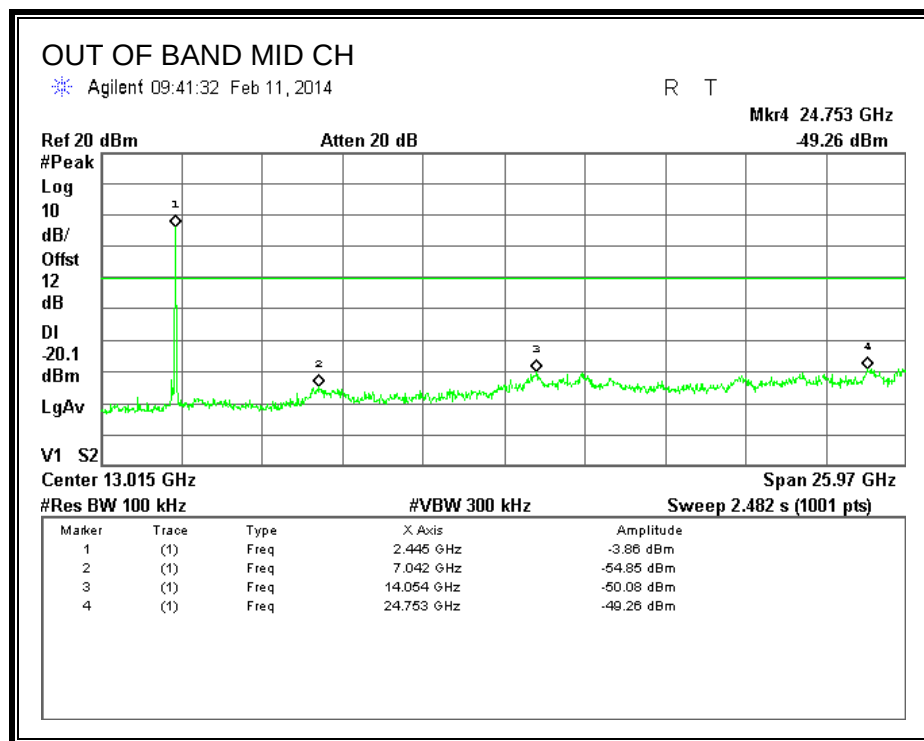
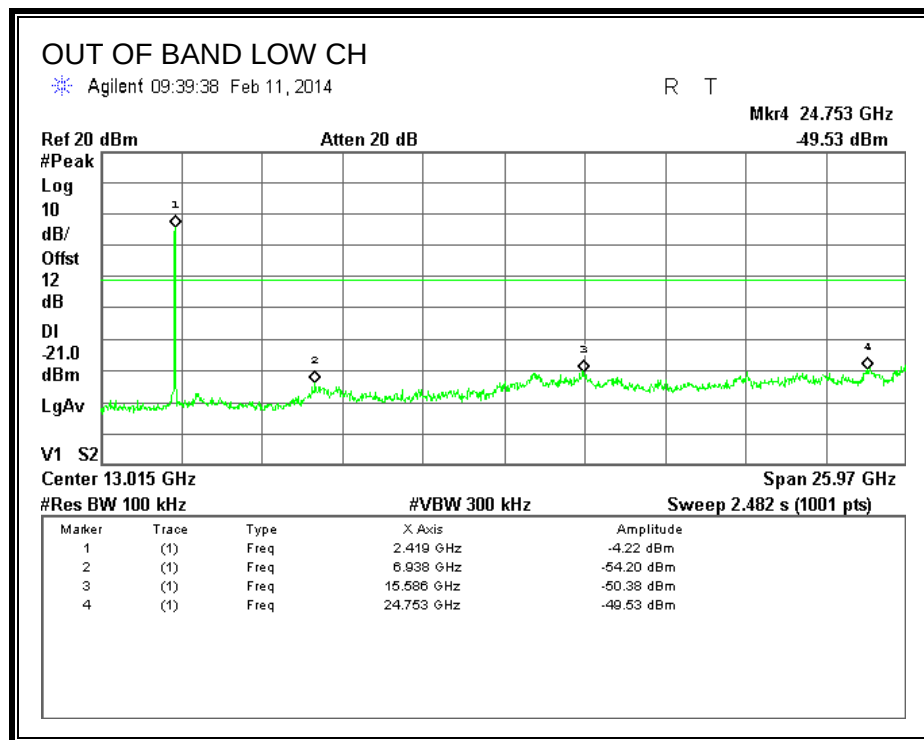
LOW CHANNEL BANDEDGE

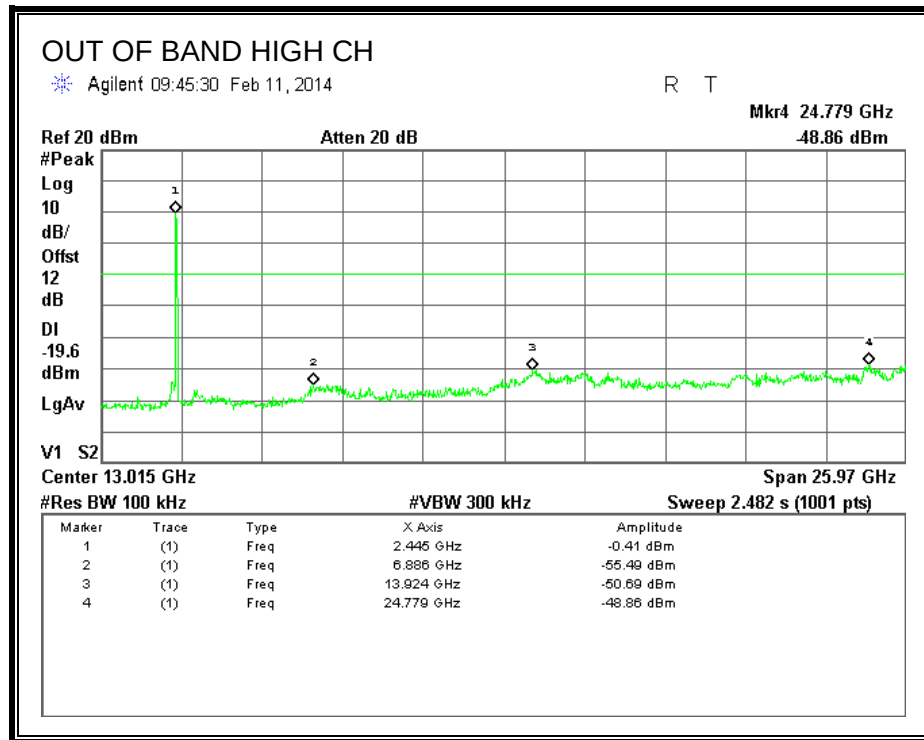


HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS





8.5.802.11n QAM 64 MODE IN THE 2.4 GHz BAND

8.5.1 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set to 100 KHz and the VBW to 300 KHz $\geq 3 \times$ RBW, peak detector and max hold.

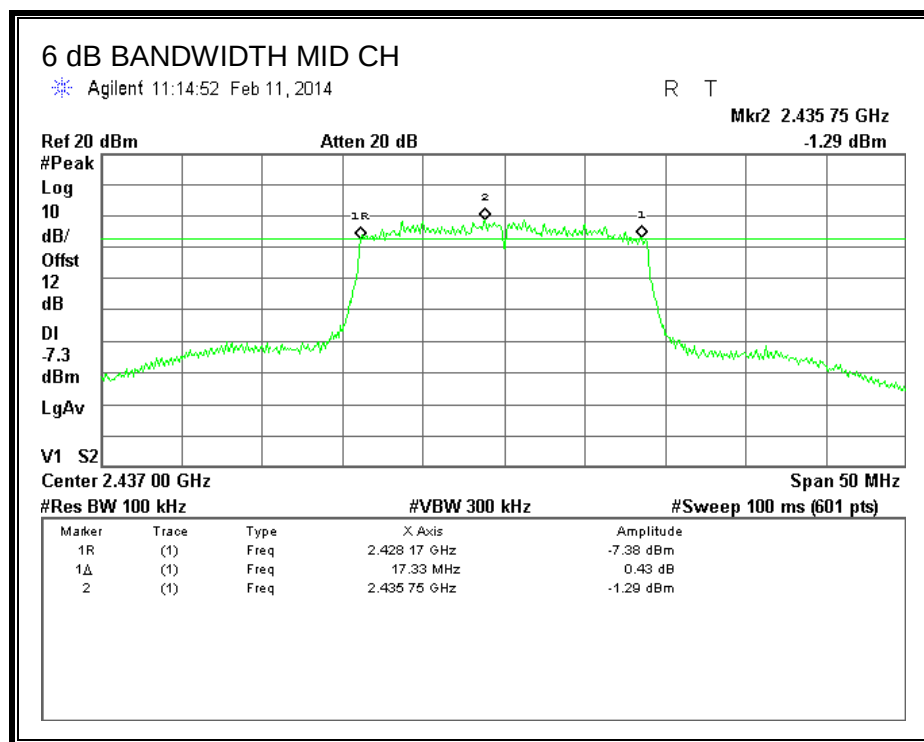
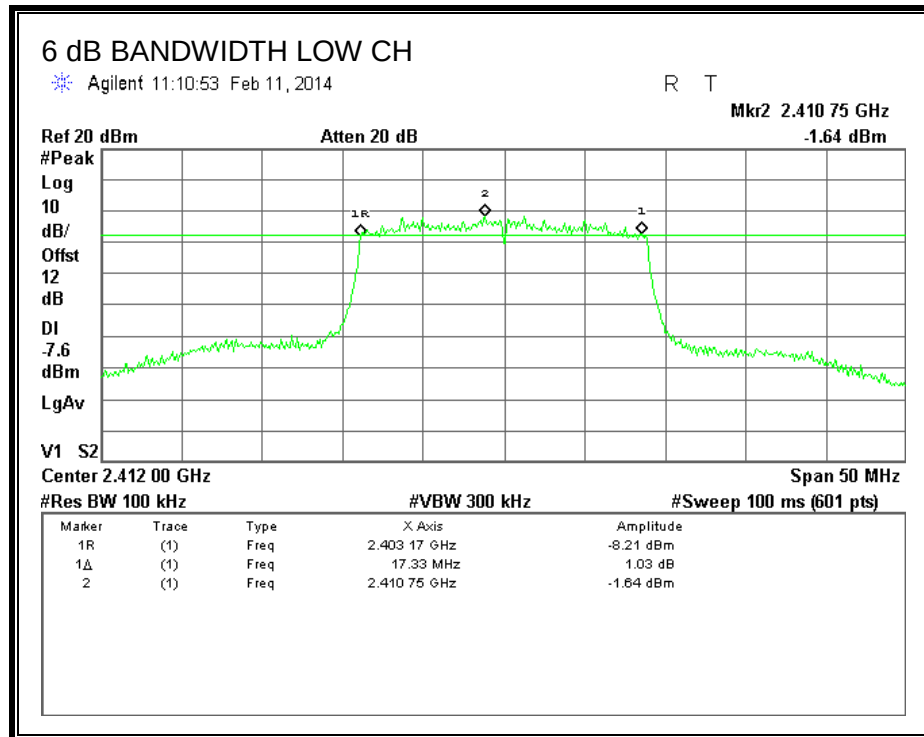
RESULTS ANTENNA PORT 1

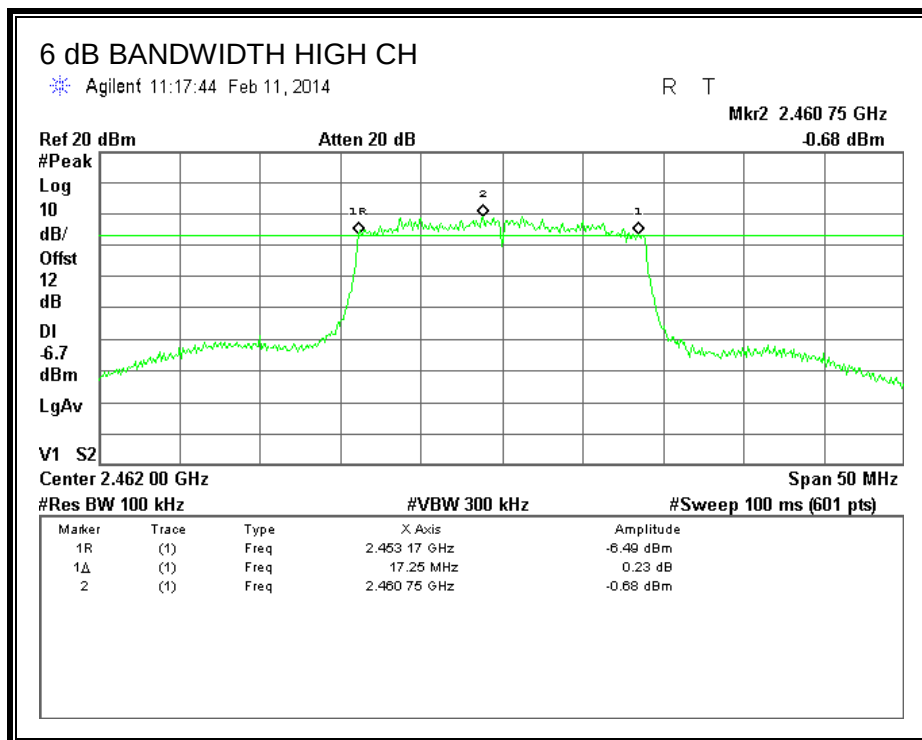
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.330	0.5
Mid	2437	17.330	0.5
High	2462	17.250	0.5

RESULTS ANTENNA PORT 2

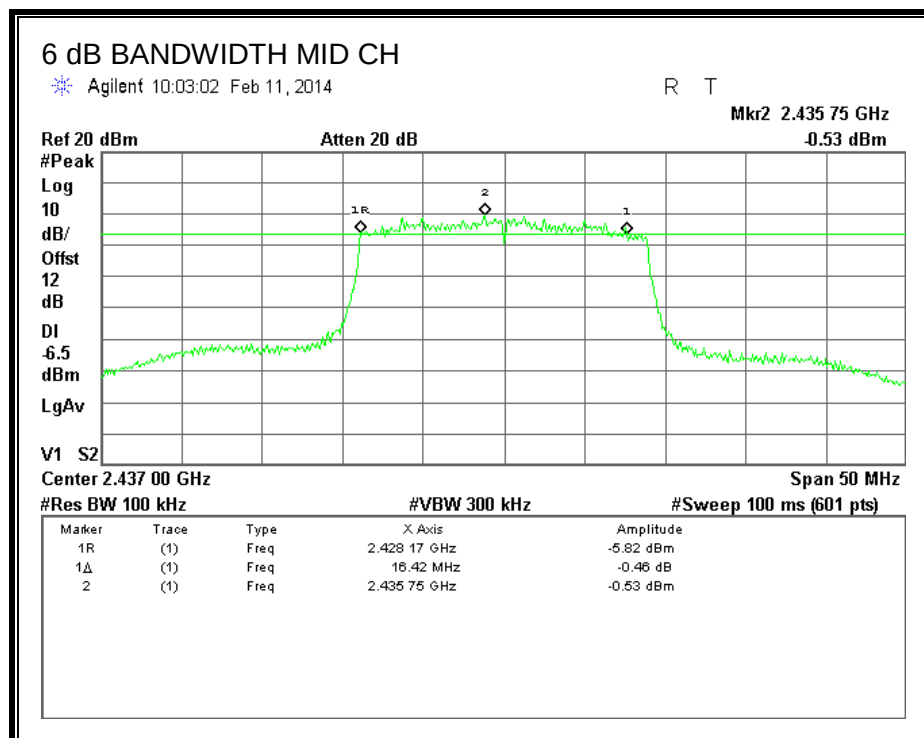
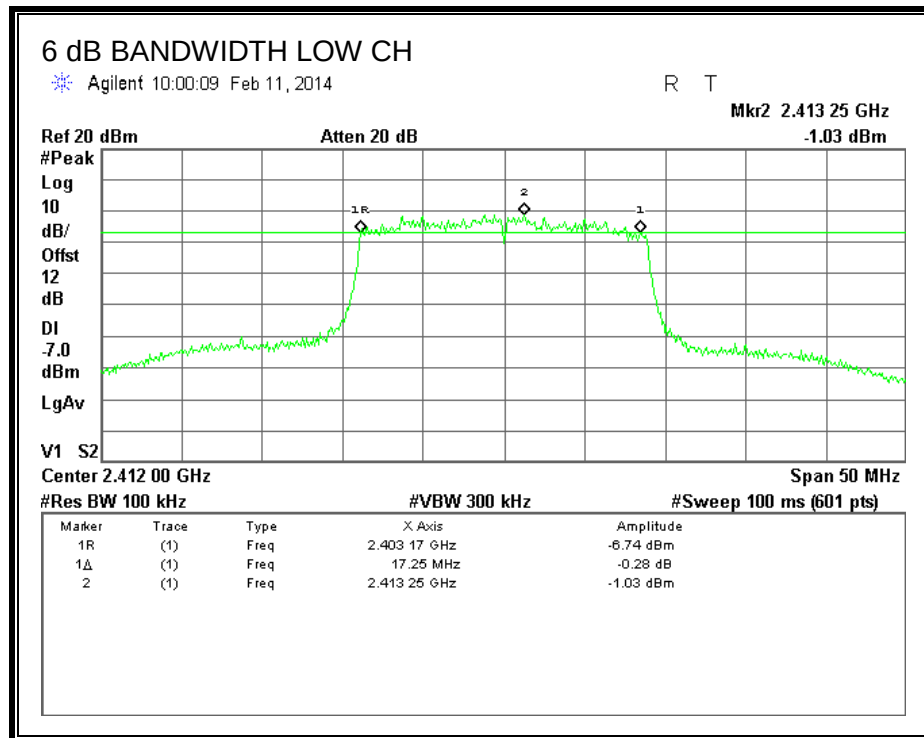
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.250	0.5
Mid	2437	16.420	0.5
High	2462	17.250	0.5

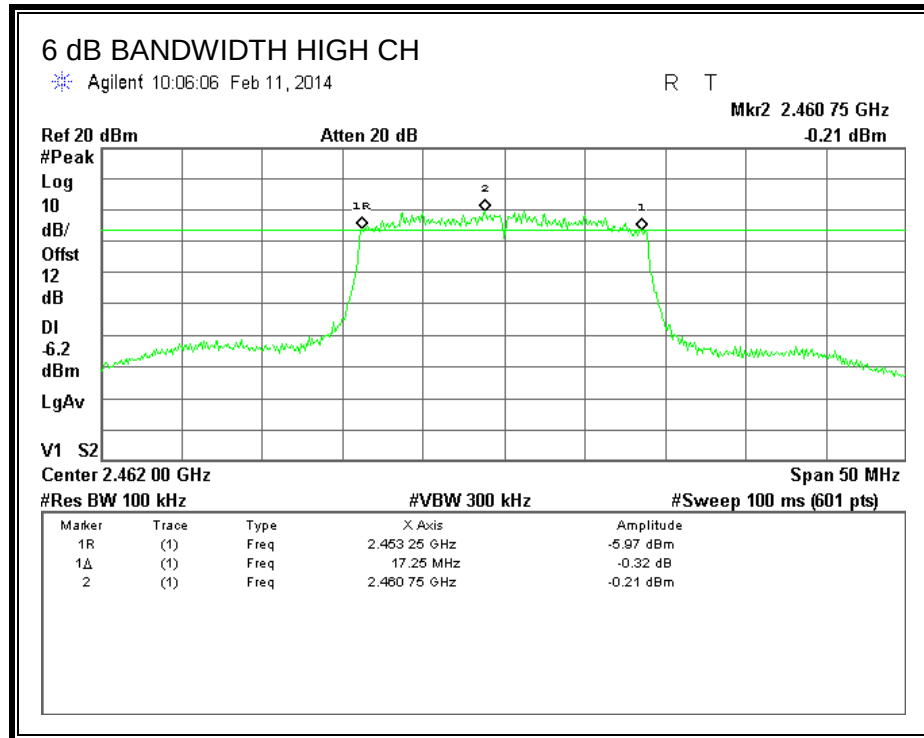
6 dB BANDWIDTH ANTENNA PORT 1





6 dB BANDWIDTH ANTENNA PORT 2





8.5.2 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

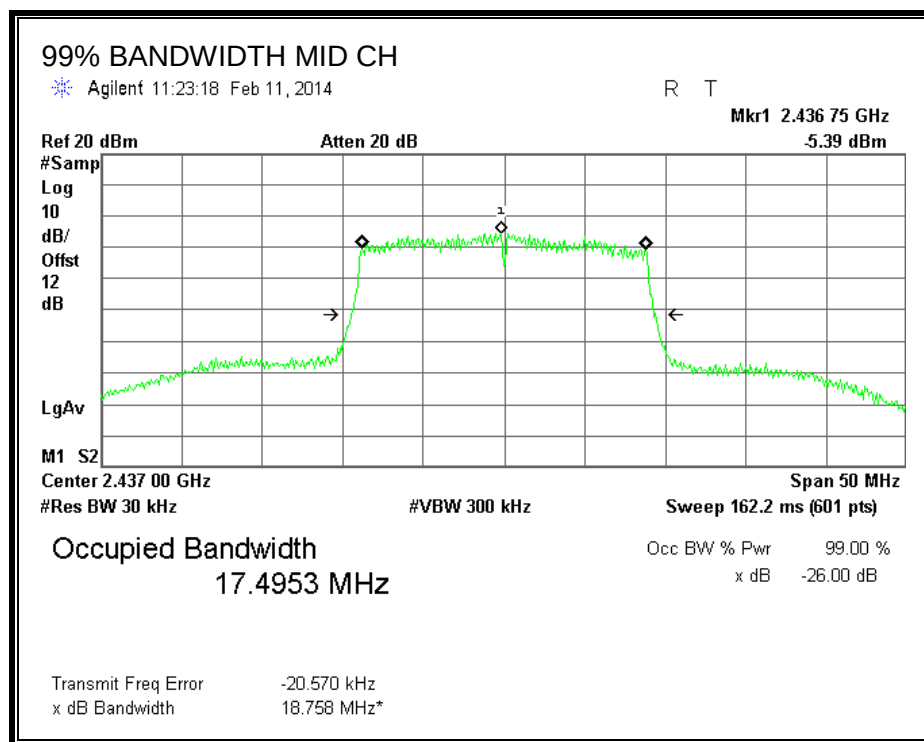
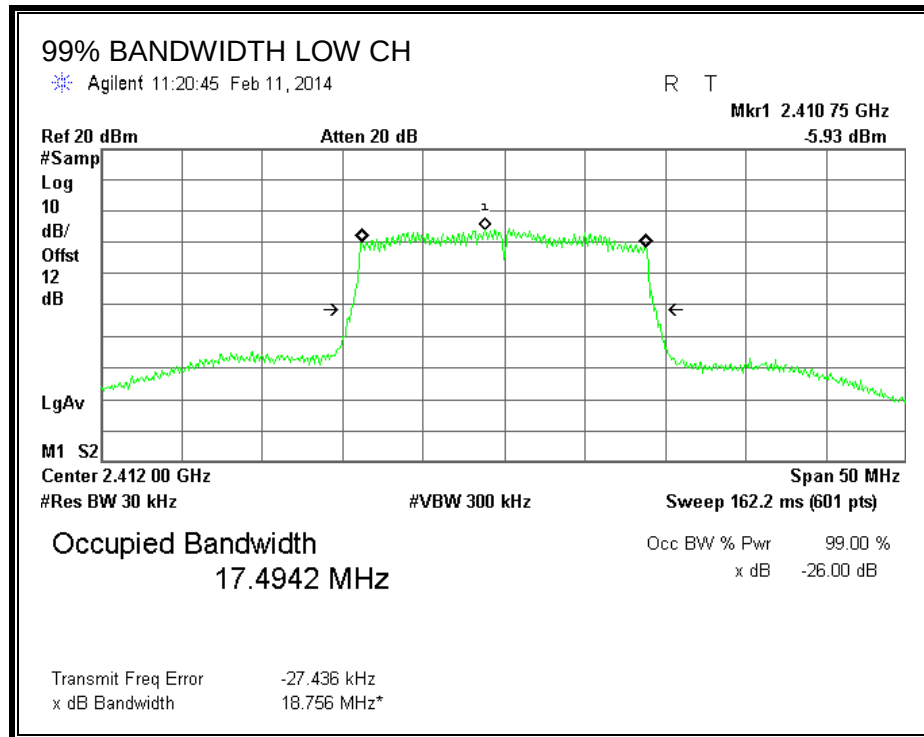
RESULTS ANTENNA PORT 1

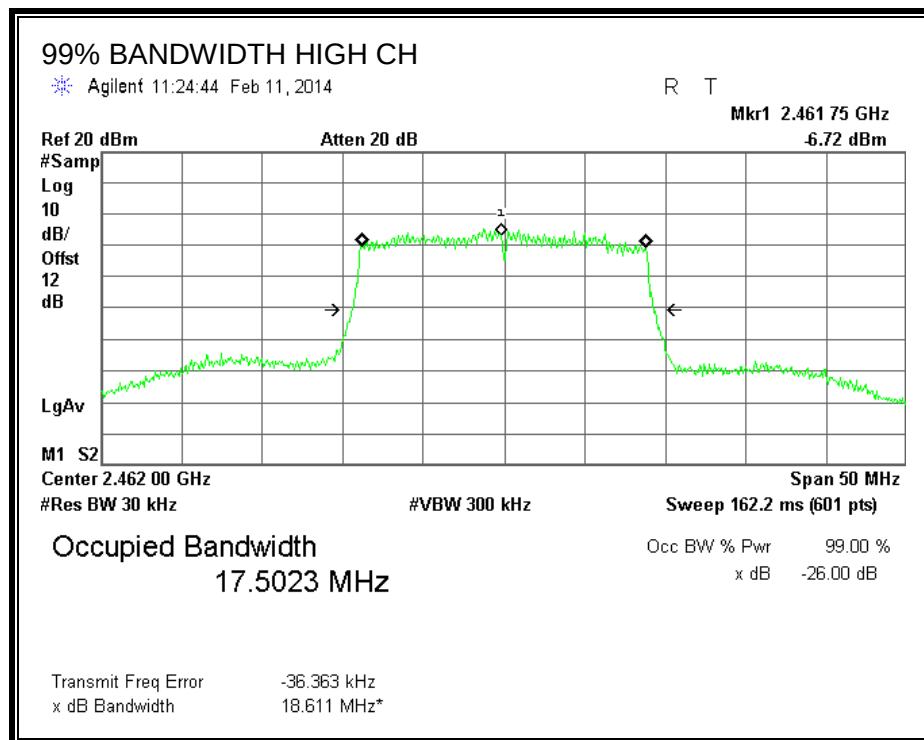
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.4942
Mid	2437	17.4953
High	2462	17.5023

RESULTS ANTENNA PORT 2

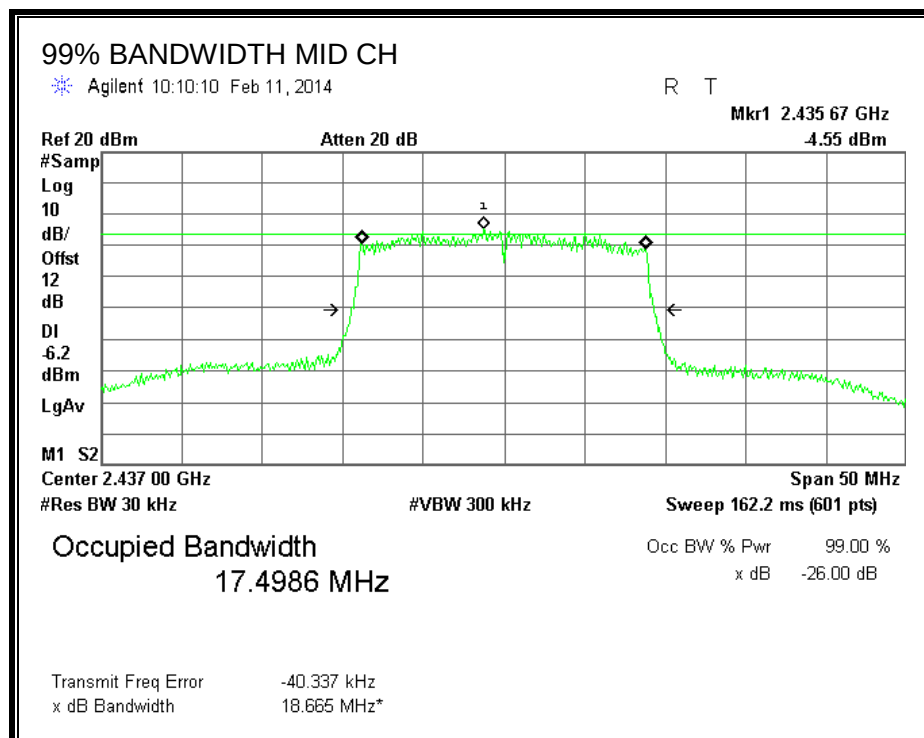
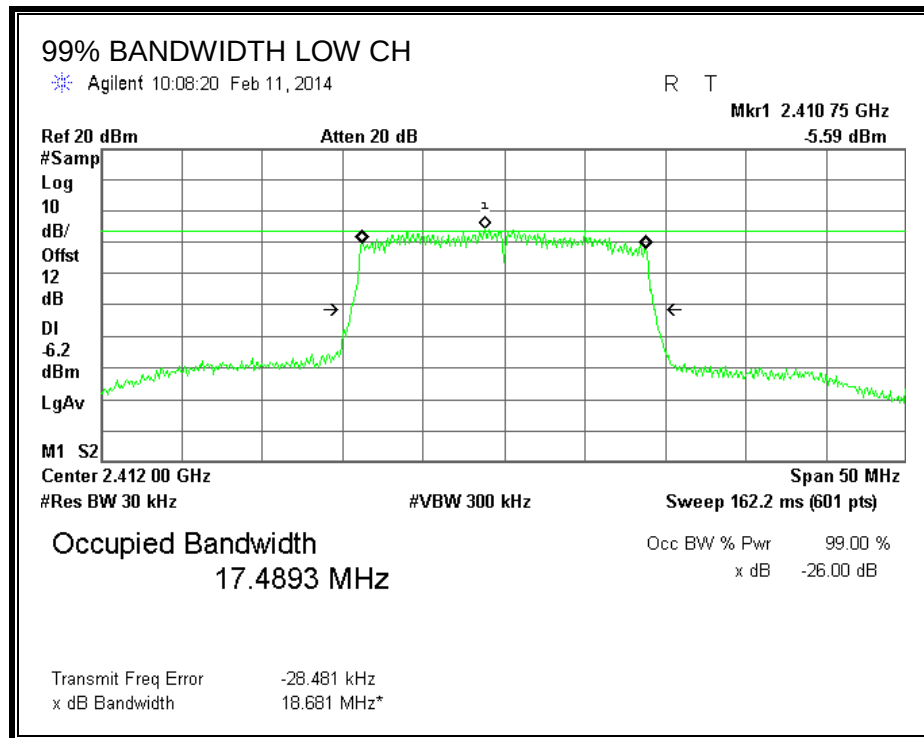
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.4893
Mid	2437	17.4986
High	2462	17.5184

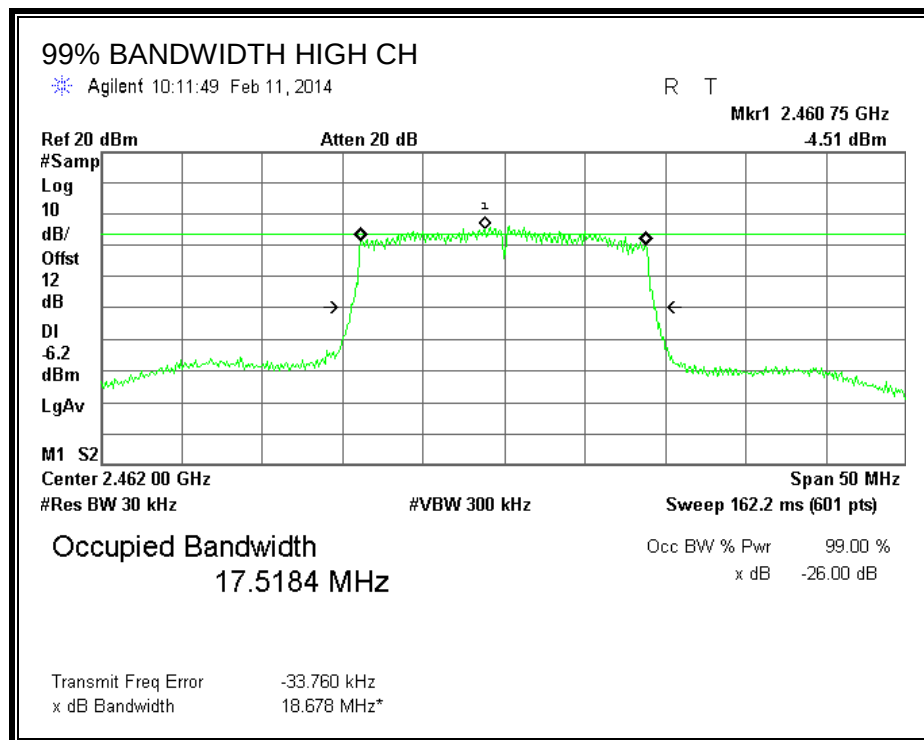
99% BANDWIDTH ANTENNA PORT 1





99% BANDWIDTH ANTENNA PORT 2





8.5.3 AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS ANTENNA PORT 1

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.15
Mid	2437	9.24
High	2462	9.49

RESULTS ANTENNA PORT 2

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.52
Mid	2437	9.64
High	2462	9.6

8.5.4 OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS ANTENNA PORT 1

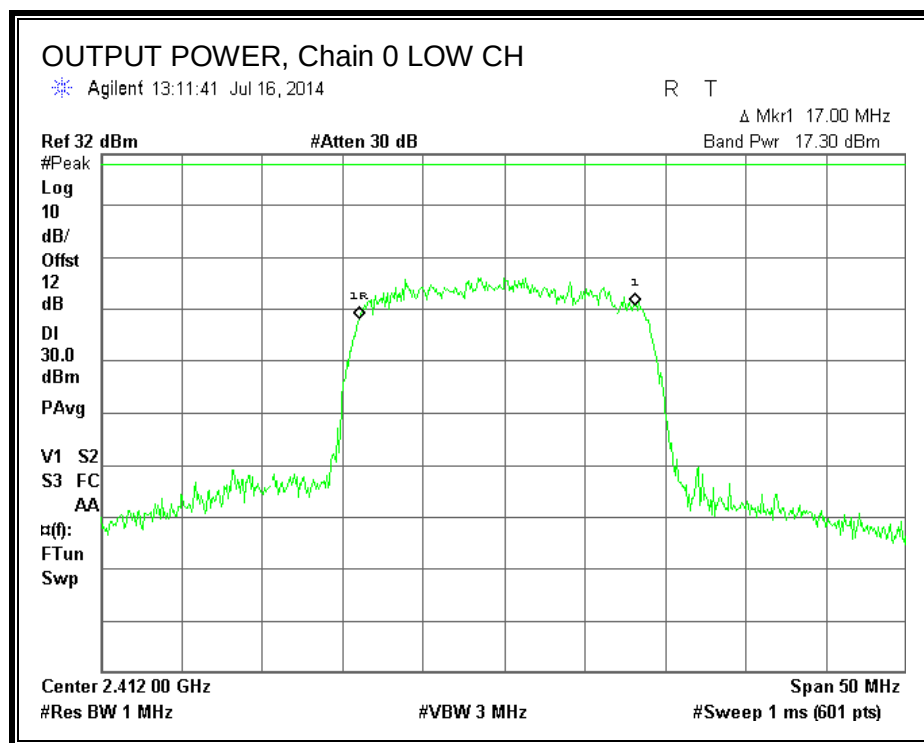
Limits

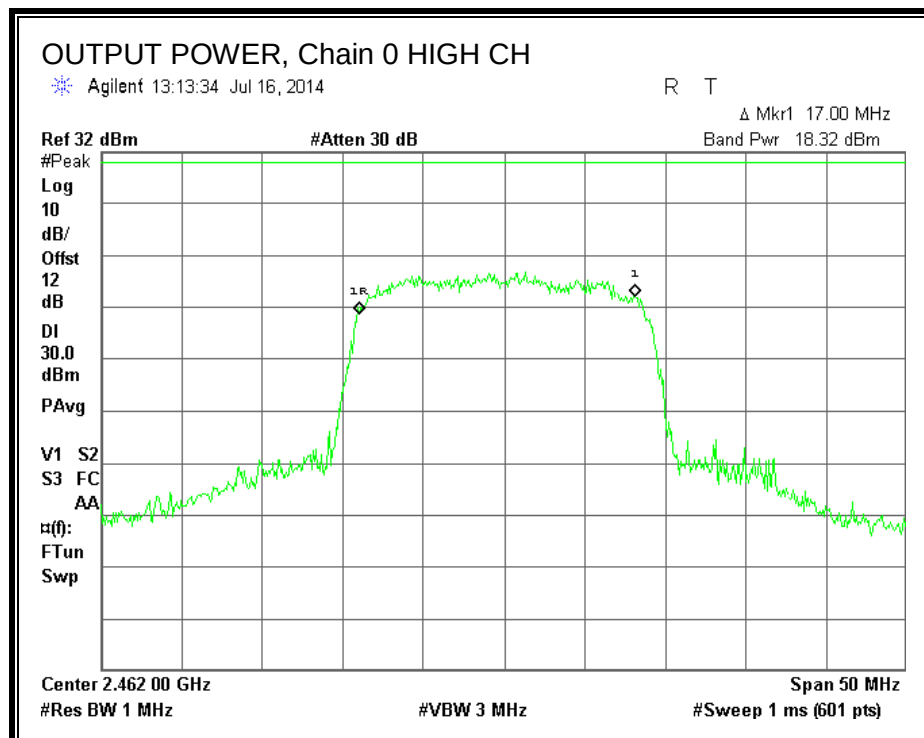
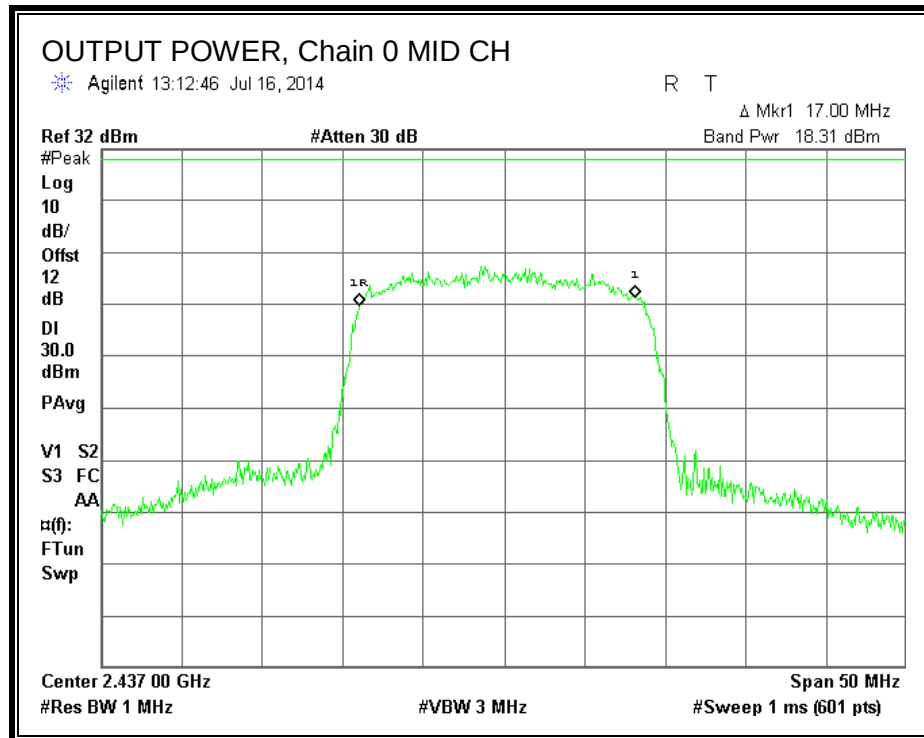
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	17.30	17.30	30.00	-12.70
Mid	2437	18.31	18.31	30.00	-11.69
High	2462	18.32	18.32	30.00	-11.68

OUTPUT POWER, Chain 0





RESULTS ANTENNA PORT 2

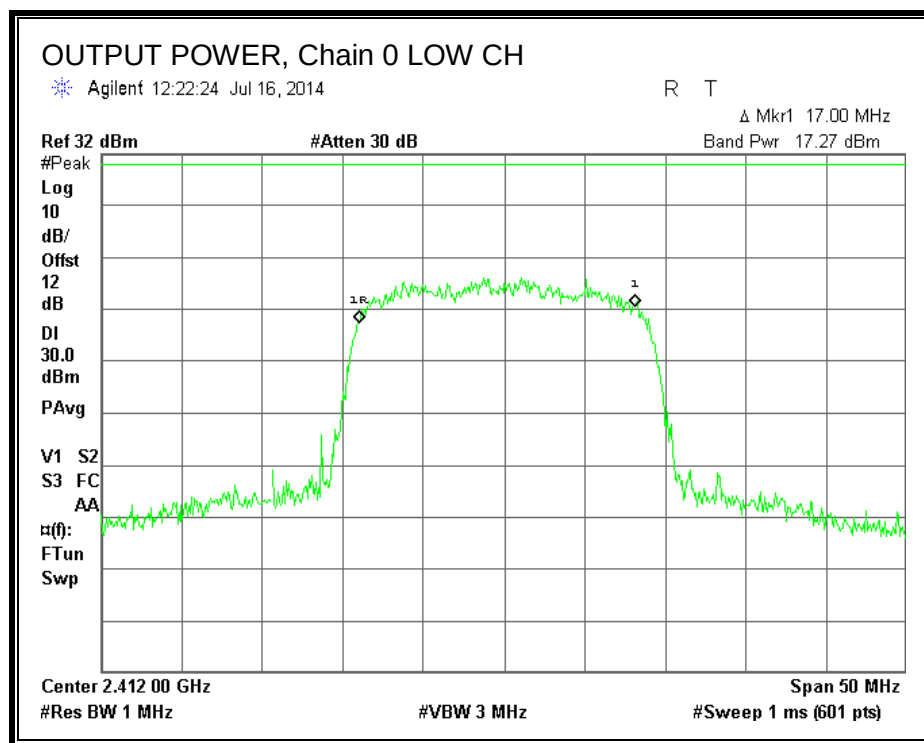
Limits

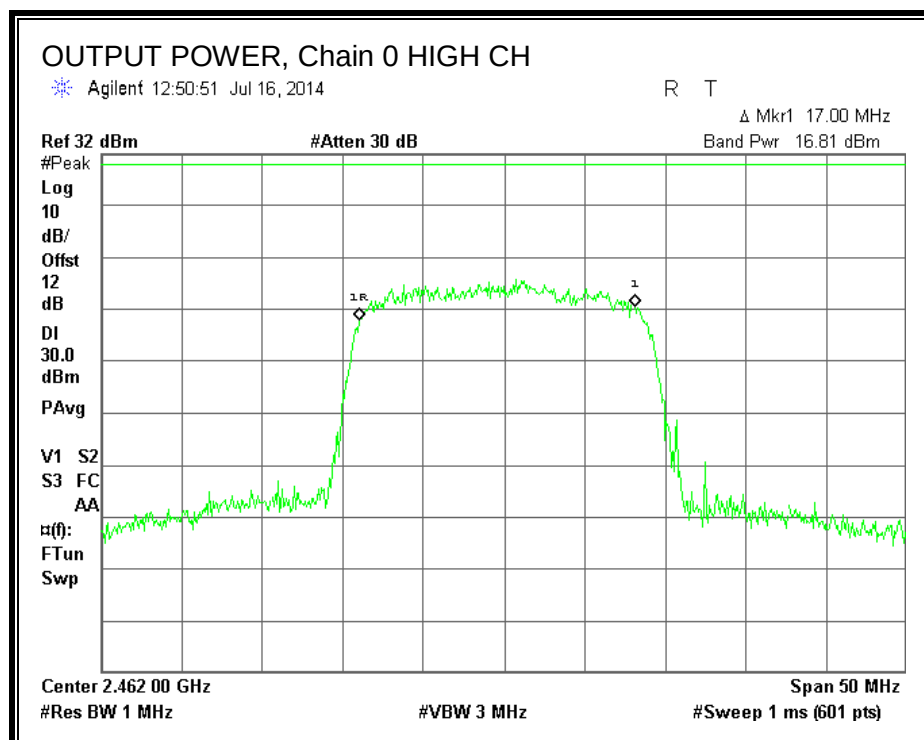
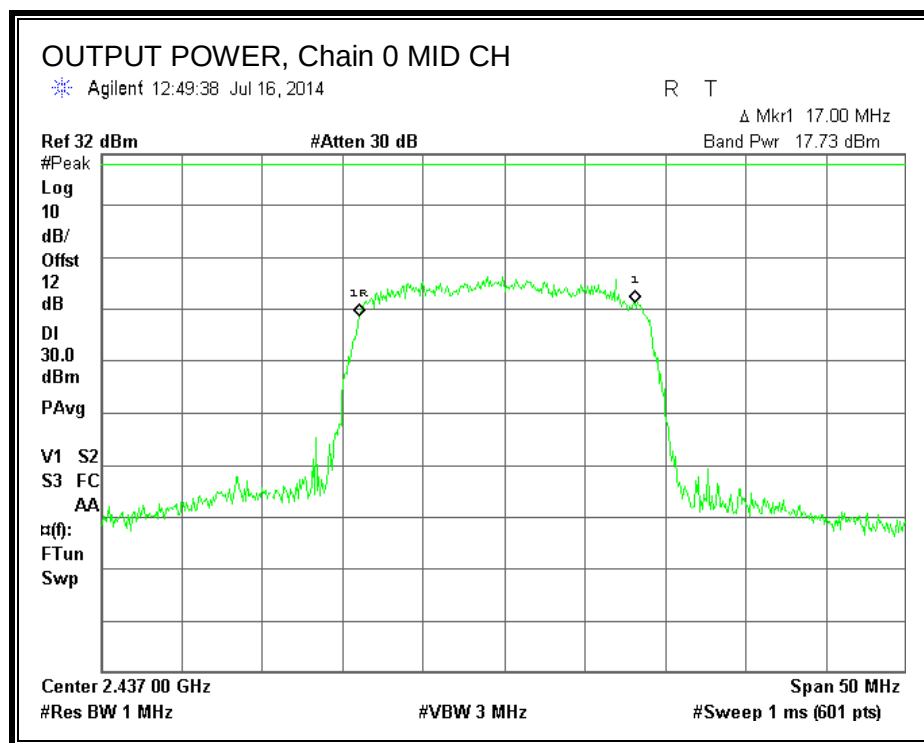
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	17.27	17.27	30.00	-12.73
Mid	2437	17.73	17.73	30.00	-12.27
High	2462	16.81	16.81	30.00	-13.19

OUTPUT POWER, Chain 0





8.5.5 PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

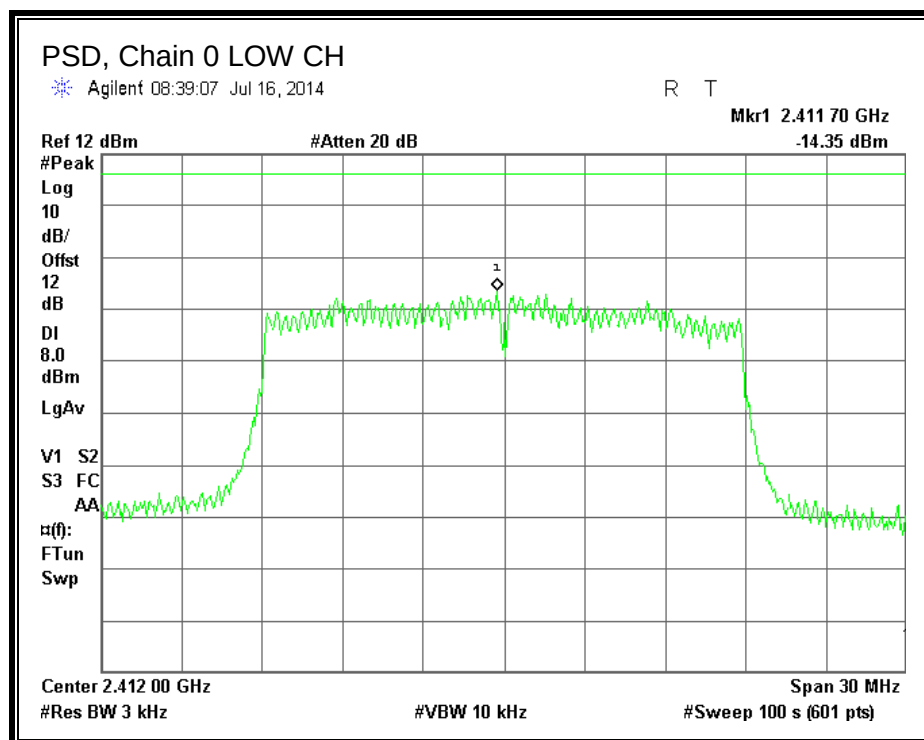
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

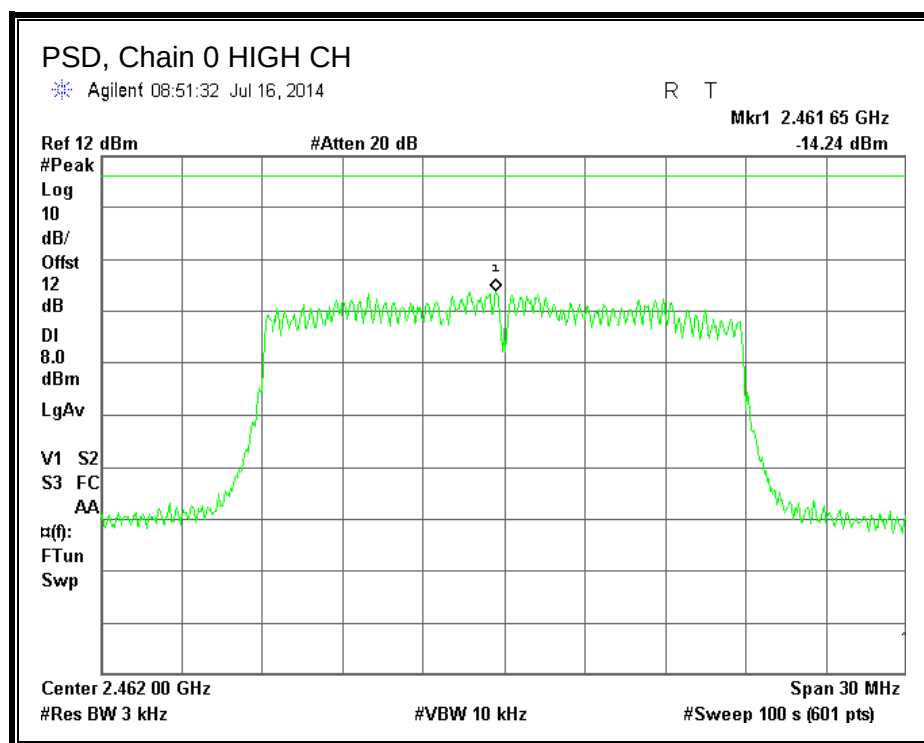
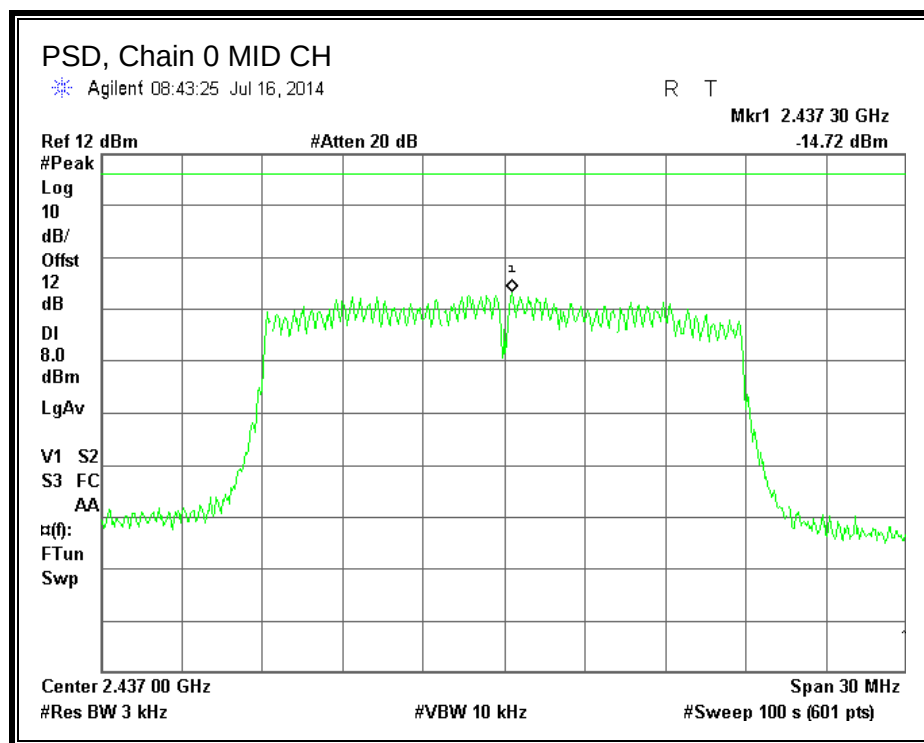
RESULTS ANTENNA PORT 1

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.35	8.0	-22.4
Mid	2437	-14.72	8.0	-22.7
High	2462	-14.24	8.0	-22.2

PSD, Chain 0



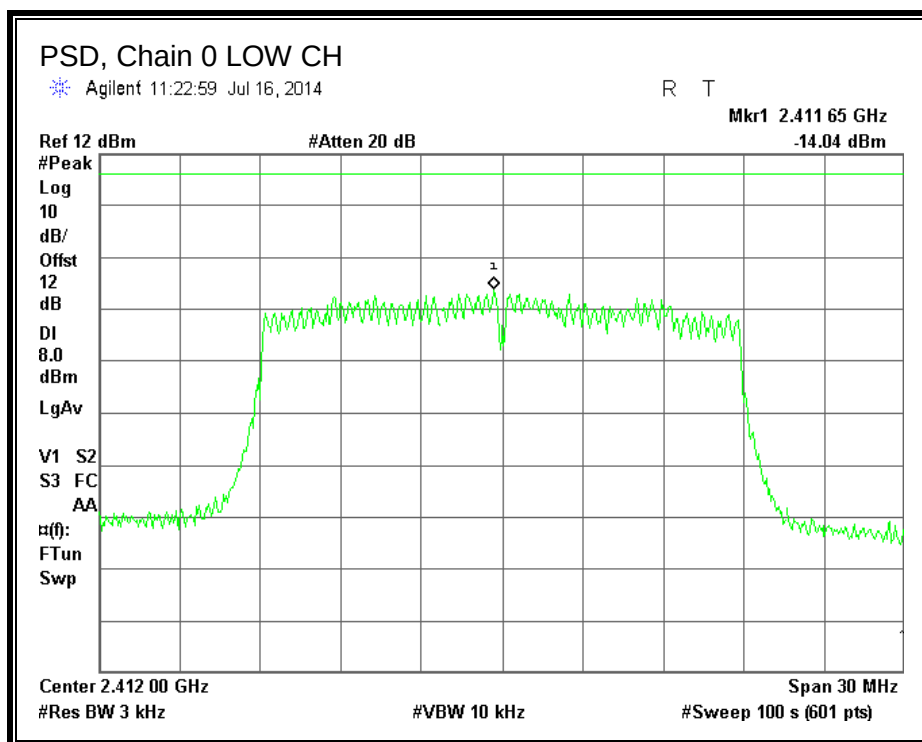


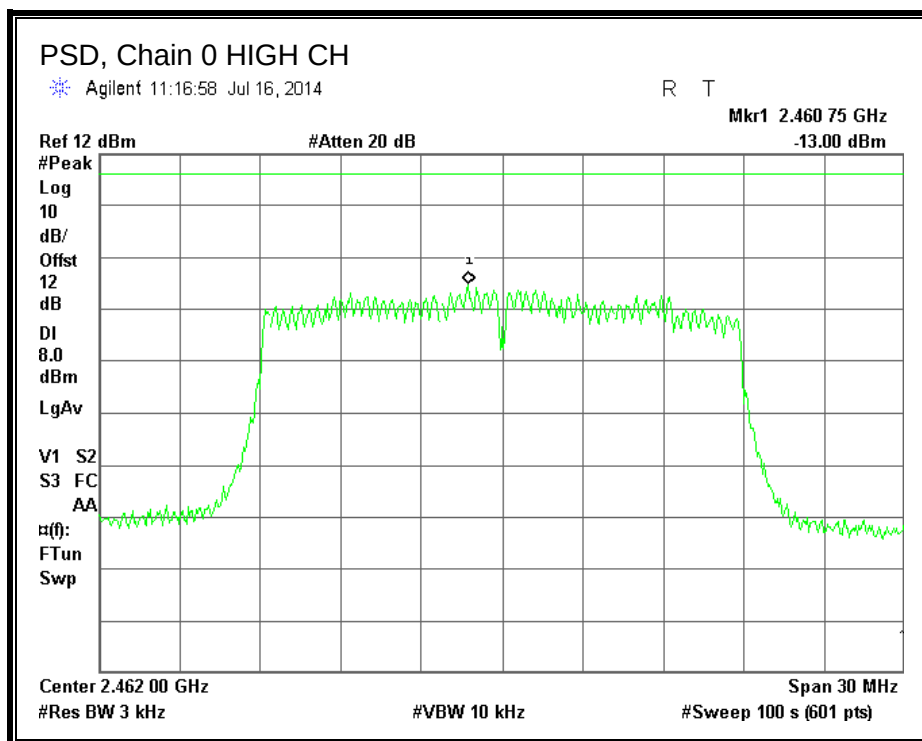
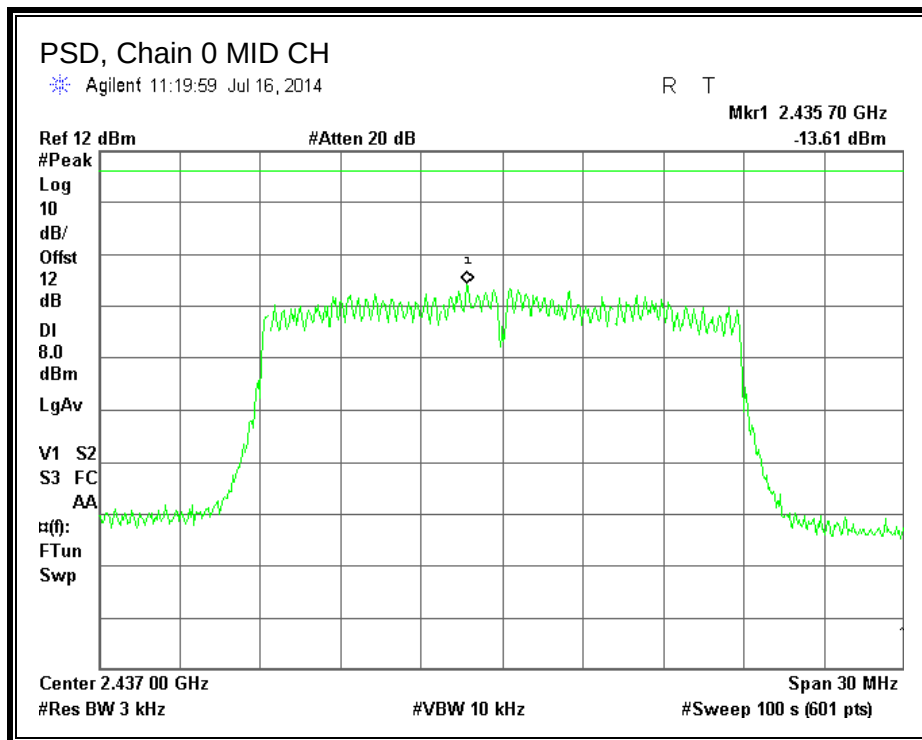
RESULTS ANTENNA PORT 2

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.04	8.0	-22.0
Mid	2437	-13.61	8.0	-21.6
High	2462	-13.00	8.0	-21.0

PSD, Chain 0





8.5.6 OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

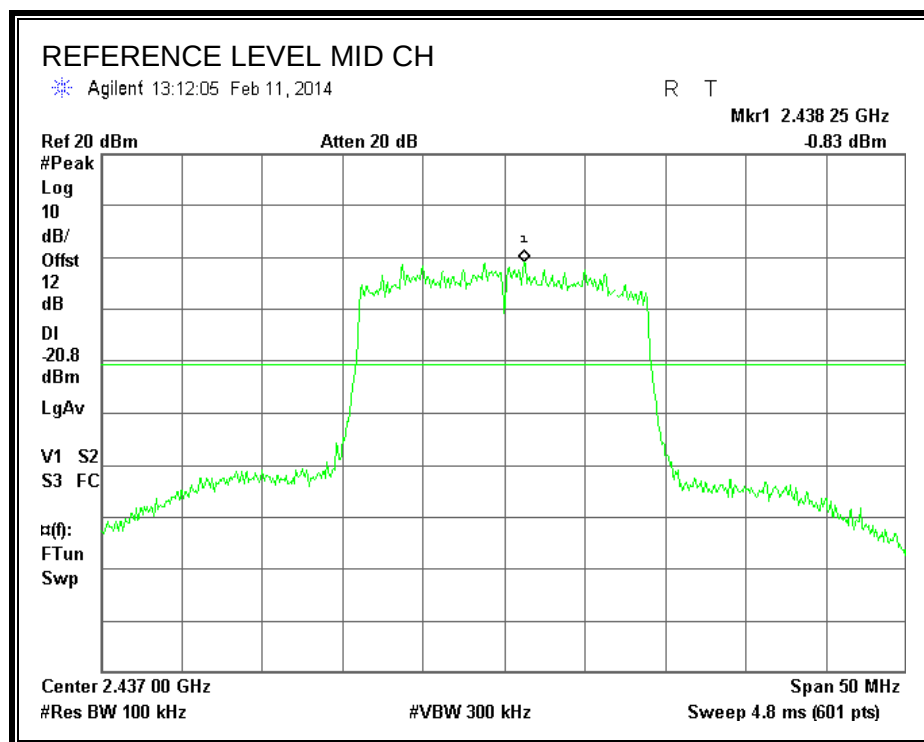
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

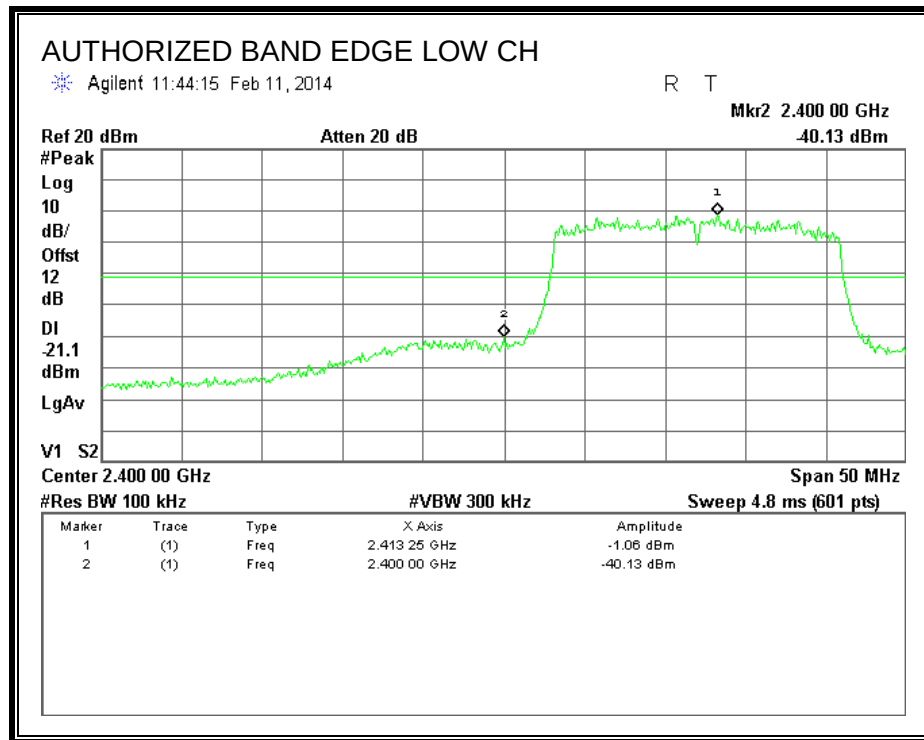
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS ANTENNA PORT 1

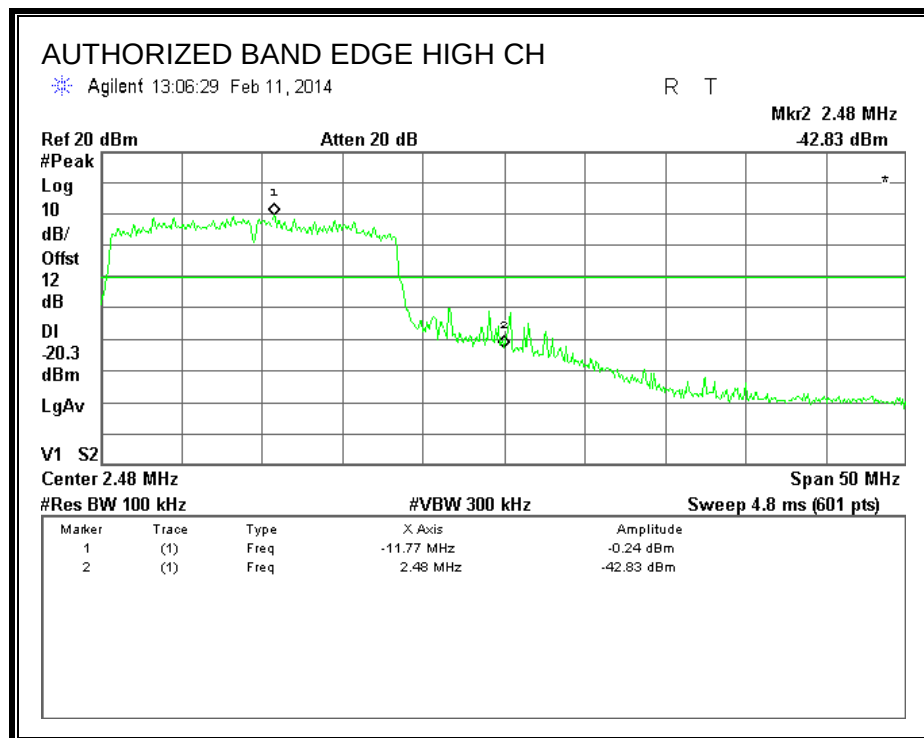
IN-BAND REFERENCE LEVEL



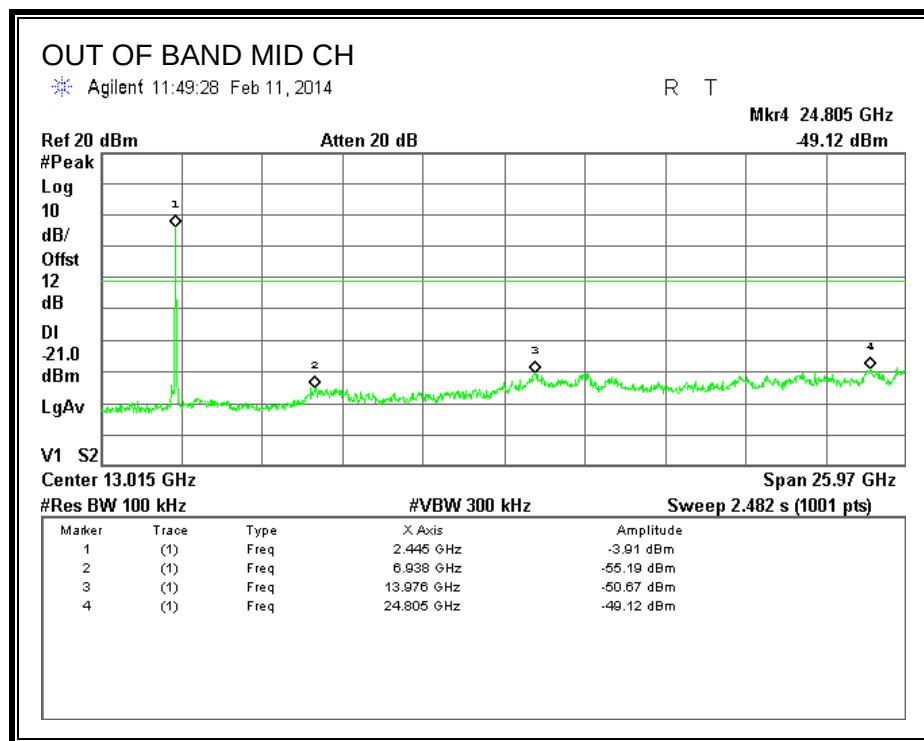
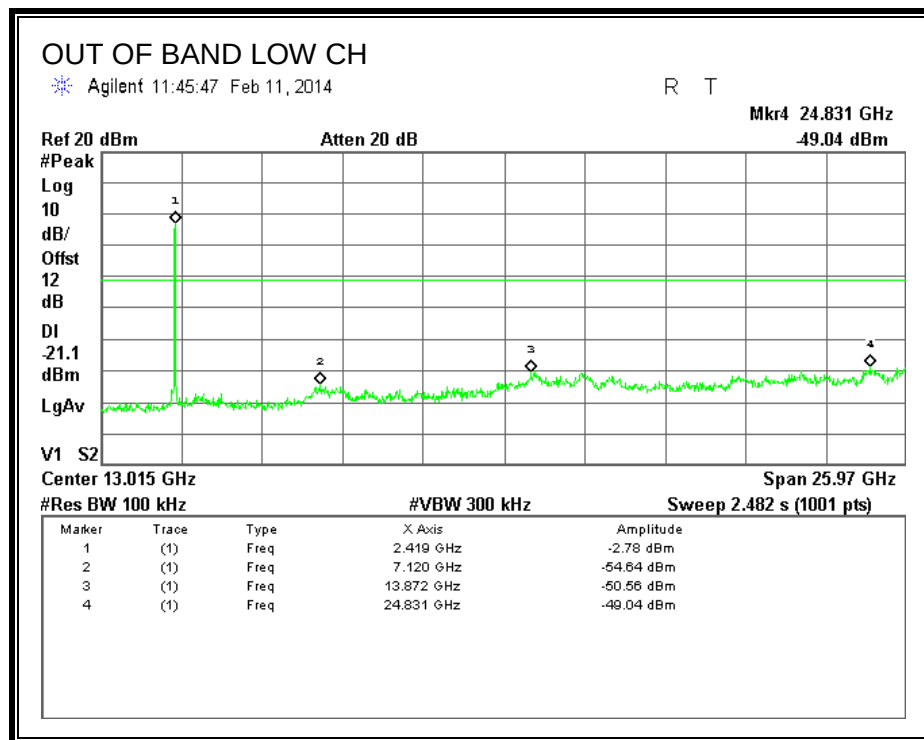
LOW CHANNEL BANDEDGE

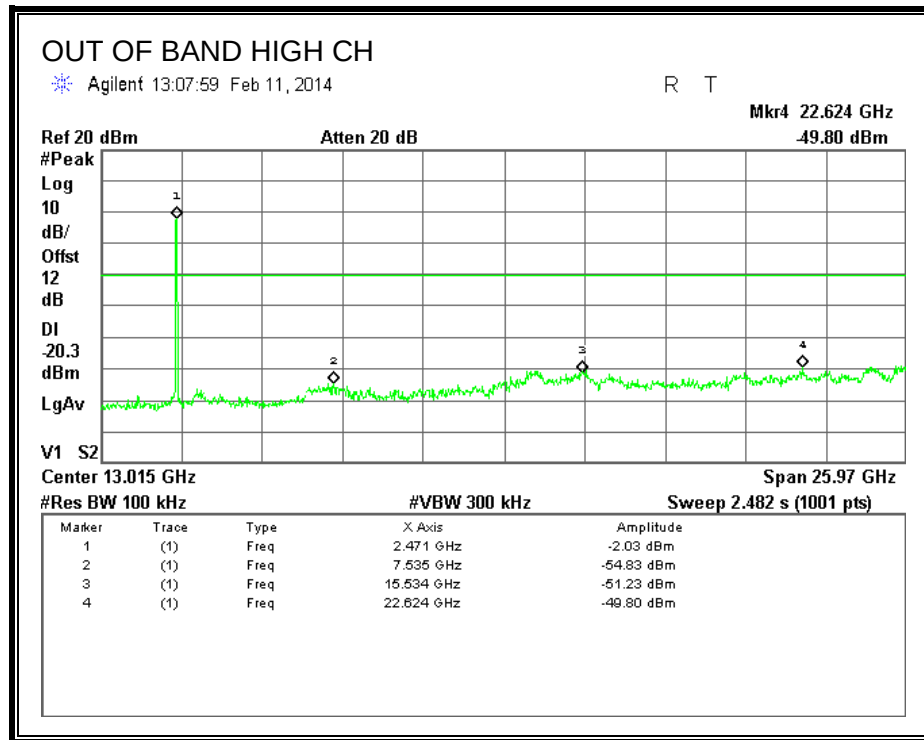


HIGH CHANNEL BANDEDGE



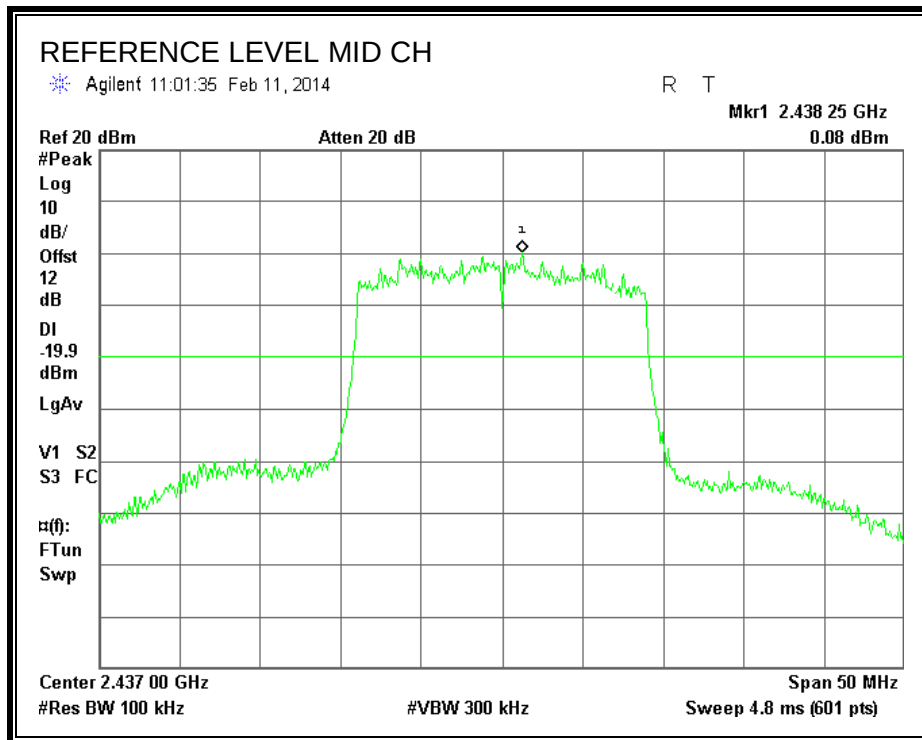
OUT-OF-BAND EMISSIONS



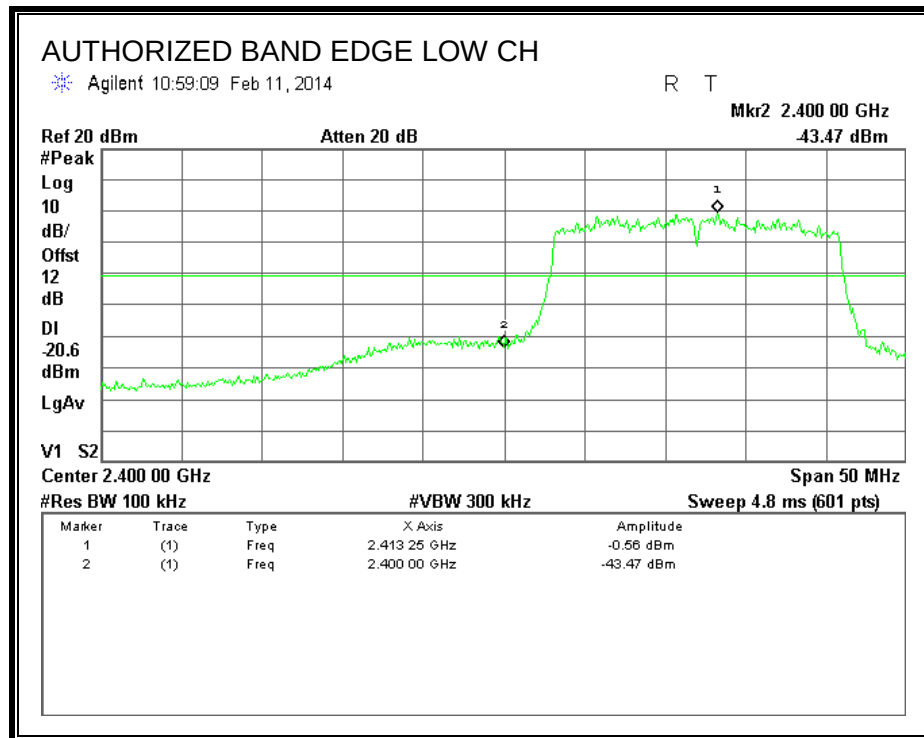


RESULTS ANTENNA PORT 2

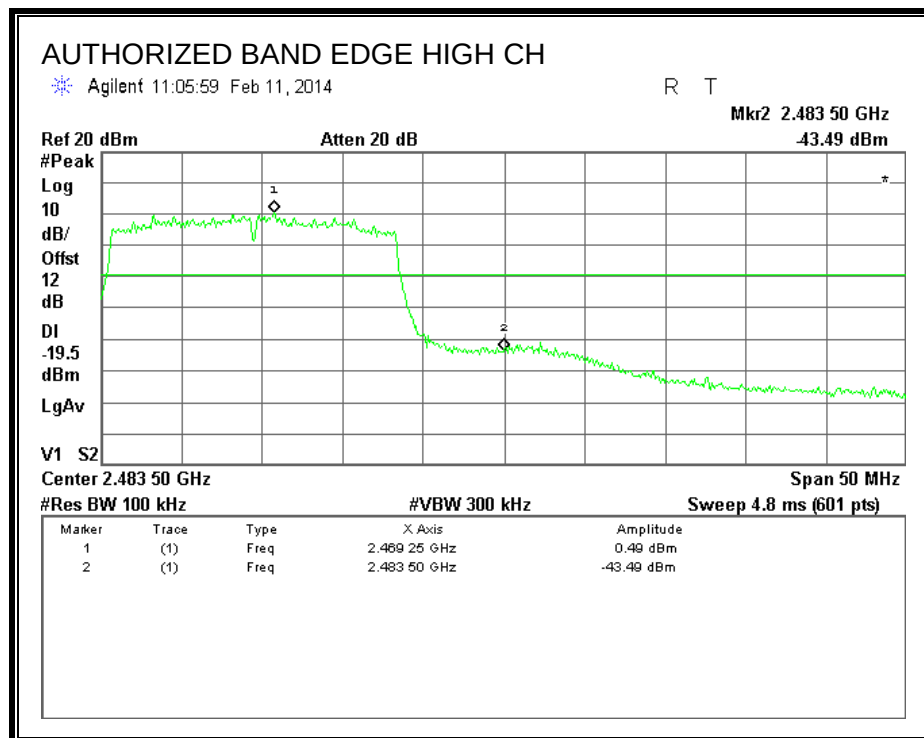
IN-BAND REFERENCE LEVEL



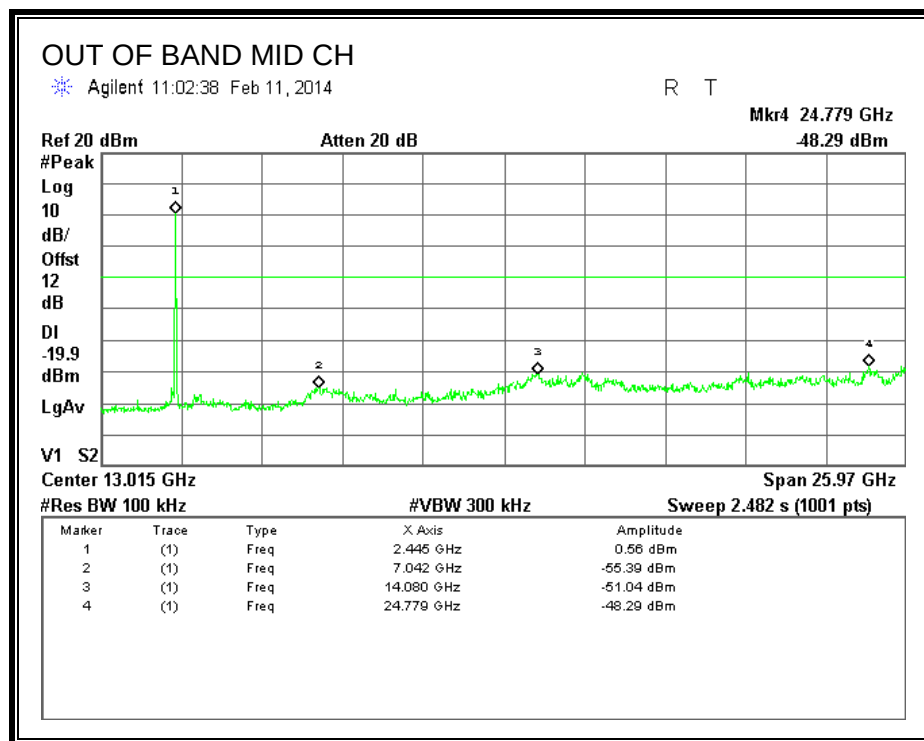
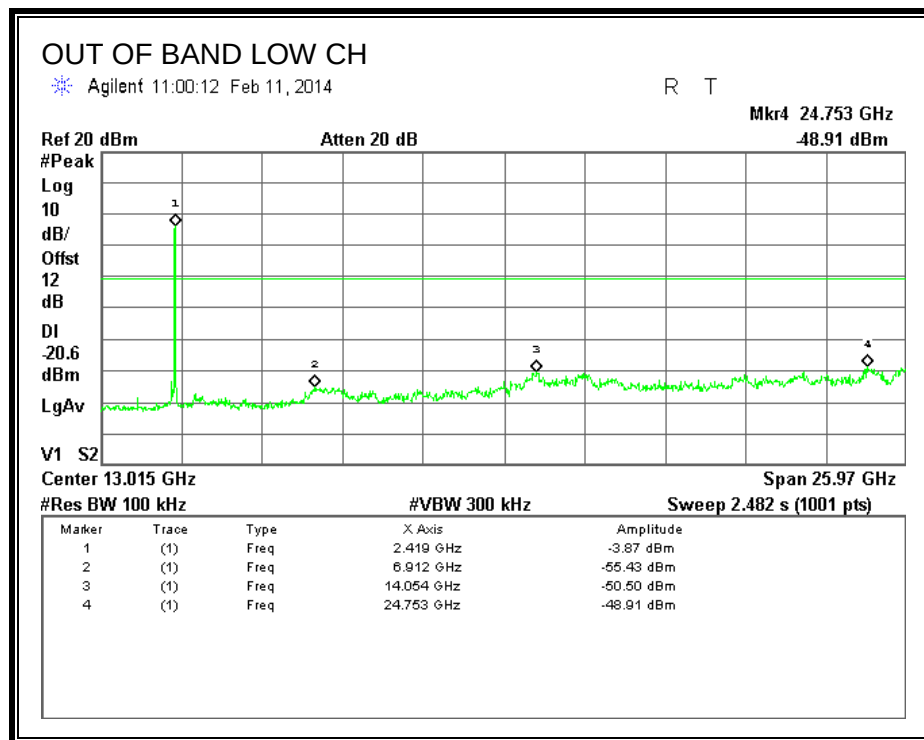
LOW CHANNEL BANDEDGE

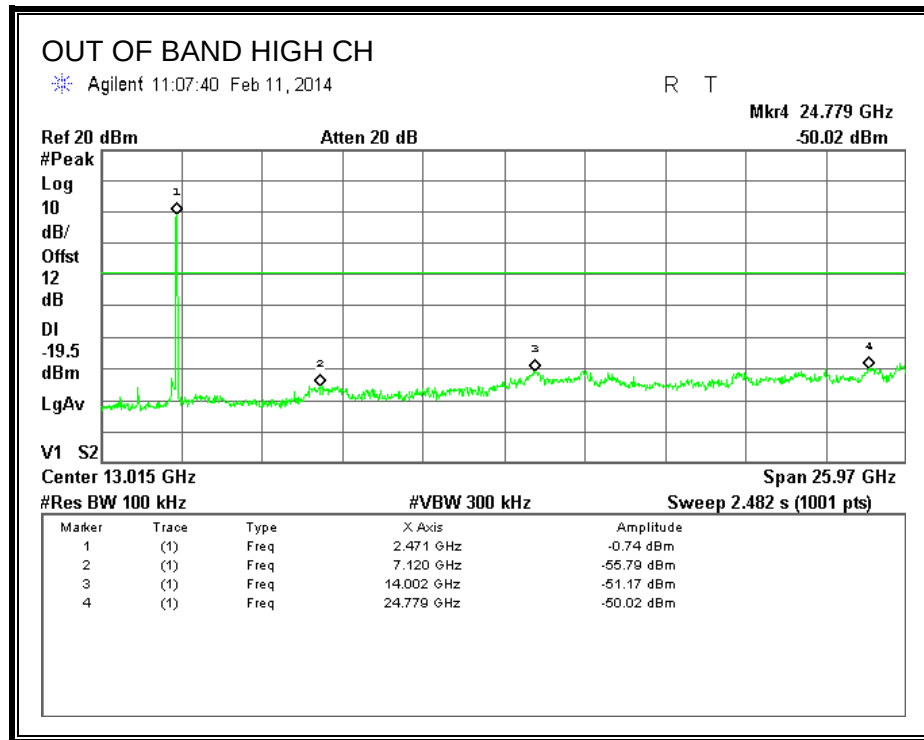


HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS





8.6 802.11n QPSK MODE IN THE 2.4 GHz BAND

8.6.1 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set to 100 KHz and the VBW to 300 KHz $\geq 3 \times$ RBW, peak detector and max hold.

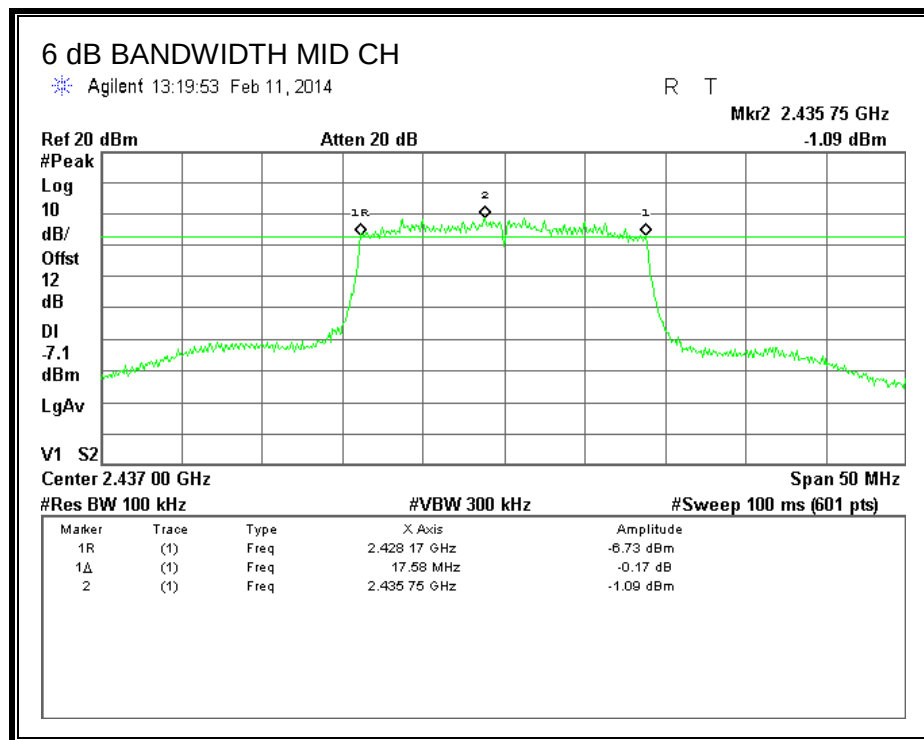
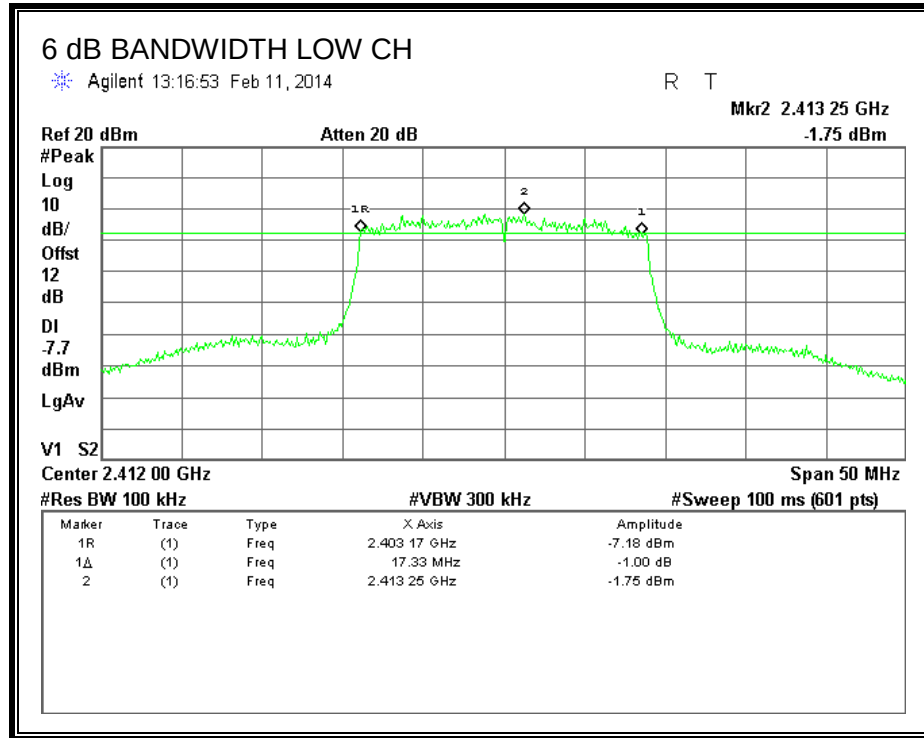
RESULTS ANTENNA PORT 1

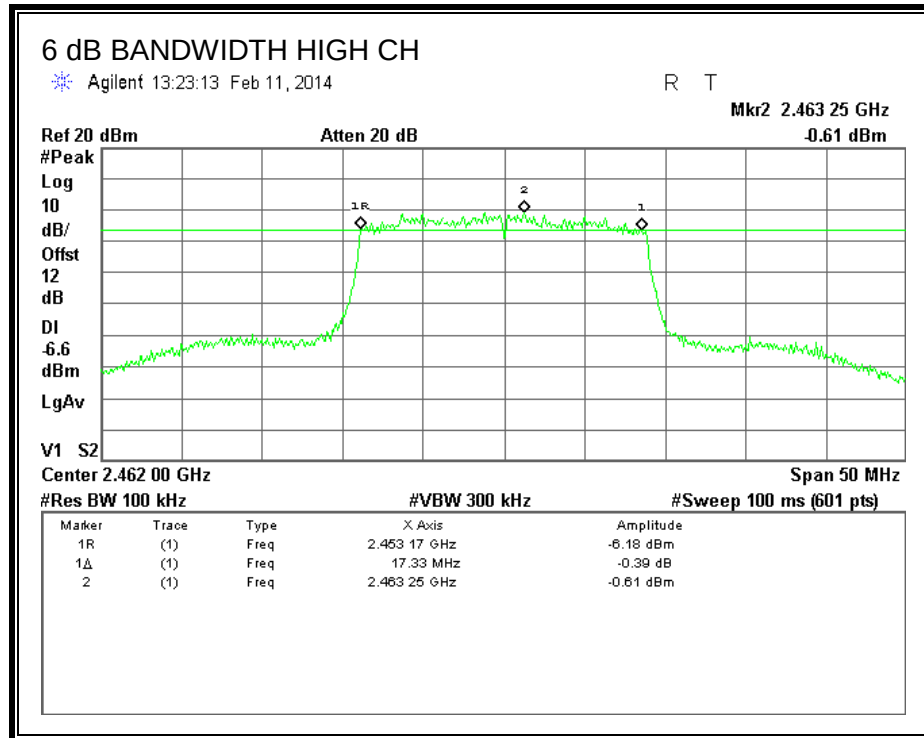
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.330	0.5
Mid	2437	17.580	0.5
High	2462	17.330	0.5

RESULTS ANTENNA PORT 2

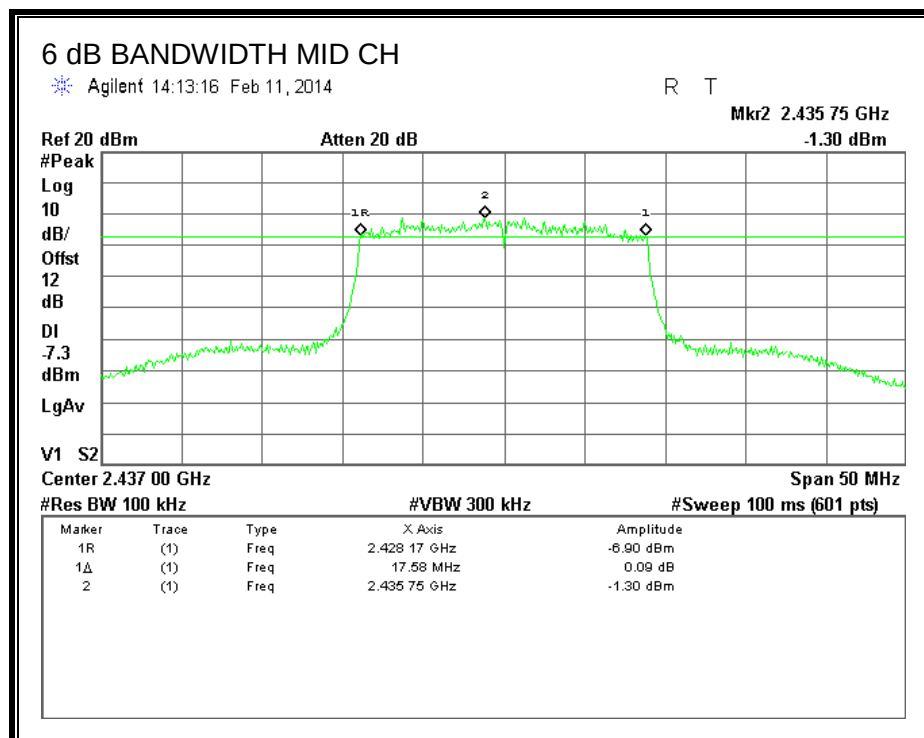
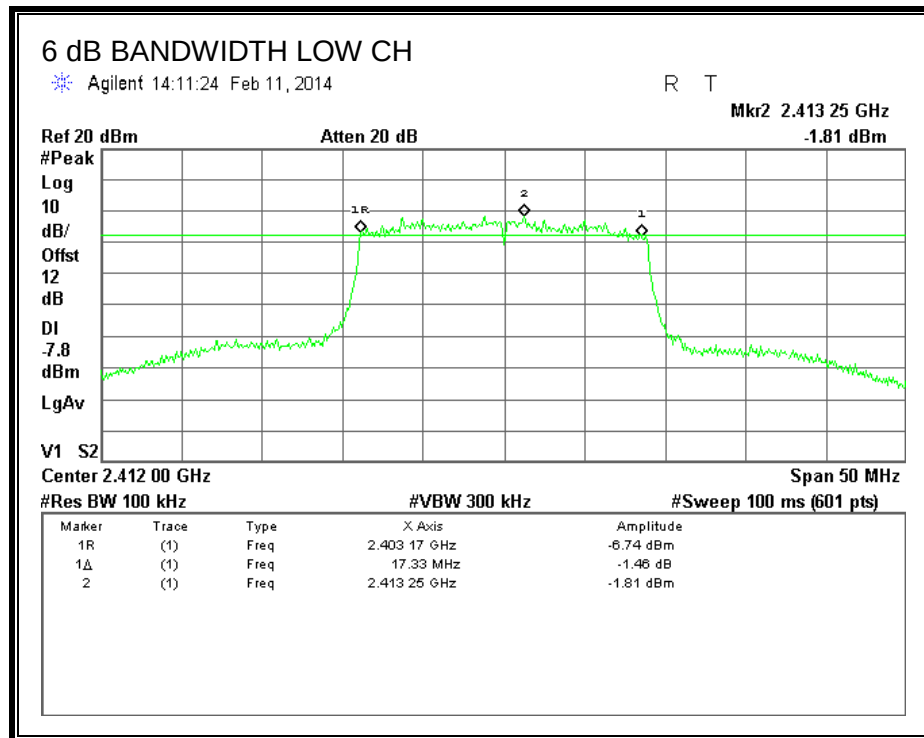
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.330	0.5
Mid	2437	17.580	0.5
High	2462	17.330	0.5

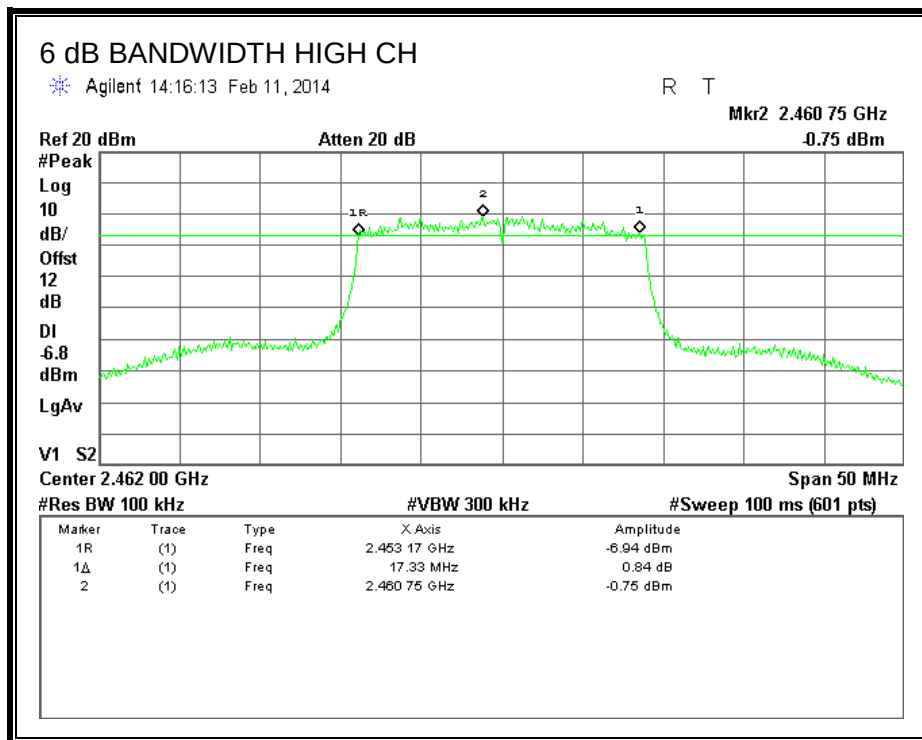
6 dB BANDWIDTH ANTENNA PORT 1





6 dB BANDWIDTH ANTENNA PORT 2





8.6.2 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

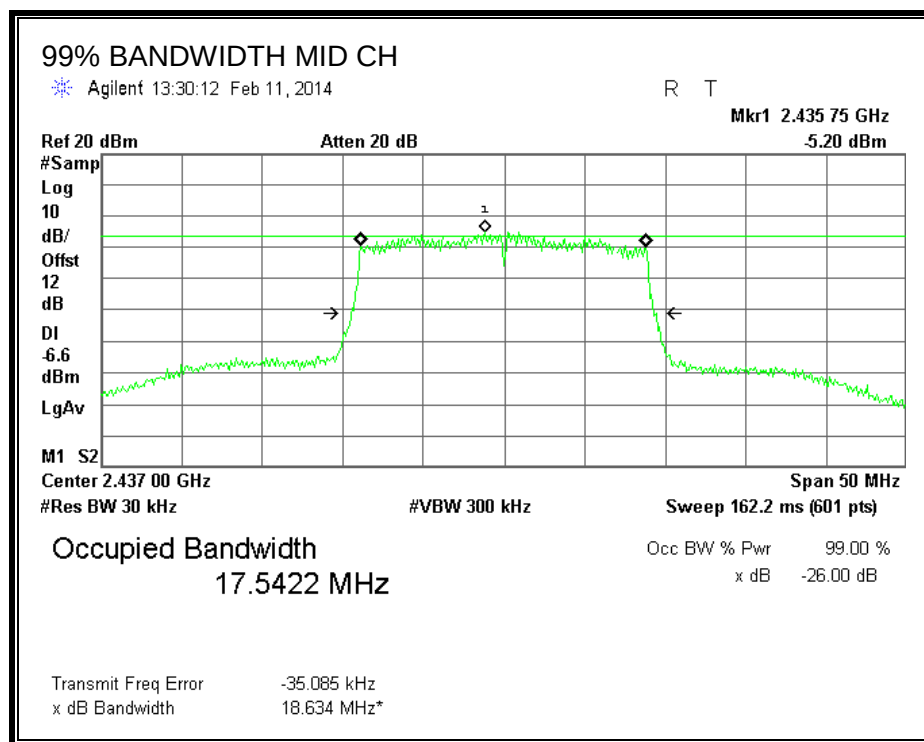
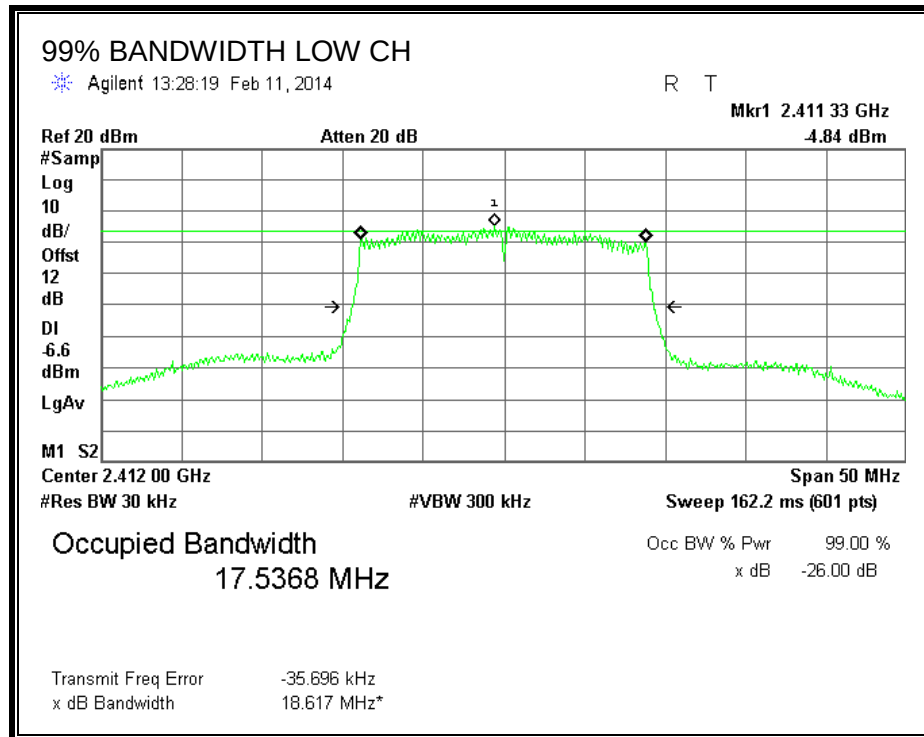
RESULTS ANTENNA PORT 1

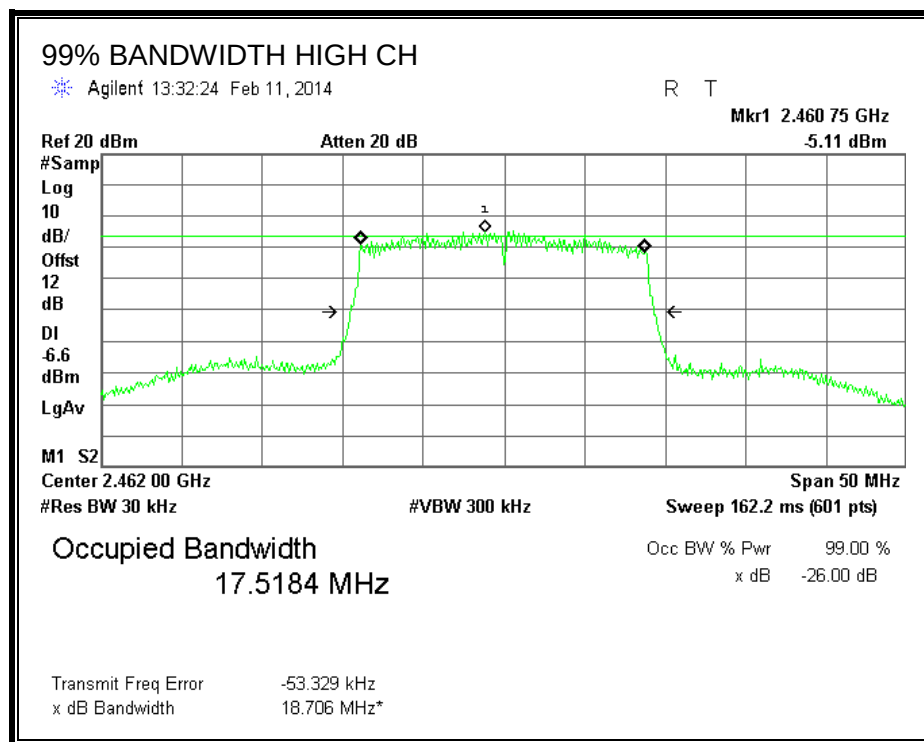
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.5368
Mid	2437	17.5420
High	2462	17.5184

RESULTS ANTENNA PORT 2

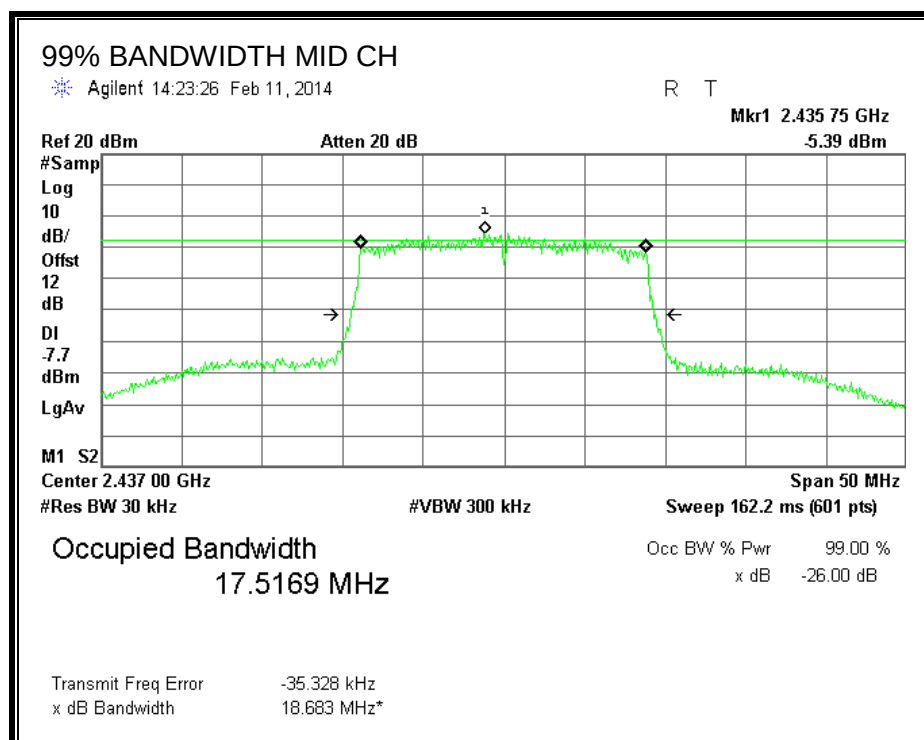
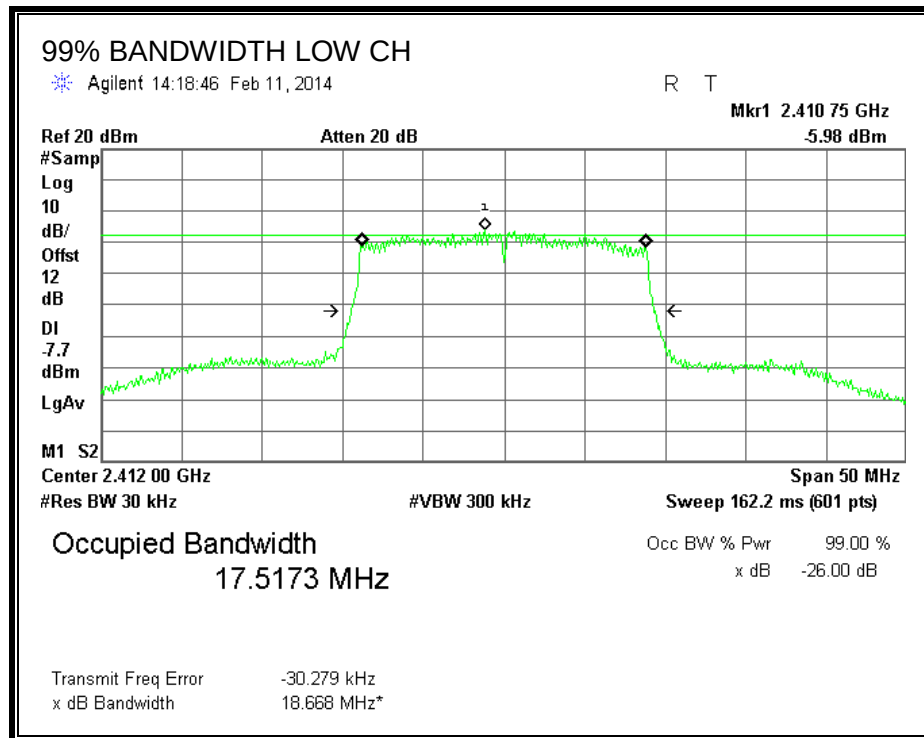
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.5173
Mid	2437	17.5169
High	2462	17.5083

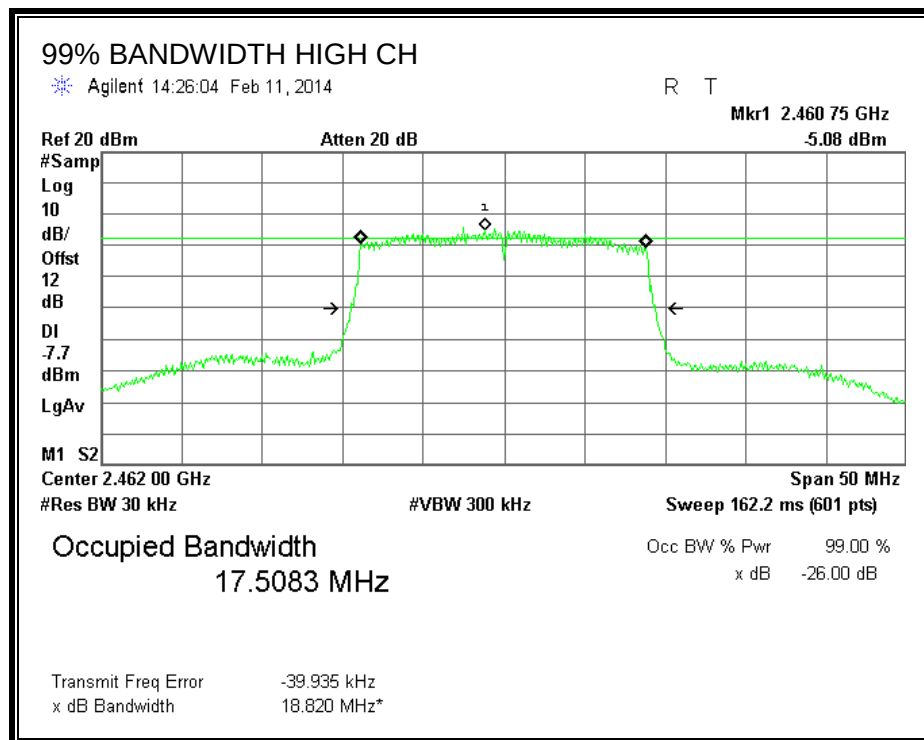
99% BANDWIDTH ANTENNA PORT 1





99% BANDWIDTH ANTENNA PORT 2





8.6.3 AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 12 dB (including 10 dB pad and 2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS ANTENNA PORT 1

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.63
Mid	2437	9.83
High	2462	9.95

RESULTS ANTENNA PORT 2

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.84
Mid	2437	10.20
High	2462	10.00

8.6.4 OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS ANTENNA PORT 1

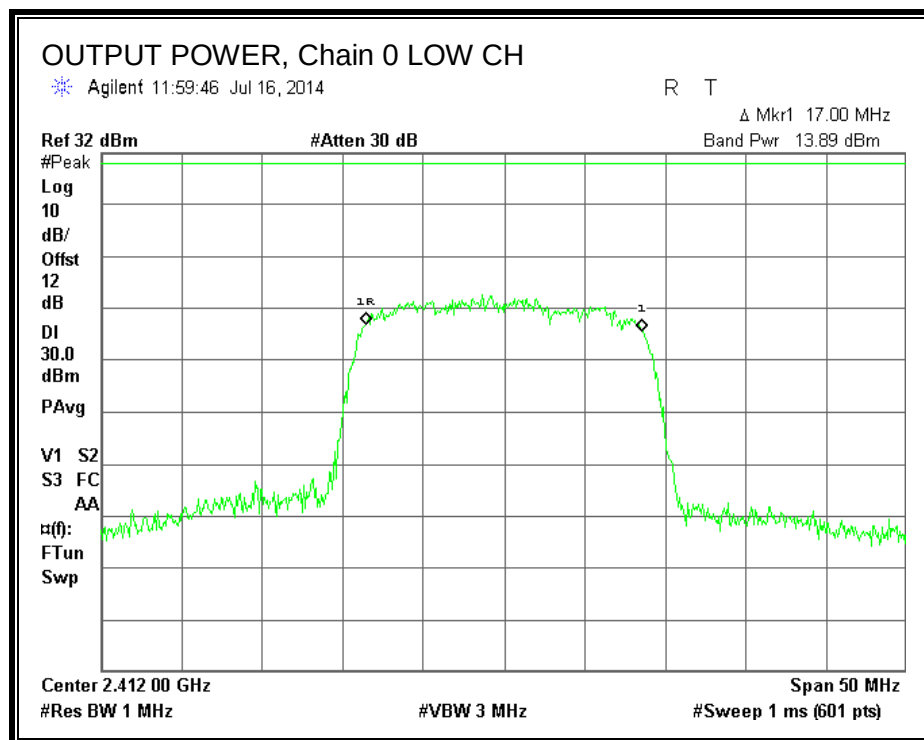
Limits

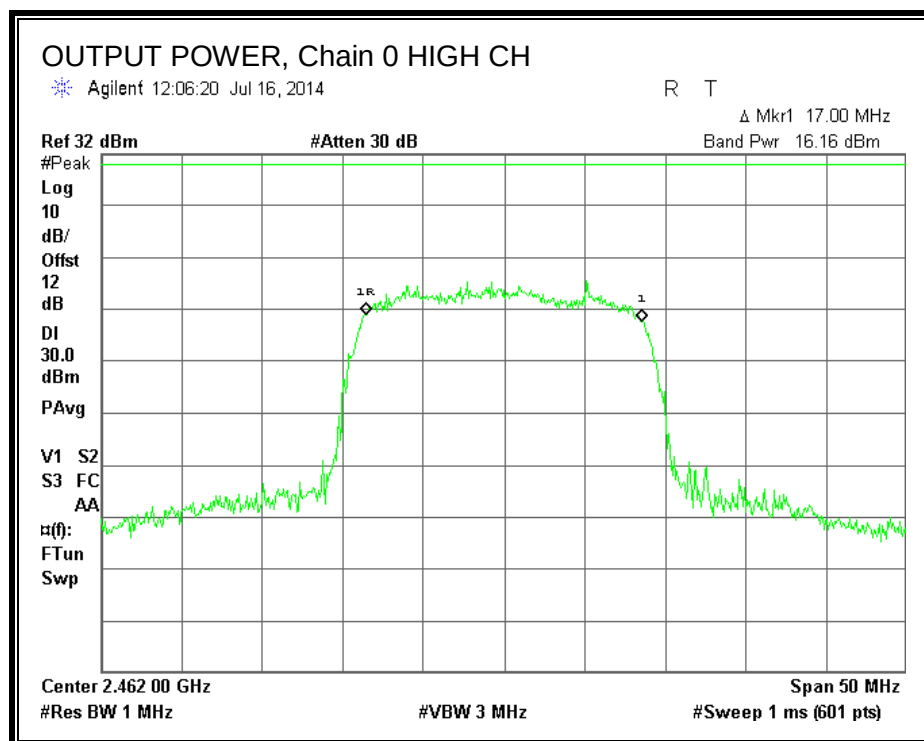
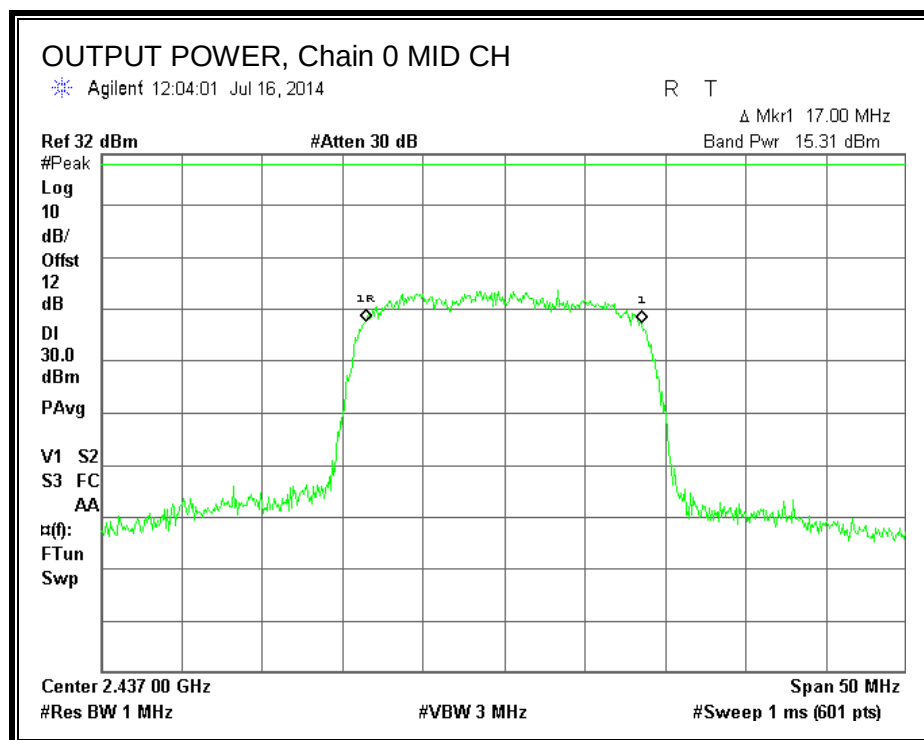
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	13.89	13.89	30.00	-16.11
Mid	2437	15.31	15.31	30.00	-14.69
High	2462	16.16	16.16	30.00	-13.84

OUTPUT POWER, Chain 0





RESULTS ANTENNA PORT 2

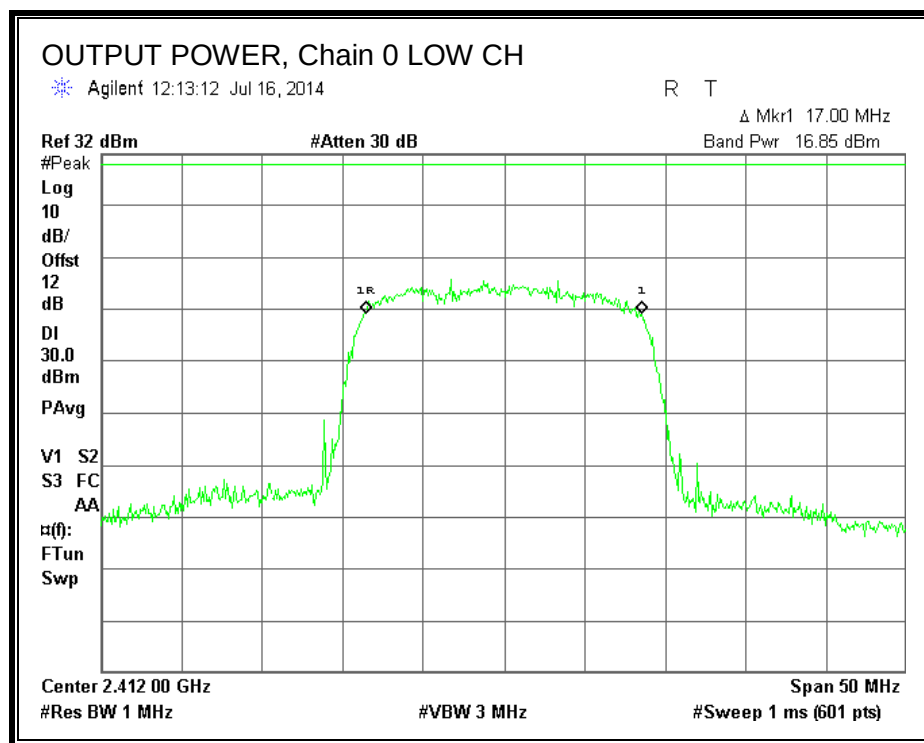
Limits

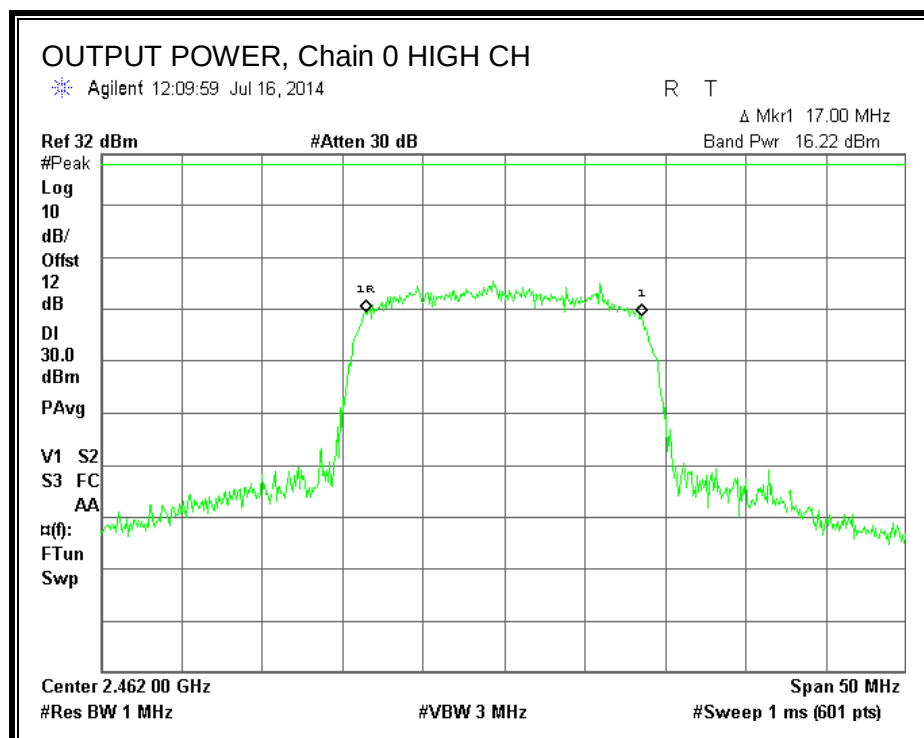
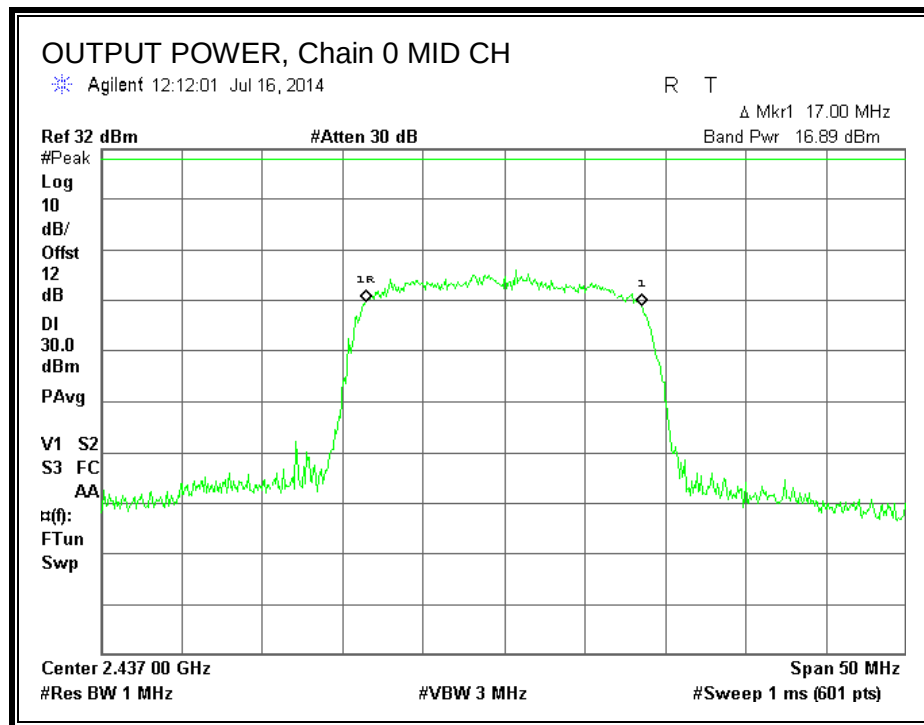
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.00	30.00	30	36	30.00
Mid	2437	2.00	30.00	30	36	30.00
High	2462	2.00	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	16.85	16.85	30.00	-13.15
Mid	2437	16.89	16.89	30.00	-13.11
High	2462	16.22	16.22	30.00	-13.78

OUTPUT POWER, Chain 0





8.6.5 PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

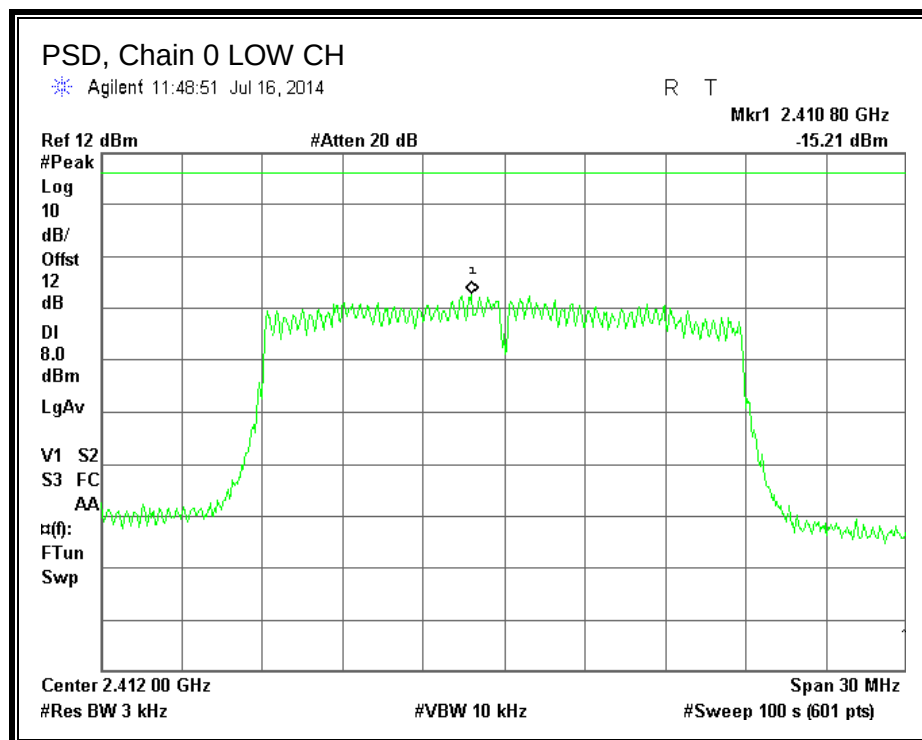
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

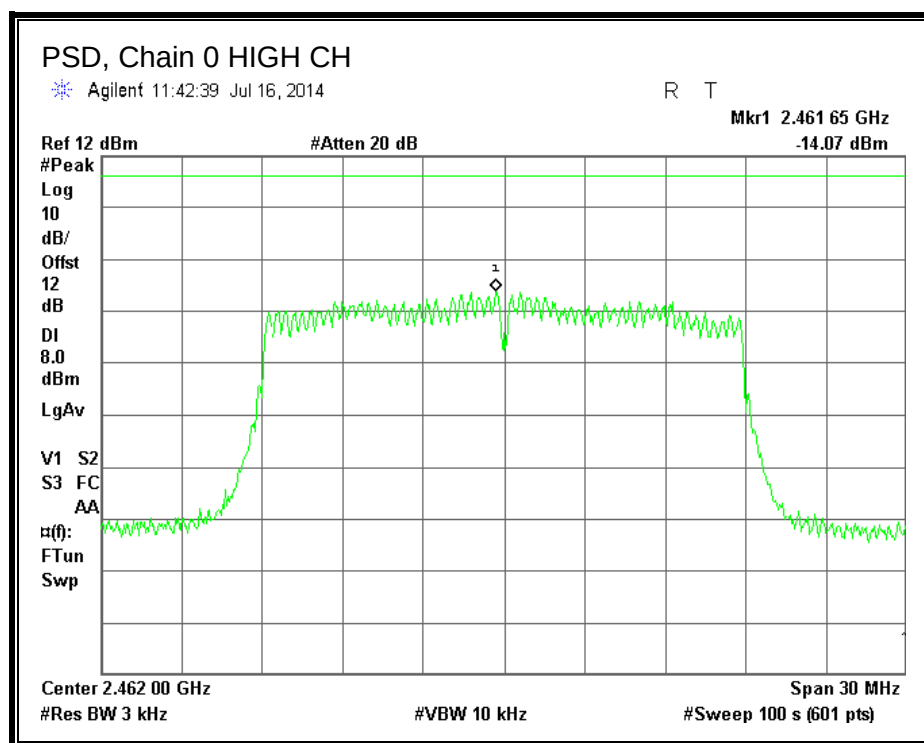
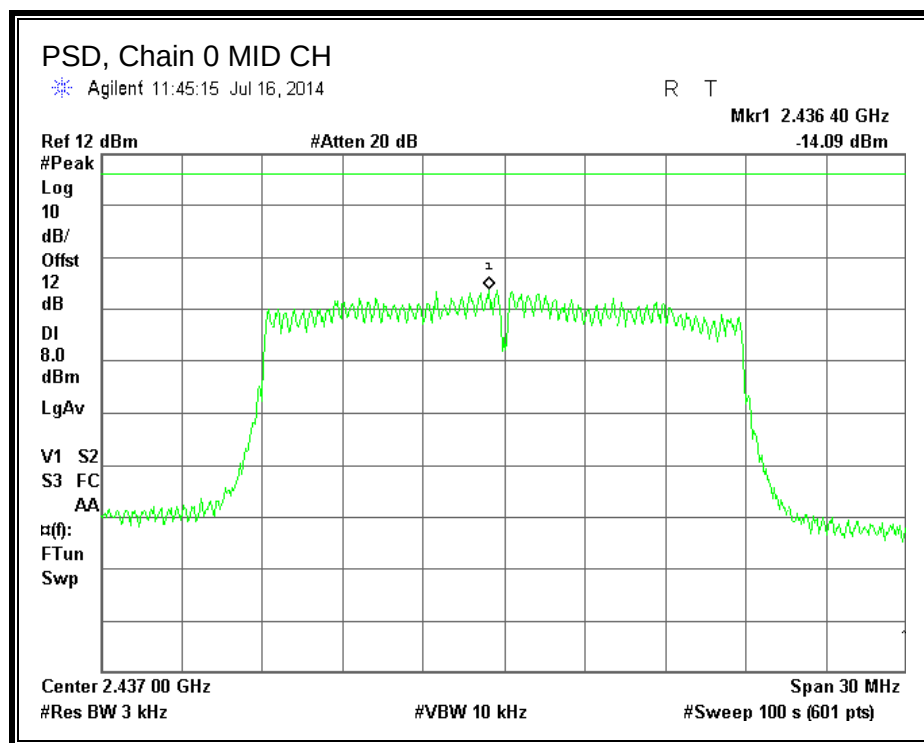
RESULTS ANTENNA PORT 1

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-15.21	8.0	-23.2
Mid	2437	-14.09	8.0	-22.1
High	2462	-14.07	8.0	-22.1

PSD, Chain 0



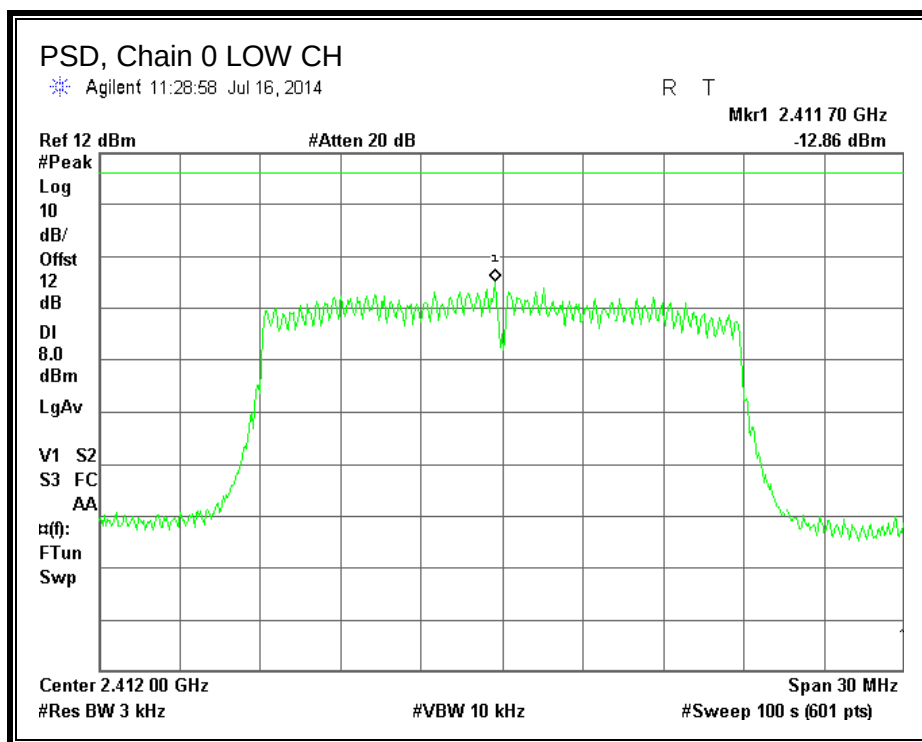


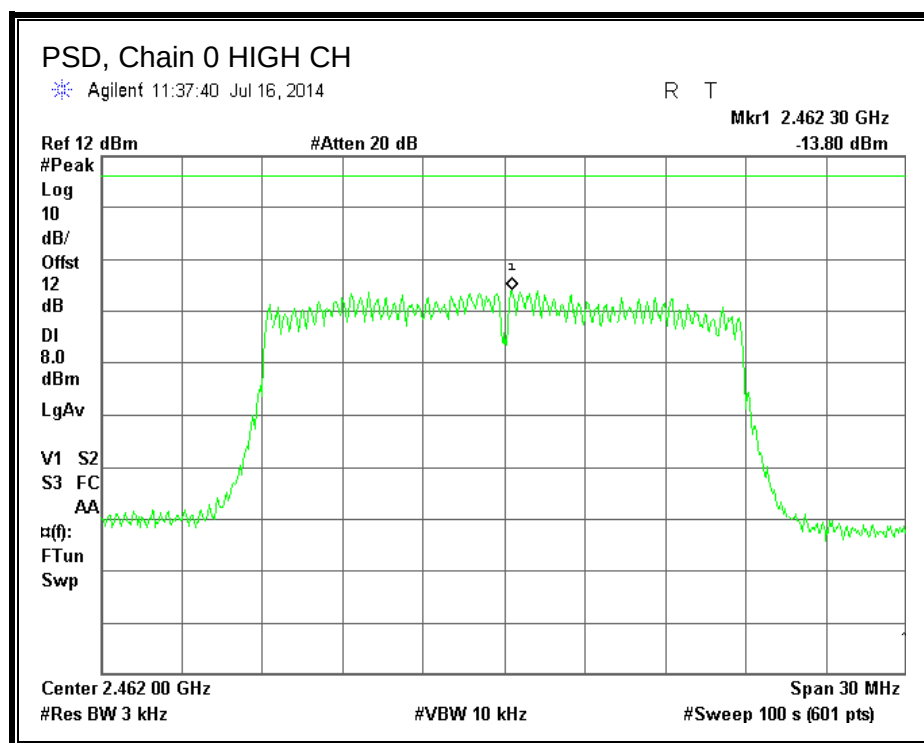
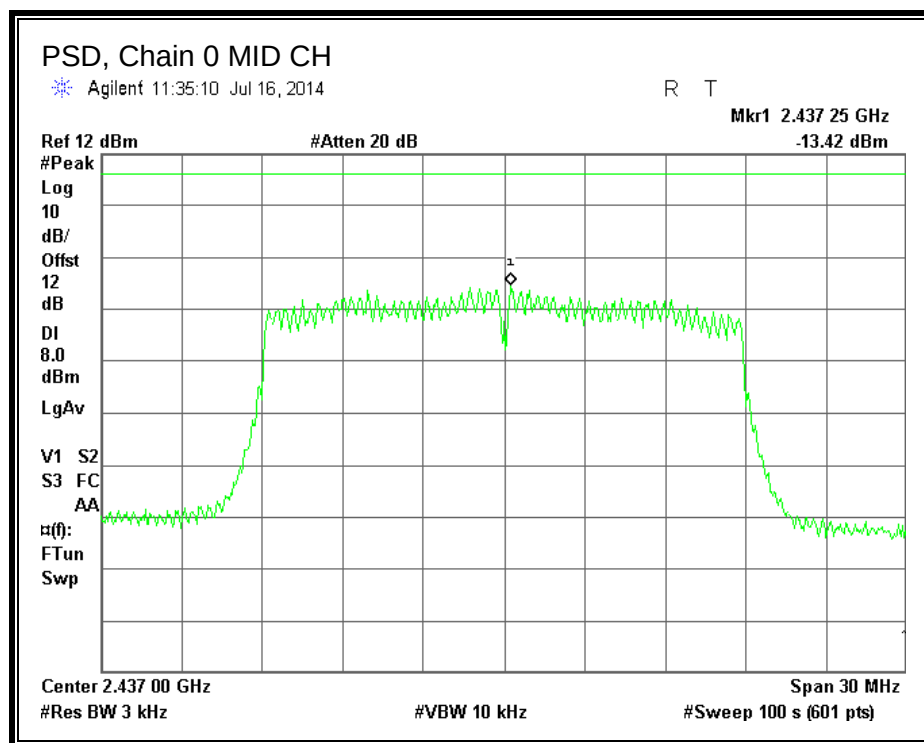
RESULTS ANTENNA PORT 2

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-12.86	8.0	-20.9
Mid	2437	-13.42	8.0	-21.4
High	2462	-13.80	8.0	-21.8

PSD, Chain 0





8.6.6 OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

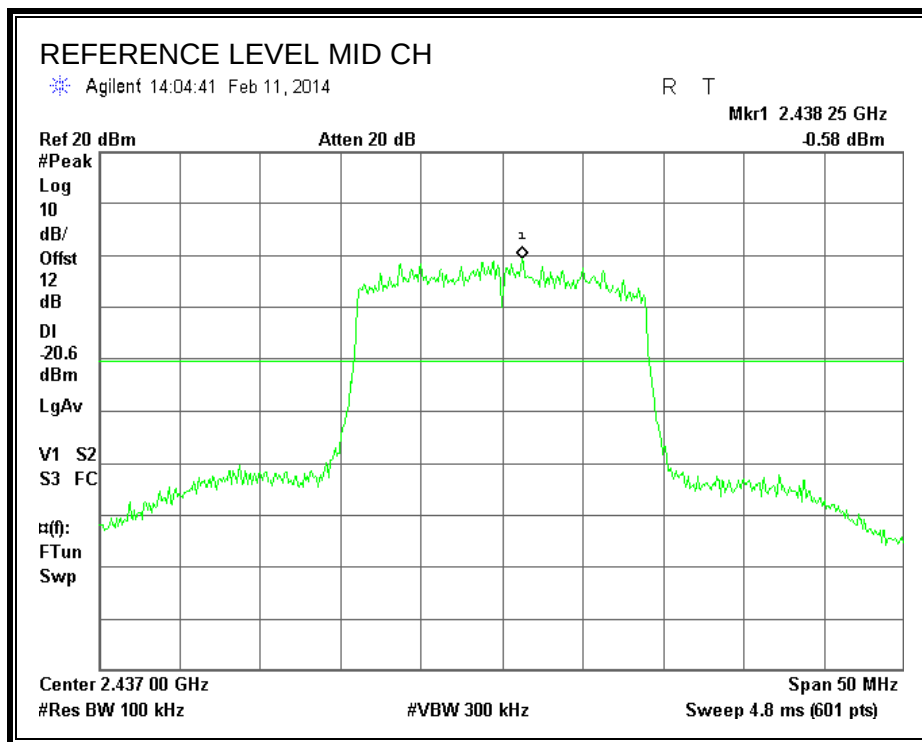
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

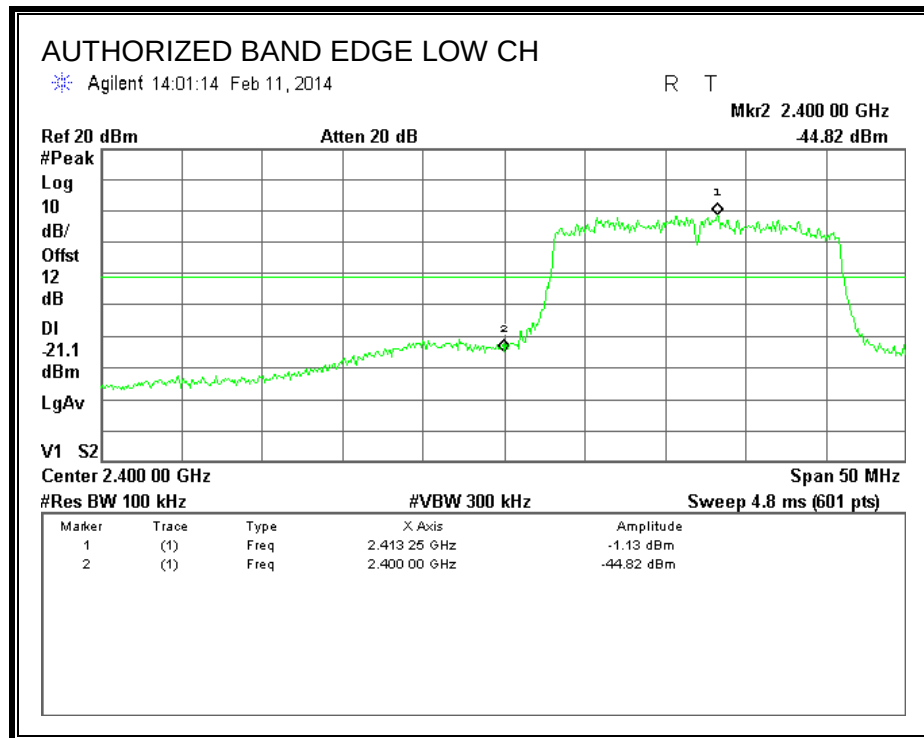
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS ANTENNA PORT 1

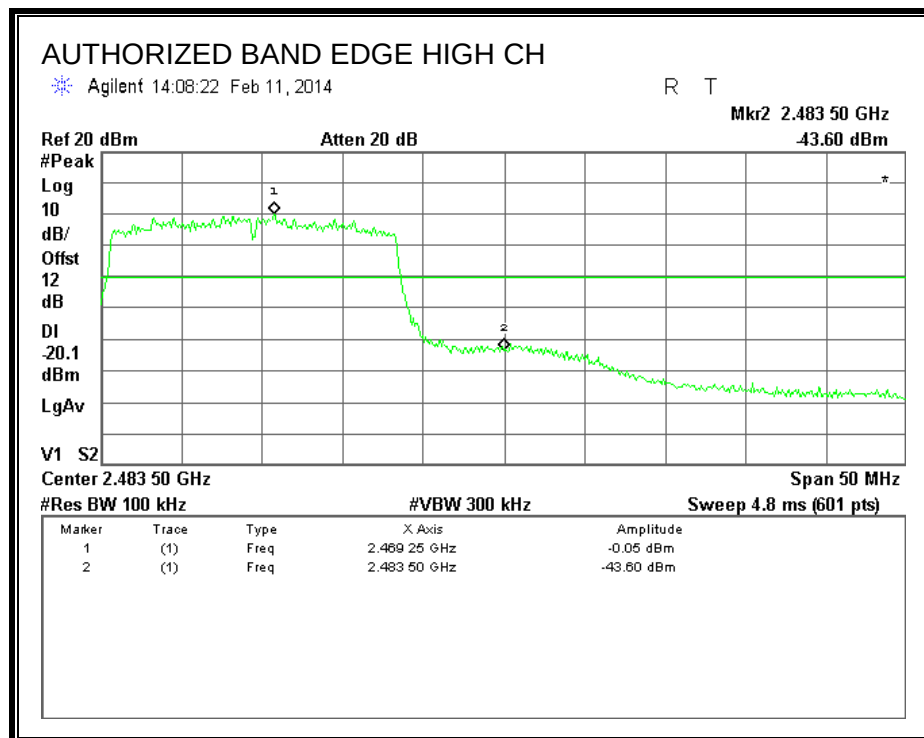
IN-BAND REFERENCE LEVEL



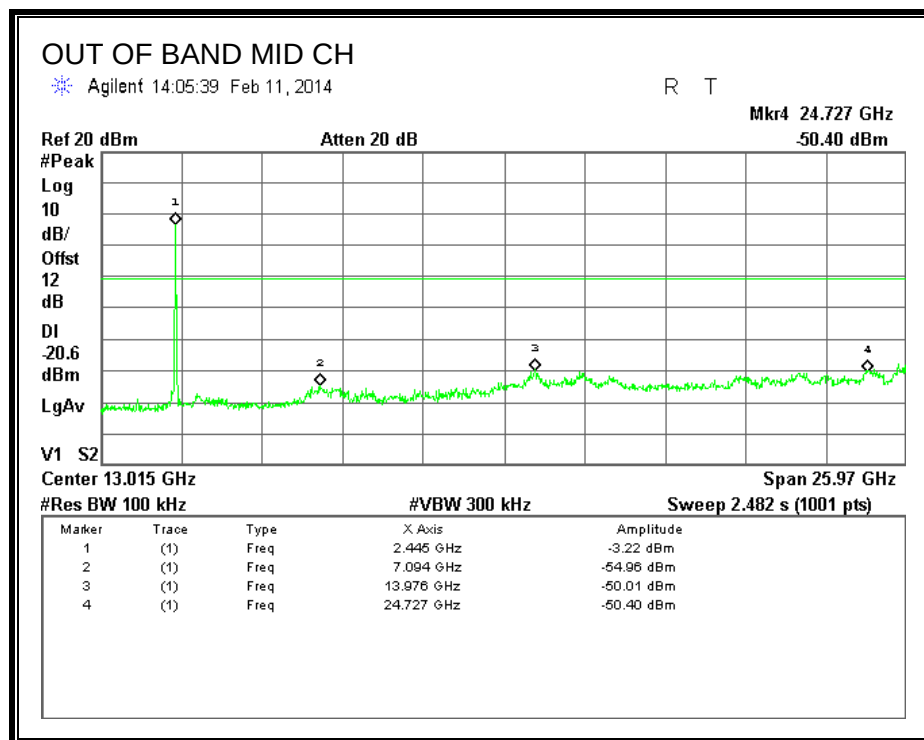
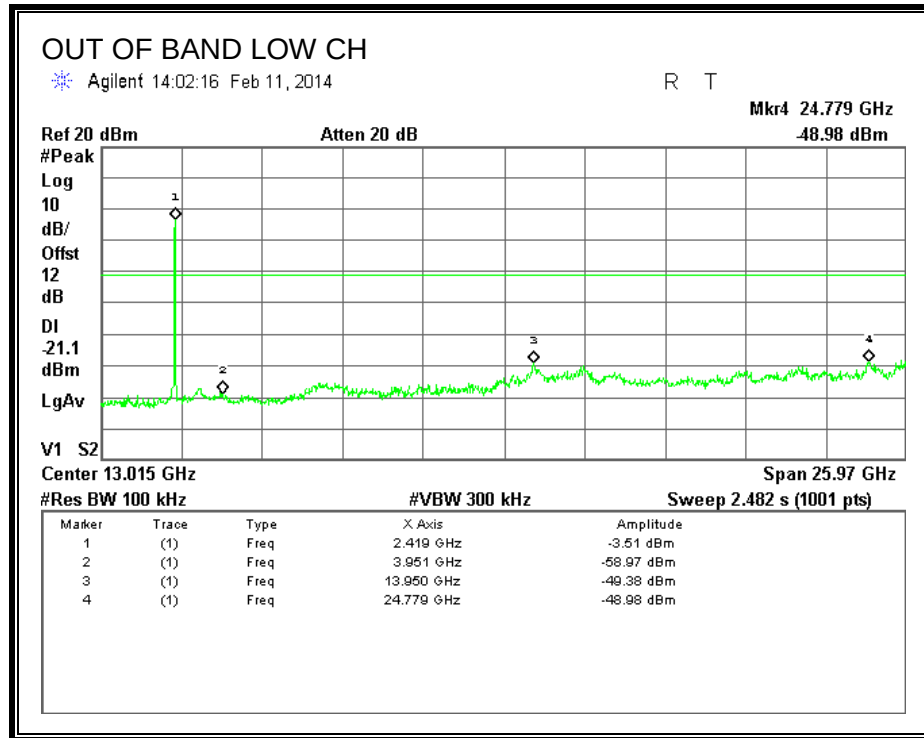
LOW CHANNEL BANDEDGE

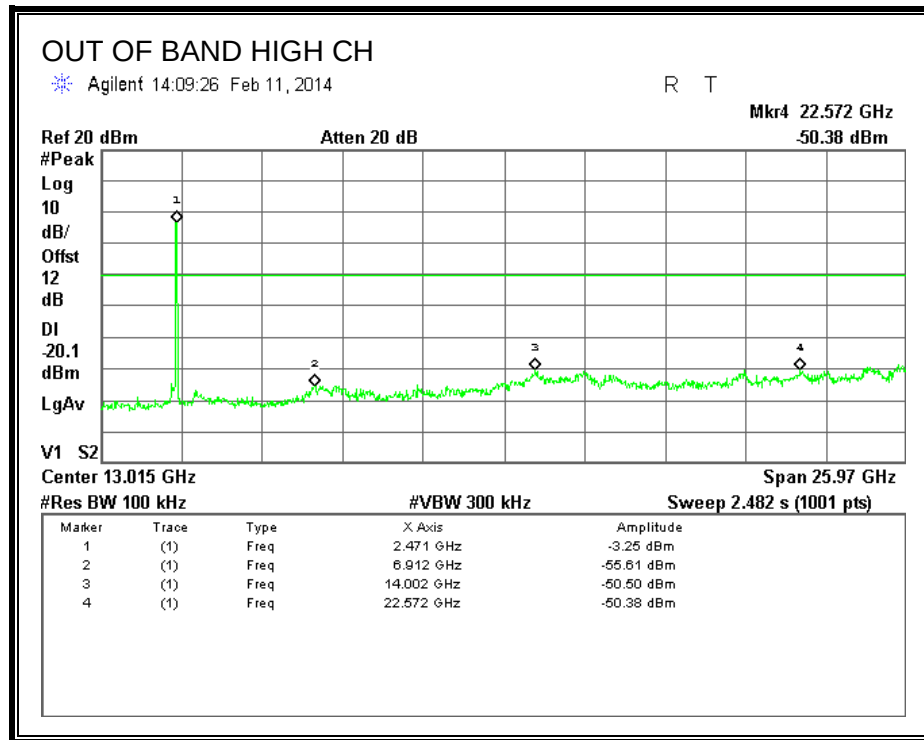


HIGH CHANNEL BANDEDGE



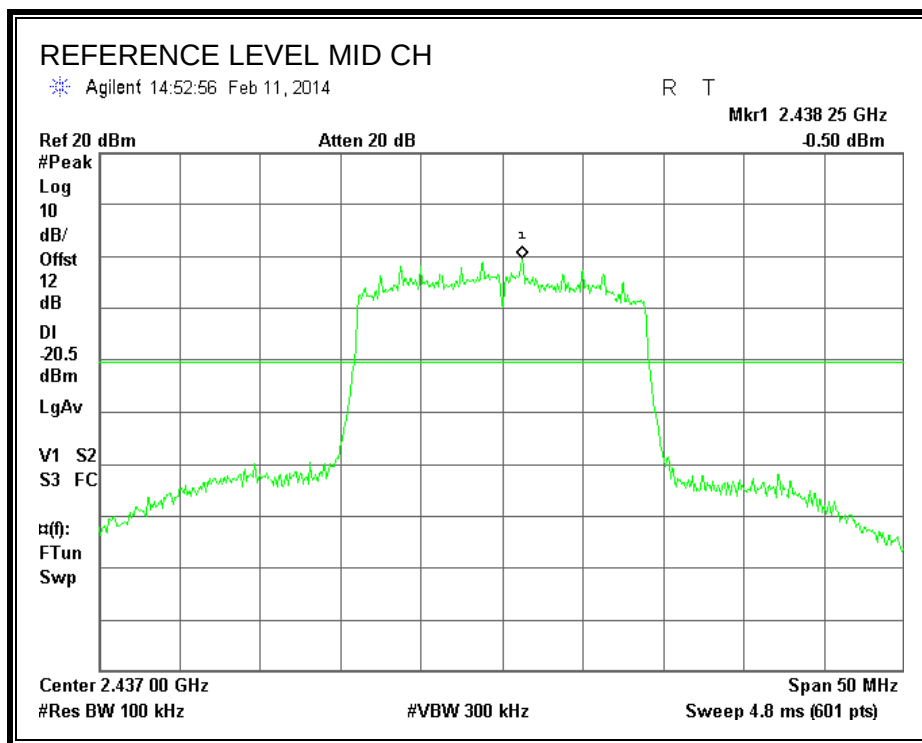
OUT-OF-BAND EMISSIONS



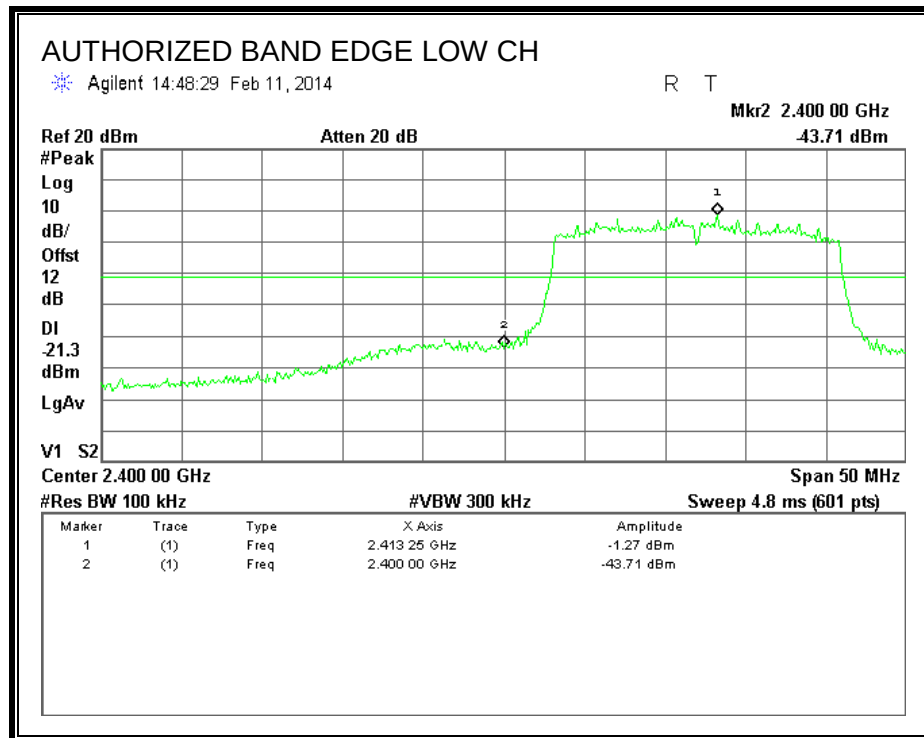


RESULTS ANTENNA PORT 2

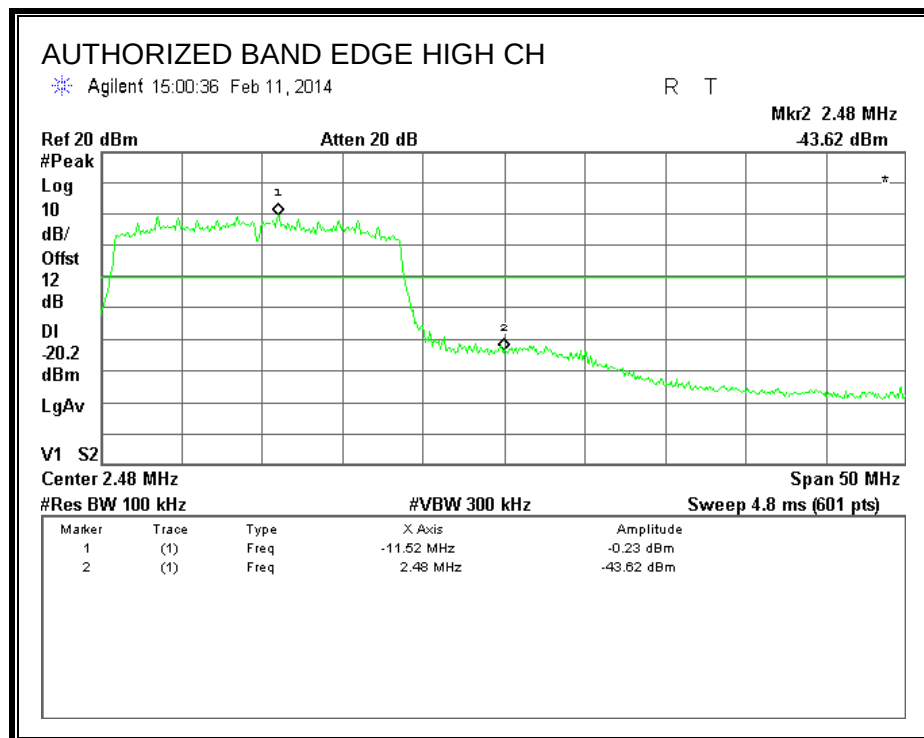
IN-BAND REFERENCE LEVEL



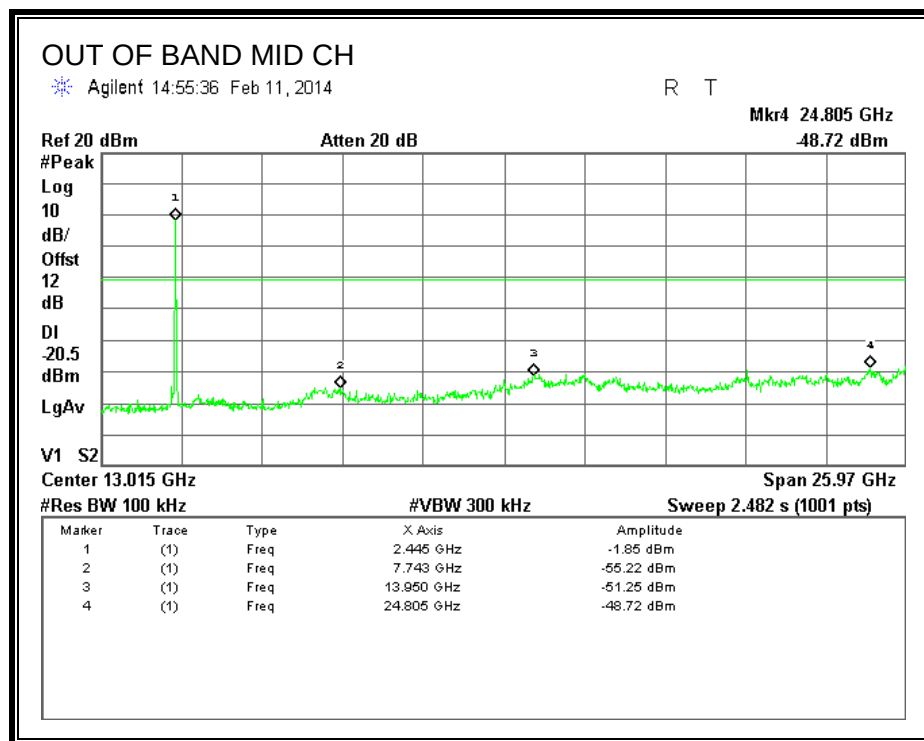
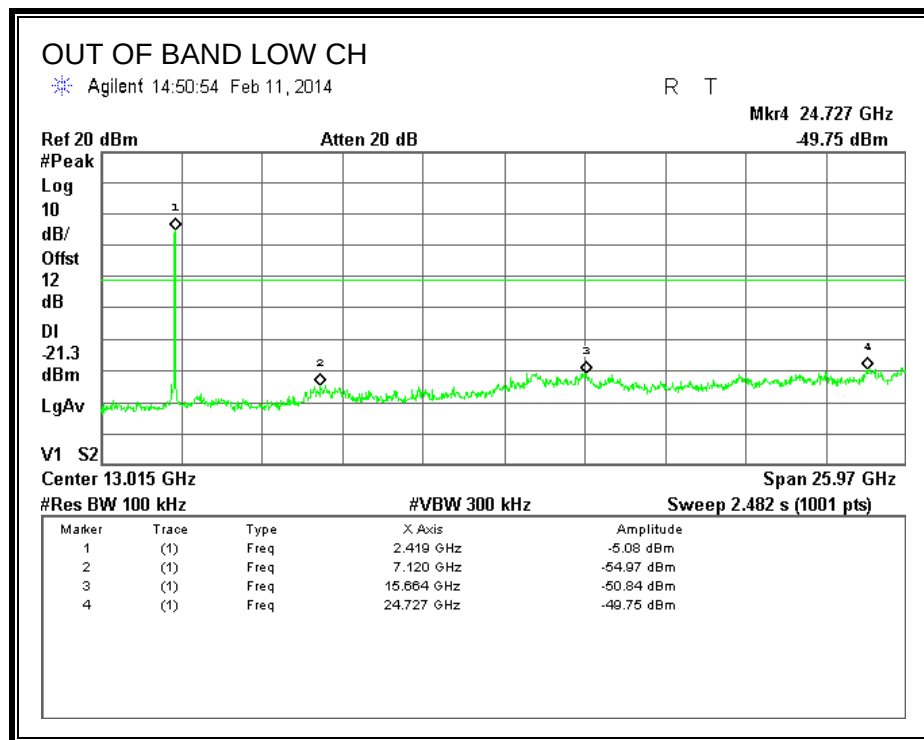
LOW CHANNEL BANDEDGE

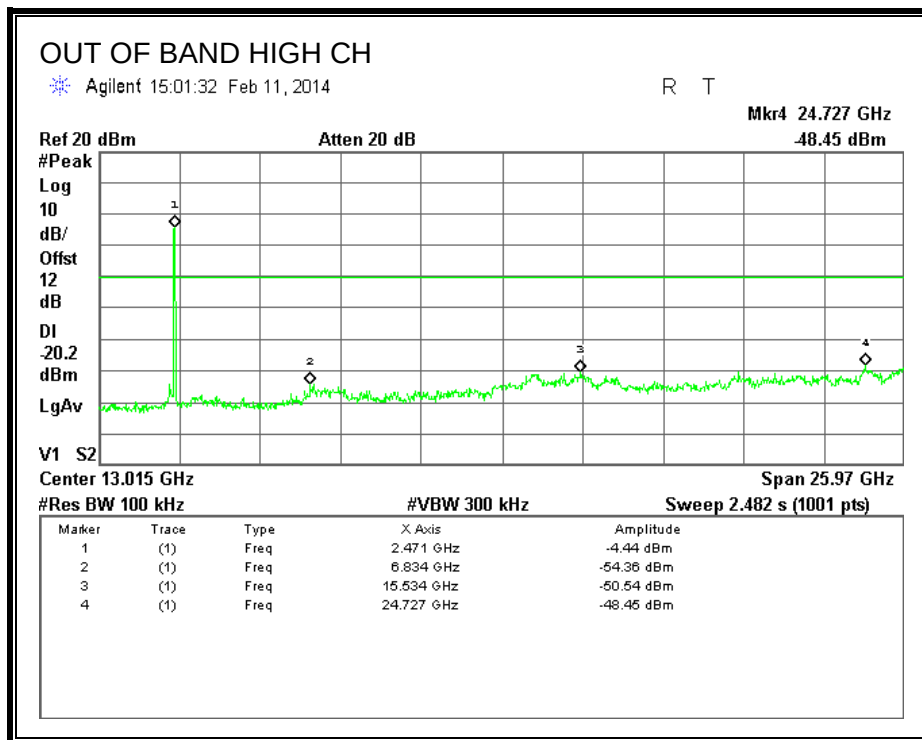


HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS





9 RADIATED TEST RESULTS

9.1 LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and as applicable for average measurements.

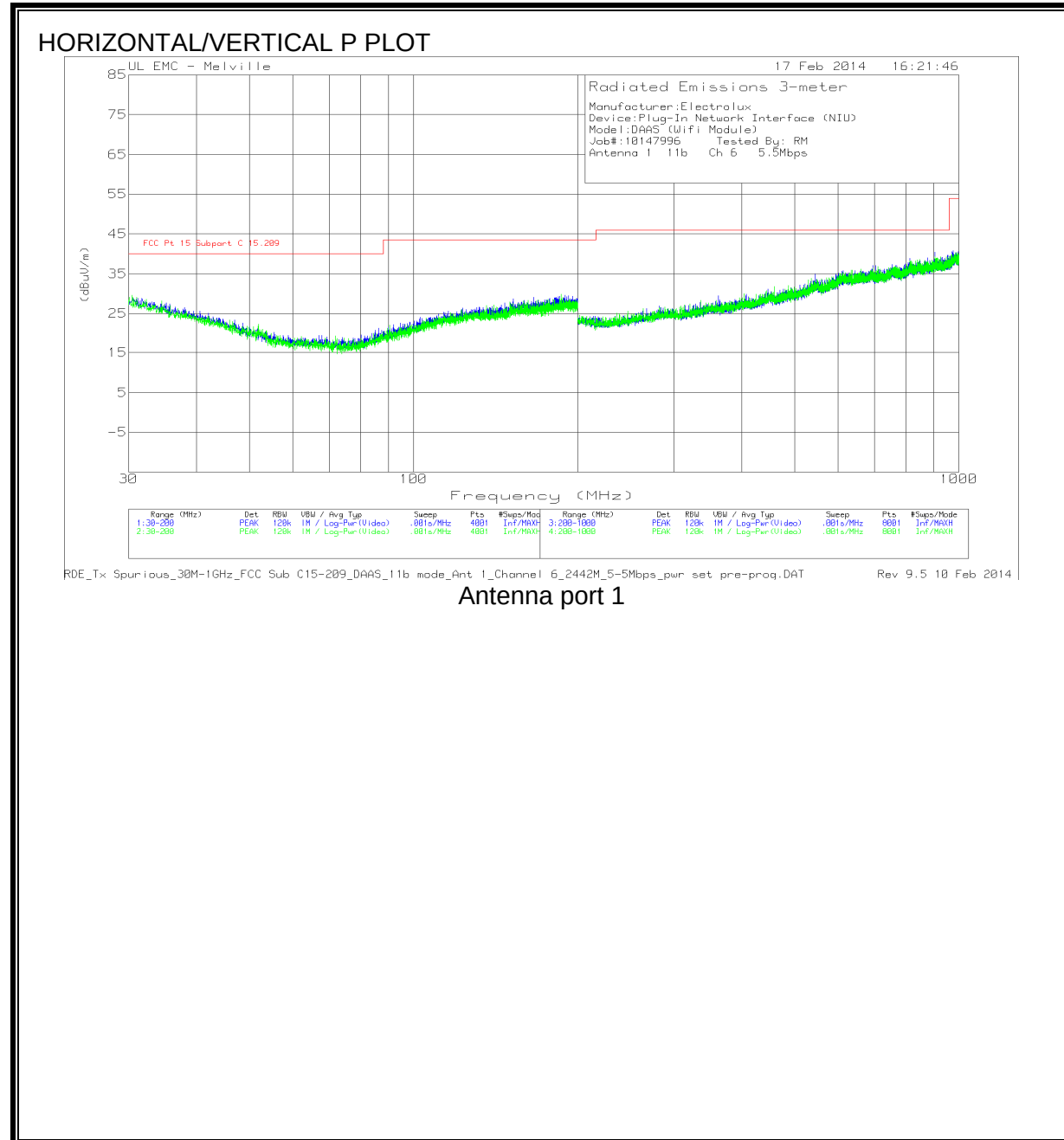
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

Note: Spurious emissions below 3GHz in the restricted band were evaluated after numerous measurement the emissions were identical therefore some results in the tables may outline similar outcomes in the measurement.

9.1.1 WORST-CASE BELOW 1 GHz B MODE

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, 802.11b MODE (HORIZONTAL/VERTICAL) DAAS VERSION



HORIZONTAL/VERTICAL DATA

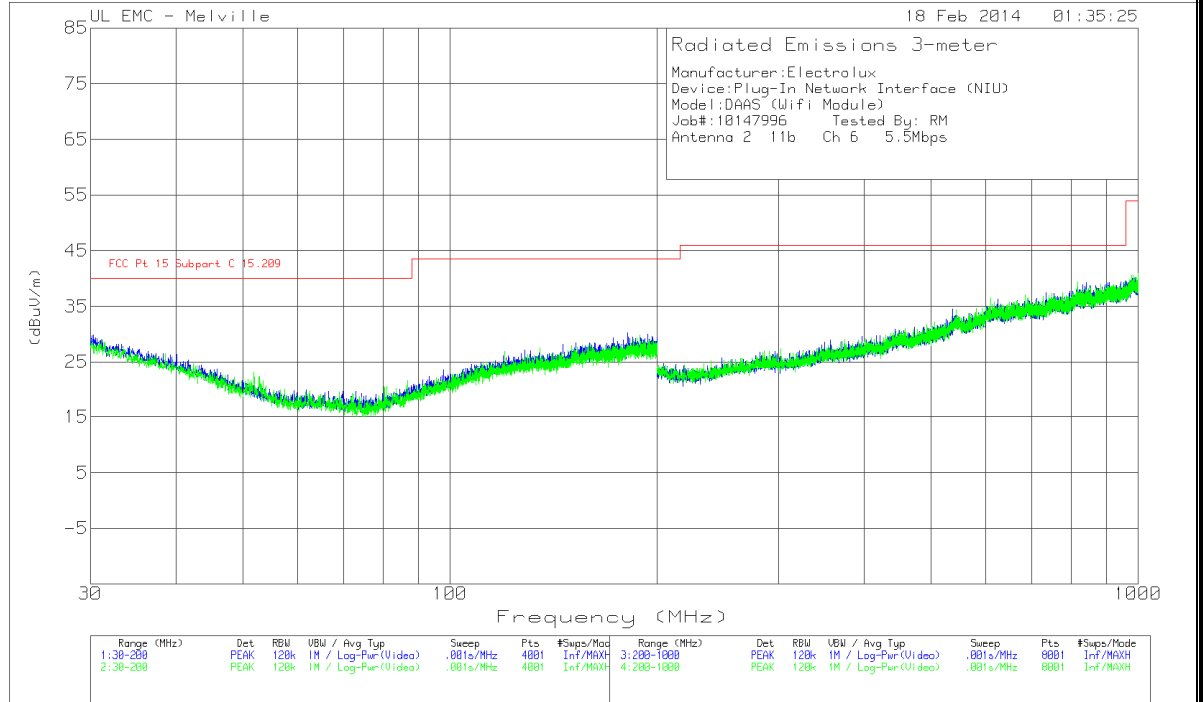
Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
31.7425	11.86	PK	17	0	28.86	40	-11.14	0-360	98	H
165.9575	13.65	PK	14.8	.7	29.15	43.5	-14.35	0-360	250	H
186.655	13.58	PK	15.6	.7	29.88	43.5	-13.62	0-360	100	V

PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
545.1	13.77	PK	19.5	1.6	34.87	46	-11.13	0-360	300	H
976.1	14.51	PK	24.1	2.2	40.81	54	-13.19	0-360	200	H
458	13.58	PK	16.7	1.5	31.78	46	-14.22	0-360	200	V

PK - Peak detector

HORIZONTAL/VERTICAL PLOT



RDE_Tx Spurious_30M-1GHz_FCC Sub C15-209_DAAS_11b mode_Ant 1_Channel 6_2442M_5-5Mbps_pwr set pre-prog.DAT

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HORIZONTAL/VERTICAL DATA

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
145.8125	13.13	PK	14.3	.7	28.13	43.5	-15.37	0-360	400	H
181.045	13.96	PK	15.5	.8	30.26	43.5	-13.24	0-360	400	H
51.8875	14.02	PK	8.9	.1	23.02	40	-16.98	0-360	100	V
134.975	12.85	PK	14.1	.6	27.55	43.5	-15.95	0-360	100	V

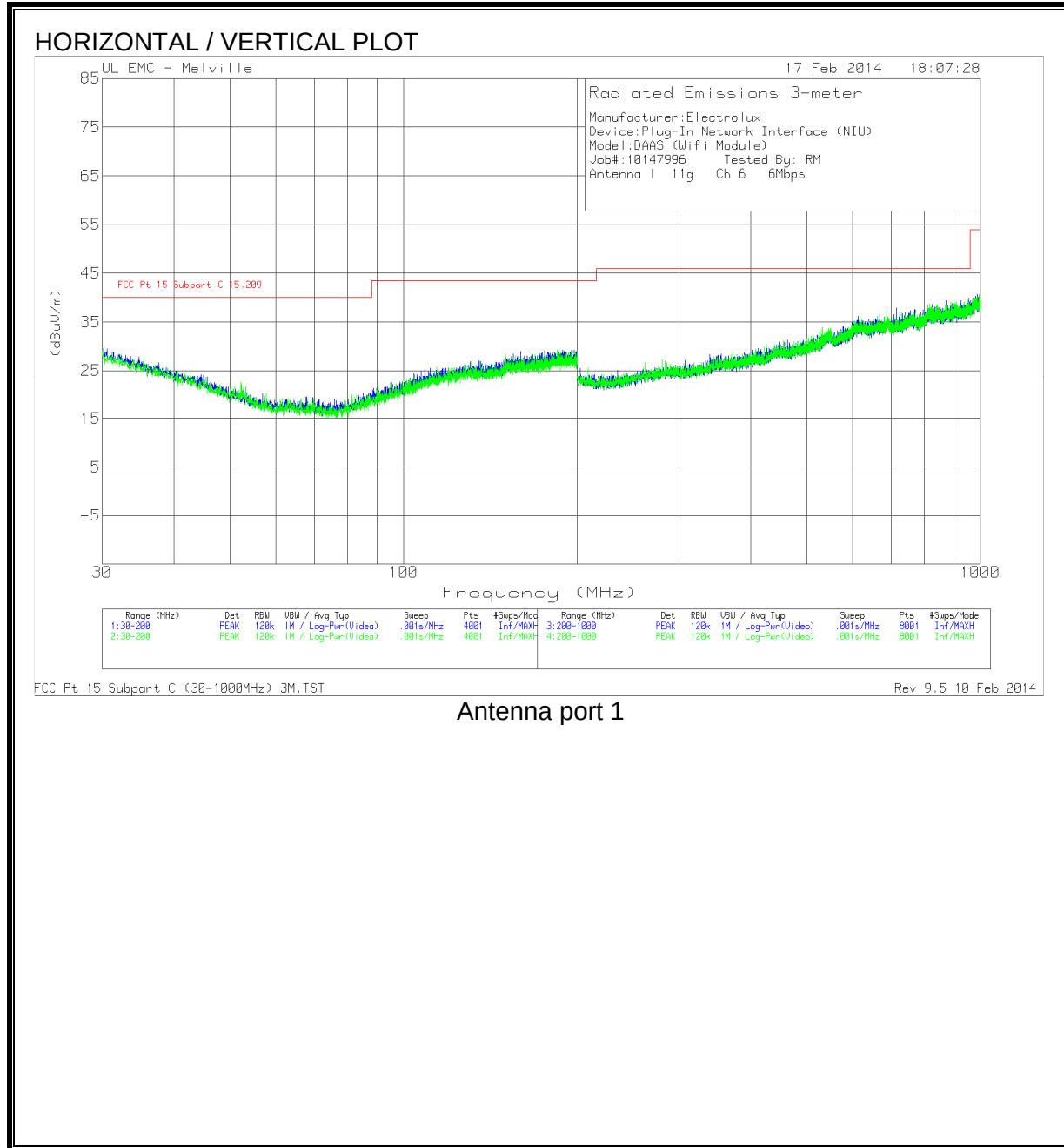
PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
357.4	13.01	PK	14.8	1.2	29.01	46	-16.99	0-360	102	H
817.7	14.94	PK	22.4	2.1	39.44	46	-6.56	0-360	200	V

PK - Peak detector

9.1.2 WORST-CASE BELOW 1 GHz G MODE

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, 802.11g MODE (HORIZONTAL/VERTICAL) DAAS VERSION



HORIZONTAL/VERTICAL DATA

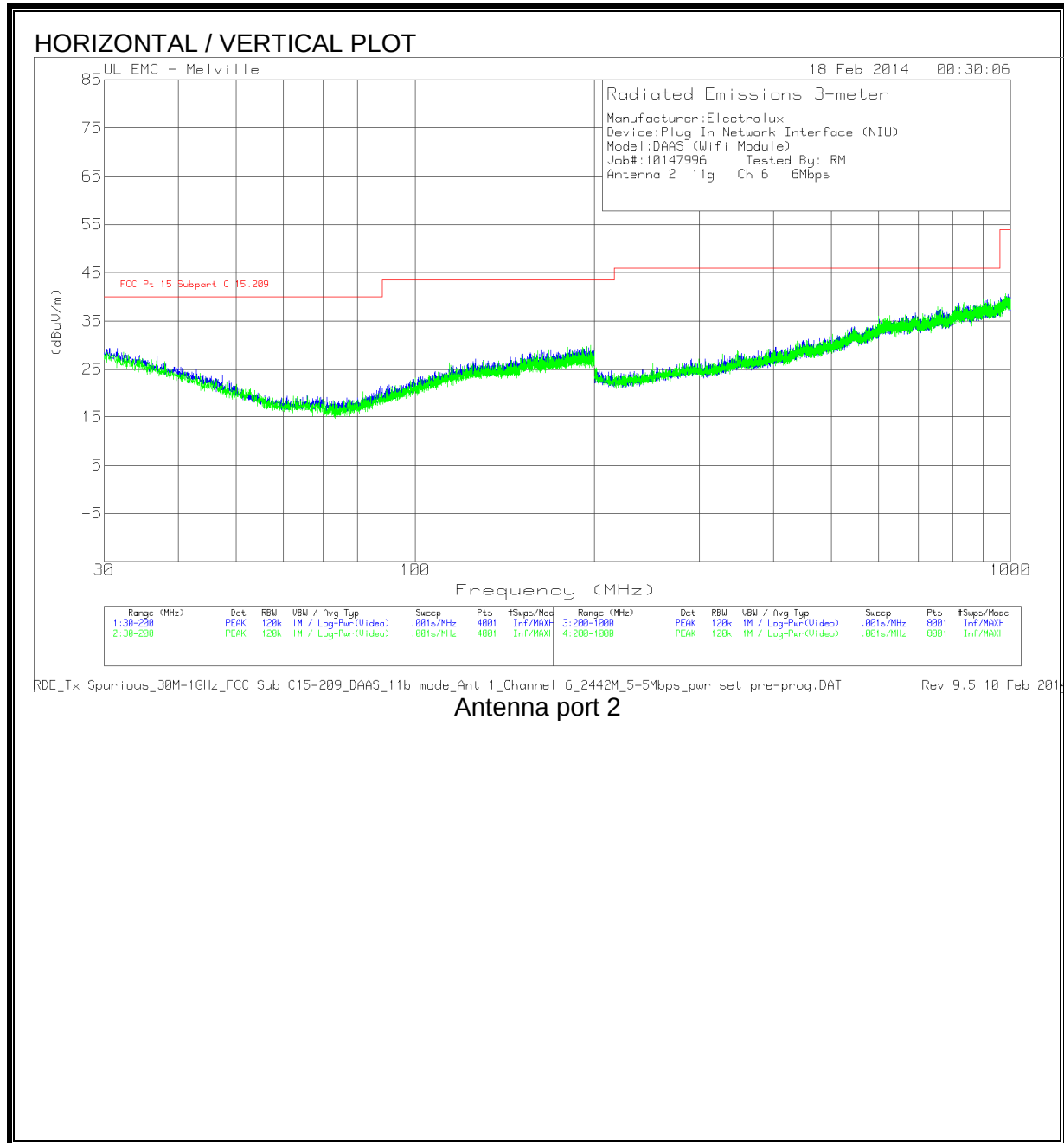
Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
30.595	11.88	PK	17.6	0	29.48	40	-10.52	0-360	250	H
175.605	13.42	PK	15.1	.7	29.22	43.5	-14.28	0-360	400	H
150.275	13.35	PK	14.4	.7	28.45	43.5	-15.05	0-360	100	V

PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
612.9	14.68	PK	19.8	1.7	36.18	46	-9.82	0-360	300	H
715.8	15.49	PK	20.4	2	37.89	46	-8.11	0-360	200	H
816	13.85	PK	22.5	2.1	38.45	46	-7.55	0-360	400	V

PK - Peak detector

**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, 802.11g MODE
(HORIZONTAL/VERTICAL) DAAS VERSION**



HORIZONTAL/VERTICAL DATA

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
36.8425	12.57	PK	15.1	0	27.67	40	-12.33	0-360	400	H
169.0175	13.53	PK	14.8	.7	29.03	43.5	-14.47	0-360	250	H
180.11	13.45	PK	15.5	.7	29.65	43.5	-13.85	0-360	100	V

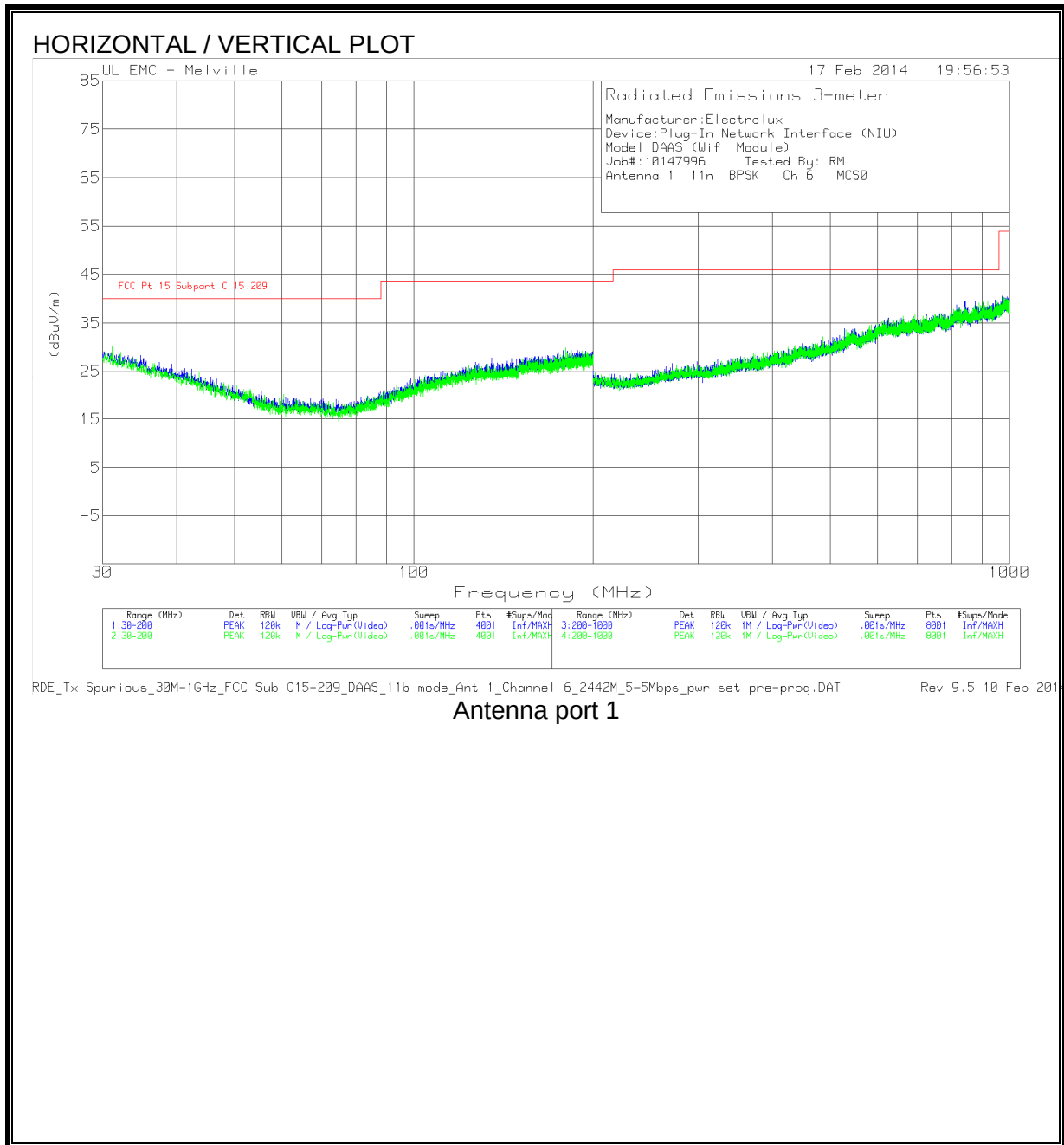
PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
541.8	12.81	PK	19.3	1.6	33.71	46	-12.29	0-360	200	H
351.3	13.15	PK	14.8	1.2	29.15	46	-16.85	0-360	100	V
605.9	14.67	PK	19.6	1.7	35.97	46	-10.03	0-360	300	V

PK - Peak detector

9.1.3 WORST-CASE BELOW 1 GHz N MODE BPSK

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, 802.11n BPSK MODE (HORIZONTAL/VERTICAL) DAAS VERSION



HORIZONTAL/VERTICAL DATA

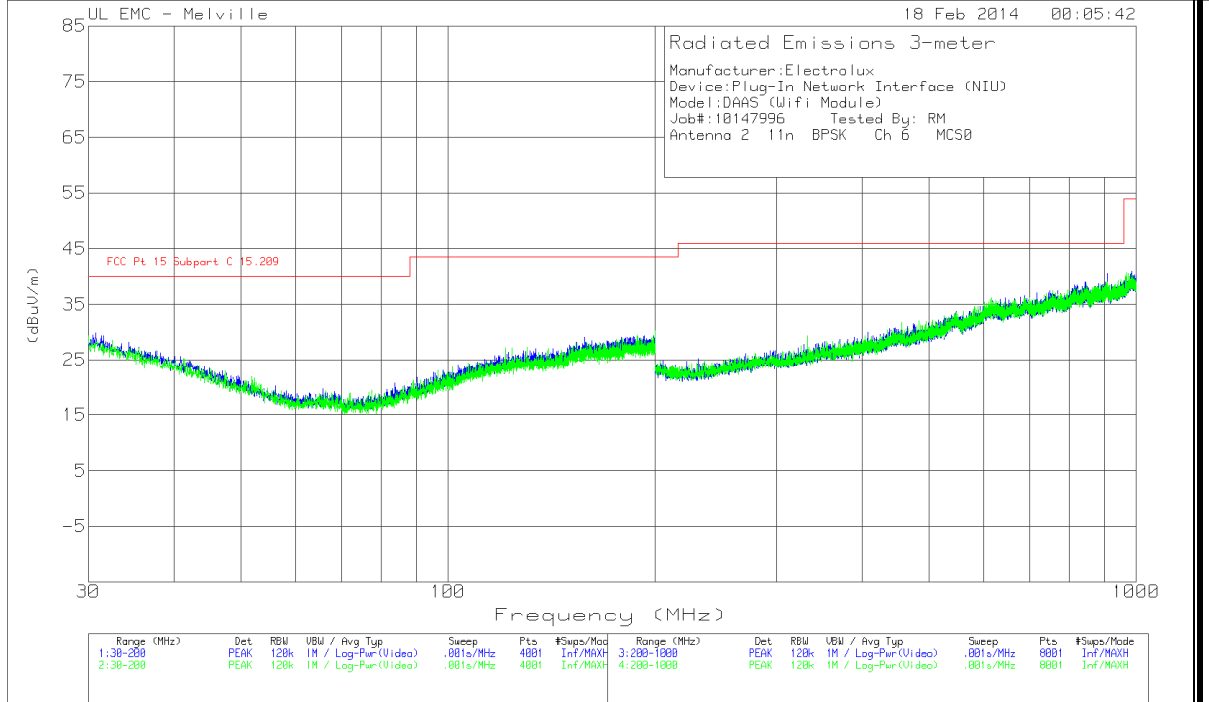
Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
34.76	12.3	PK	16	0	28.3	40	-11.7	0-360	250	H
135.1025	13.07	PK	14.1	.6	27.77	43.5	-15.73	0-360	100	H
31.105	12.75	PK	17.4	0	30.15	40	-9.85	0-360	100	V
179.7275	13.81	PK	15.4	.7	29.91	43.5	-13.59	0-360	100	V

PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
529.1	13.98	PK	18.4	1.5	33.88	46	-12.12	0-360	200	H
973.8	14.22	PK	24	2.3	40.52	54	-13.48	0-360	100	V

PK - Peak detector

HORIZONTAL / VERTICAL PLOT



RDE_Tx Spurious_30M-1GHz_FCC Sub C15-209_DAAS_11b mode_Ant 1_Channel 6_2442M_5-5Mbps_pwr set pre-prog.DAT

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HORIZONTAL/VERTICAL DATA

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
30.765	12.35	PK	17.5	0	29.85	40	-10.15	0-360	400	H
157.9675	13.59	PK	14.8	.7	29.09	43.5	-14.41	0-360	98	H
121.2475	13.03	PK	13.5	.6	27.13	43.5	-16.37	0-360	100	V

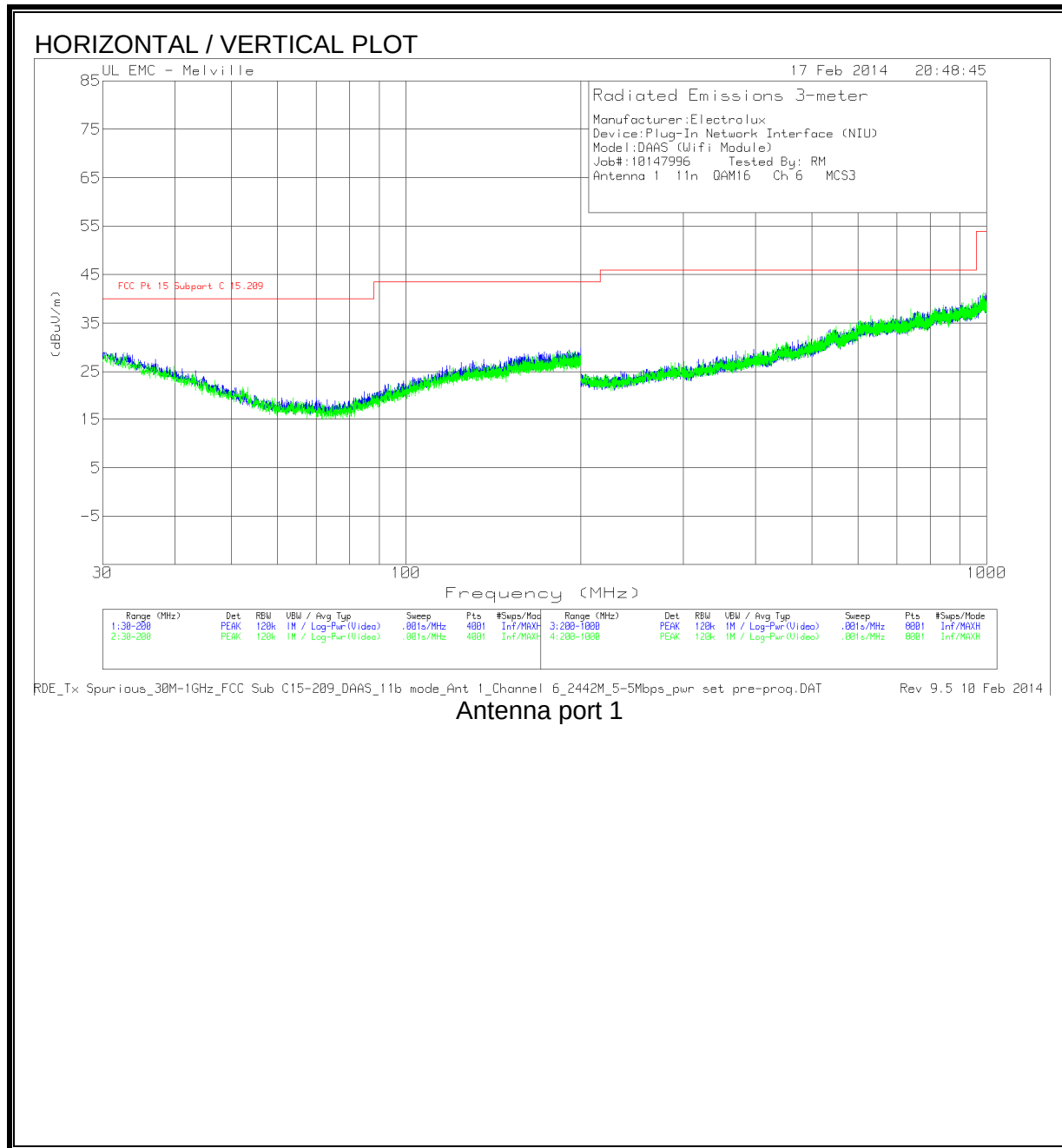
PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
844.6	14.33	PK	22.6	2.1	39.03	46	-6.97	0-360	400	H
986.3	14.29	PK	24.4	2.3	40.99	54	-13.01	0-360	300	H
333	14.22	PK	13.9	1.2	29.32	46	-16.68	0-360	400	V

PK - Peak detector

9.1.4 WORST-CASE BELOW 1 GHz N MODE QAM 16

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, 802.11n QAM 16 MODE (HORIZONTAL/VERTICAL) DAAS VERSION



HORIZONTAL/VERTICAL DATA

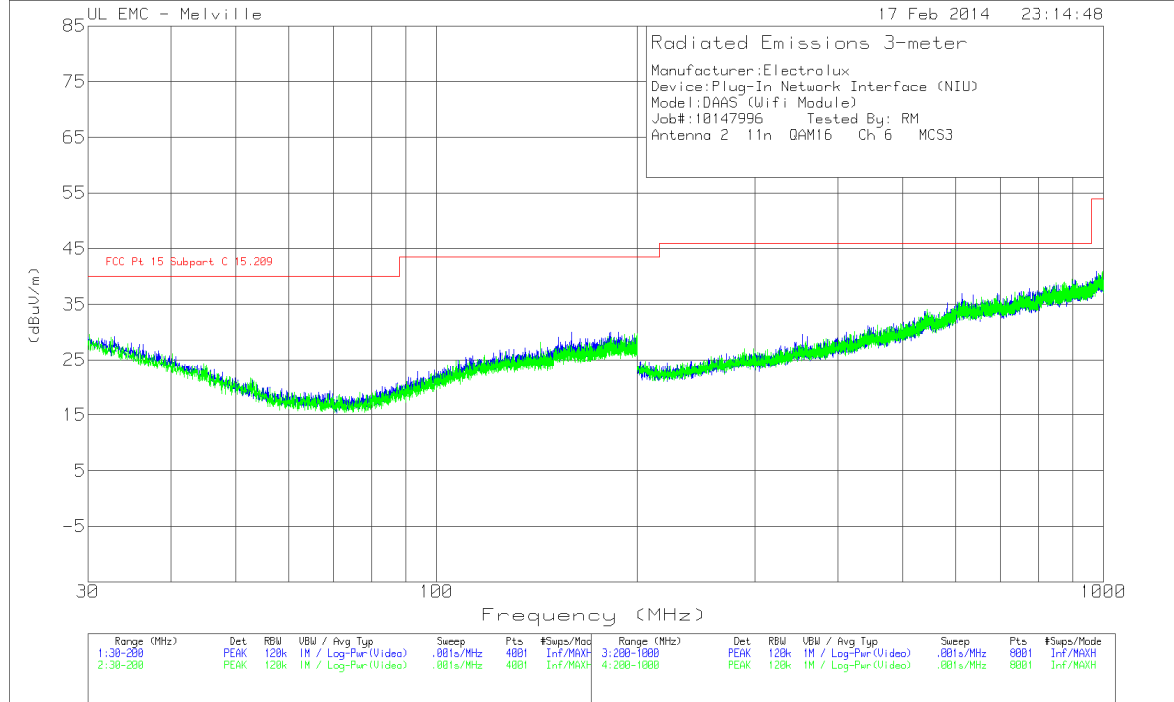
Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
33.1025	12.14	PK	16.6	.1	28.84	40	-11.16	0-360	250	H
182.32	13.01	PK	15.6	.8	29.41	43.5	-14.09	0-360	250	H
190.8625	12.73	PK	15.6	.8	29.13	43.5	-14.37	0-360	100	V

PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
759.8	14.21	PK	21.3	2	37.51	46	-8.49	0-360	400	H
543.2	12.62	PK	19.4	1.6	33.62	46	-12.38	0-360	300	V
740.9	15.33	PK	20.8	1.9	38.03	46	-7.97	0-360	300	V

PK - Peak detector

HORIZONTAL / VERTICAL PLOT



RDE_Tx Spurious_30M-1GHz_FCC Sub C15-209_DAAS_11b mode_Ant 1_Channel 6_2442M_5-5Mbps_pwr set pre-prog.DAT

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Antenna port 2

HORIZONTAL/VERTICAL DATA

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
32.89	12.57	PK	16.7	0	29.27	40	-10.73	0-360	250	H
159.285	14.53	PK	14.8	.7	30.03	43.5	-13.47	0-360	400	H
191.415	13.21	PK	15.6	.8	29.61	43.5	-13.89	0-360	100	V

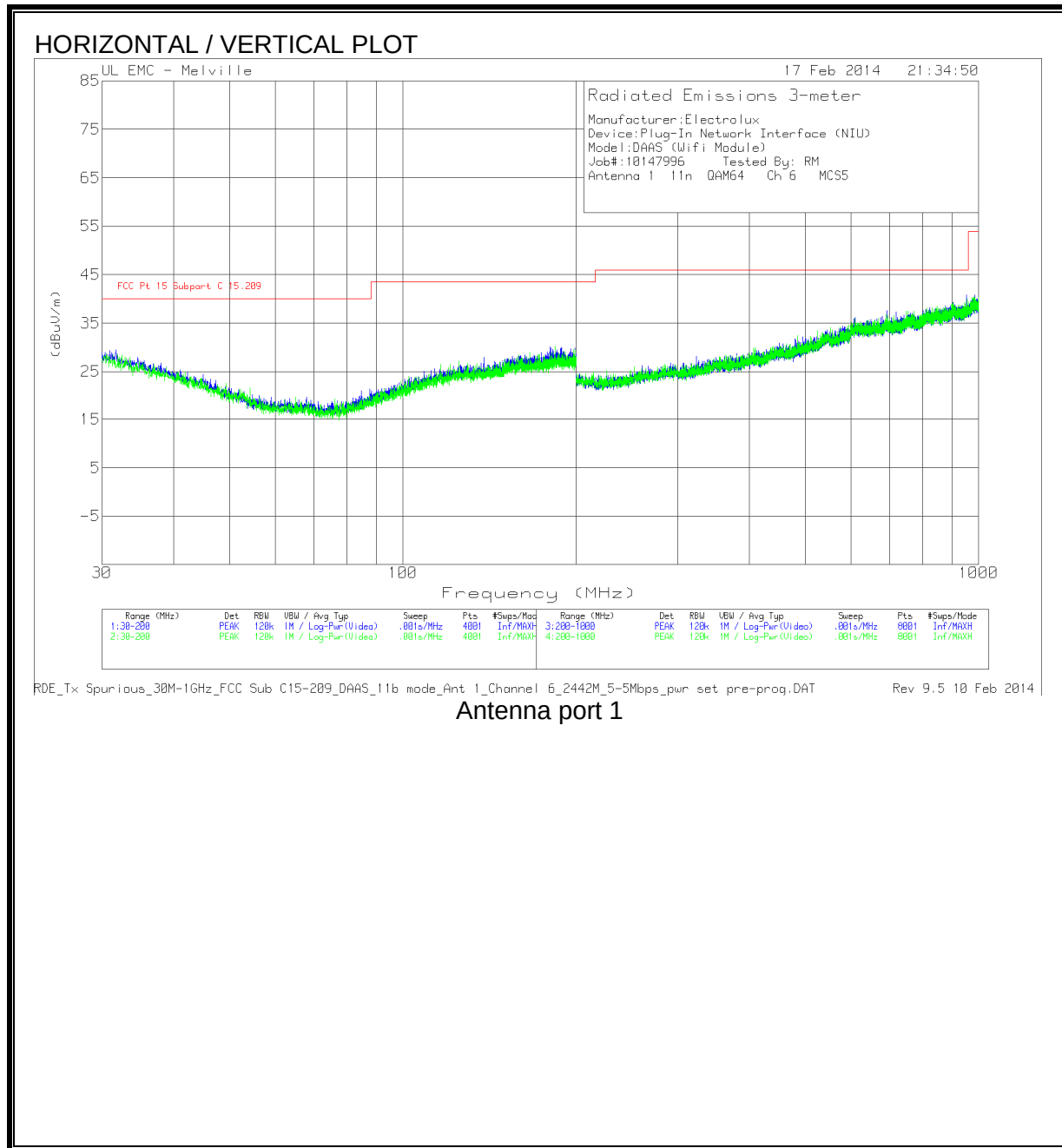
PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
614.2	15.5	PK	19.8	1.6	36.9	46	-9.1	0-360	400	H
977	14.39	PK	24.2	2.3	40.89	54	-13.11	0-360	98	H
995	14.44	PK	24	2.3	40.74	54	-13.26	0-360	100	V

PK - Peak detector

9.1.5 WORST-CASE BELOW 1 GHz N MODE QAM 64

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, 802.11n QAM 64 MODE (HORIZONTAL/VERTICAL) DAAS VERSION



HORIZONTAL/VERTICAL DATA

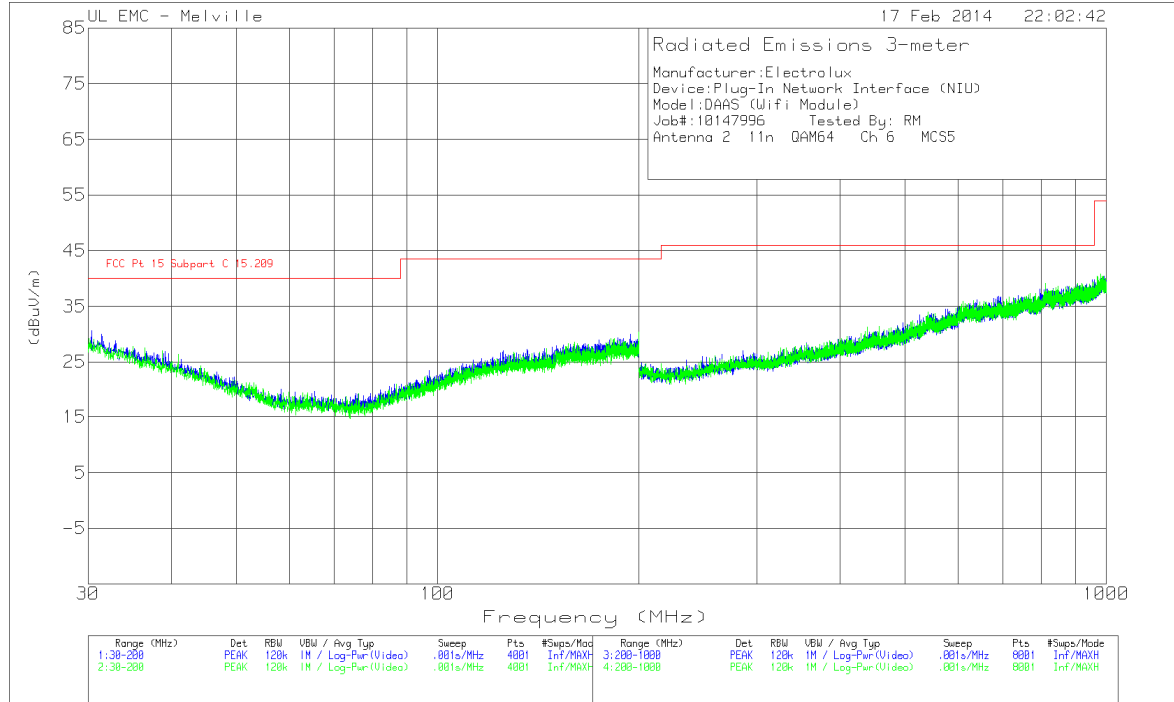
Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
31.7425	12.43	PK	17	0	29.43	40	-10.57	0-360	400	H
138.205	13.26	PK	14.2	.5	27.96	43.5	-15.54	0-360	400	H
124.9875	12.81	PK	13.9	.5	27.21	43.5	-16.29	0-360	100	V
183.595	13.79	PK	15.7	.7	30.19	43.5	-13.31	0-360	100	V

PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
692.8	15.29	PK	20.5	1.8	37.59	46	-8.41	0-360	200	H
981.7	13.87	PK	24.4	2.2	40.47	54	-13.53	0-360	300	V

PK - Peak detector

HORIZONTAL / VERTICAL PLOT



RDE_Tx Spurious_30M-1GHz_FCC Sub C15-209_DAAS_11b mode_Ant 1_Channel 6_2442M_5-5Mbps_pwr set pre-prog.DAT

Rev 9.5 10 Feb 2014

Antenna port 2

HORIZONTAL/VERTICAL DATA

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
30.3825	13.01	PK	17.6	0	30.61	40	-9.39	0-360	400	H
194.05	13.58	PK	15.6	.8	29.98	43.5	-13.52	0-360	250	H
40.9225	12.79	PK	13.6	0	26.39	40	-13.61	0-360	100	V

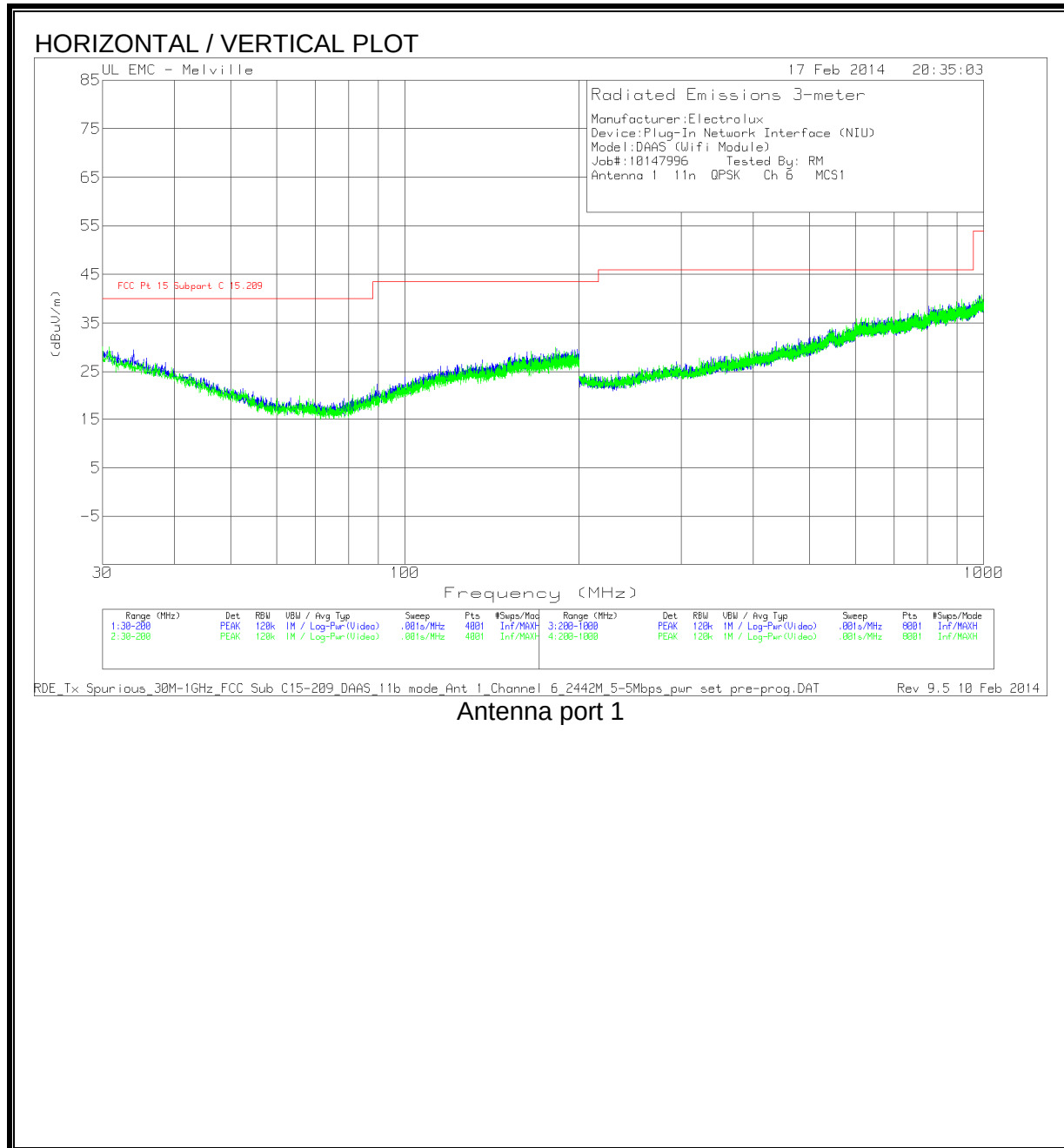
PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
575.4	13.8	PK	19	1.7	34.5	46	-11.5	0-360	100	H
687.6	14.63	PK	20.4	1.7	36.73	46	-9.27	0-360	300	H
810.1	14.72	PK	22.2	2.2	39.12	46	-6.88	0-360	100	V

PK - Peak detector

9.1.6 WORST-CASE BELOW 1 GHz N MODE QPSK

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, 802.11n QPSK MODE (HORIZONTAL/VERTICAL) DAAS VERSION)



HORIZONTAL/VERTICAL DATA

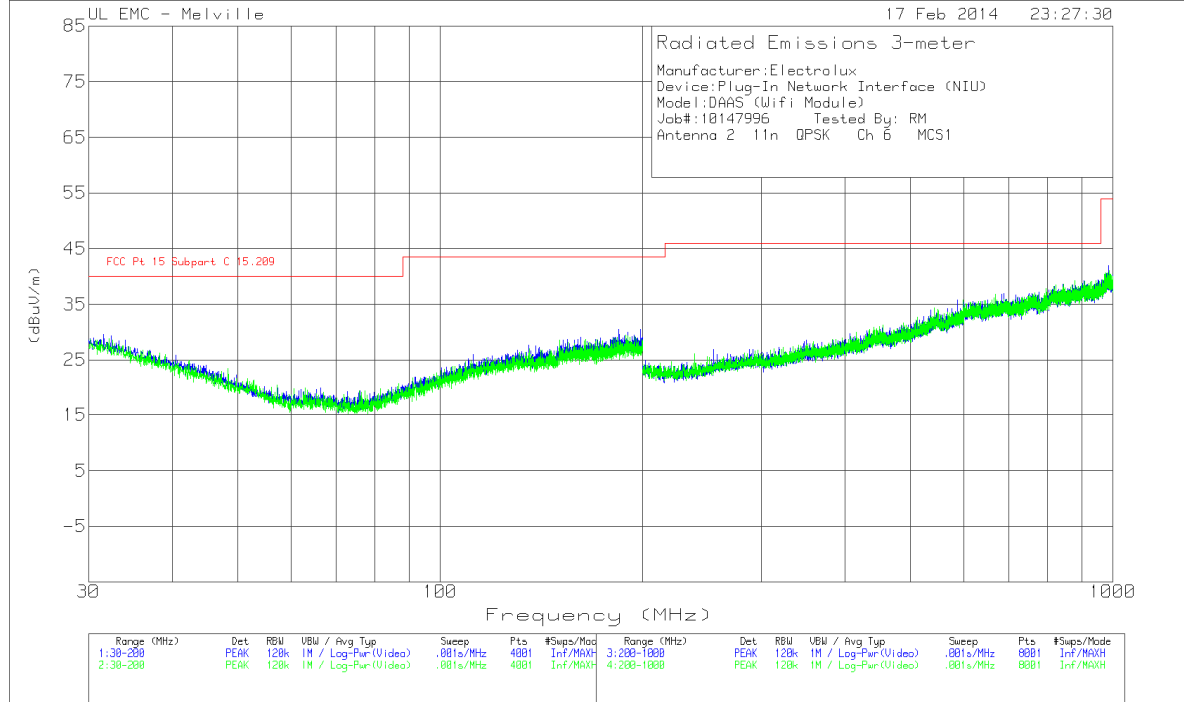
Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
33.9525	13.23	PK	16.1	.1	29.43	40	-10.57	0-360	102	H
162.5575	13.66	PK	14.8	.6	29.06	43.5	-14.44	0-360	250	H
182.065	13.65	PK	15.6	.8	30.05	43.5	-13.45	0-360	100	V

PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
438.3	13.09	PK	16.5	1.5	31.09	46	-14.91	0-360	102	H
983.9	13.95	PK	24.5	2.2	40.65	54	-13.35	0-360	300	H
718.1	15.11	PK	20.5	1.9	37.51	46	-8.49	0-360	300	V

PK - Peak detector

HORIZONTAL / VERTICAL PLOT



RDE_Tx Spurious_30M-1GHz_FCC Sub C15-209_DAAS_11b mode_Ant 1_Channel 6_2442M_5-5Mbps_pwr set pre-prog.DAT

Rev 9.5 10 Feb 2014

Antenna port 2

HORIZONTAL/VERTICAL DATA

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
31.615	12.46	PK	17.1	0	29.56	40	-10.44	0-360	250	H
111.94	12.86	PK	12.6	.5	25.96	43.5	-17.54	0-360	250	H
184.105	14.01	PK	15.8	.7	30.51	43.5	-12.99	0-360	100	H

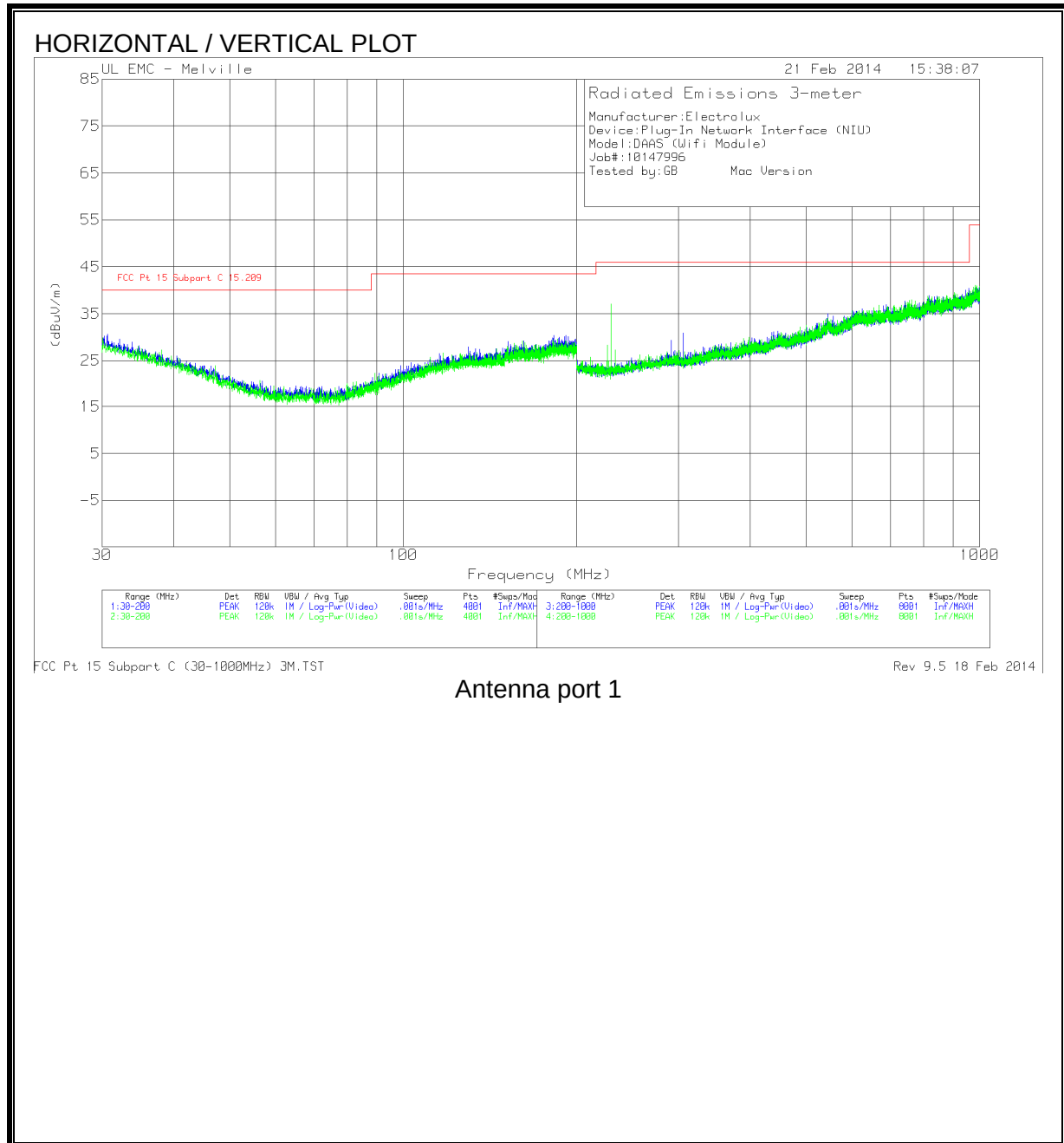
PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
254.9	13.92	PK	12.1	.9	26.92	46	-19.08	0-360	400	H
587.2	14.64	PK	19.4	1.7	35.74	46	-10.26	0-360	300	H
986.6	15.26	PK	24.4	2.3	41.96	54	-12.04	0-360	300	H

PK - Peak detector

9.1.7 WORST-CASE BELOW 1 GHz MAC VERSION

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE, CONFIGURATION (HORIZONTAL/VERTICAL) MACS VERSION



HORIZONTAL/VERTICAL DATA

Horizontal 30 - 200MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.7225	12.98	PK	17.6	0	30.58	40	-9.42	0-360	101	H
2	191.245	13.92	PK	15.6	.8	30.32	43.5	-13.18	0-360	250	H

PK - Peak detector

Vertical 30 - 200MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF-54 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	47.255	12.93	PK	10.9	.1	23.93	40	-16.07	0-360	100	V
4	117.295	12.95	PK	13.2	.5	26.65	43.5	-16.85	0-360	100	V

PK - Peak detector

Horizontal 200 - 1000MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	291.8	15.29	PK	13	1.1	29.39	46	-16.61	0-360	400	H
6	305.9	16.69	PK	13.1	1.1	30.89	46	-15.11	0-360	400	H

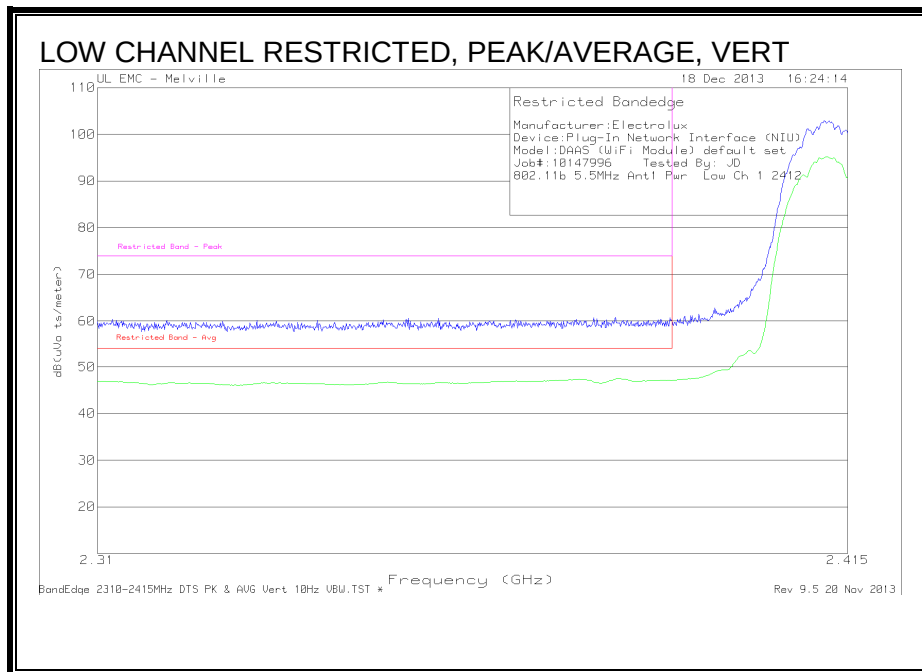
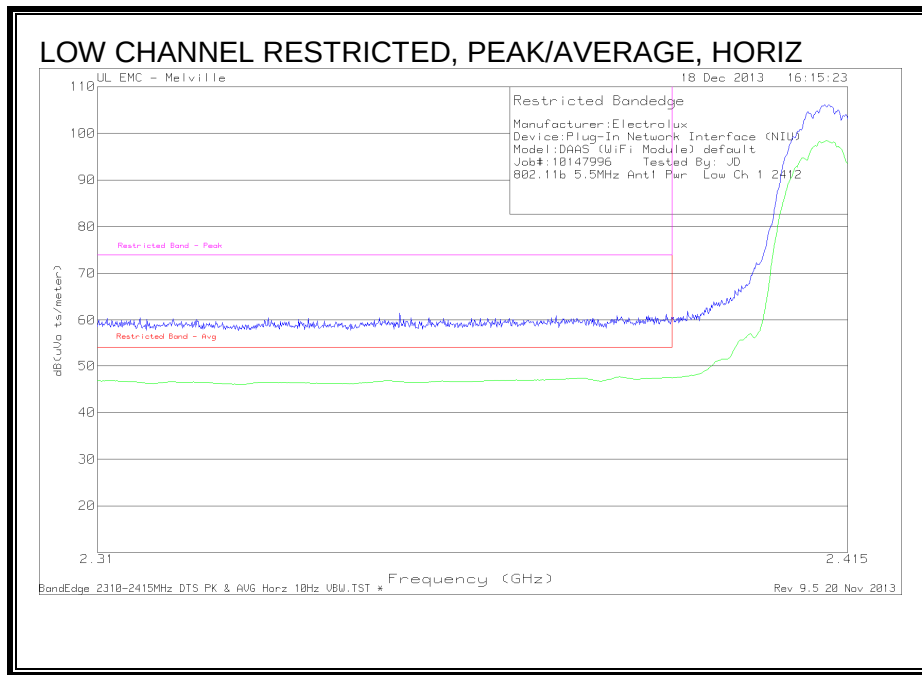
PK - Peak detector

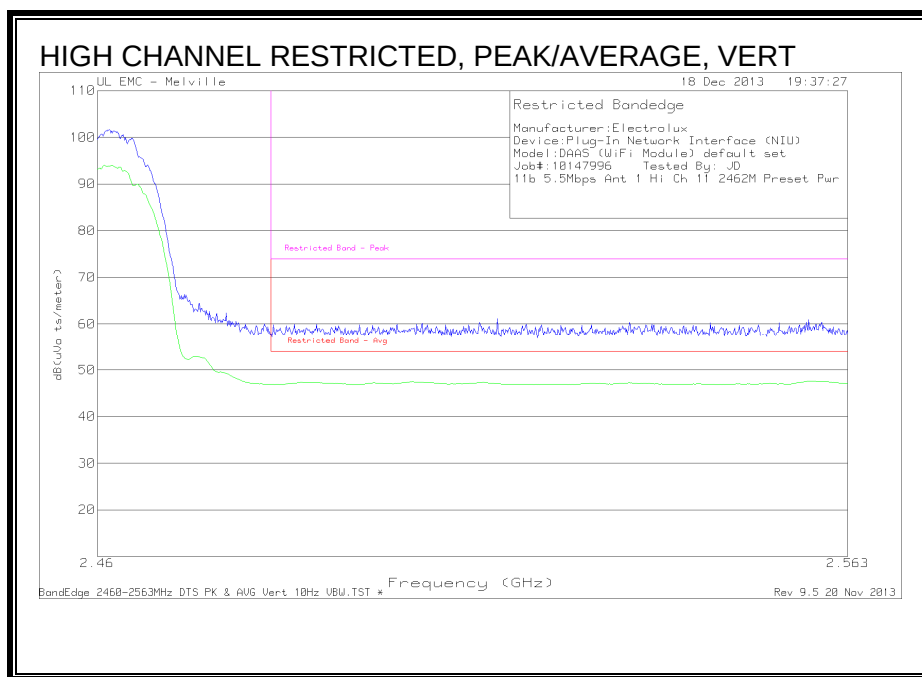
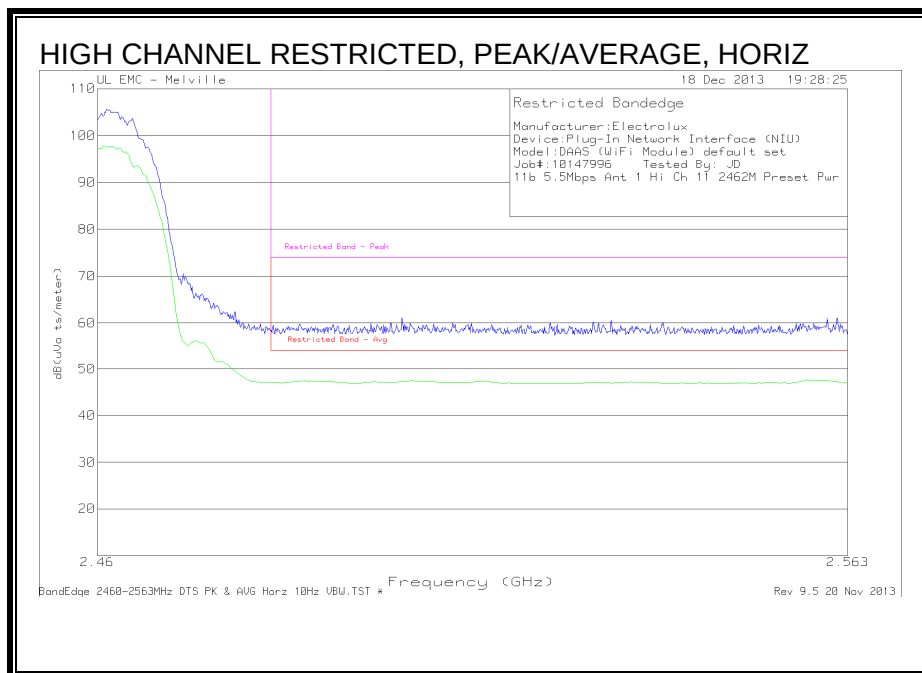
Vertical 200 - 1000MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF-67 [dB/m]	GL-3M [dB]	Corrected Reading (dBuV/m)	FCC Pt 15 Subpart C 15.209	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	211.4	14.08	PK	10.8	.8	25.68	43.5	-17.82	0-360	400	V
8	225.8	16.73	PK	10.8	.8	28.33	46	-17.67	0-360	400	V
9	229.3	25.22	PK	10.9	.9	37.02	46	-8.98	0-360	400	V
10	233.4	15.36	PK	11	.9	27.26	46	-18.74	0-360	400	V

PK - Peak detector

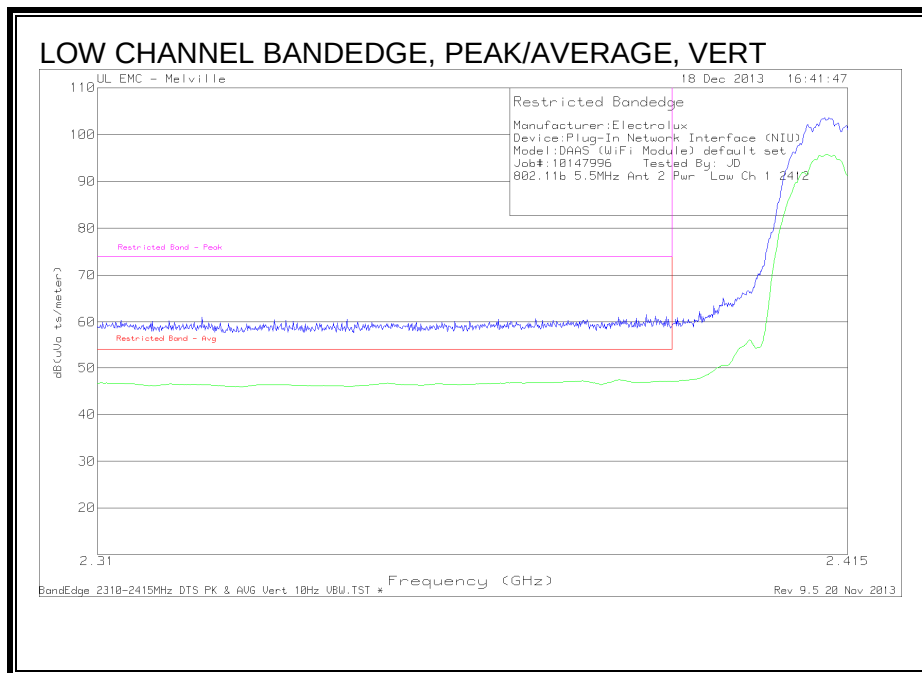
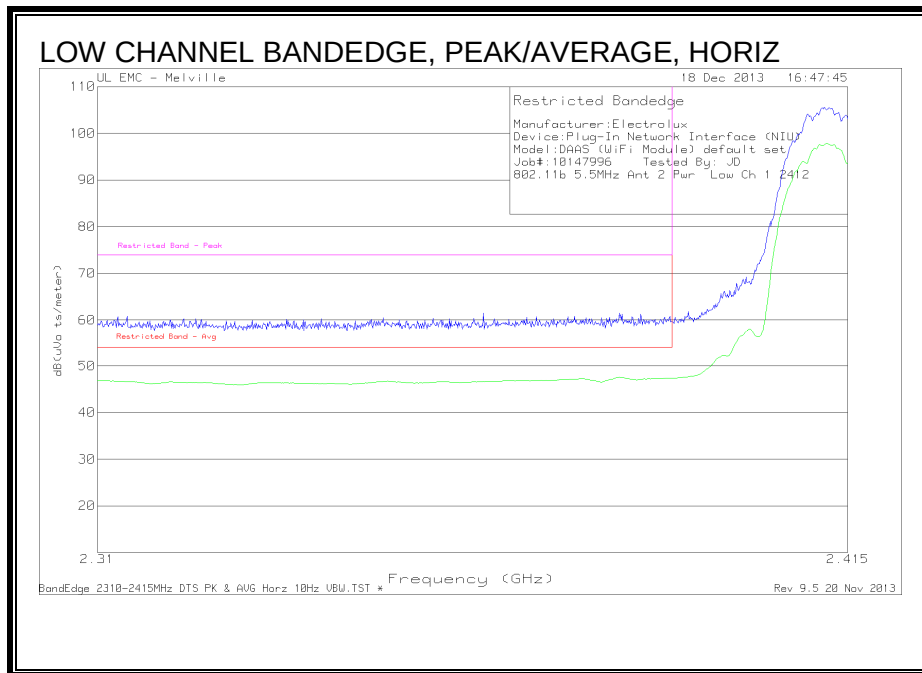
9.2 TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL) ANTENNA PORT 1

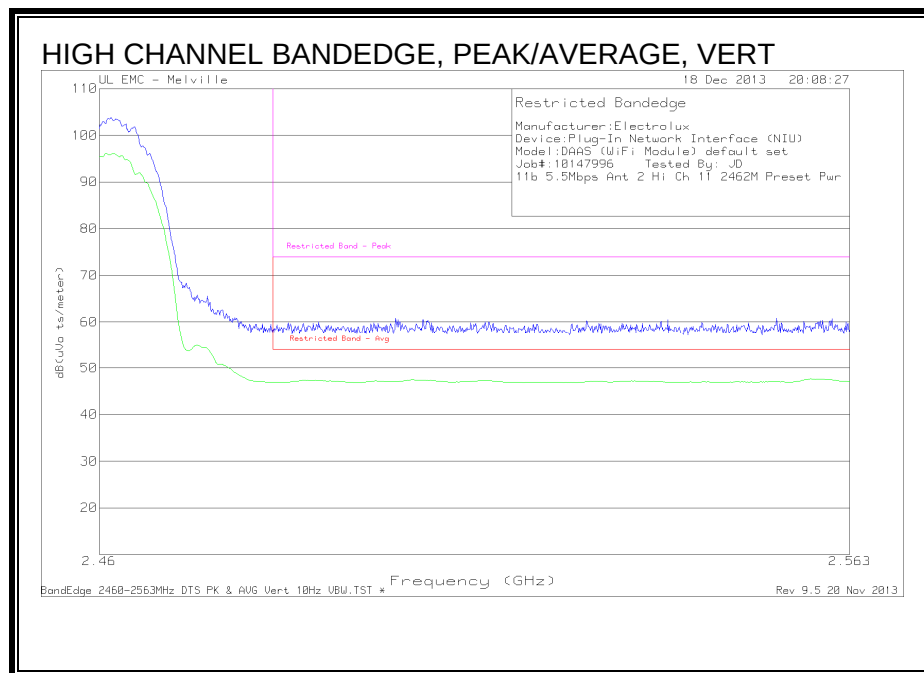
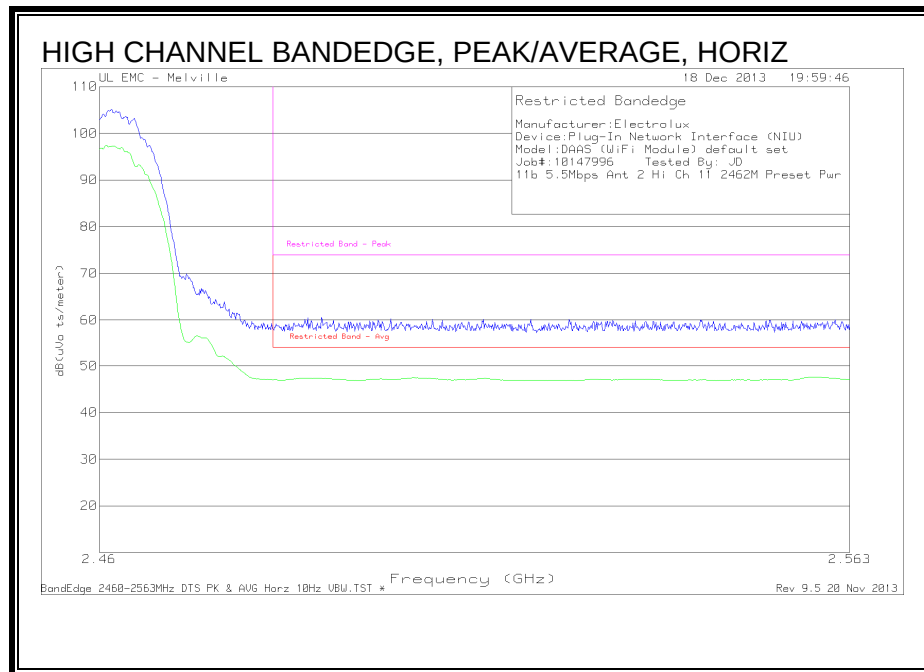




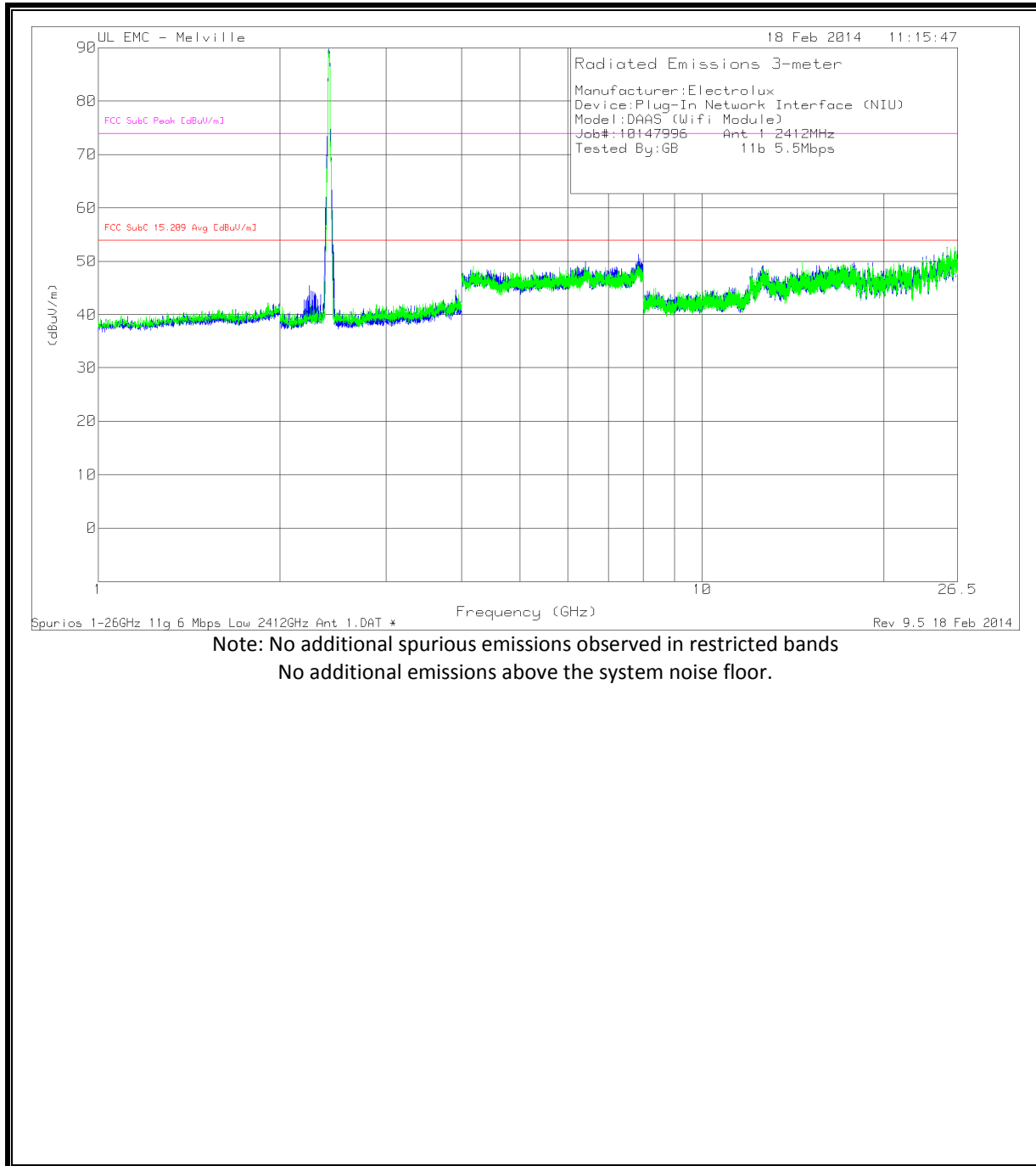
AUTHORIZED BANDEDGE (LOW CHANNEL) ANTENNA PORT 2



AUTHORIZED BANDEDGE (HIGH CHANNEL) ANTENNA PORT 2



HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

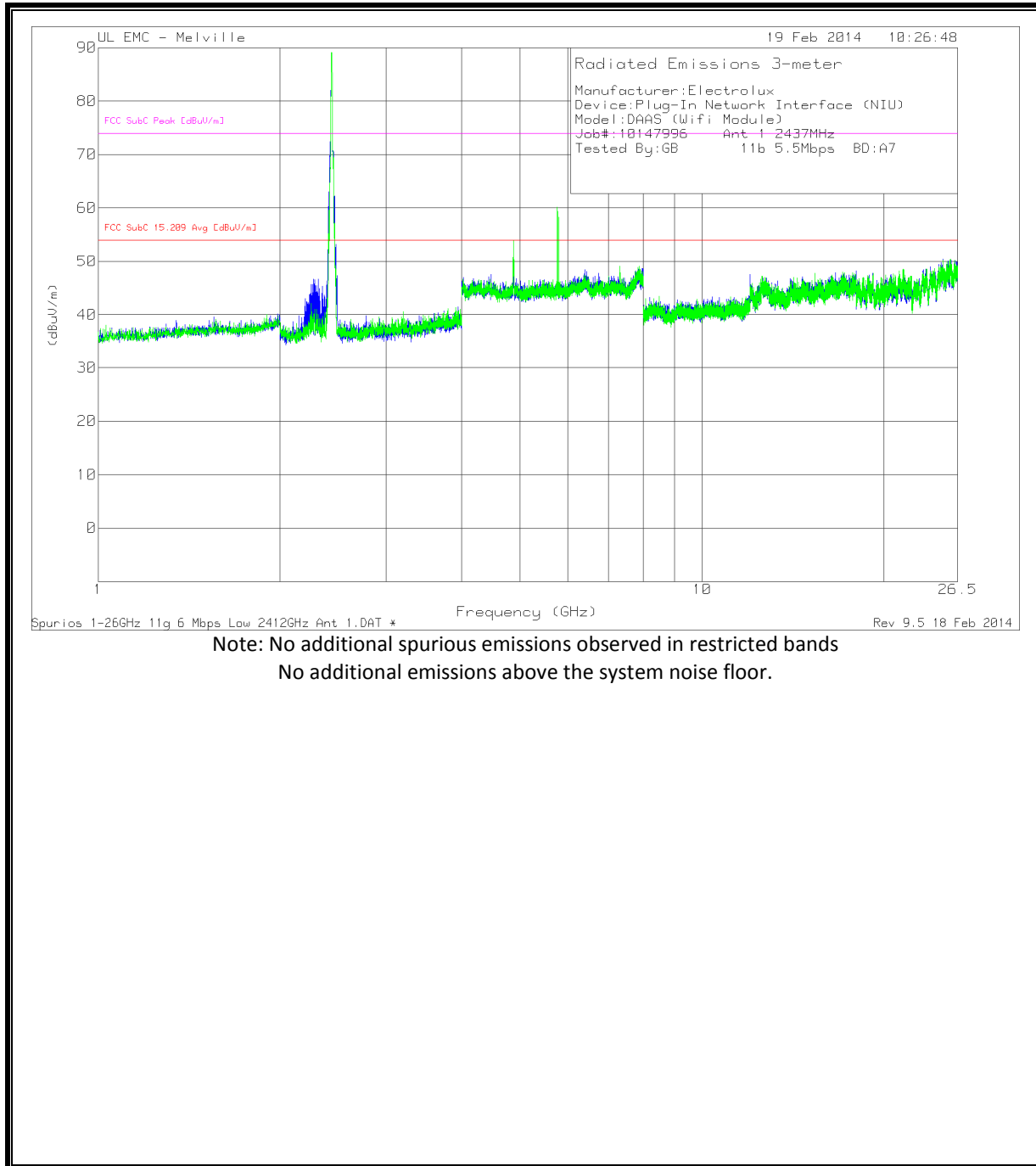
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	-	-	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	-	-	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

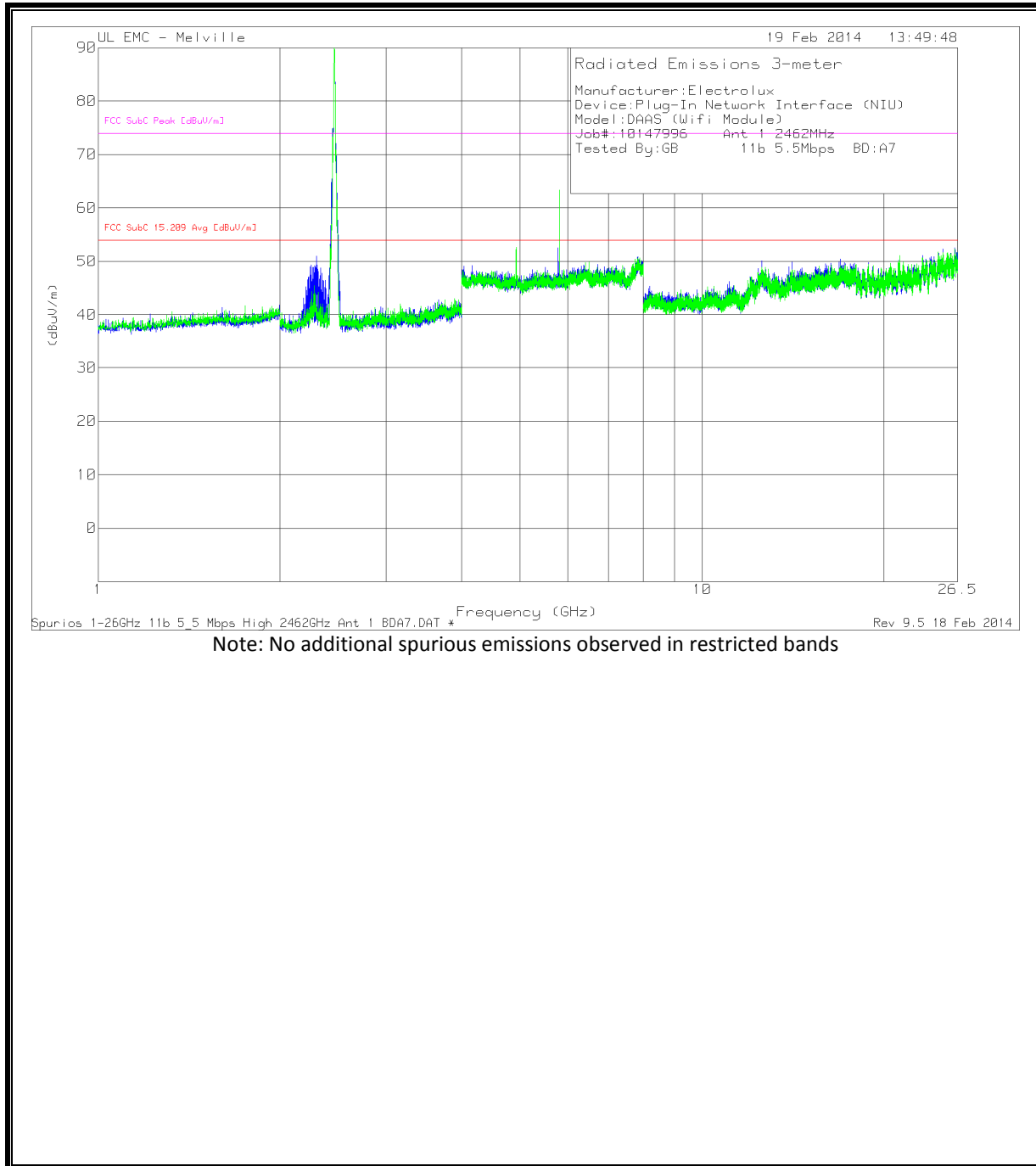
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	-	-	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	-	-	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48106 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 4.874	56.03	MAv1	37.2	-52.12	41.11	54	-12.89	-	-	62	343	V
* 4.8741	67.14	PK2	37.2	-52.12	52.22	-	-	74	-21.78	62	343	V
* 4.8741	67.99	PK2	37.2	-52.12	53.07	-	-	74	-20.93	62	343	H
* 4.879	58.4	MAv1	37.2	-52.12	43.48	54	-10.52	-	-	62	343	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

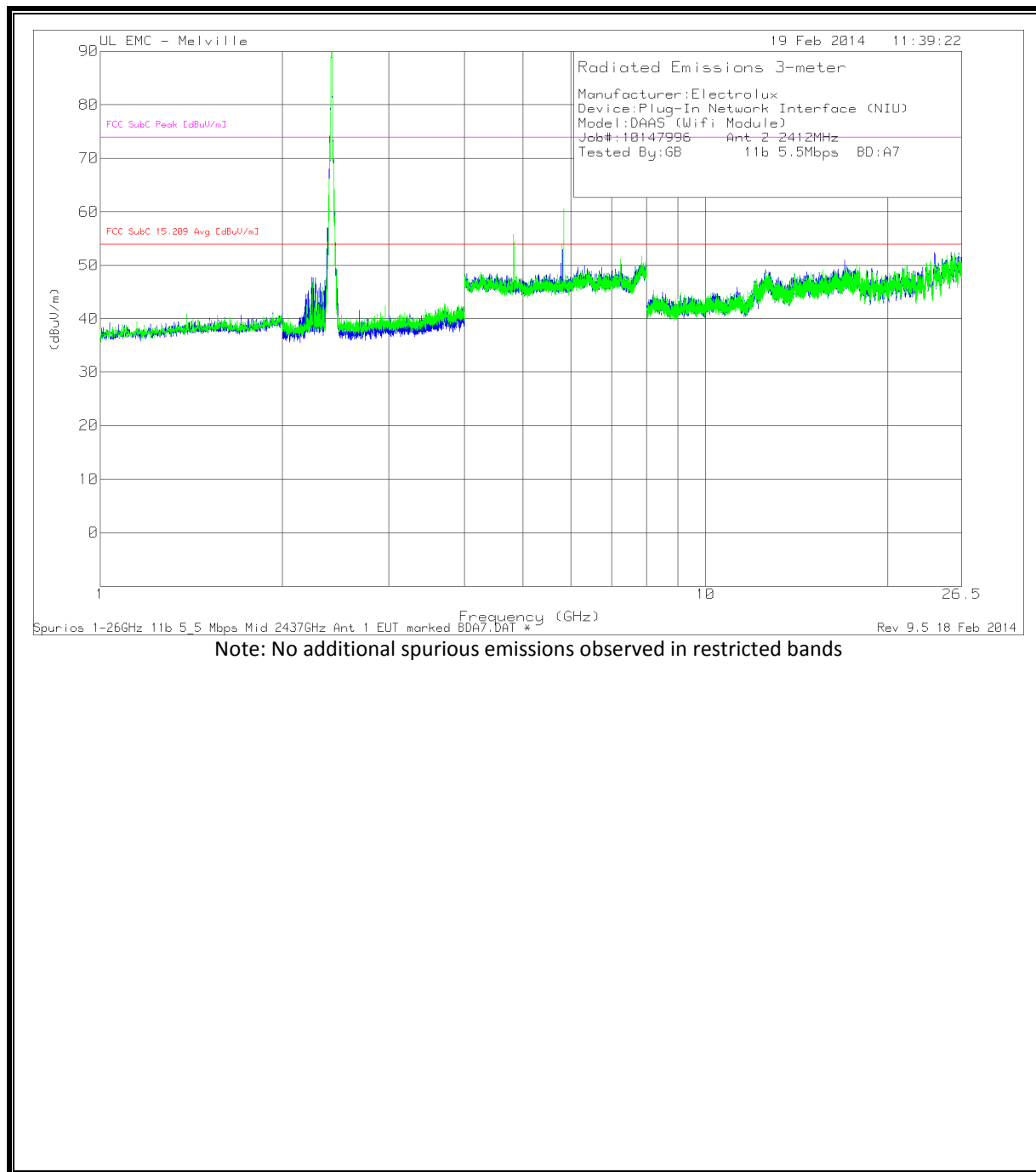
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	-	-	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	-	-	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48106 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 4.9239	70.8	PK2	37.2	-52.12	55.82	-	-	74	-18.18	184	123	V
* 4.9244	57.74	MAv1	37.2	-52.12	42.74	54	-11.26	-	-	184	123	V
* 4.9241	68.47	PK2	37.2	-52.12	53.49	-	-	74	-20.51	3	221	H
* 4.924	57.18	MAv1	37.2	-52.12	42.2	54	-11.8	-	-	3	221	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

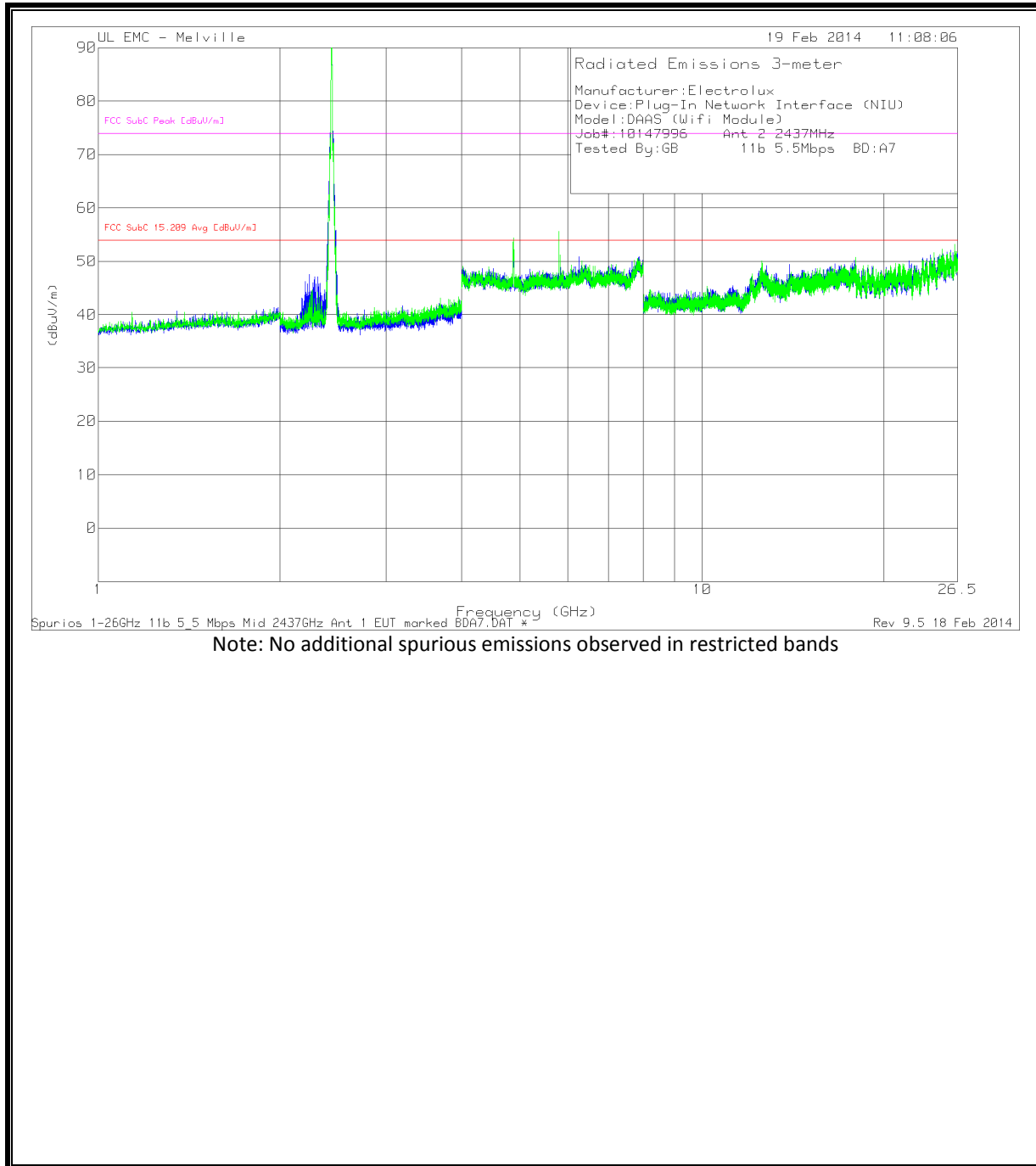
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	-	-	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	-	-	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48106 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 4.824	70.72	PK2	37.1	-52.3	55.52	-	-	74	-18.48	100	181	V
* 4.8243	58.58	MAv1	37.1	-52.3	43.38	54	-10.62	-	-	100	181	V
* 4.824	69.61	PK2	37.1	-52.3	54.41	-	-	74	-19.59	12	128	H
* 4.8239	57.95	MAv1	37.1	-52.3	42.75	54	-11.25	-	-	12	128	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 2

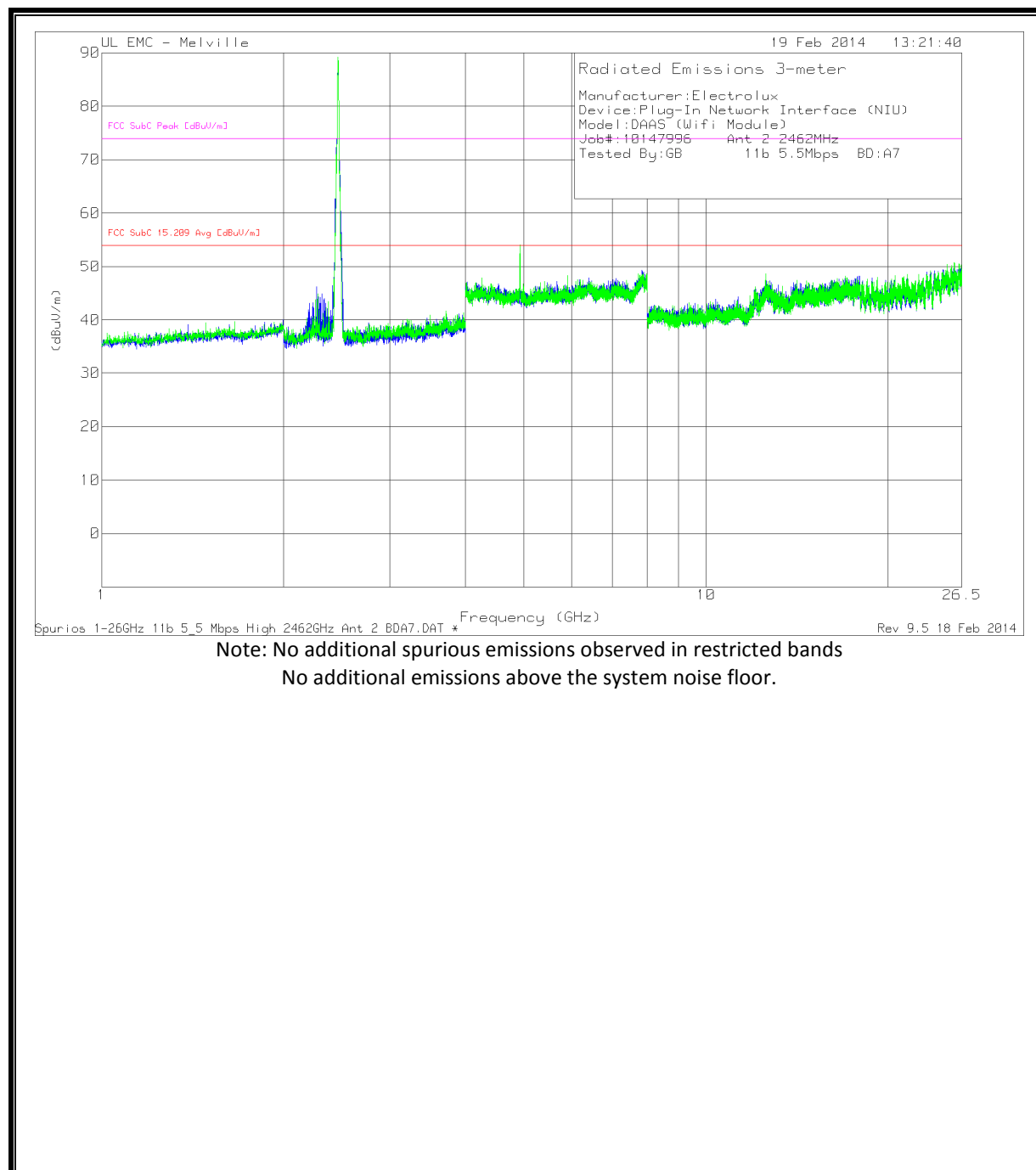


HORIZONTAL/VERTICAL DATA

Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	-	-	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	-	-	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48106 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 4.874	71.89	PK2	37.2	-52.12	56.97	-	-	74	-17.03	86	100	V
* 4.8741	59.18	MAv1	37.2	-52.12	44.26	54	-9.74	-	-	86	100	V
* 4.8741	68.8	PK2	37.2	-52.12	53.88	-	-	74	-20.12	341	129	H
* 4.874	56.2	MAv1	37.2	-52.12	41.28	54	-12.72	-	-	341	129	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48106 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 4.9186	71.28	PK2	37.2	-52.03	56.45	-	-	74	-17.55	326	296	V
* 4.9187	65.29	MAv1	37.2	-52.03	50.46	54	-3.54	-	-	326	296	V
* 4.9185	69.64	PK2	37.2	-52.03	54.81	-	-	74	-19.19	75	291	H
* 4.9186	62.43	MAv1	37.2	-52.03	47.6	54	-6.4	-	-	75	291	H

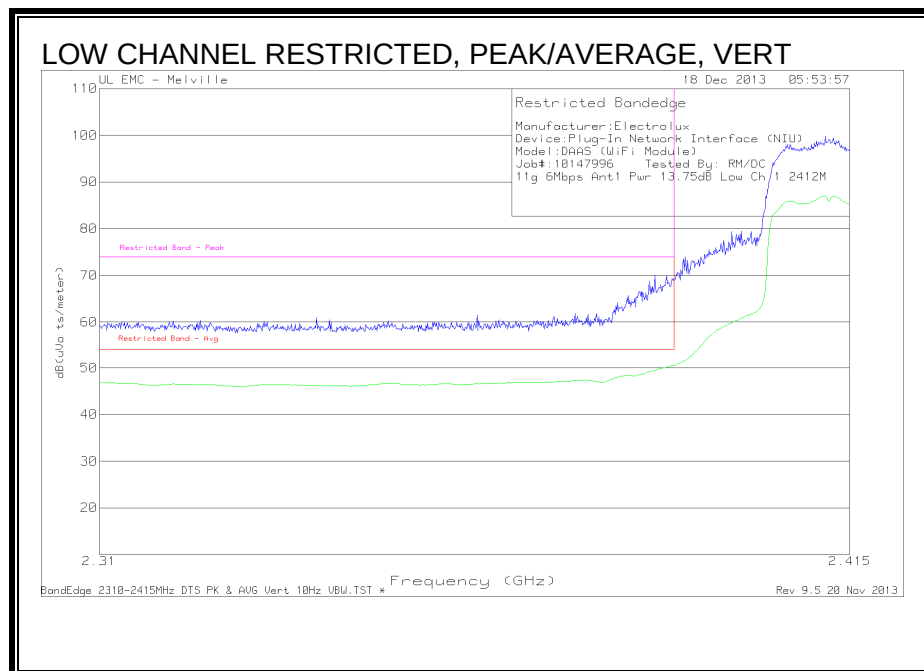
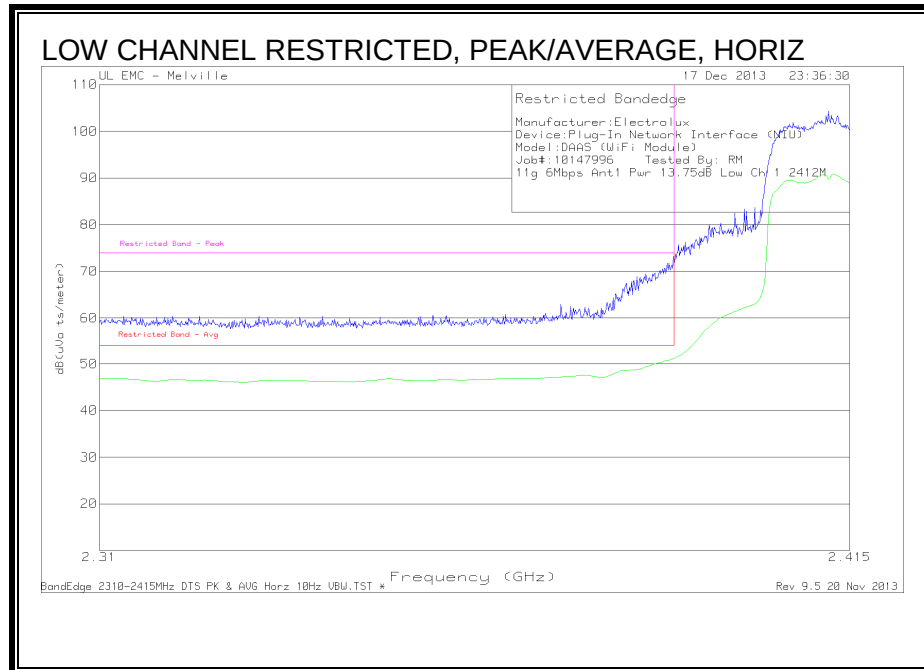
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

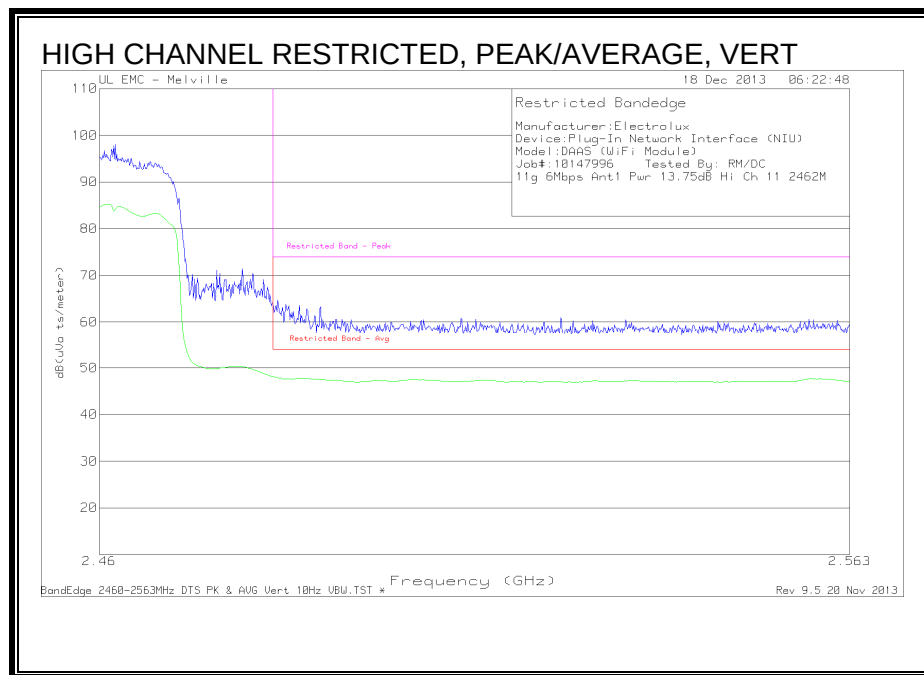
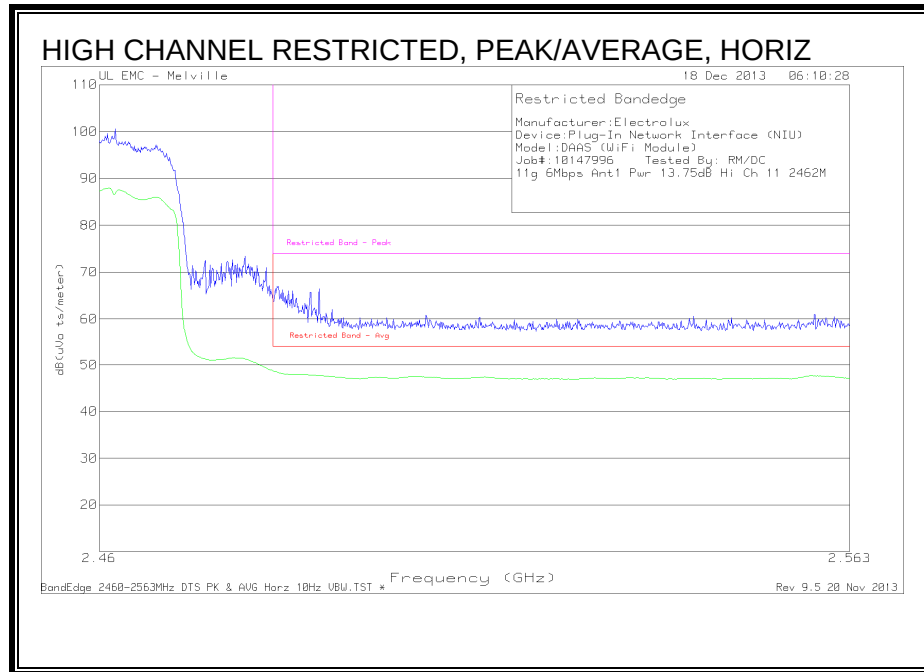
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

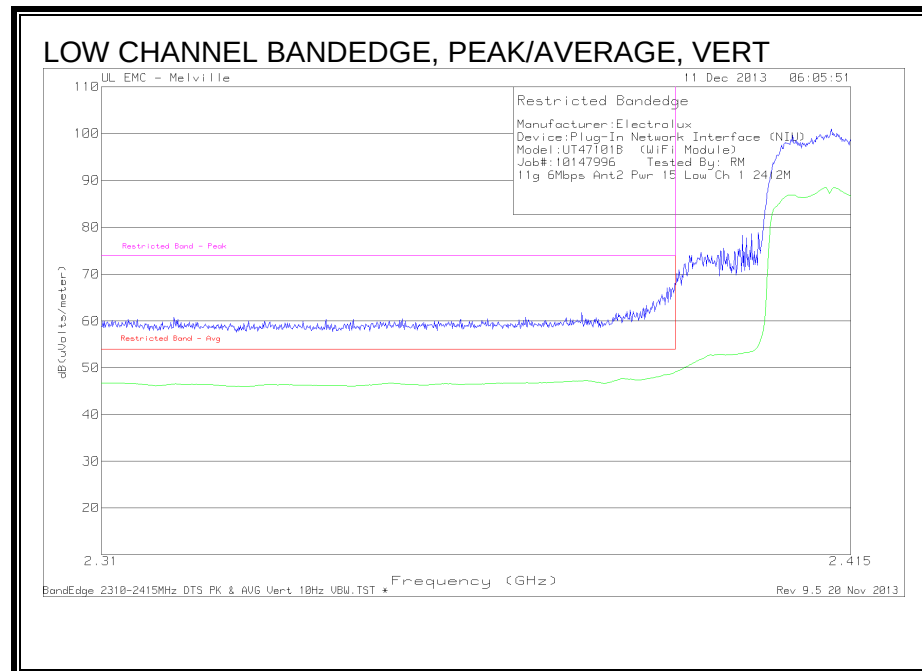
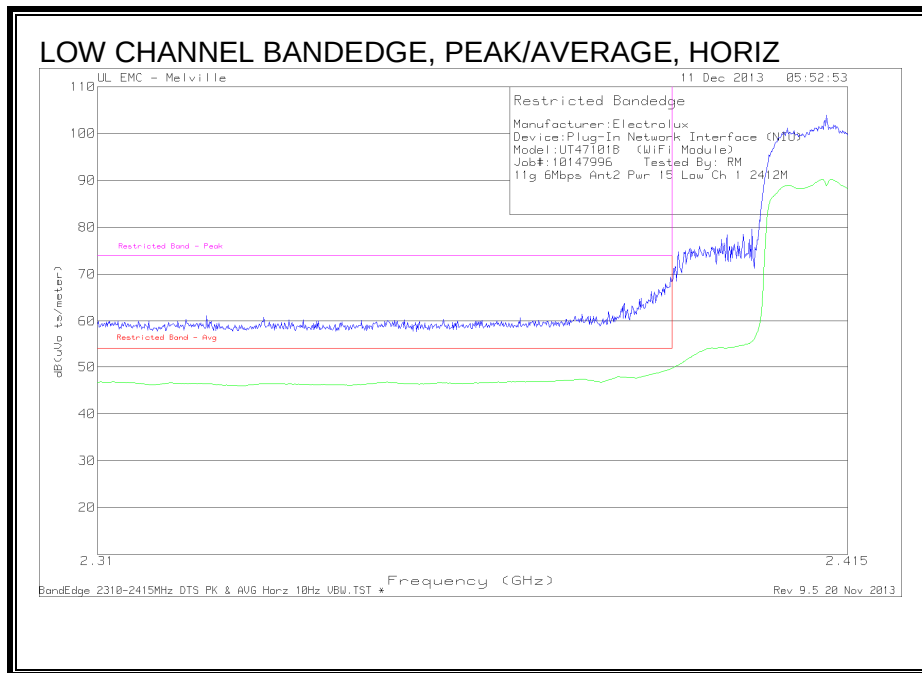
9.3 TX ABOVE 1 GHz g 802.11g MODE IN THE 2.4 GHz BAND

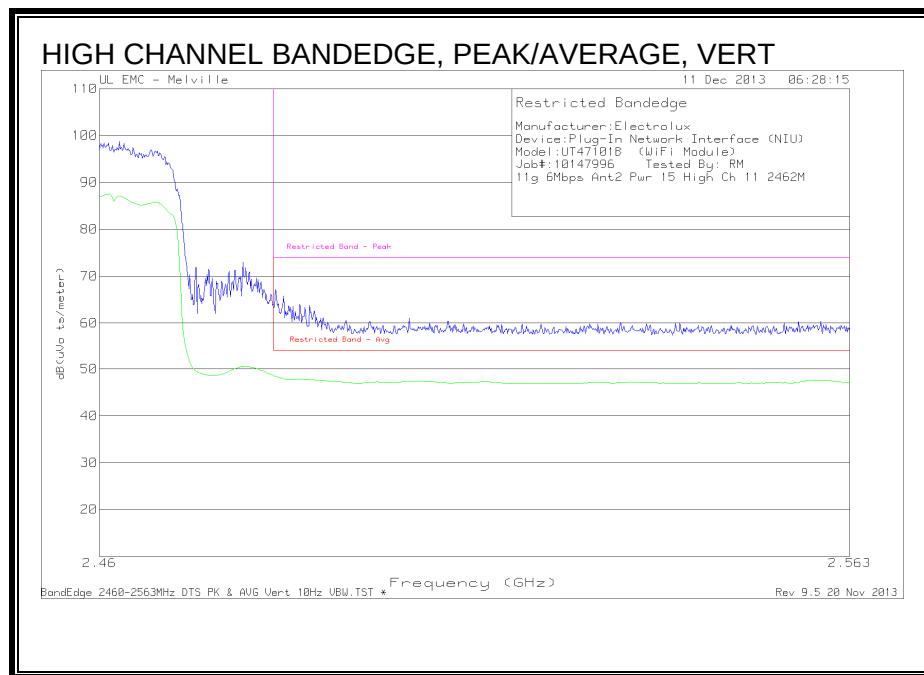
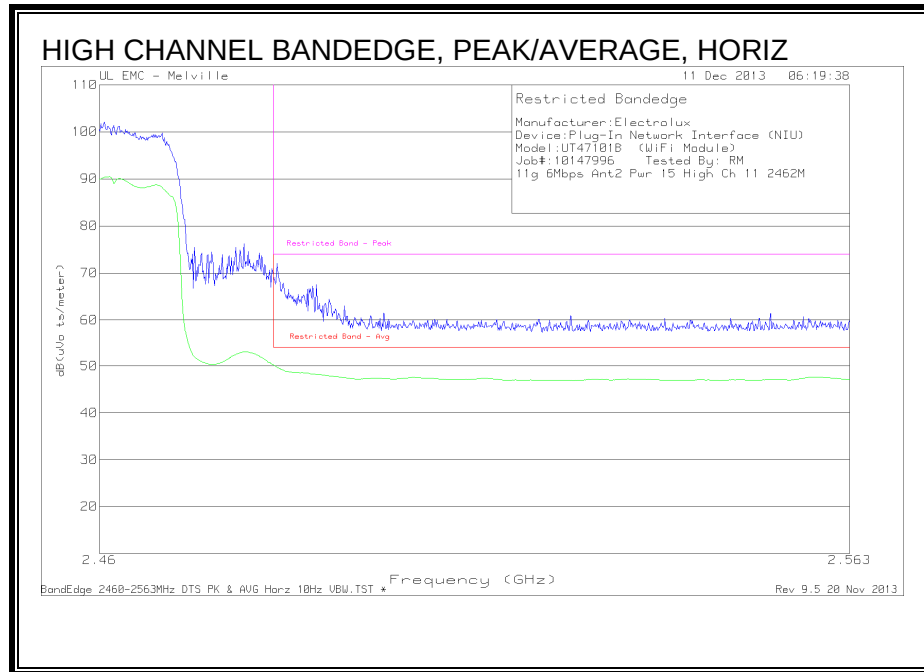
AUTHORIZED BANDEDGE (LOW CHANNEL) ANTENNA PORT 1



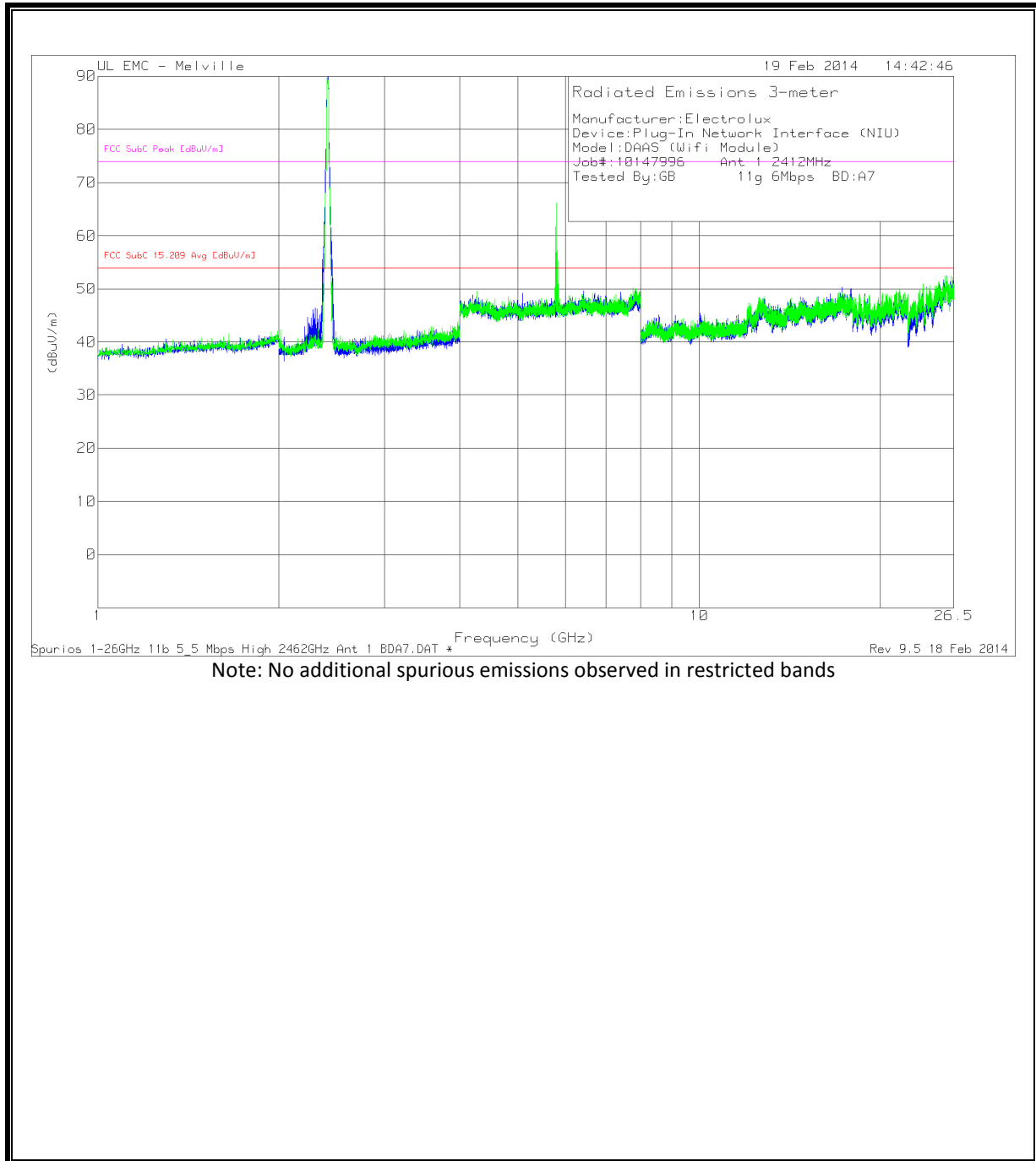


AUTHORIZED BANDEDGE (LOW CHANNEL) ANTENNA PORT 2





HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

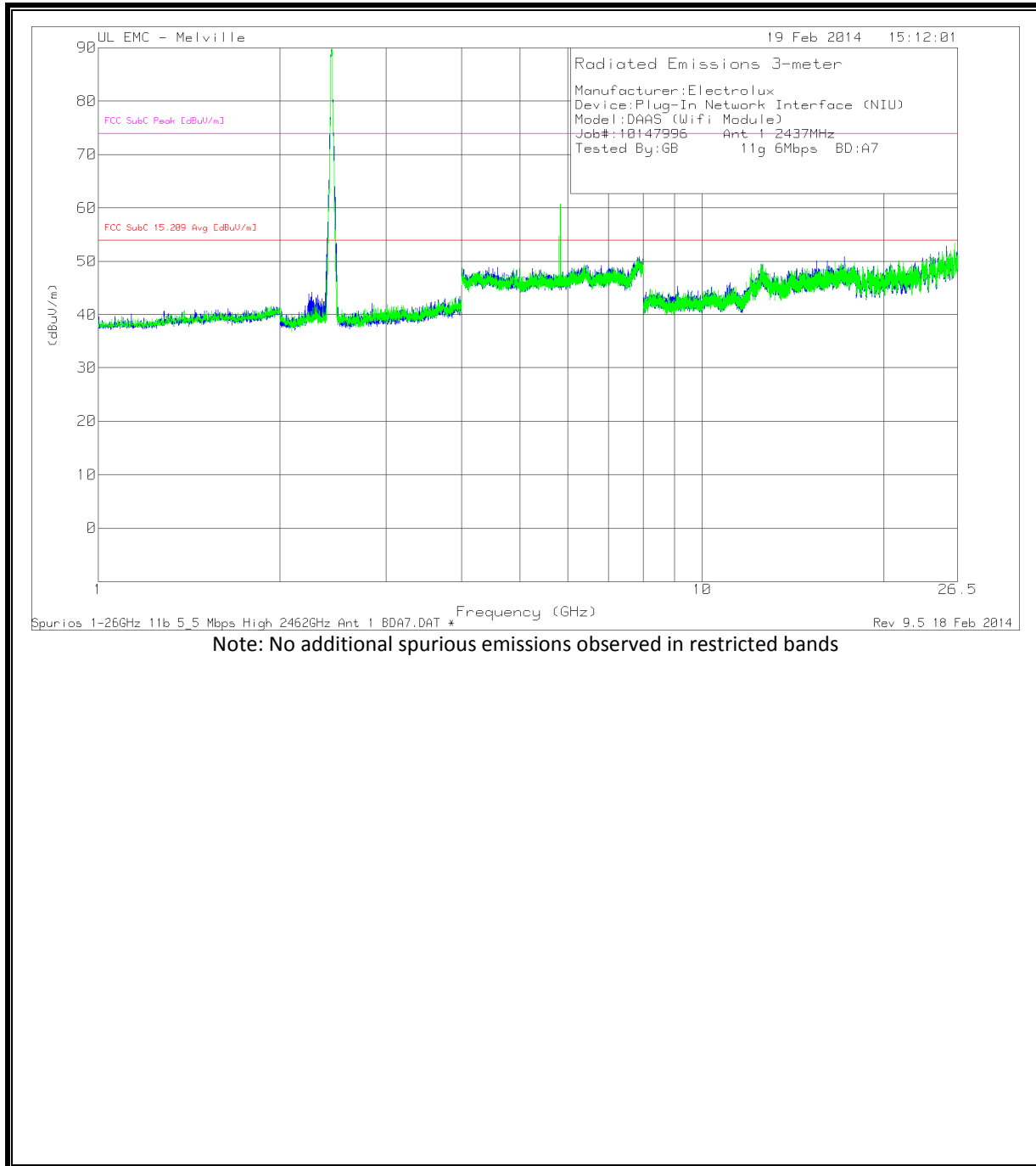
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

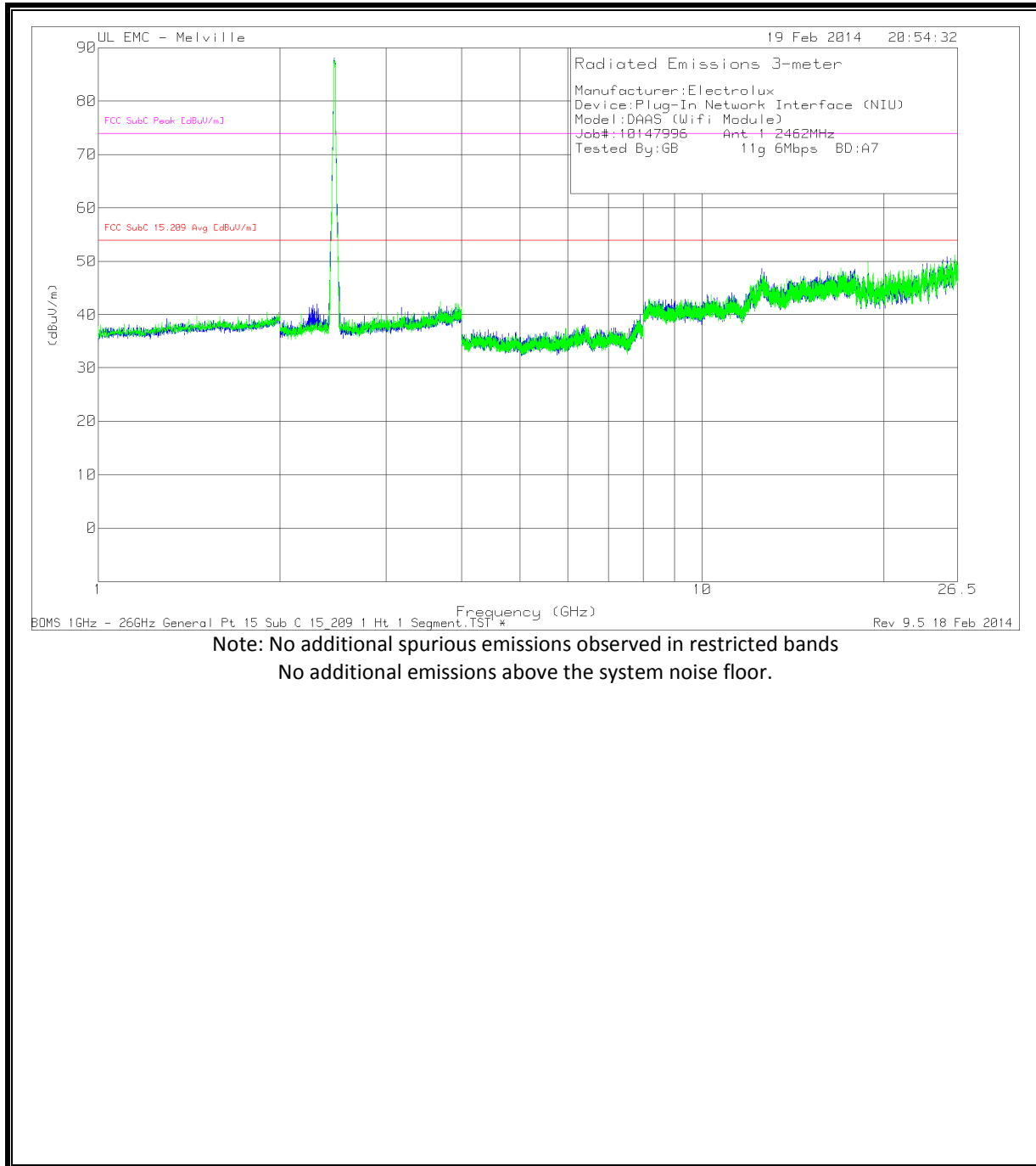
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

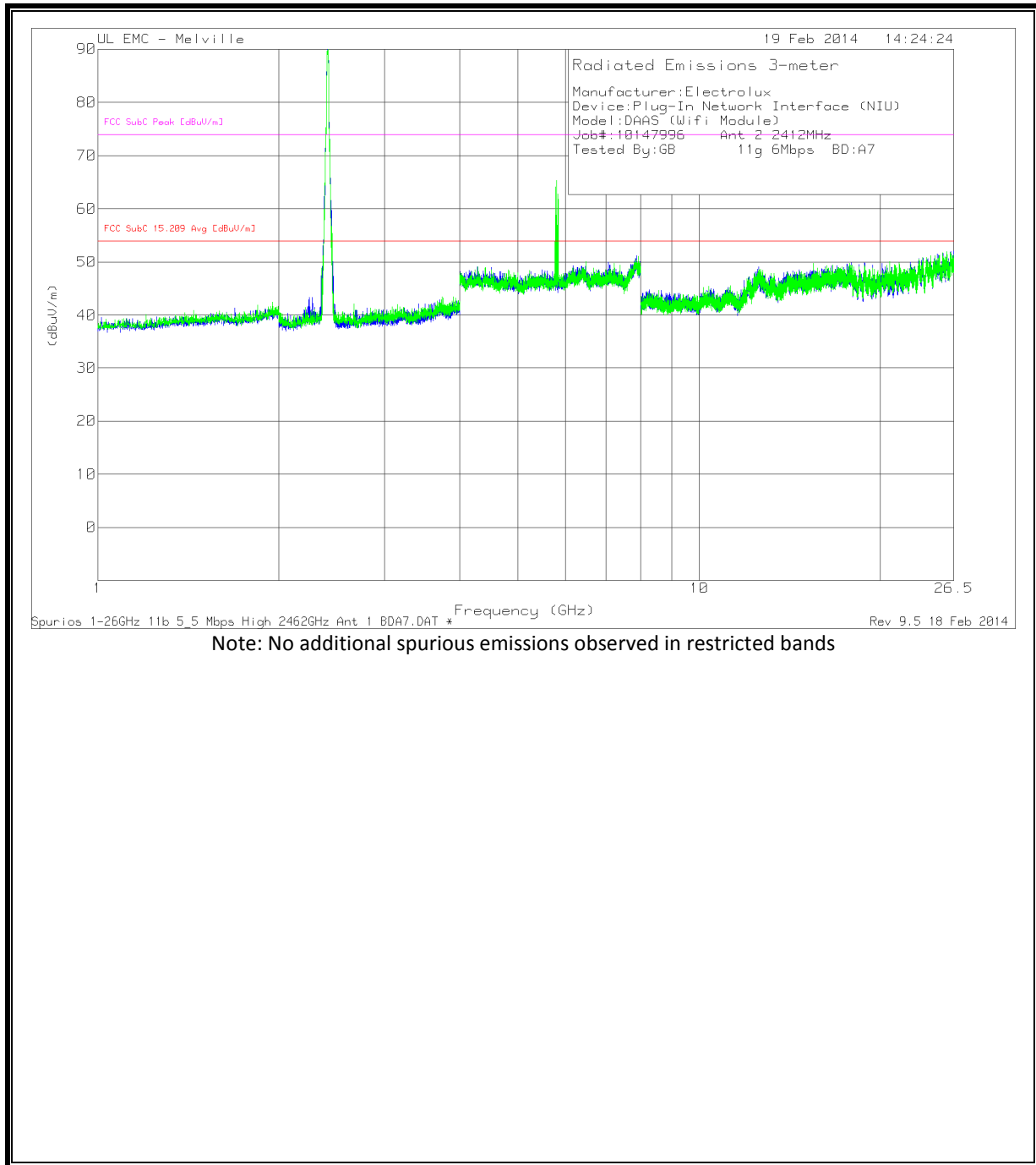
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

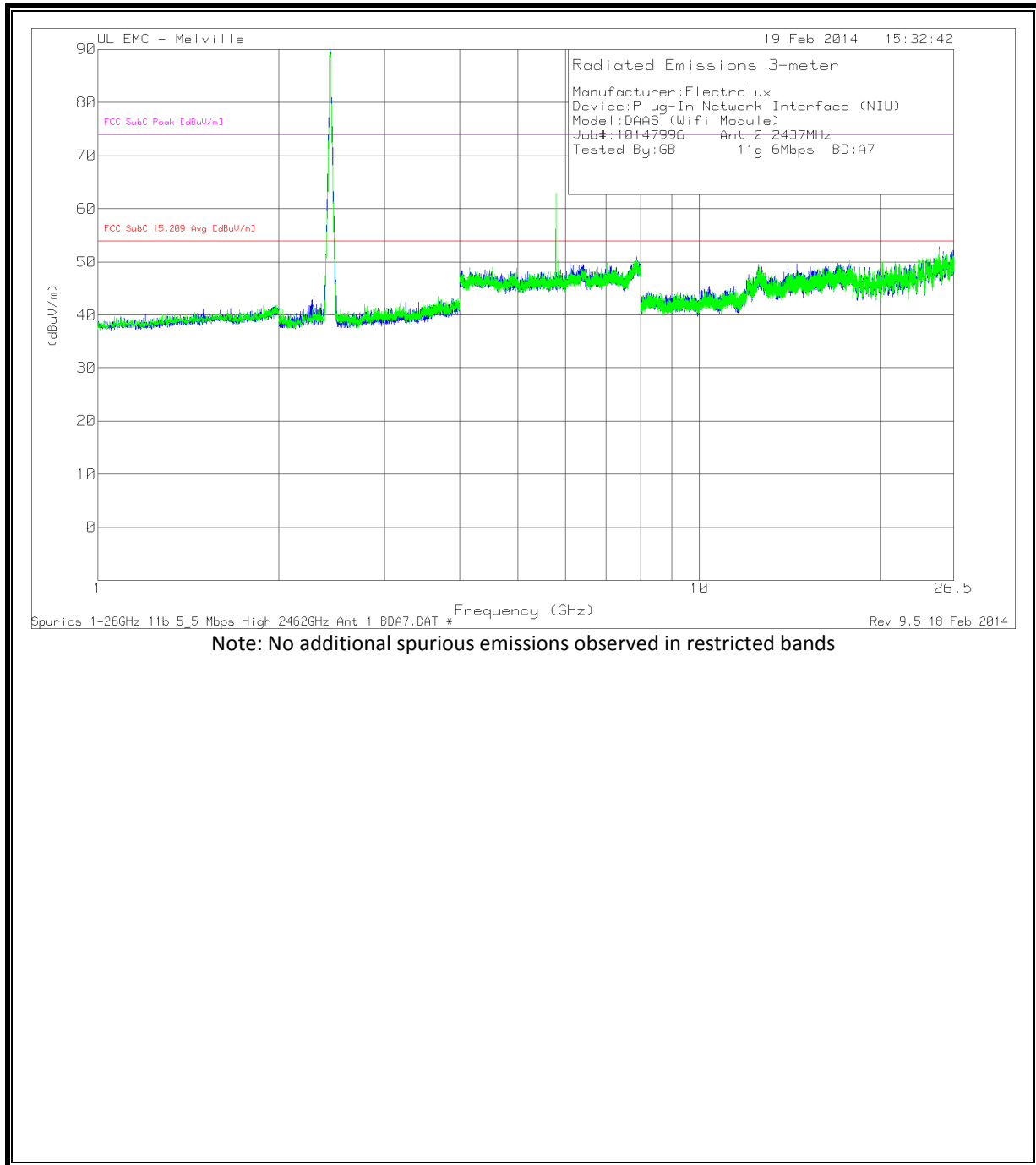
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

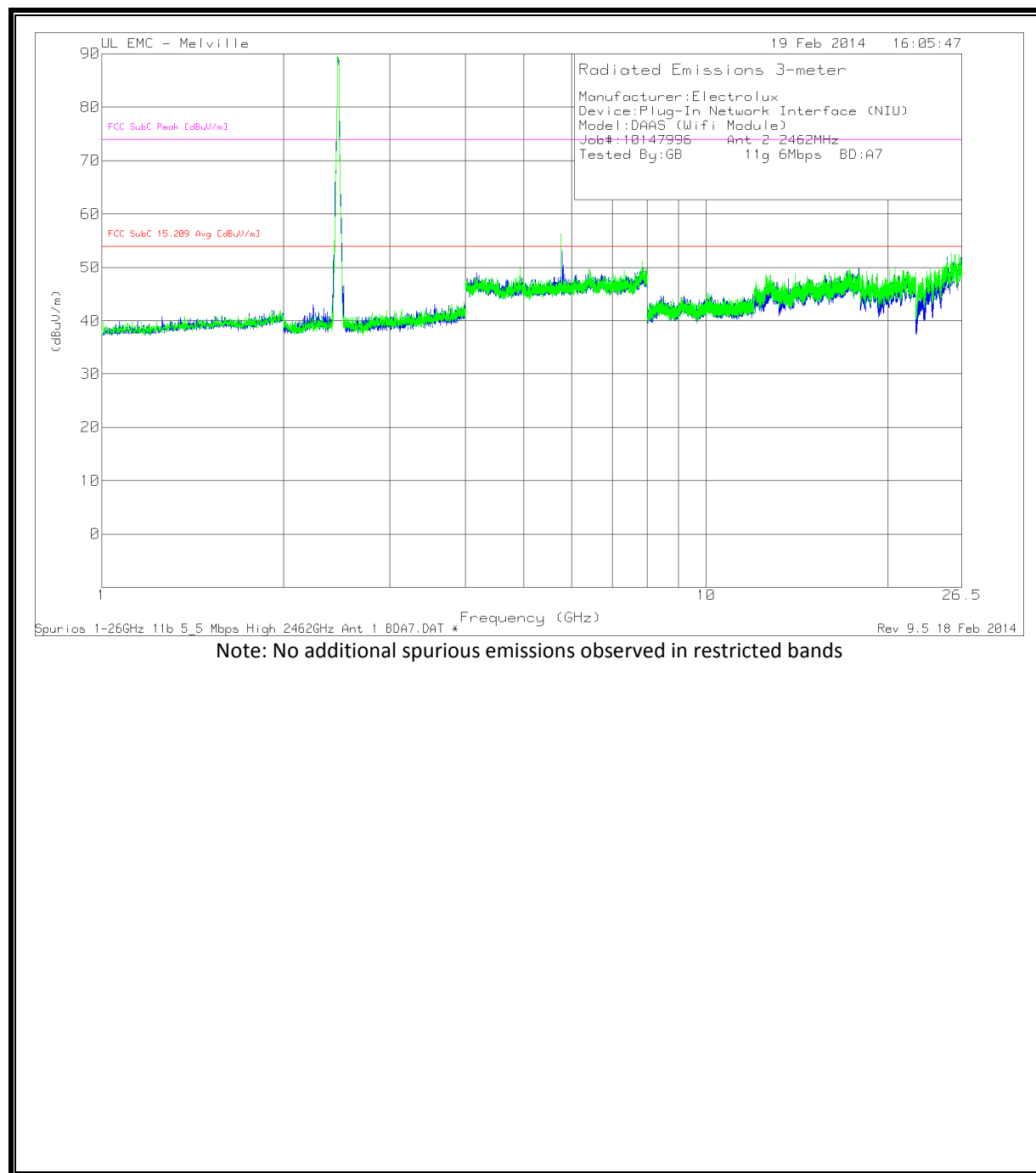
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48106 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*4.924	64.2	PK2	27.2	-52.18	39.22	-	-	74	-34.78	54	268	H
*4.924	54.22	MAv1	27.2	-52.18	29.24	54	-24.76	-	-	54	268	H
*4.9239	63.54	PK2	27.2	-52.18	38.56	-	-	74	-35.44	245	307	V
*4.924	52.84	MAv1	27.2	-52.18	27.86	54	-26.14	-	-	245	307	V

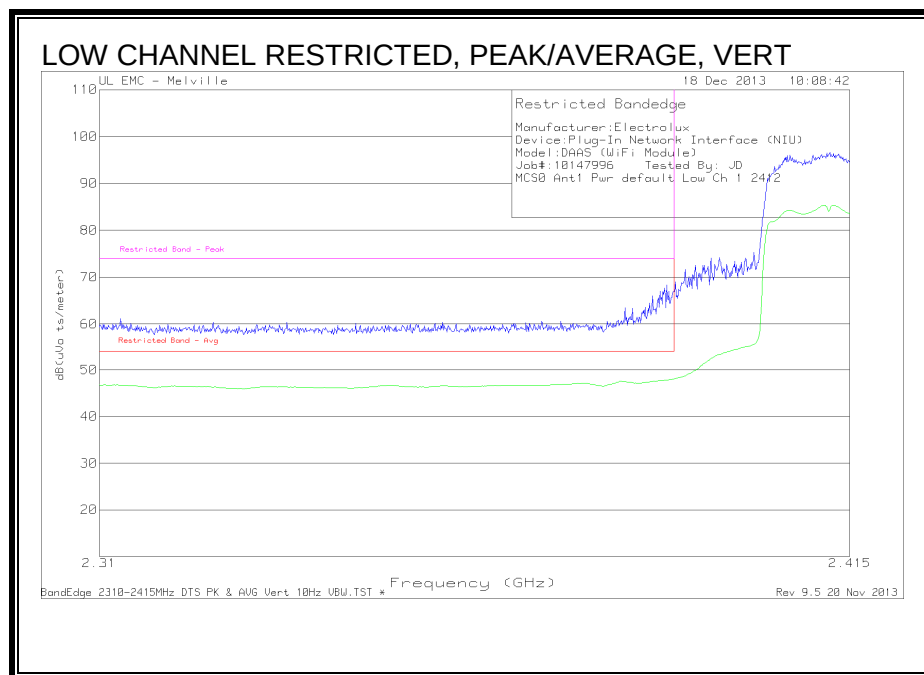
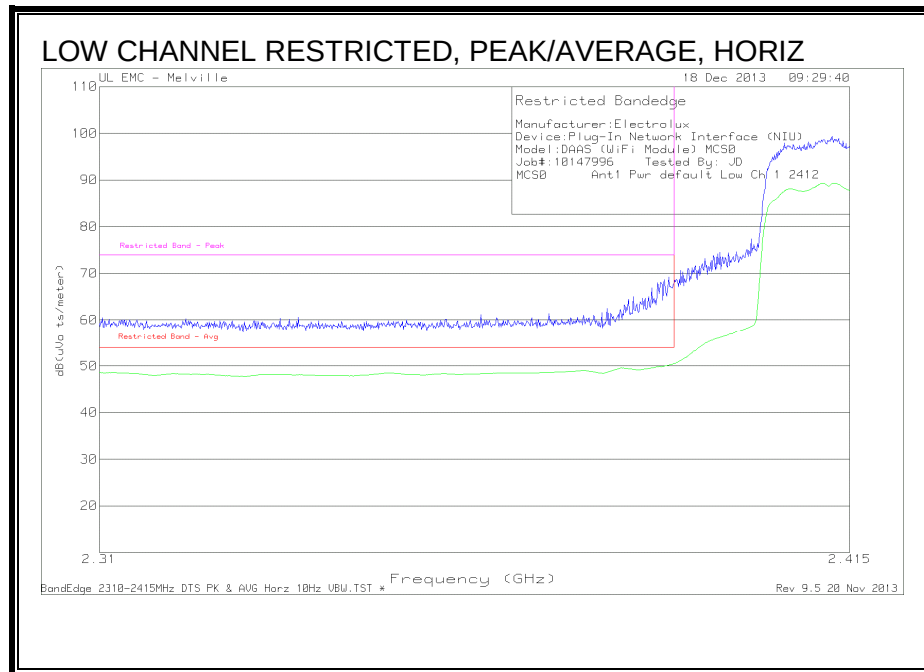
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

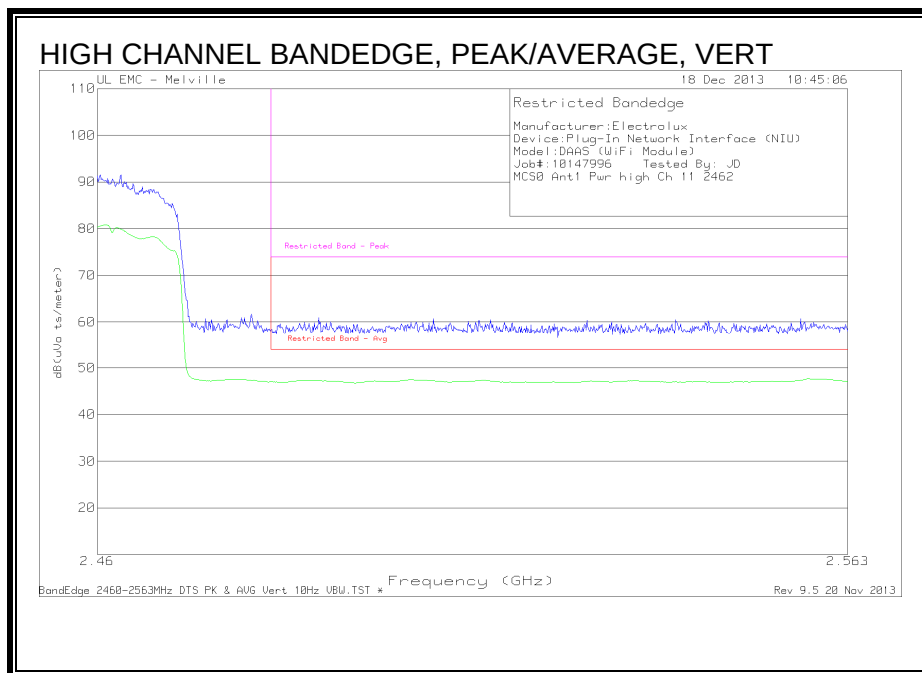
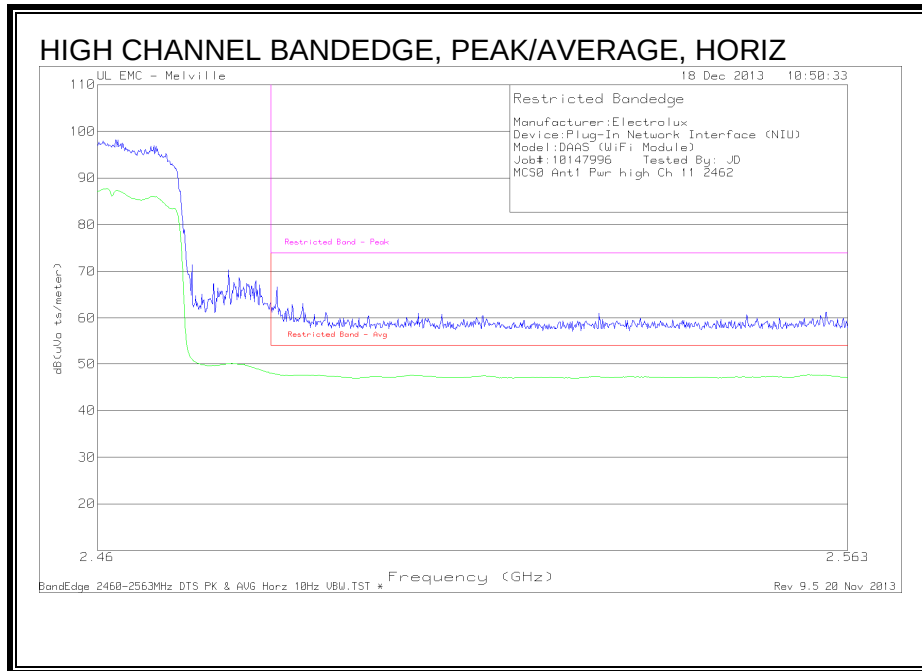
MAv1 - KDB558074 Option 1 Maximum RMS Average

9.4 TX ABOVE 1 GHz BPSK 802.11n MODE IN THE 2.4 GHz BAND

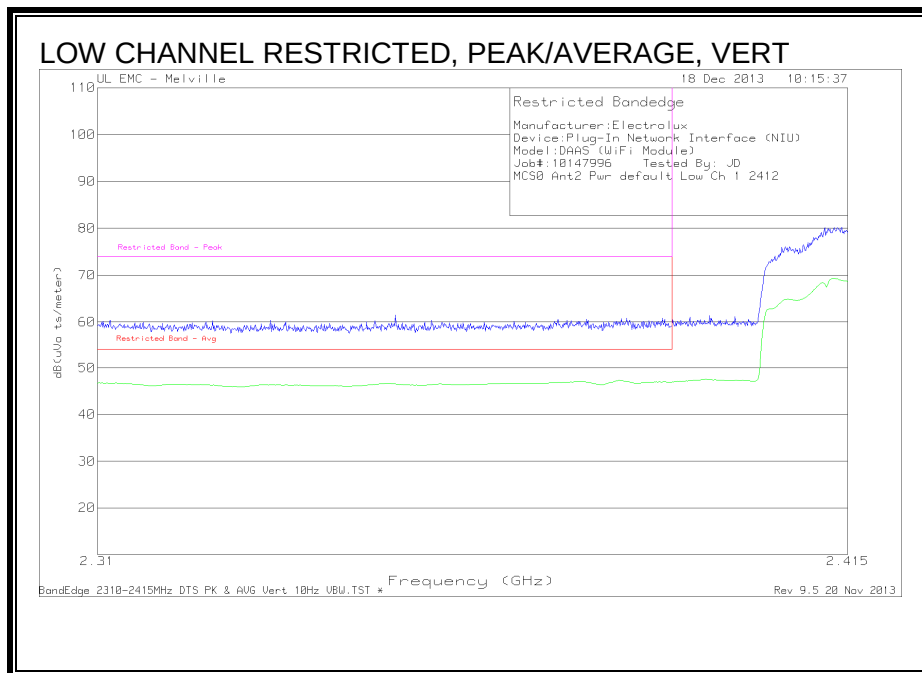
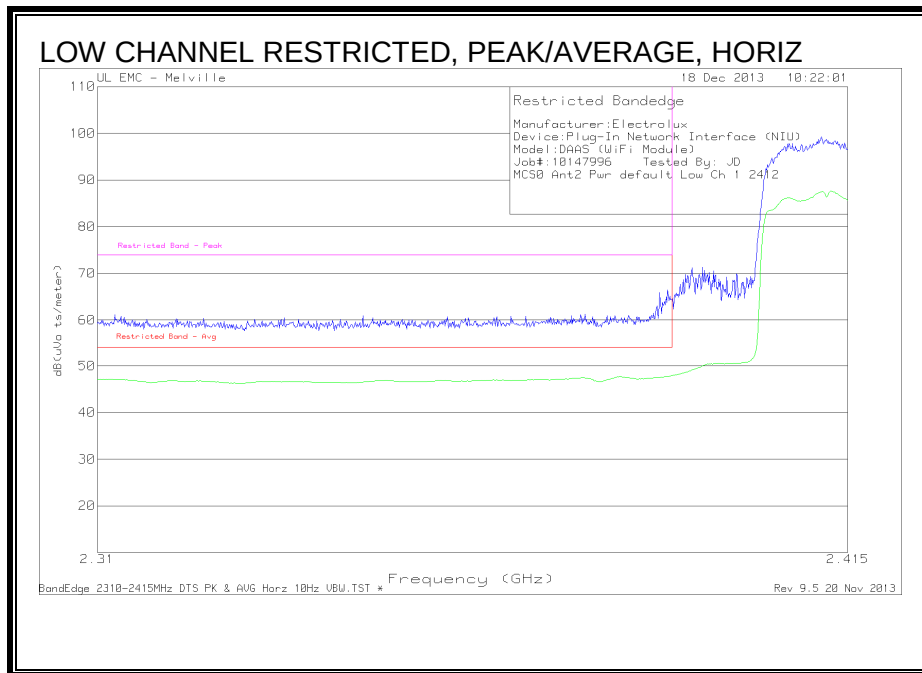
RESTRICTED BANDEDGE (LOW CHANNEL) ANTENNA PORT 1



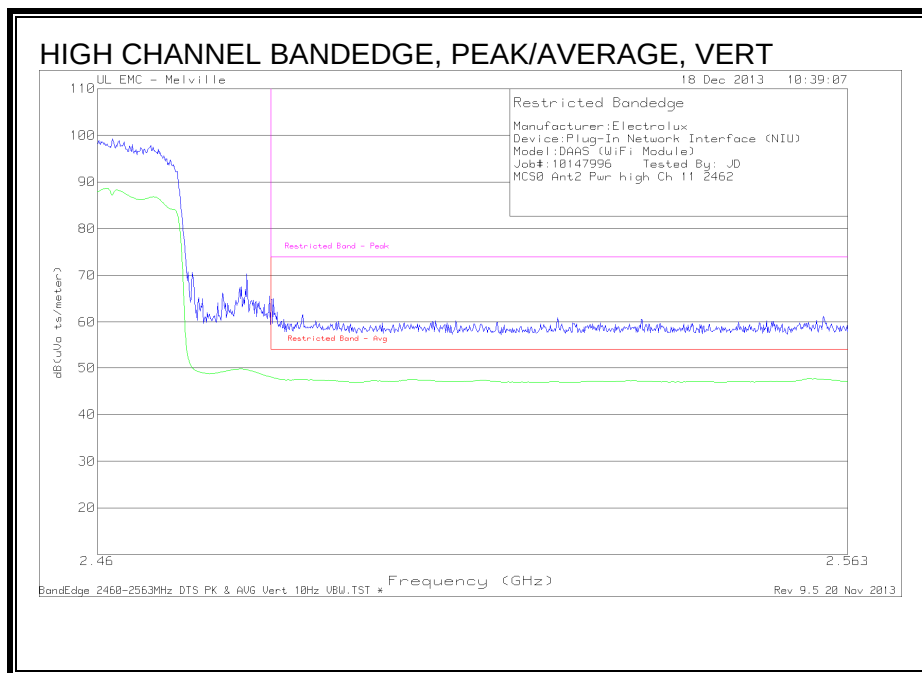
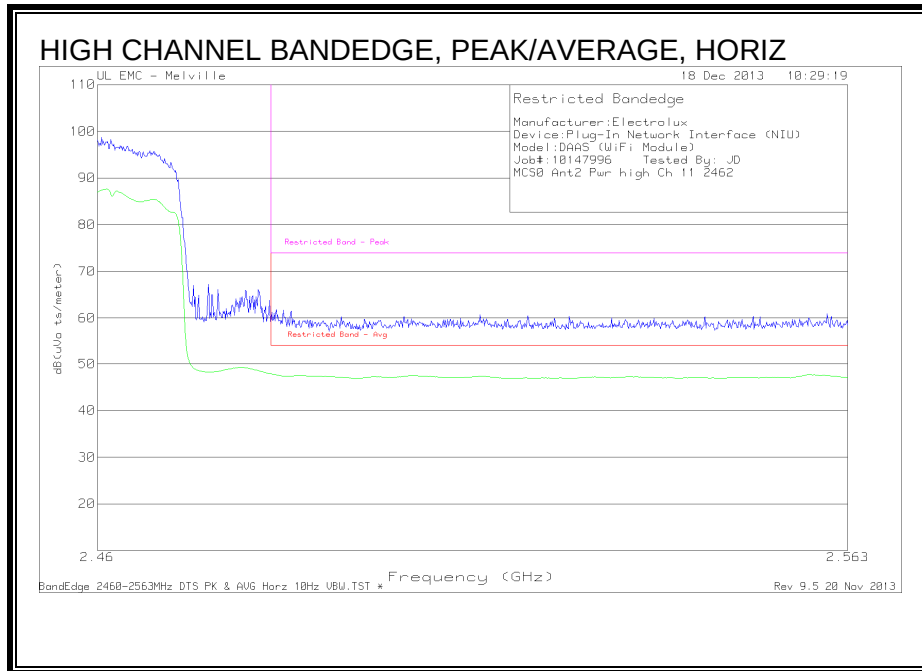
AUTHORIZED BANDEDGE (HIGH CHANNEL) ANTENNA PORT 1



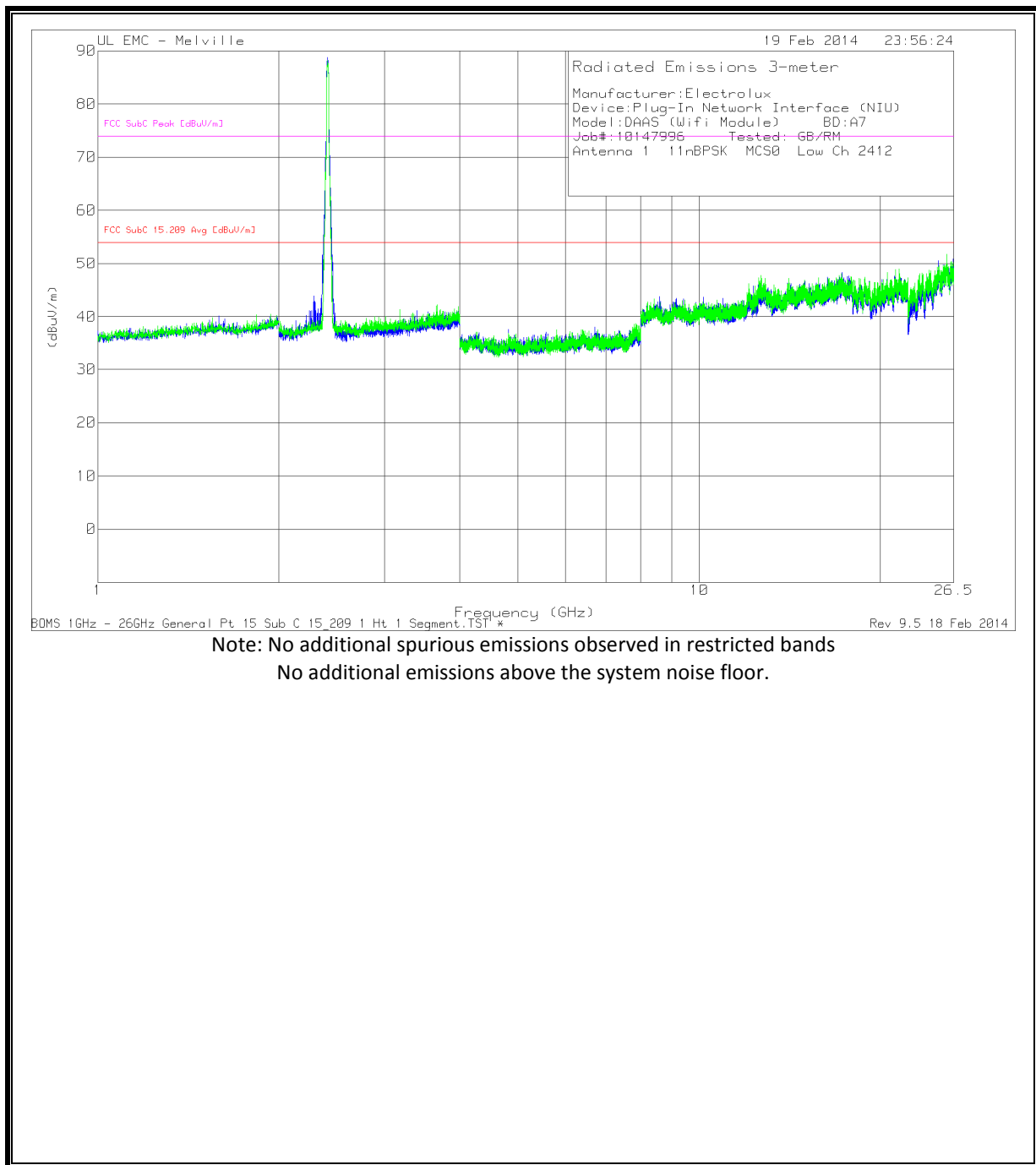
AUTHORIZED BANDEDGE (LOW CHANNEL) ANTENNA PORT 2



AUTHORIZED BANDEDGE (HIGH CHANNEL) ANTENNA PORT 2



HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

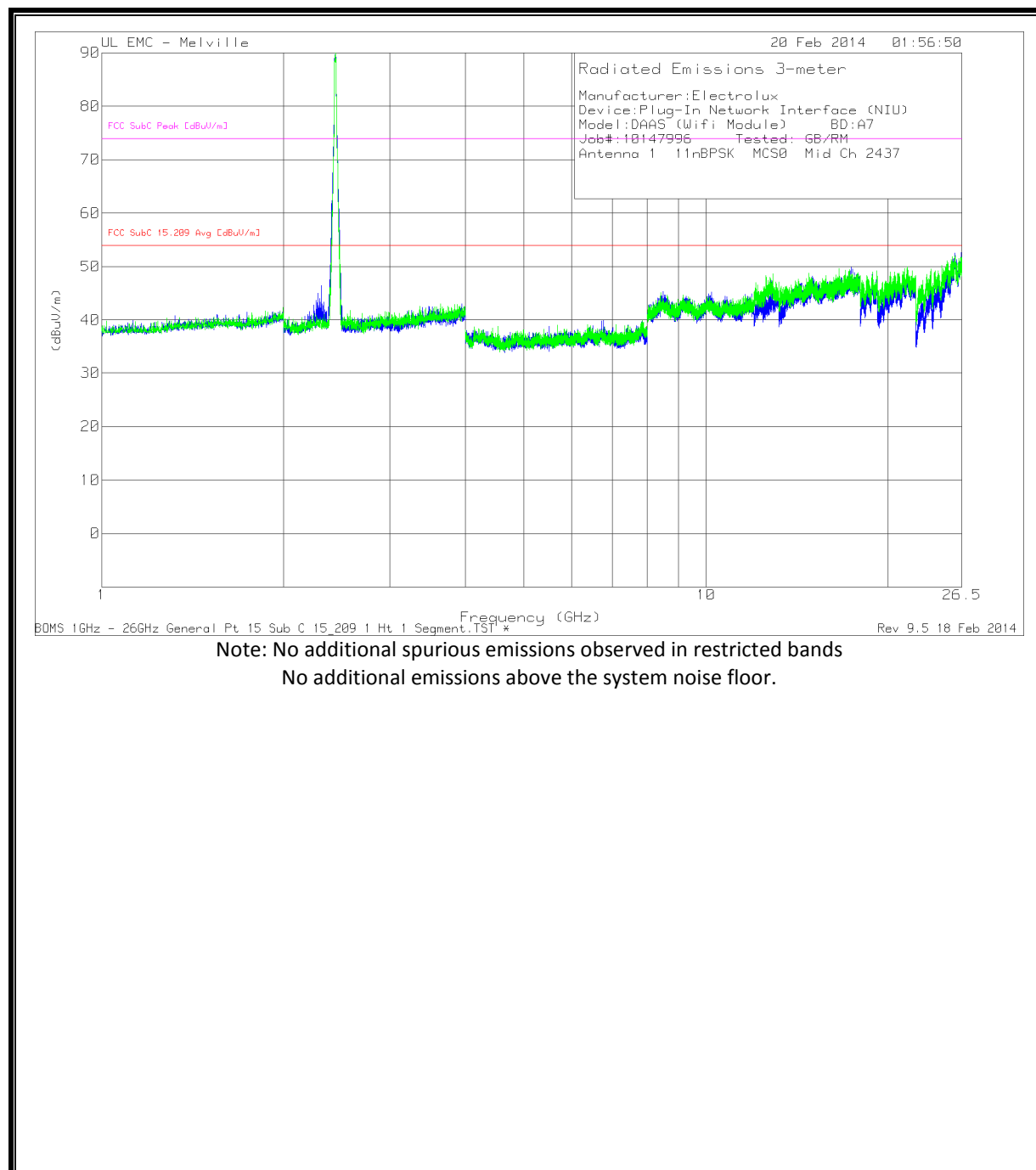
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

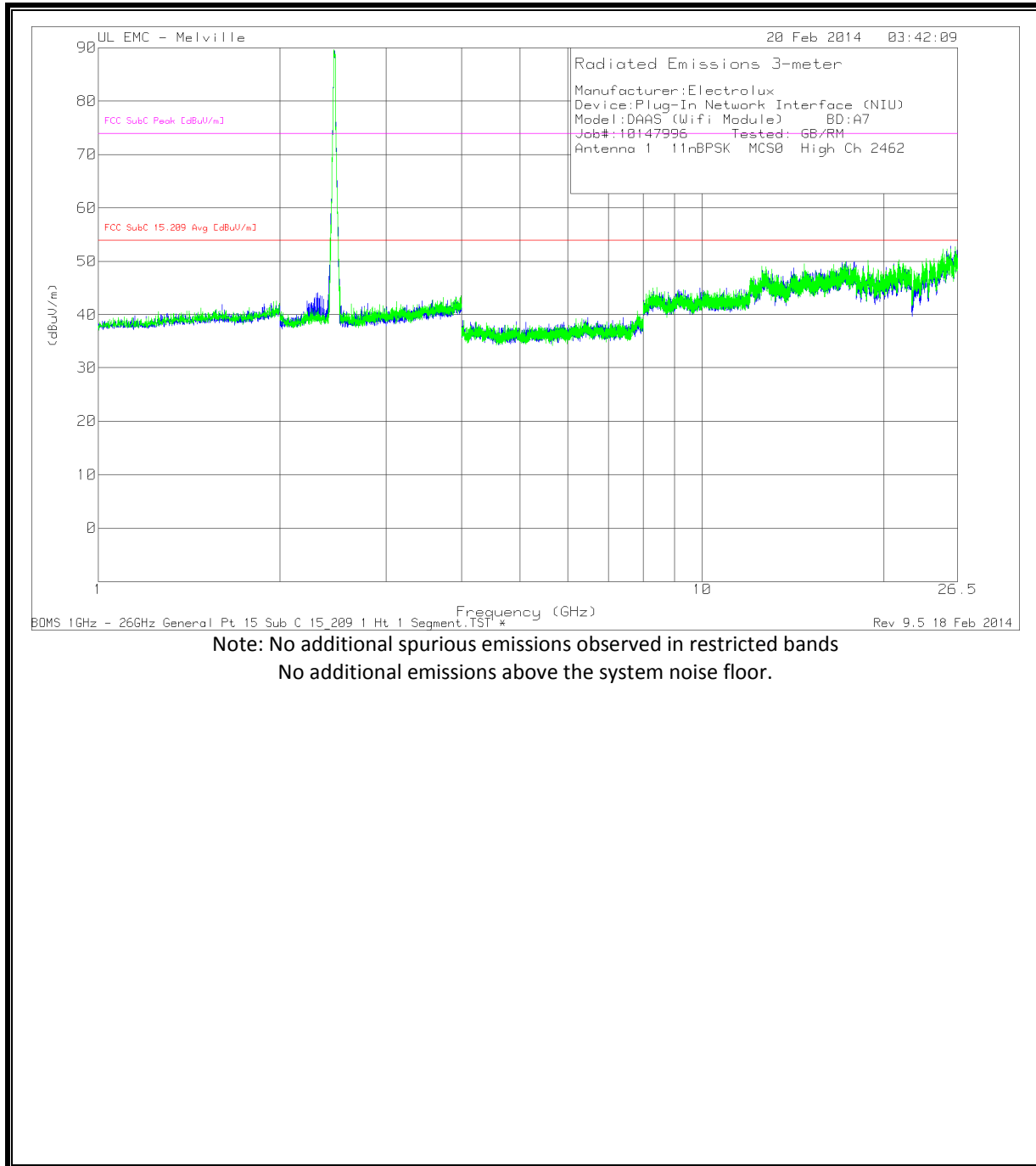
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

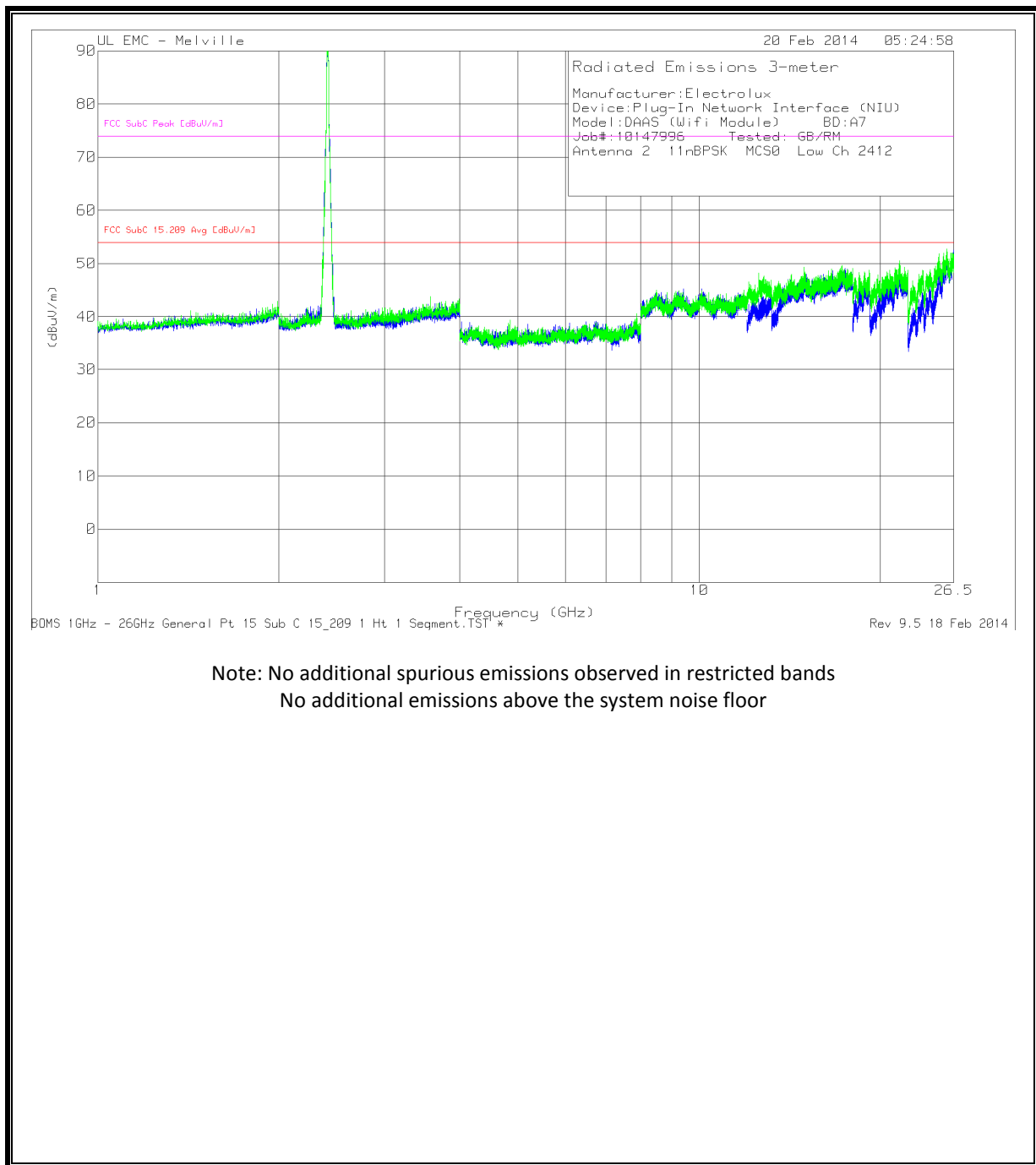
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

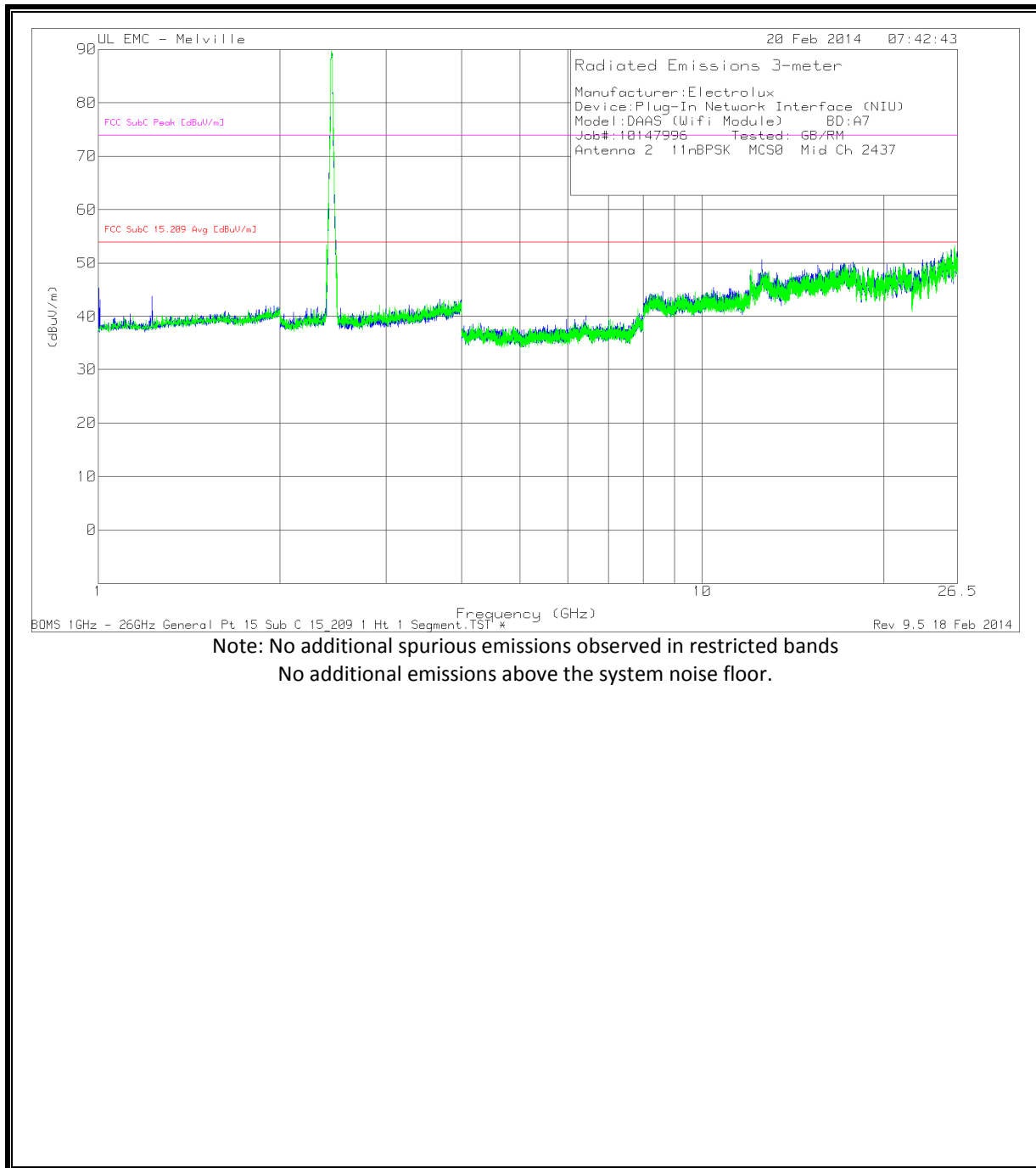
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 2



HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

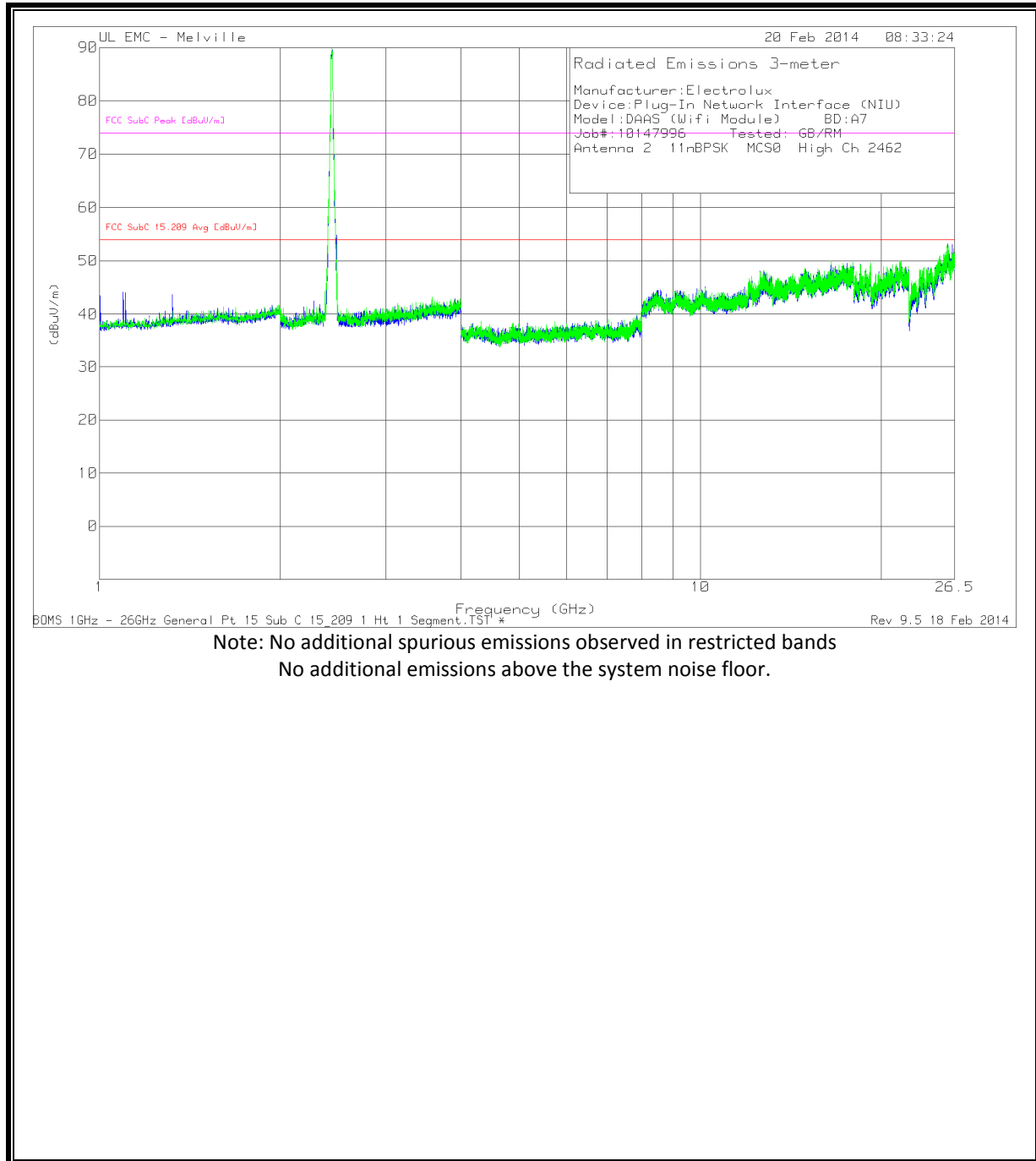
Horizontal 1 - 2GHz												
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-51442 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 1.0941	64.52	PK2	20	-44.29	40.23	54	-13.77	74	-33.77	188	171	H
* 1.0939	52.8	MAv1	20	-44.3	28.5	54	-25.5	-	-	188	171	H
* 1.3246	62.76	PK2	20.5	-44.12	39.14	54	-14.86	74	-34.86	240	340	H
* 1.3238	52.6	MAv1	20.5	-44.07	29.03	54	-24.97	-	-	240	340	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

Horizontal 1 - 2GHz												
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-51442 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 1.0941	64.52	PK2	20	-44.29	40.23	54	-13.77	74	-33.77	188	171	H
* 1.0939	52.8	MAv1	20	-44.3	28.5	54	-25.5	-	-	188	171	H
* 1.3246	62.76	PK2	20.5	-44.12	39.14	54	-14.86	74	-34.86	240	340	H
* 1.3238	52.6	MAv1	20.5	-44.07	29.03	54	-24.97	-	-	240	340	H

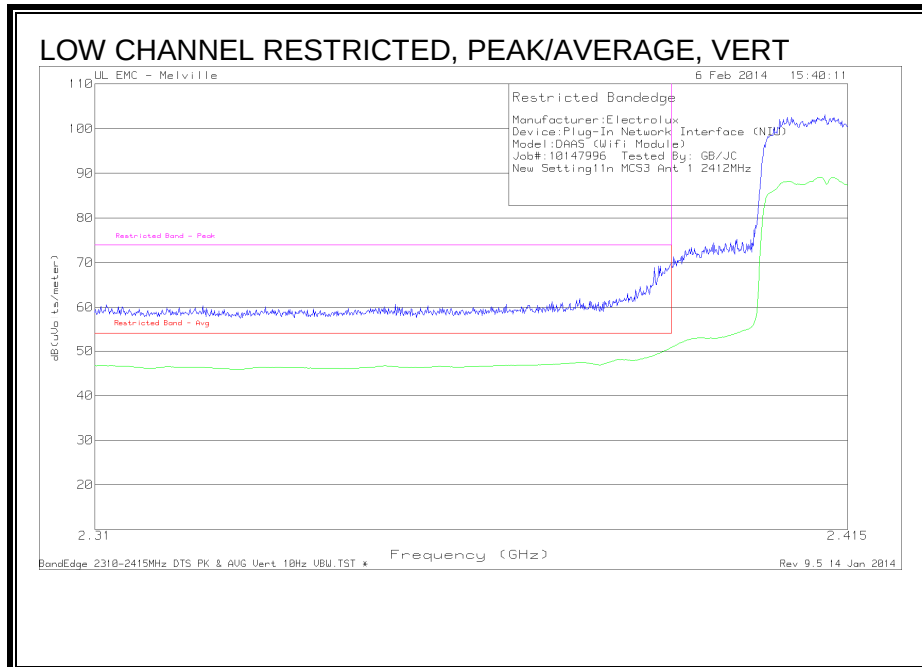
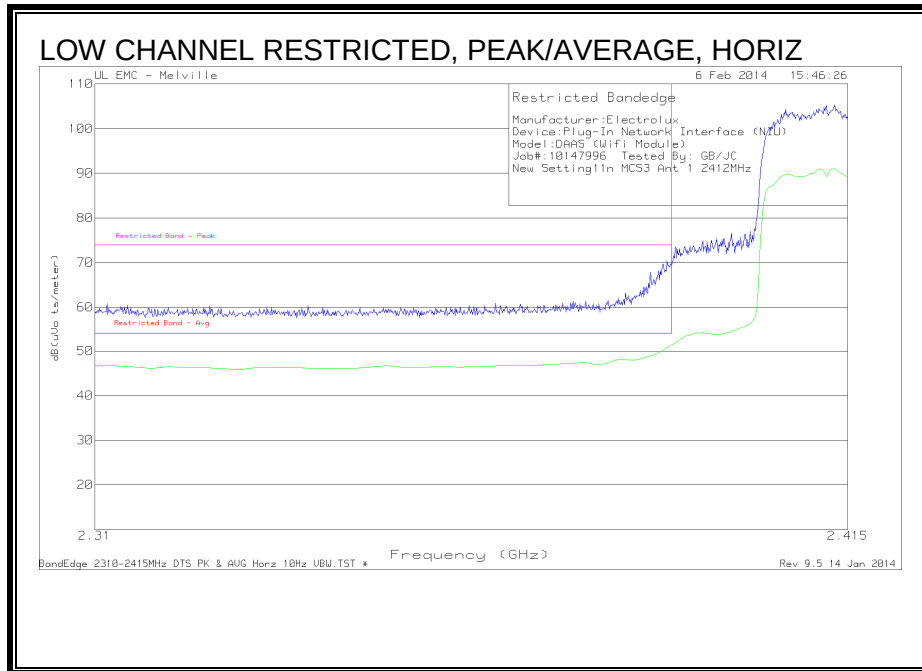
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

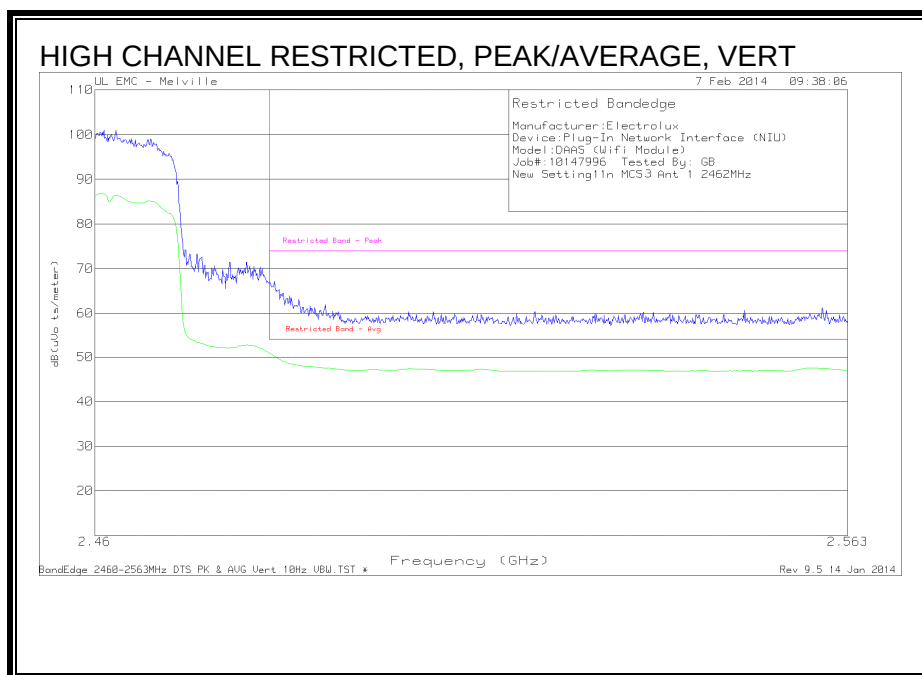
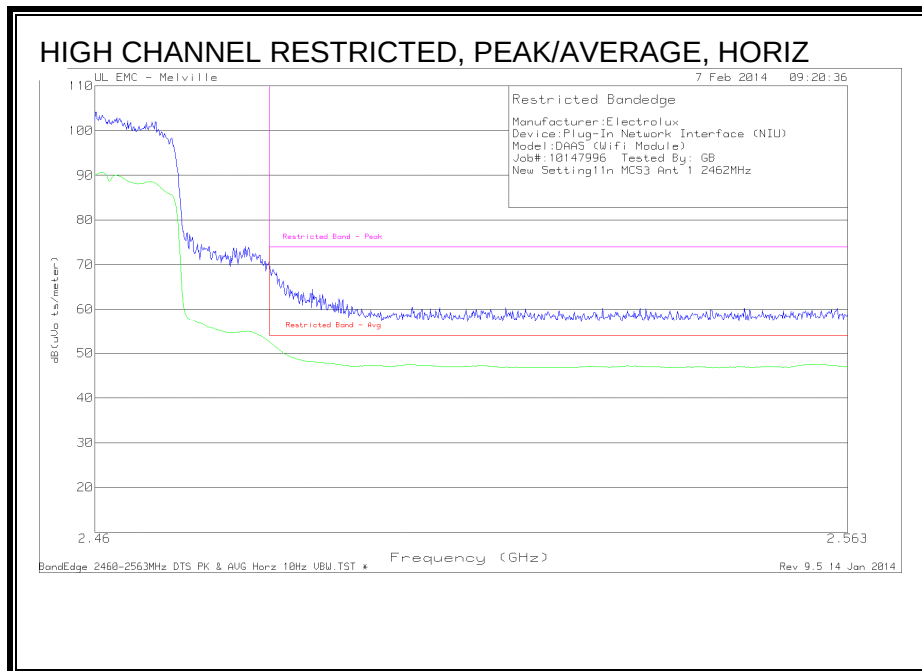
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

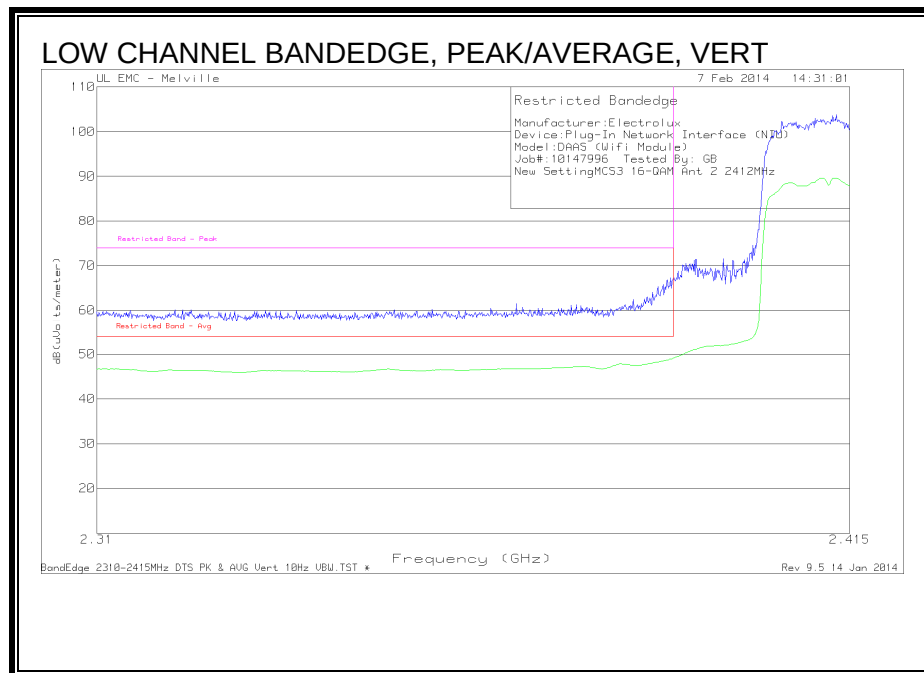
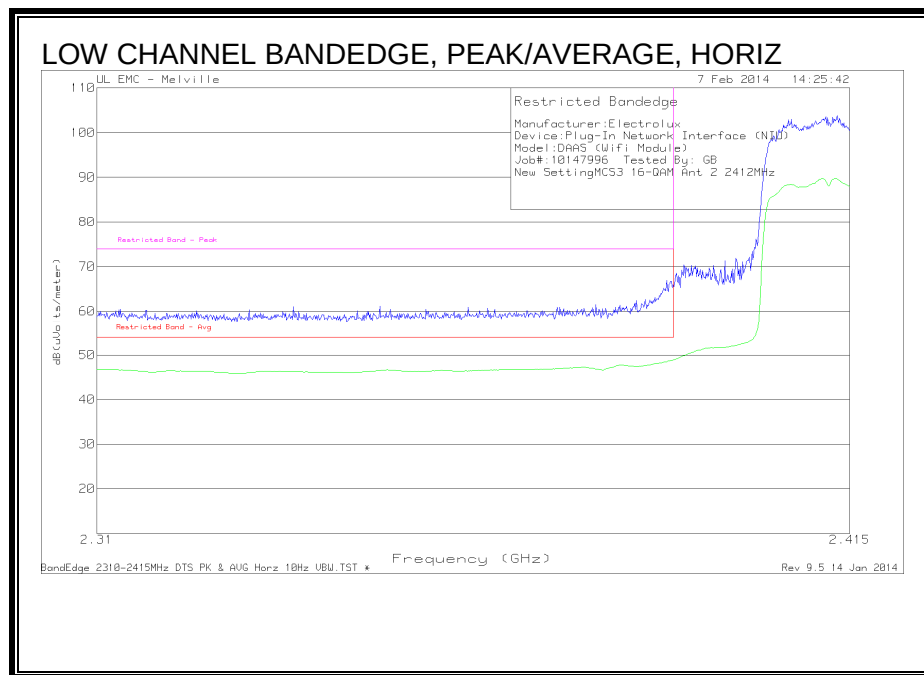
9.5 TX ABOVE 1 GHz 802.11n QAM 16 MODE IN THE 2.4 GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL) ANTENNA PORT 1

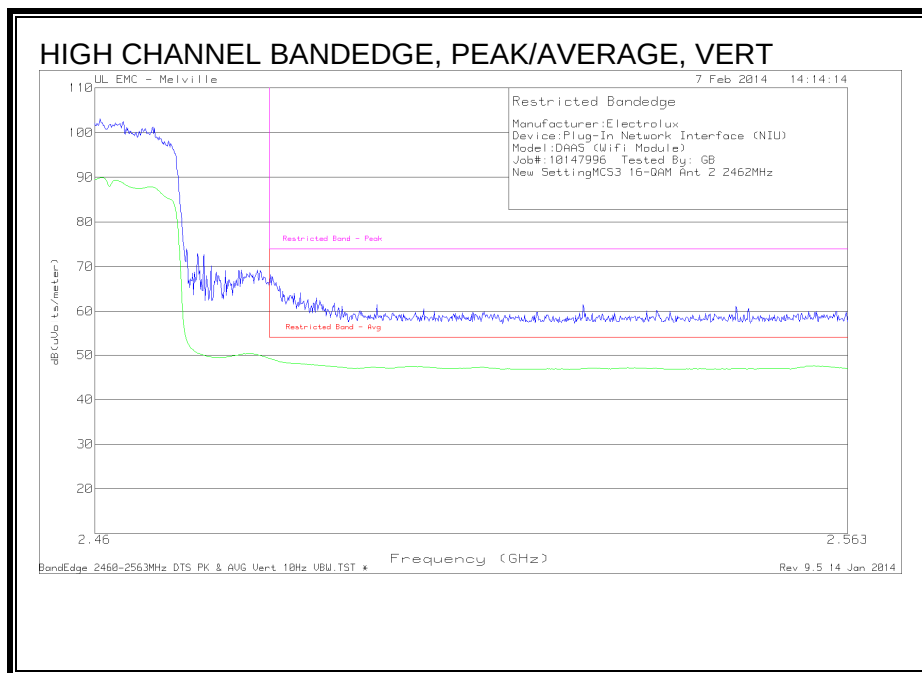
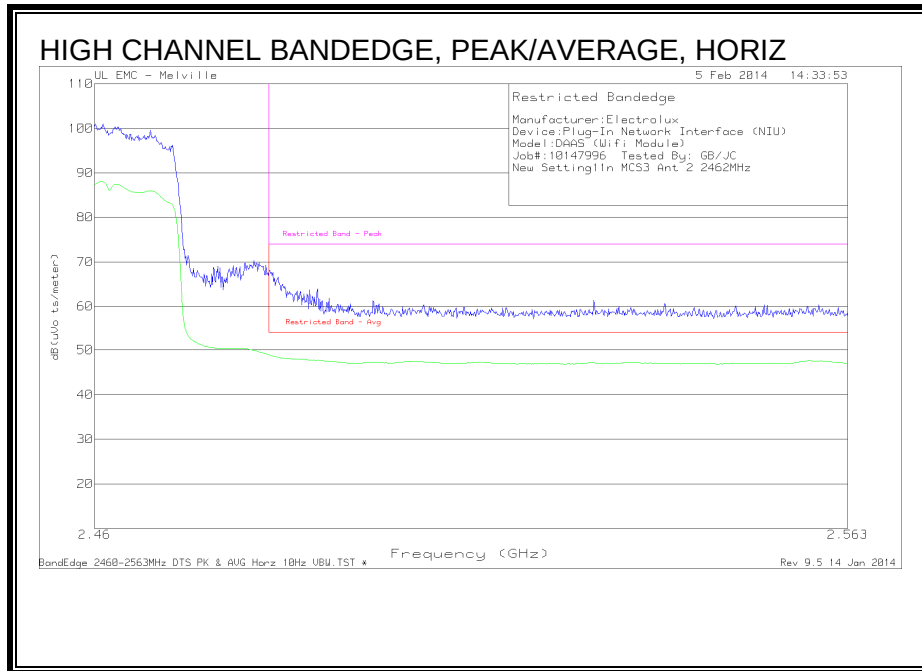




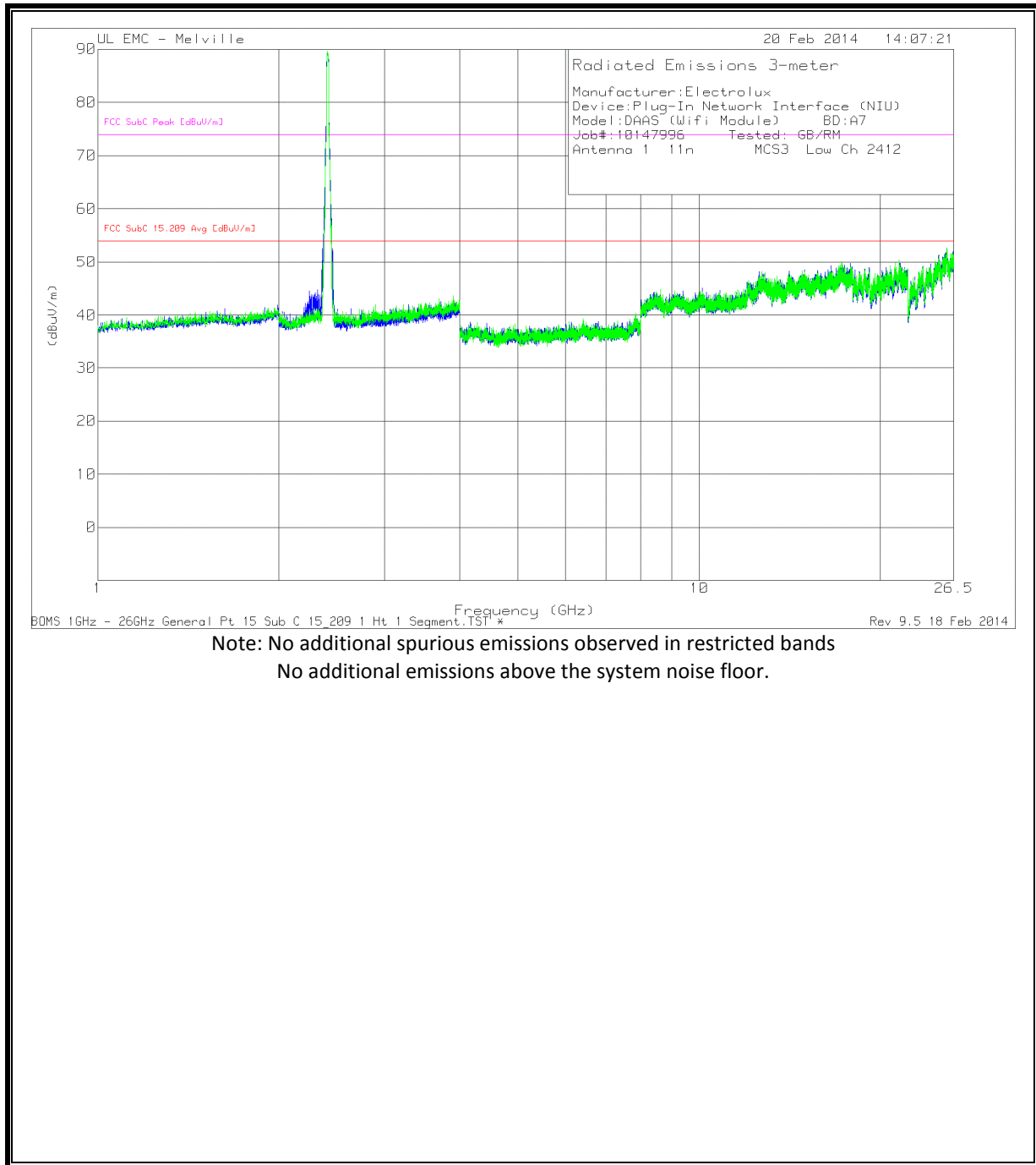
AUTHORIZED BANDEGE (LOW CHANNEL) ANTENNA PORT 2



AUTHORIZED BANDEDGE (HIGH CHANNEL) ANTENNA PORT 2



HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

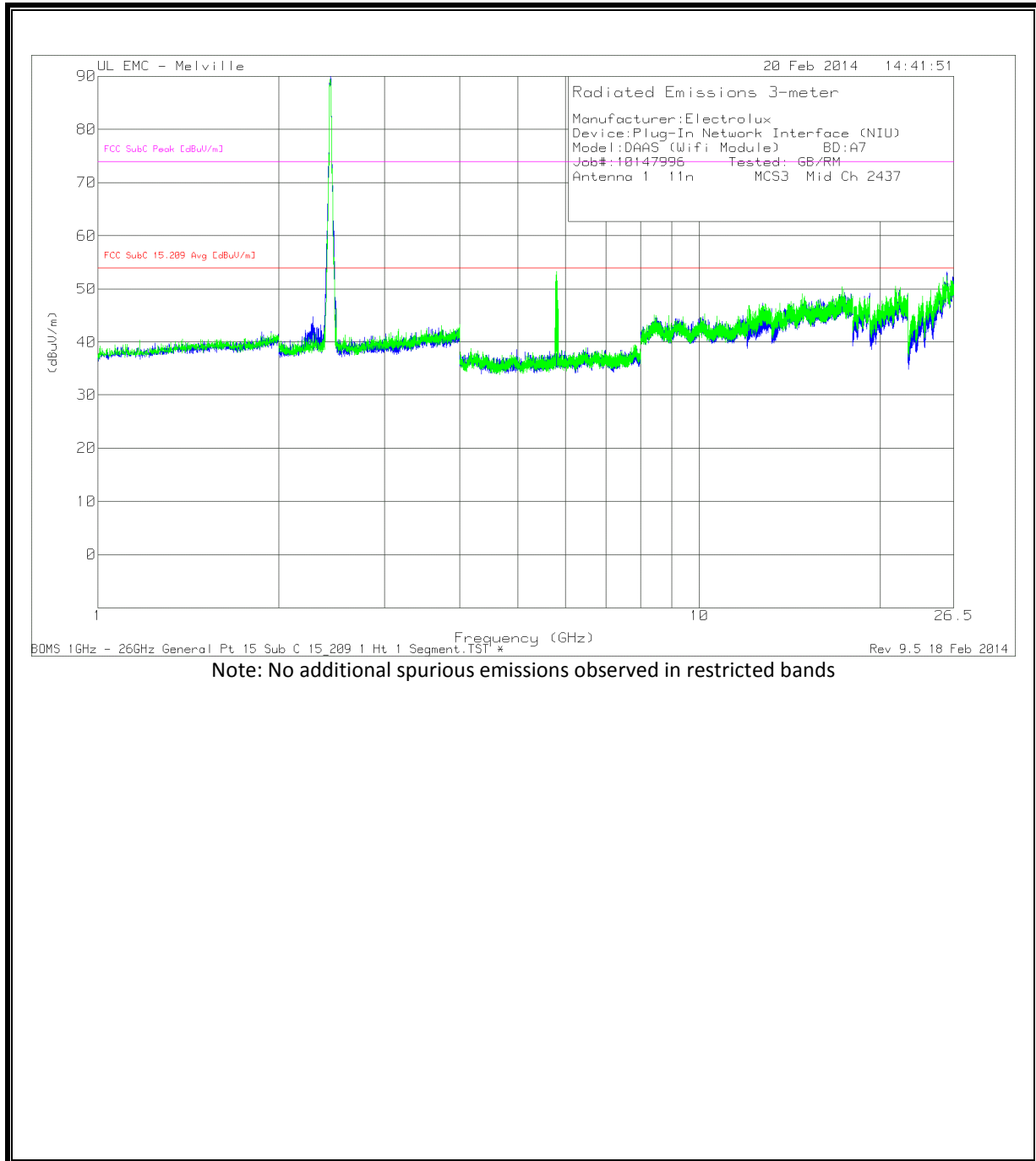
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

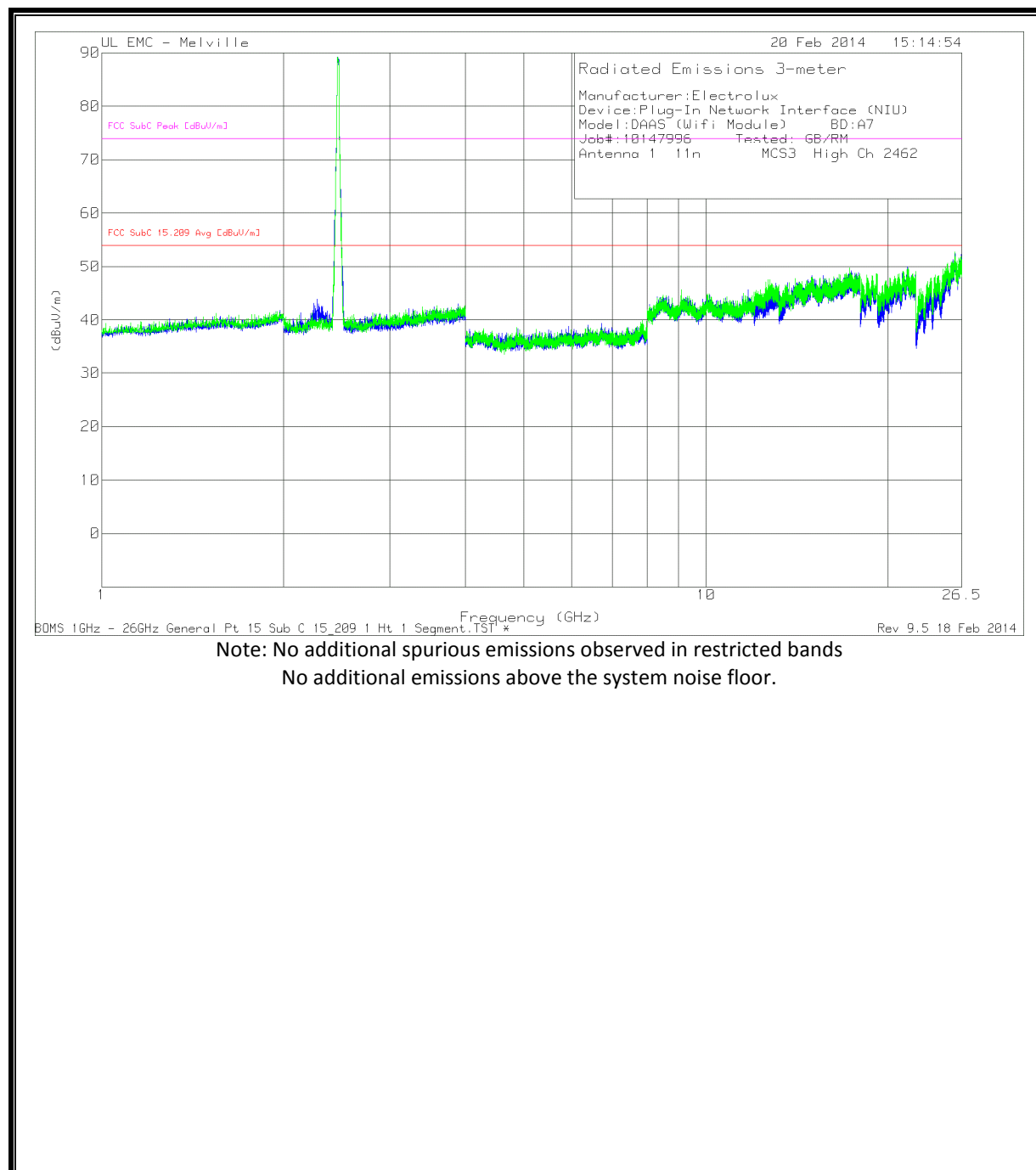
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

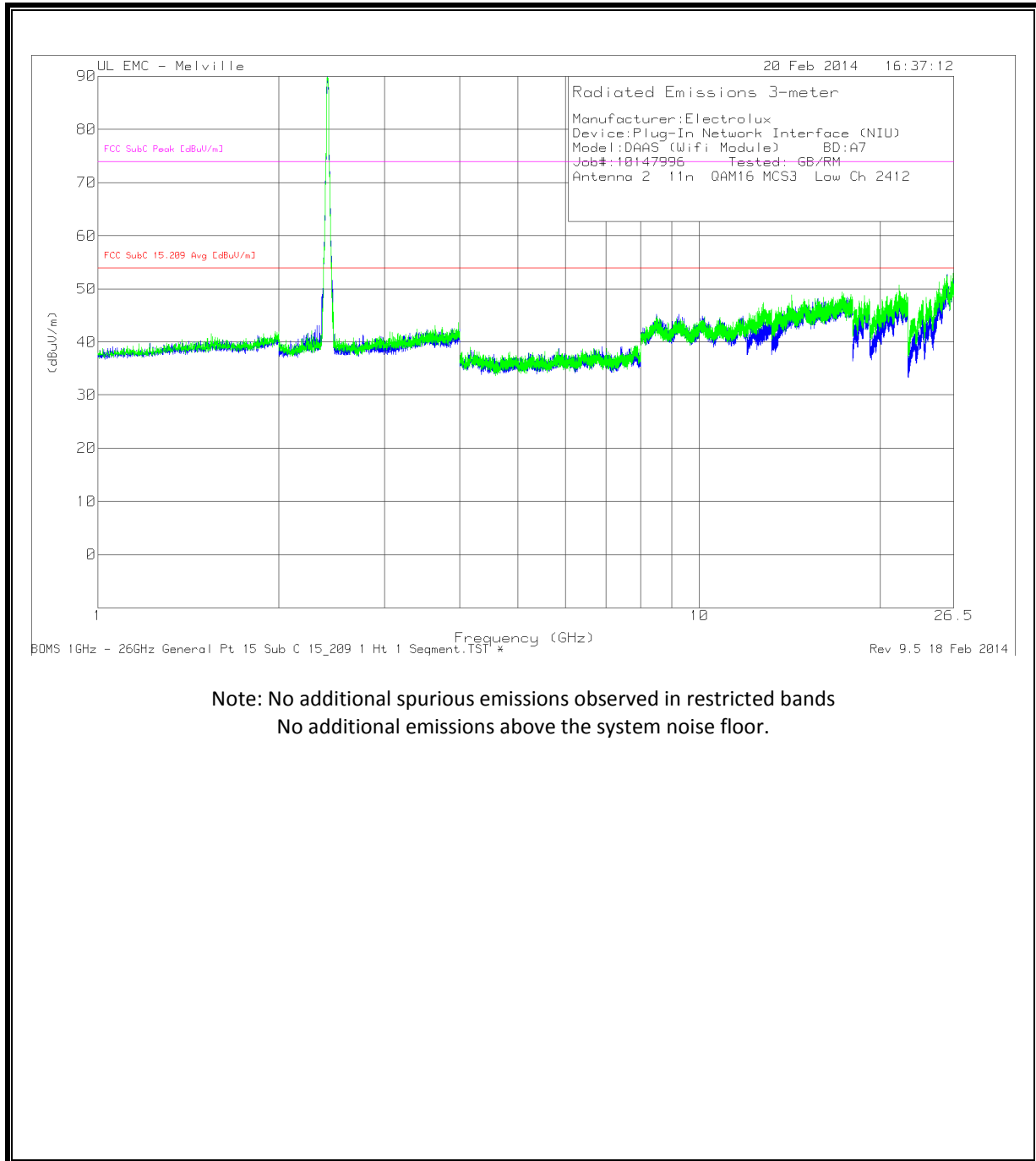
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

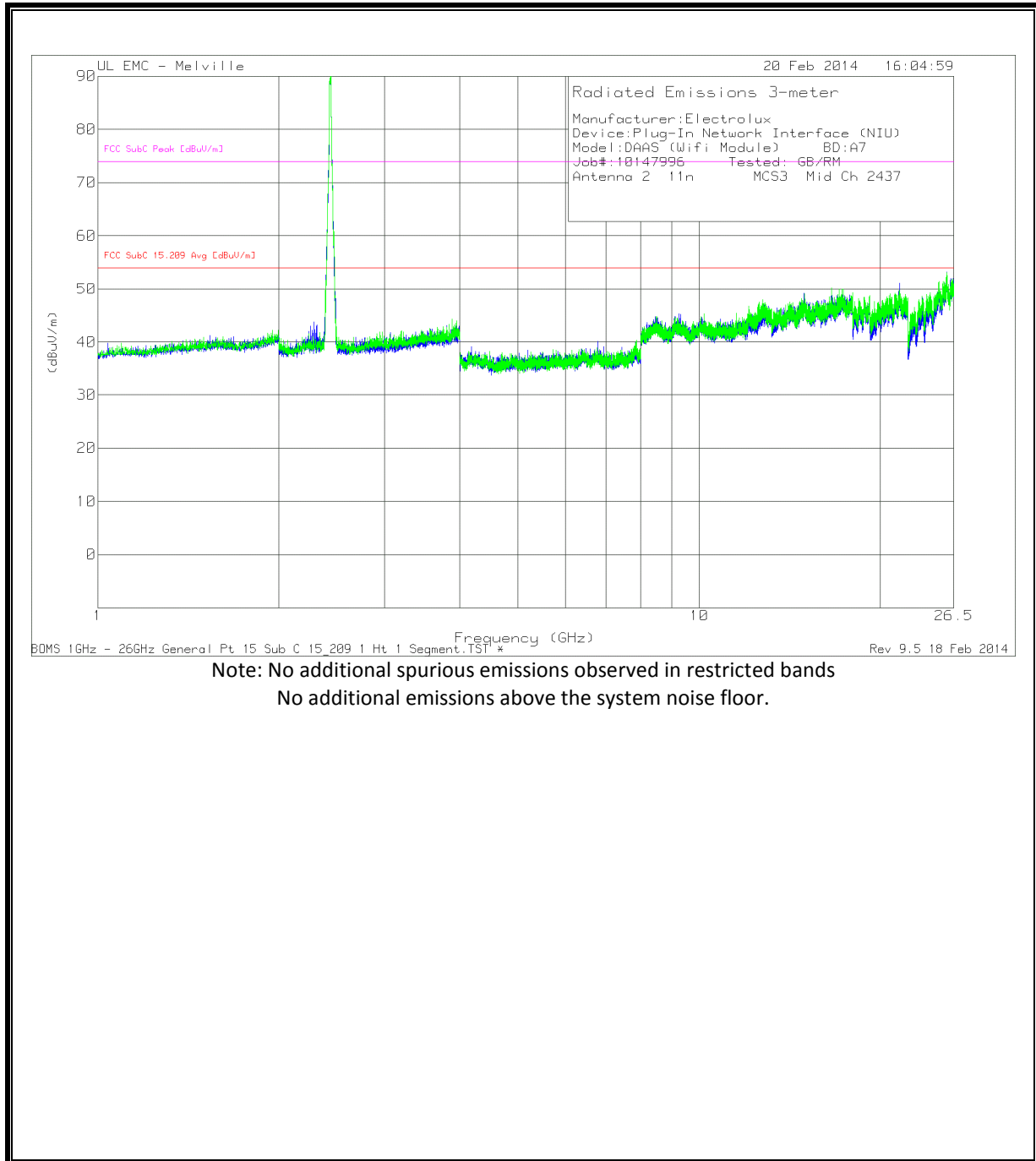
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

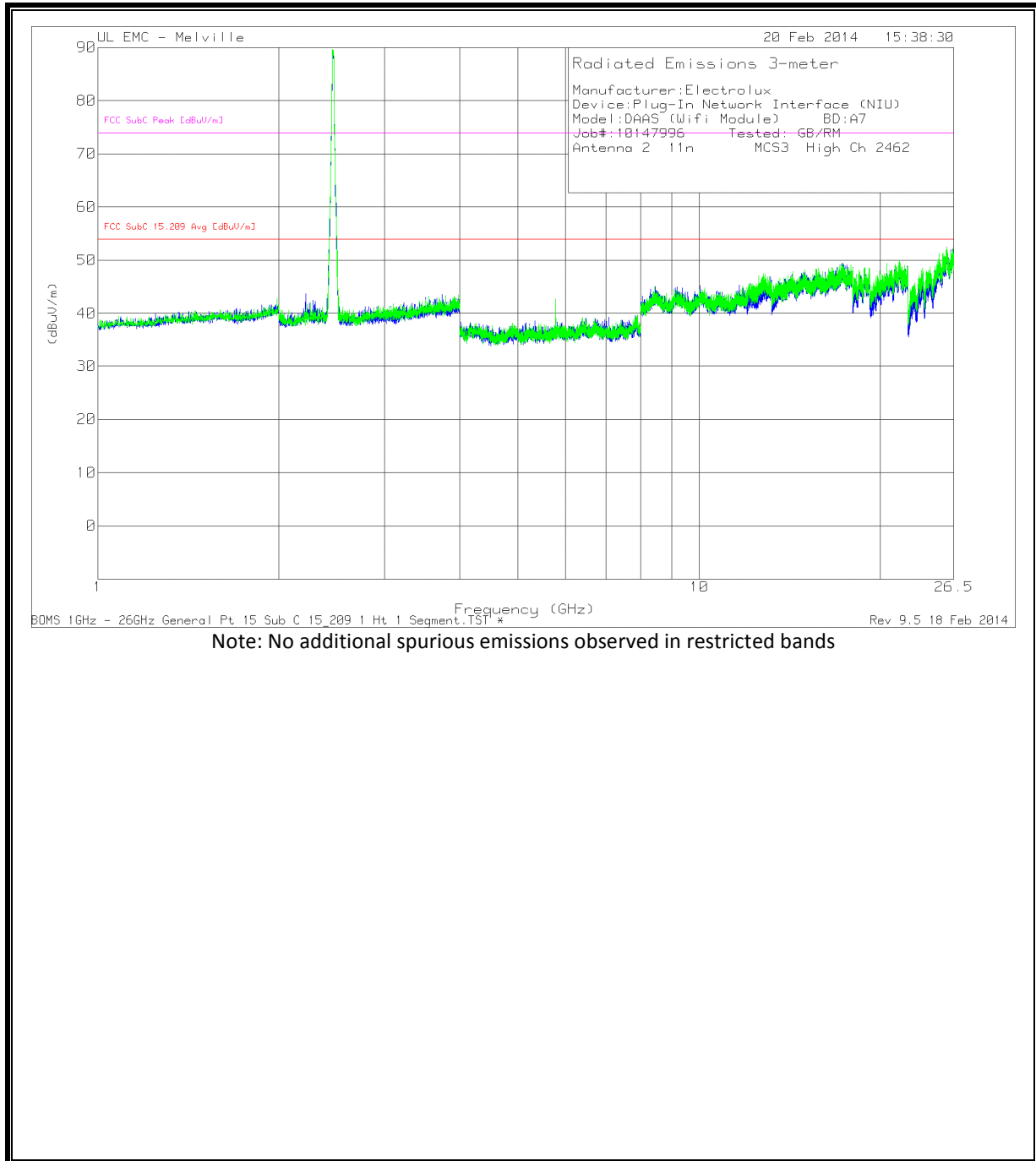
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

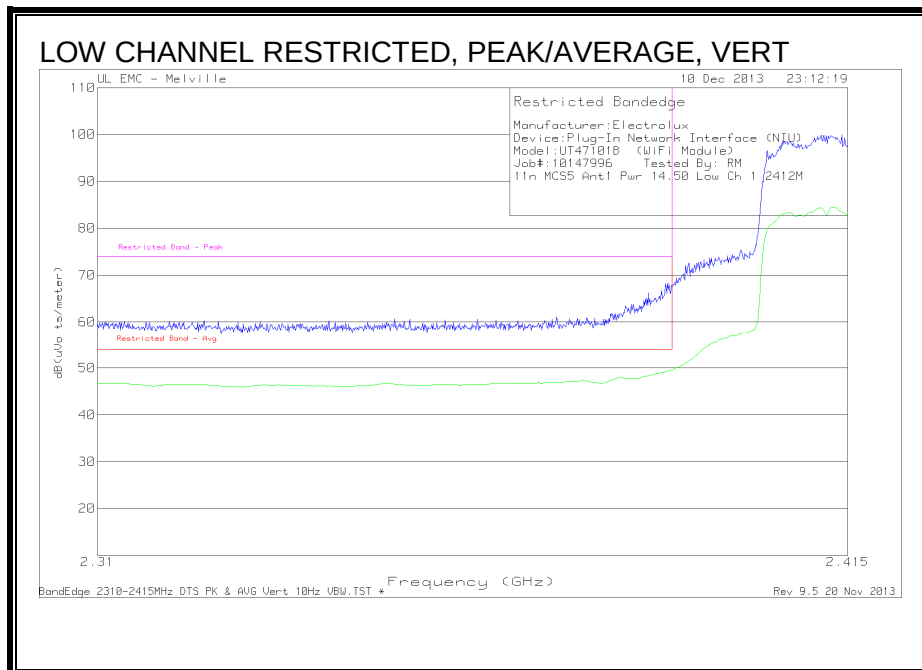
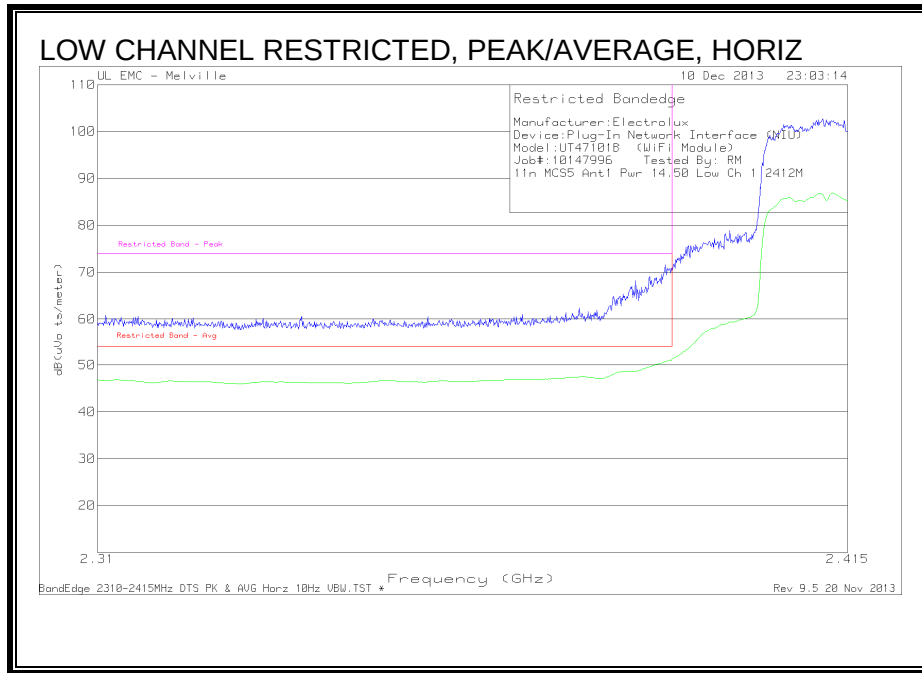
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

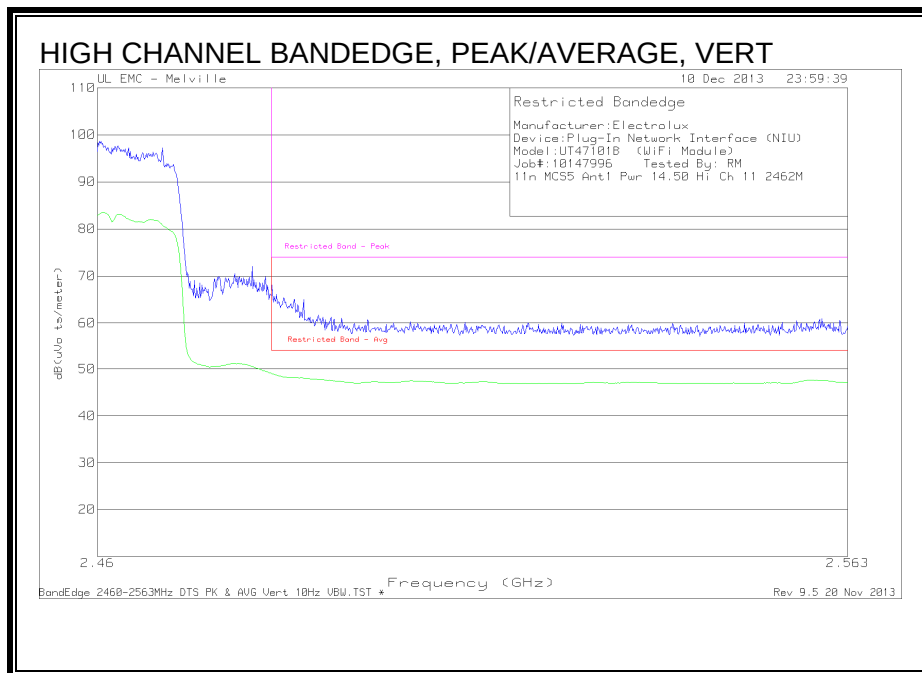
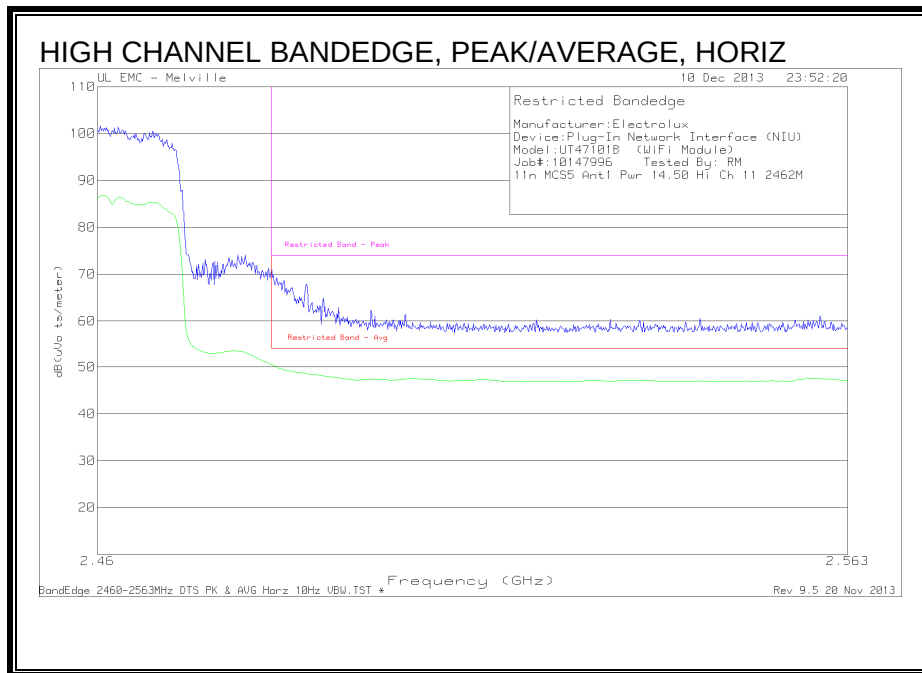
MAv1 - KDB558074 Option 1 Maximum RMS Average

9.6 TX ABOVE 1 GHz 802.11n QAM 64 MODE IN THE 2.4 GHz BAND

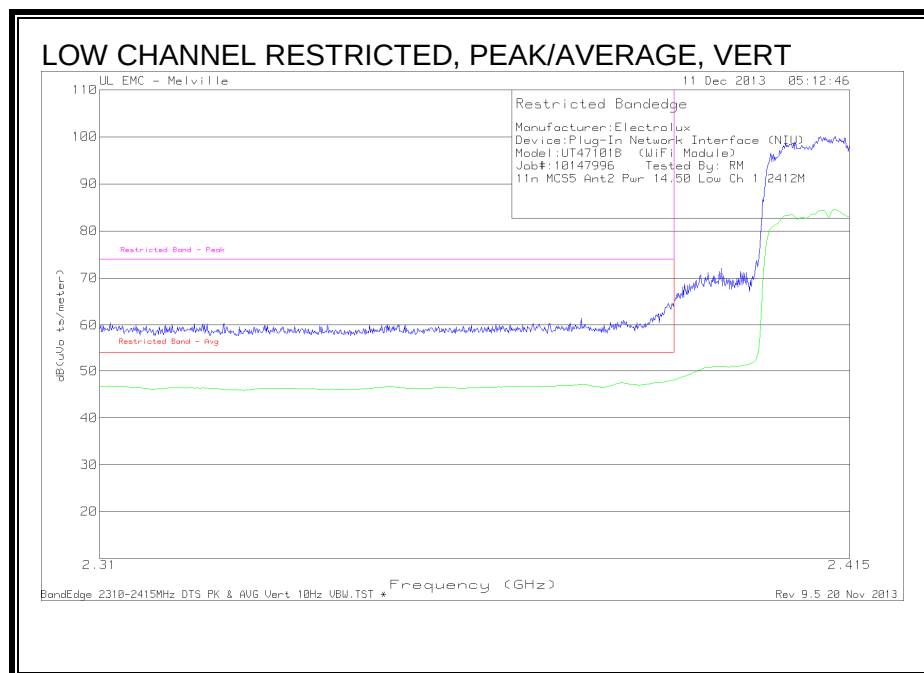
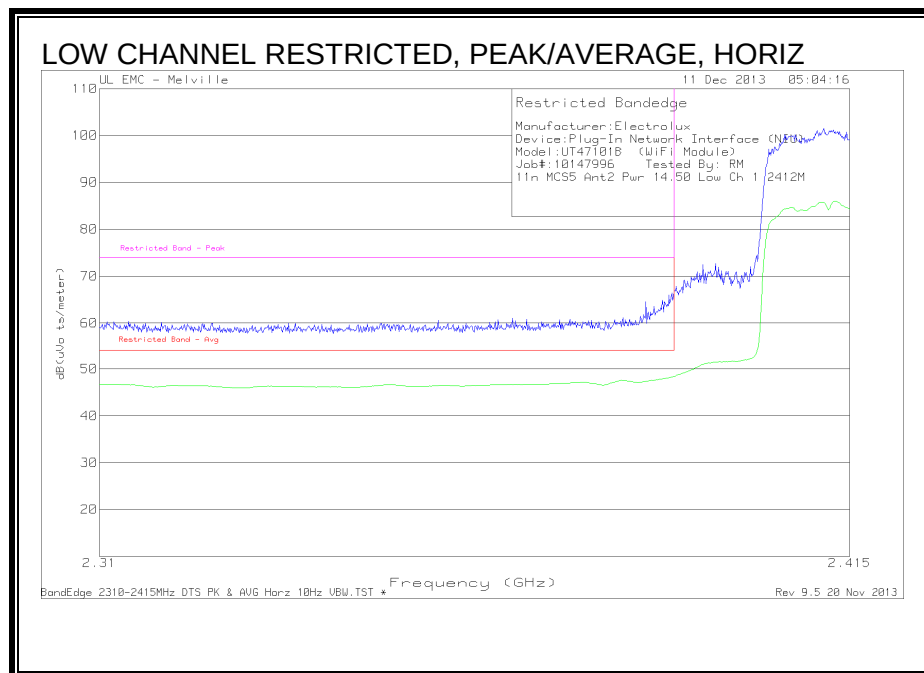
RESTRICTED BANDEDGE (LOW CHANNEL) ANTENNA PORT 1



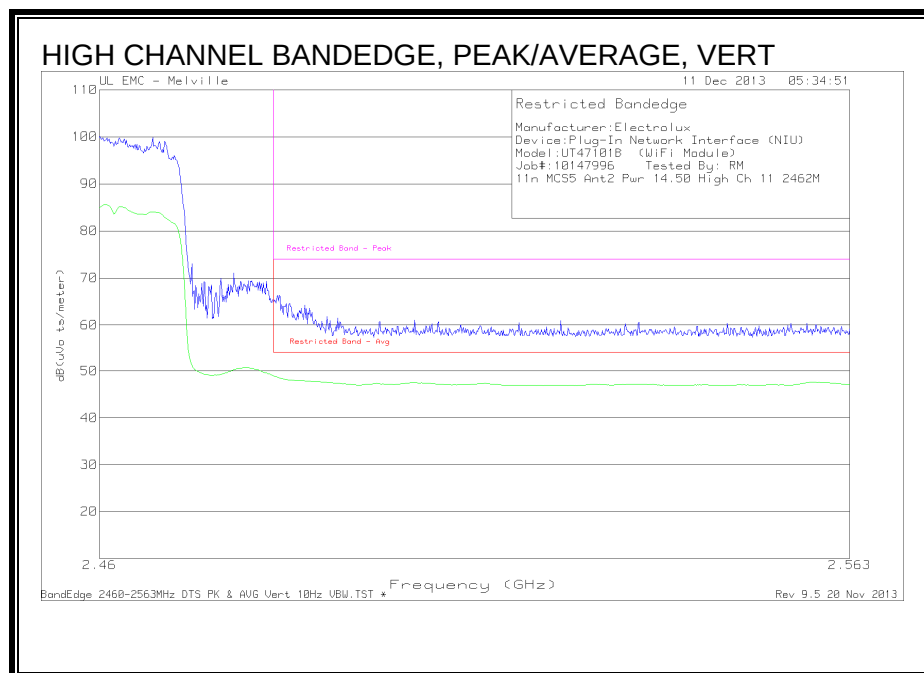
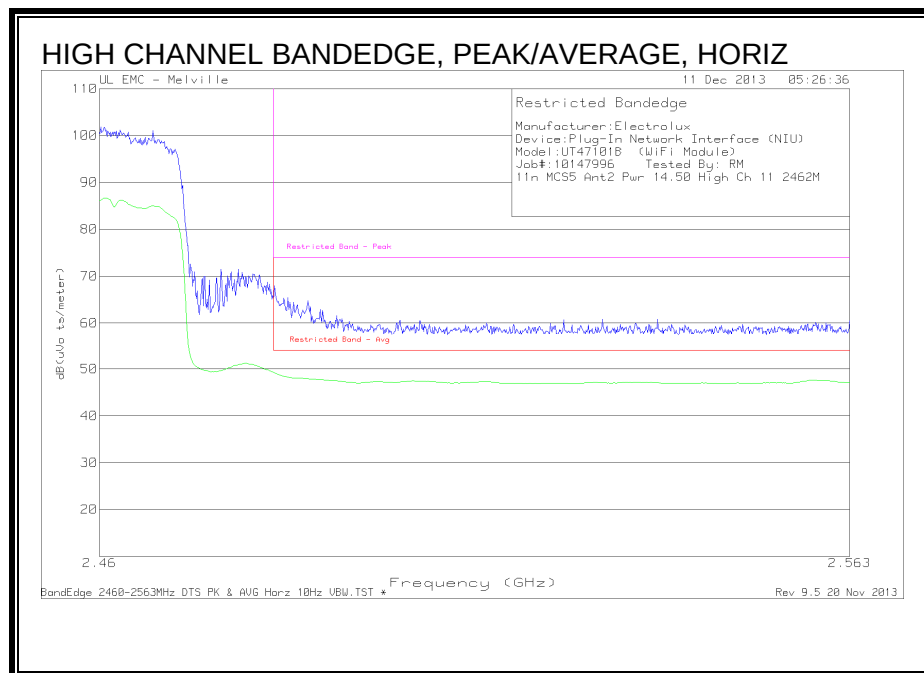
AUTHORIZED BANDEDGE (HIGH CHANNEL) ANTENNA PORT 1



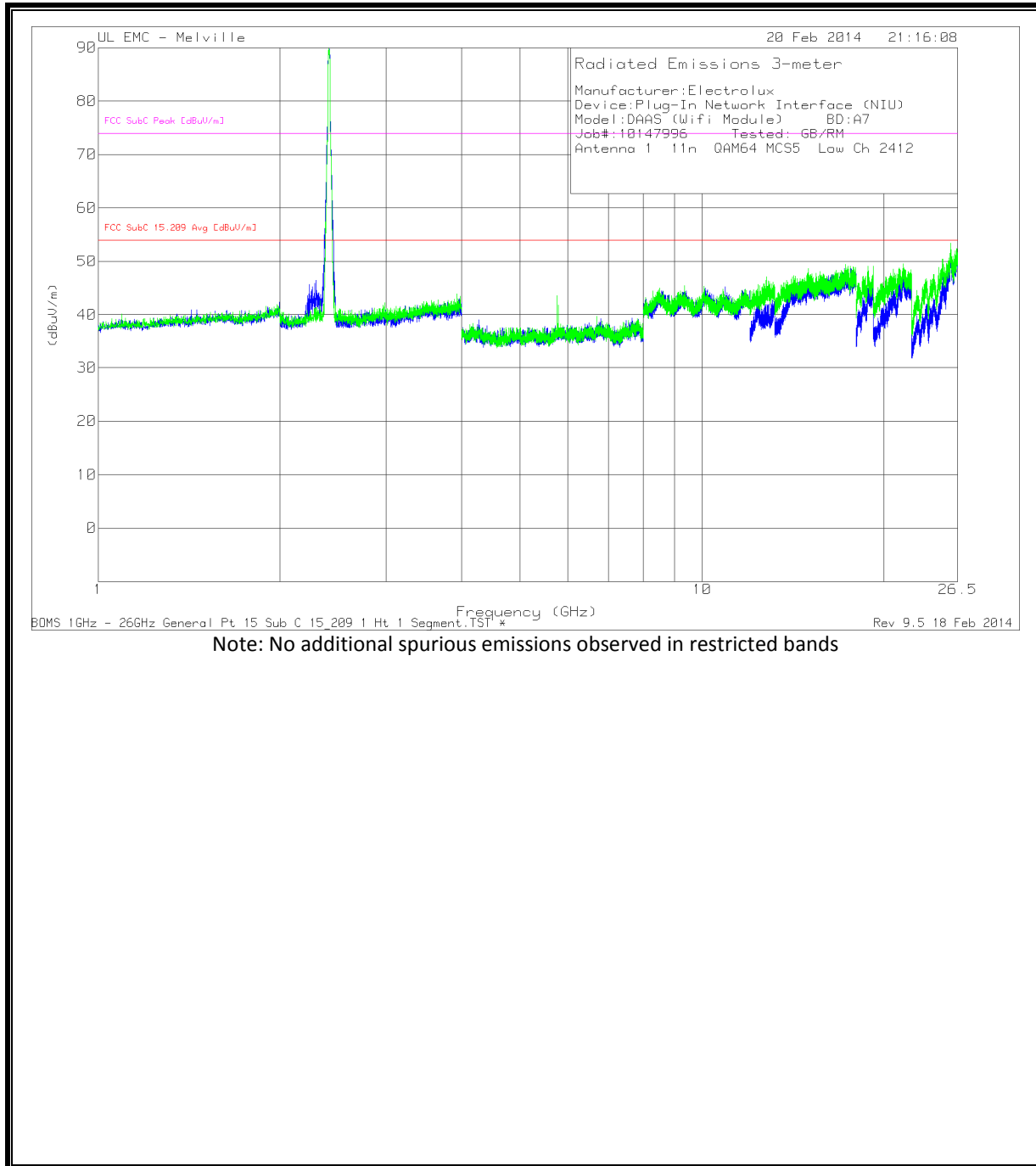
RESTRICTED BANDEDGE (LOW CHANNEL) ANTENNA PORT 2



AUTHORIZED BANDEDGE (HIGH CHANNEL) ANTENNA PORT 2



HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

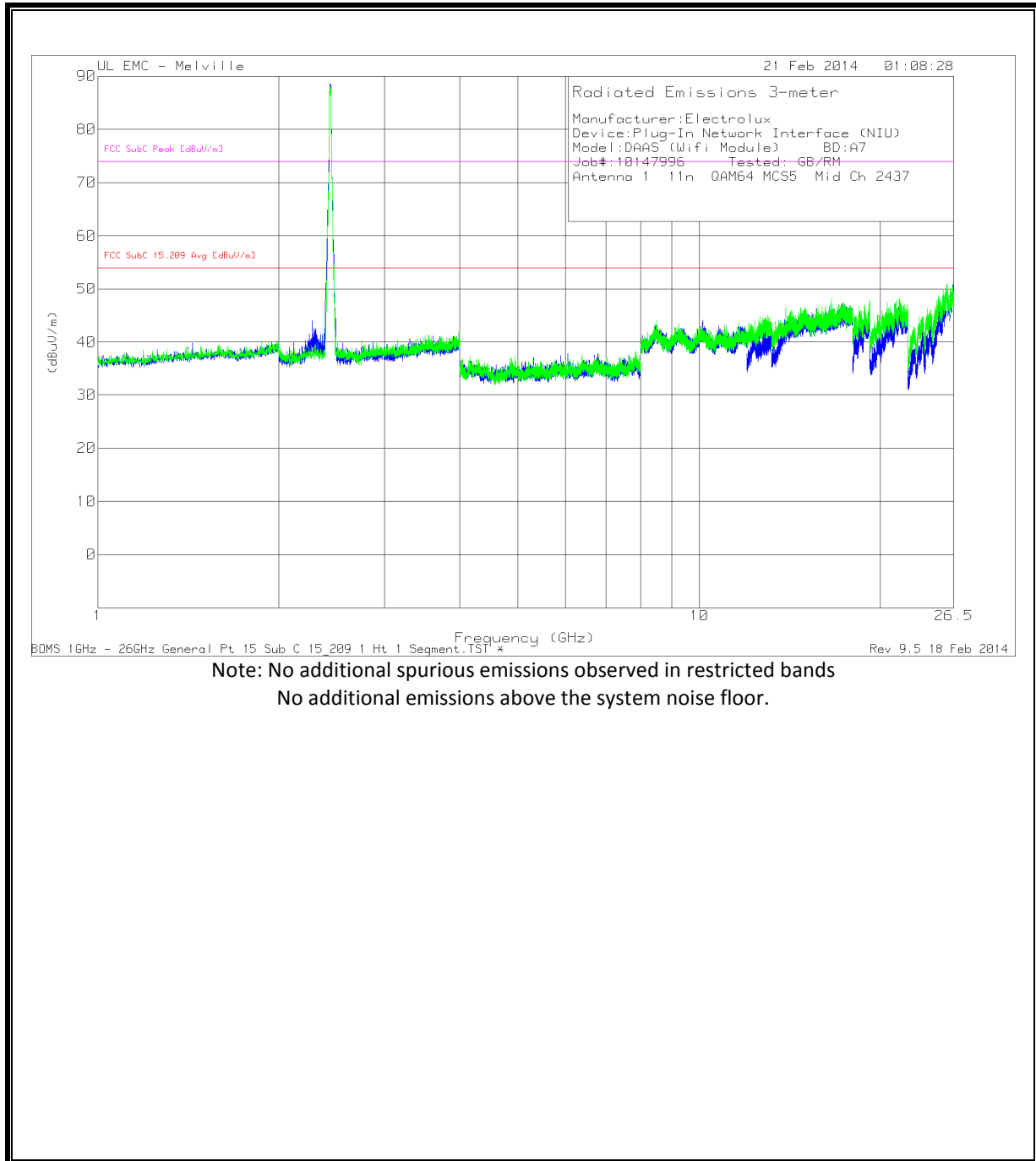
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

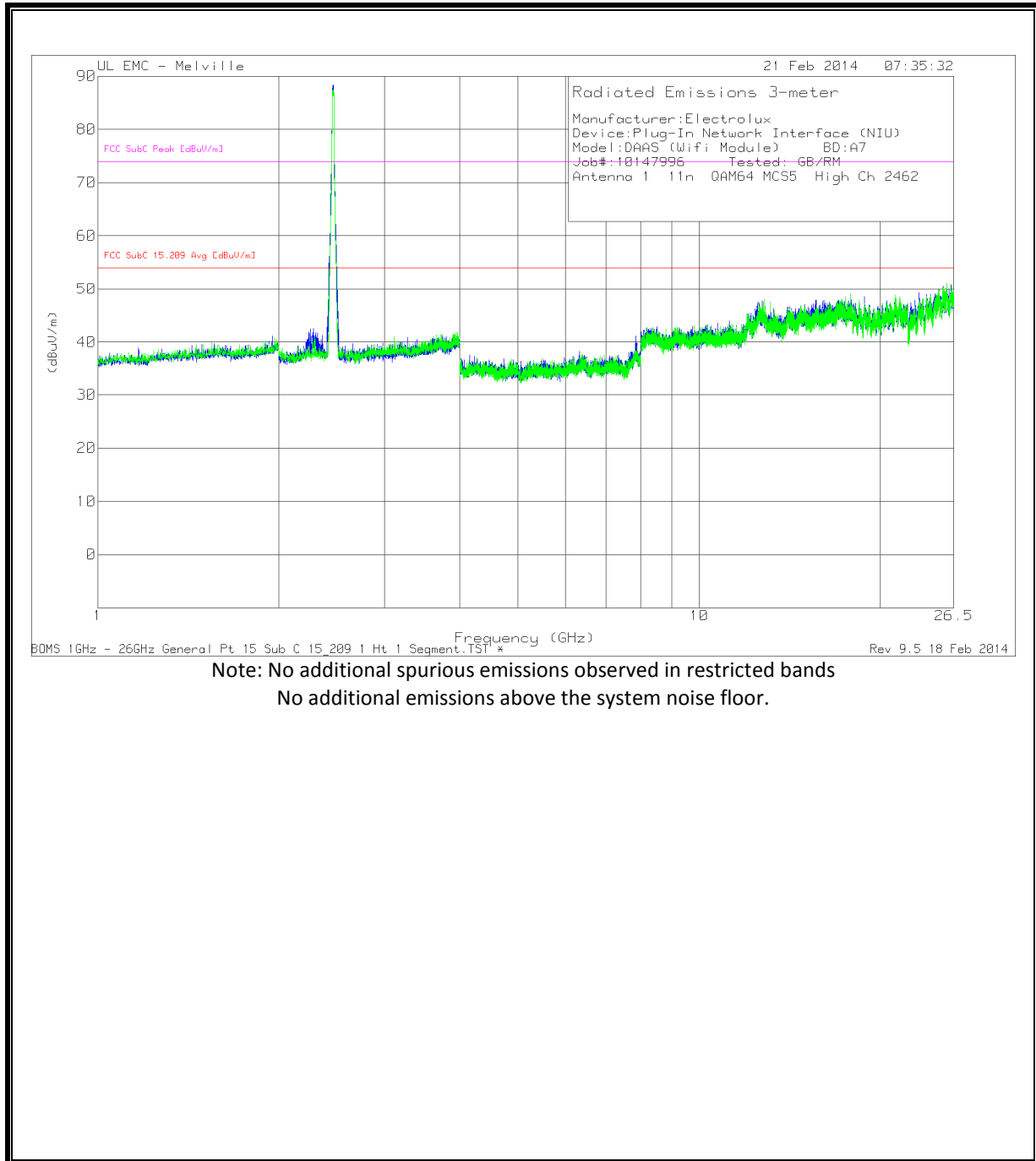
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

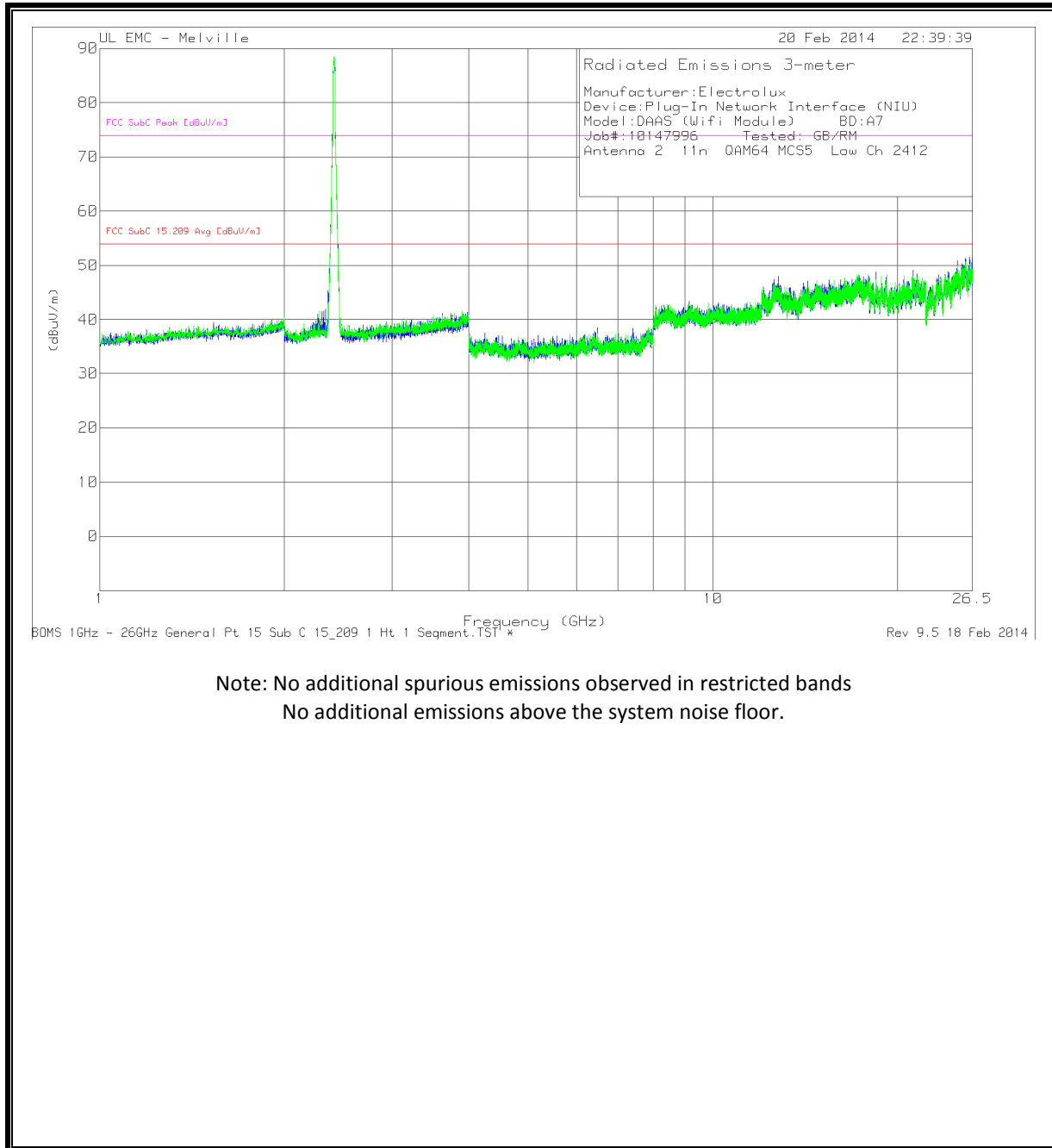
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg (dBuV/m)	Margin (dB)	FCC SubC Peak (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

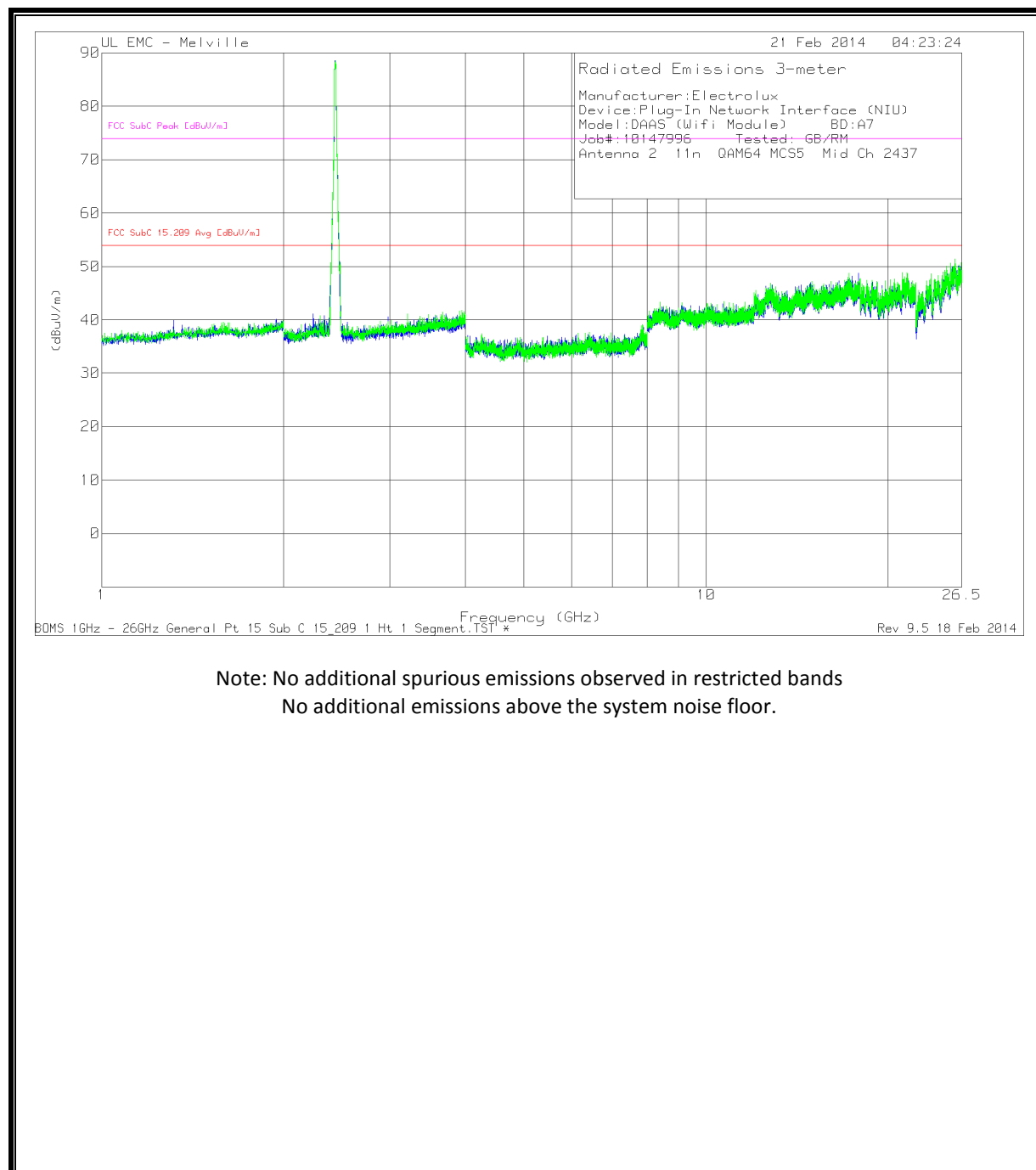
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

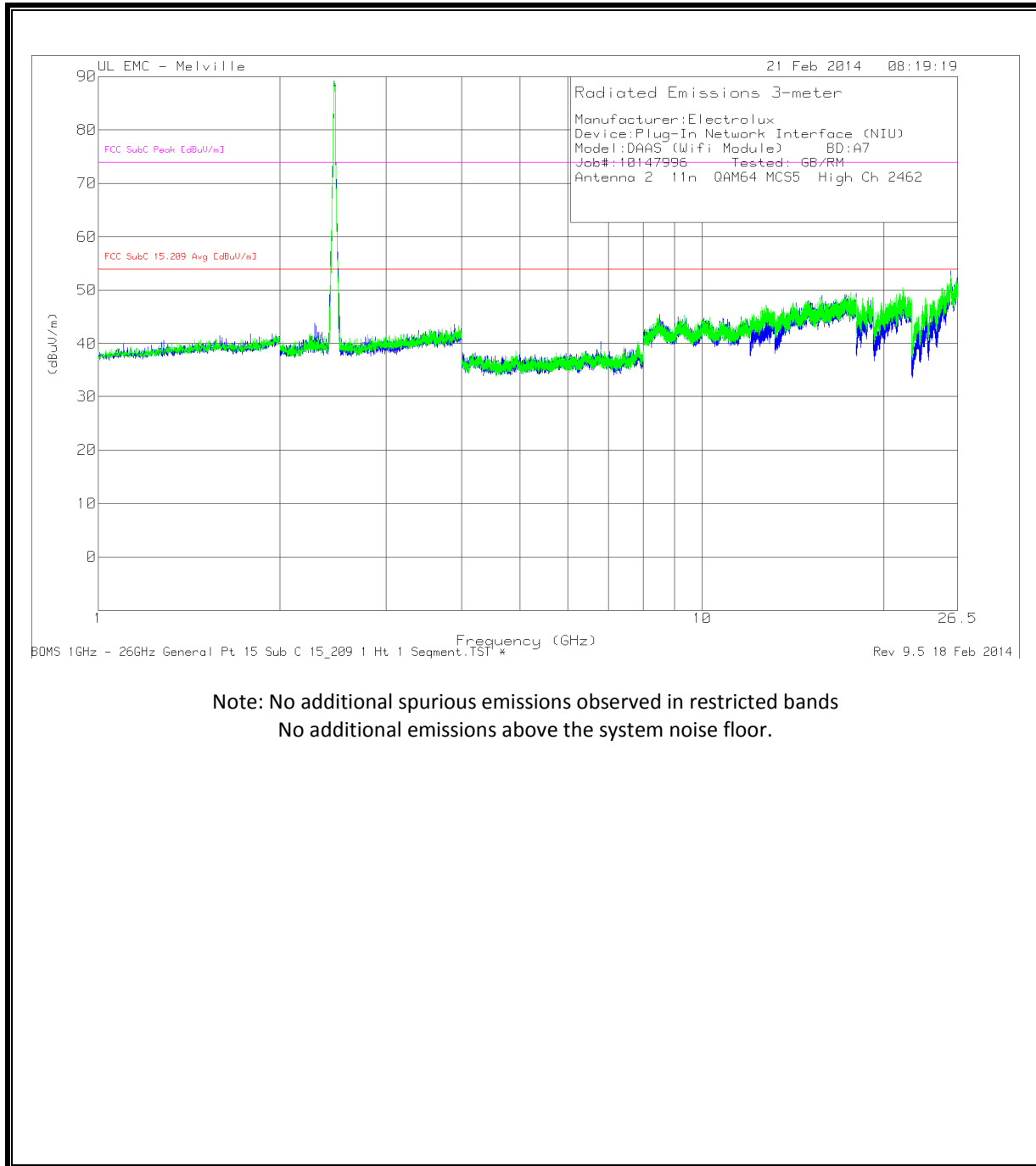
HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 2



HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 2

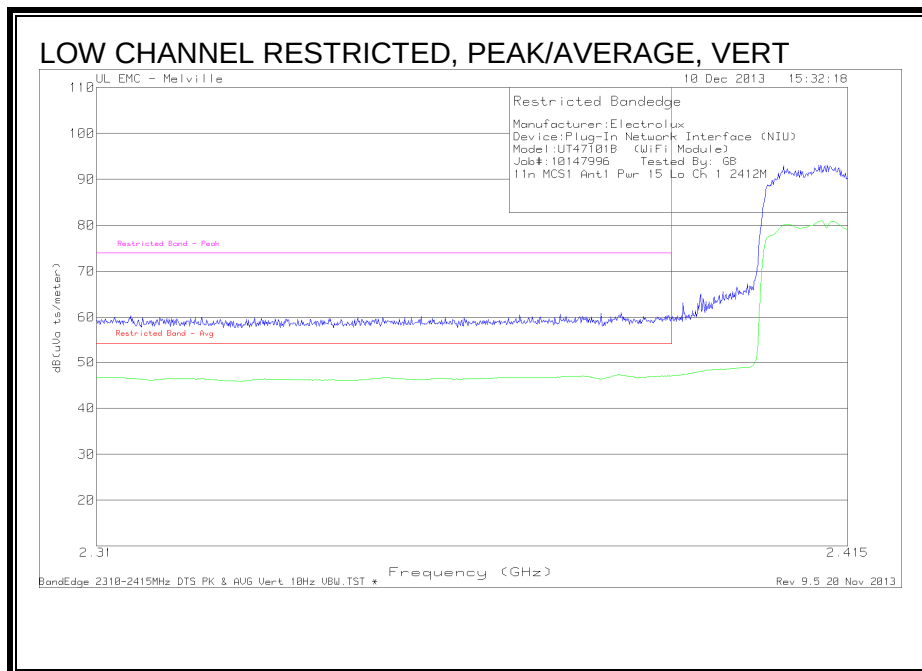
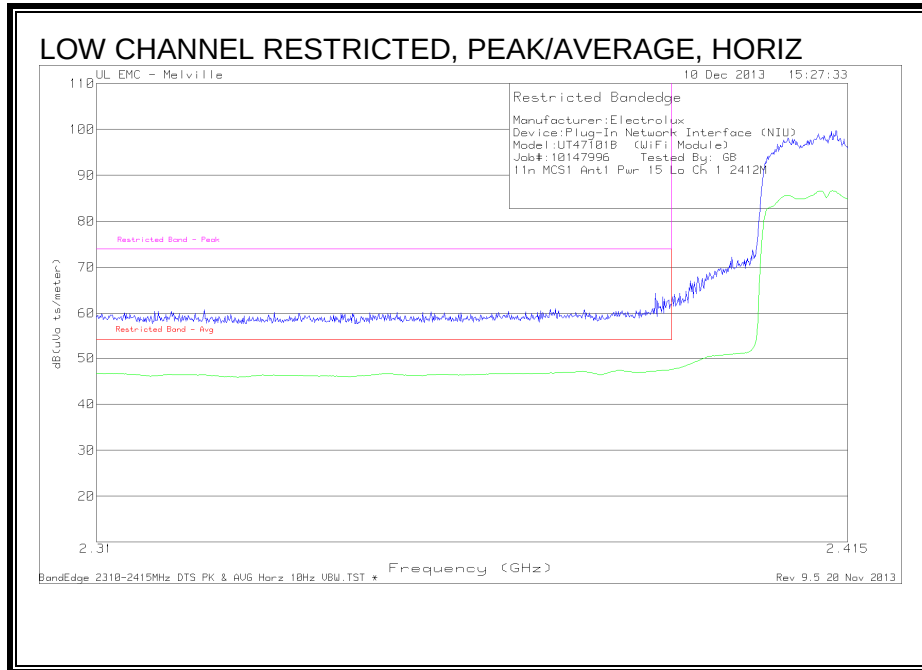


HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 2

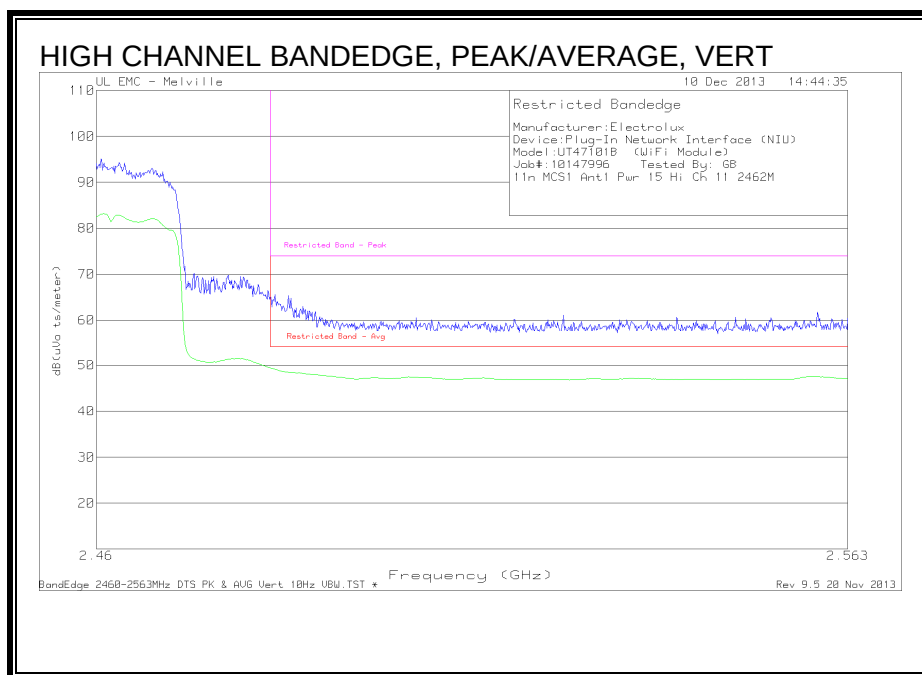
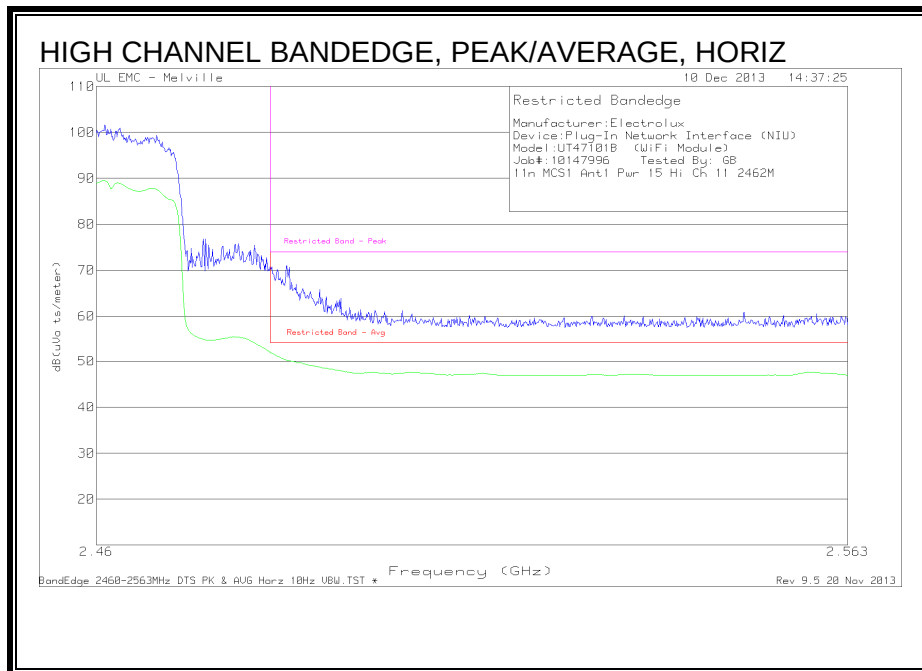


9.7 TX ABOVE 1 GHz 802.11n QPSK MODE IN THE 2.4 GHz BAND

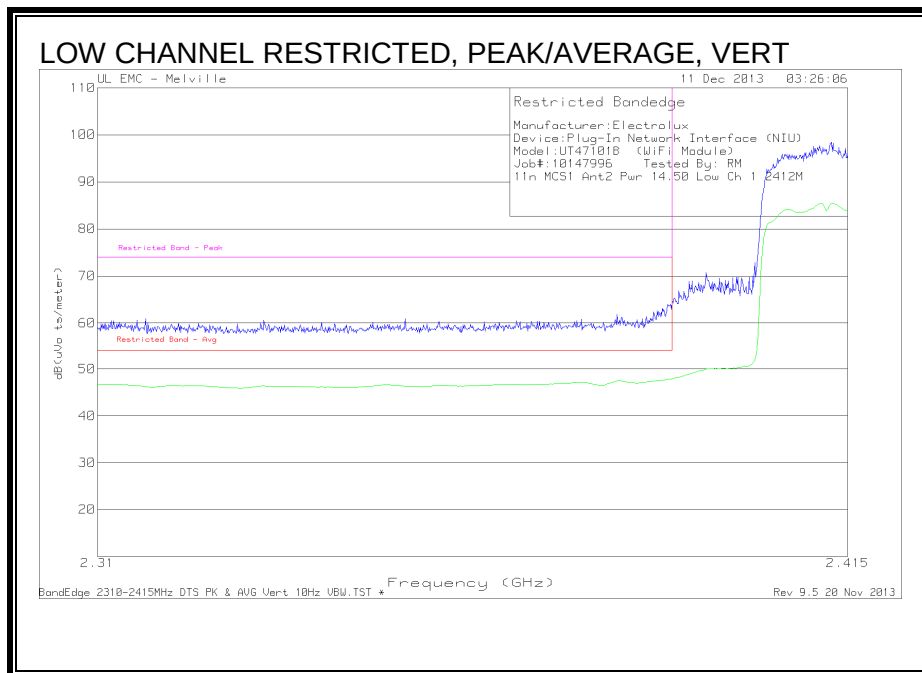
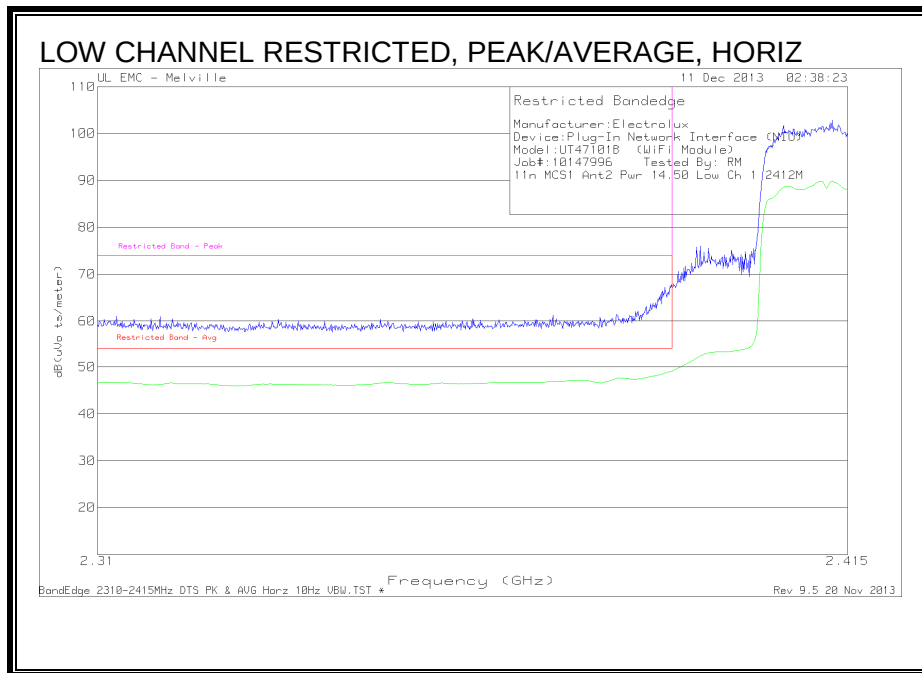
RESTRICTED BANDEDGE (LOW CHANNEL) ANTENNA PORT 1



AUTHORIZED BANDEDGE (HIGH CHANNEL) ANTENNA PORT 1



RESTRICTED BANDEDGE (LOW CHANNEL) ANTENNA PORT 2



HIGH CHANNEL BANDEDGE, PEAK/AVERAGE, HORIZ

UL EMC Test System 10 Dec 2013 15:12:05

Restricted Bandedge
 Manufacturer: ElectroLux
 Device: Plug-In Network Interface (NIU)
 Model: UT47101B (WiFi Module)
 Job#: 10147996 Tested By: GB
 In MCS1 Ant2 Pur 15 Hz On 11 2462M

Restricted Band - Peak
 Restricted Band - Avg

dB(μVols./meter)

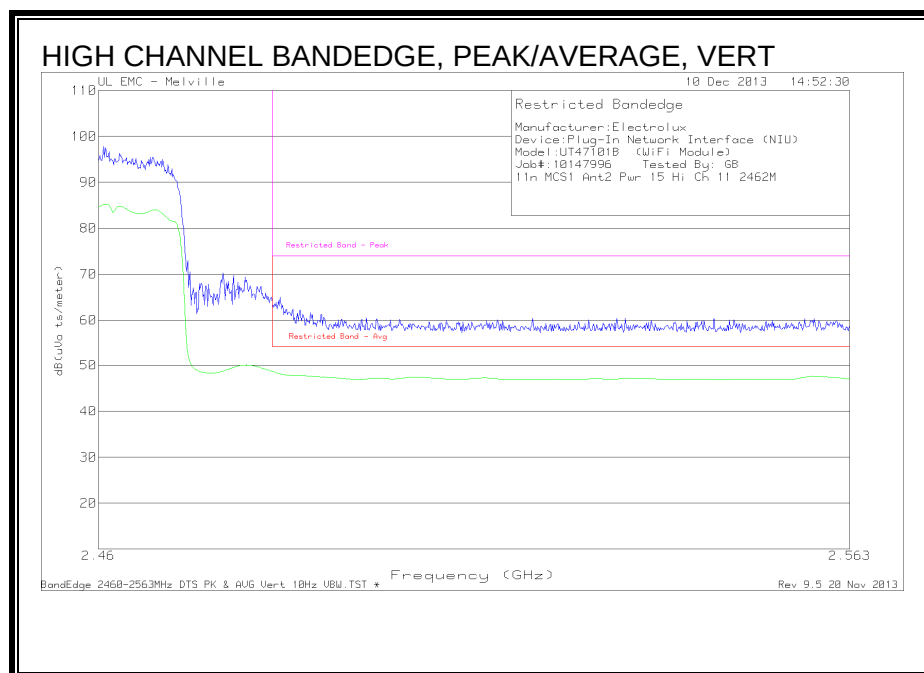
Frequency (GHz)

Range (GHz)	Set	RBW	VBW / Avg Freq	Sweep	Pks	Emissions Mode	Label
1.246-2.563	P20K	10	30 / LogPwr(10dBm)	Auto/Cycled	100	100 W000	Horizontal-Pk

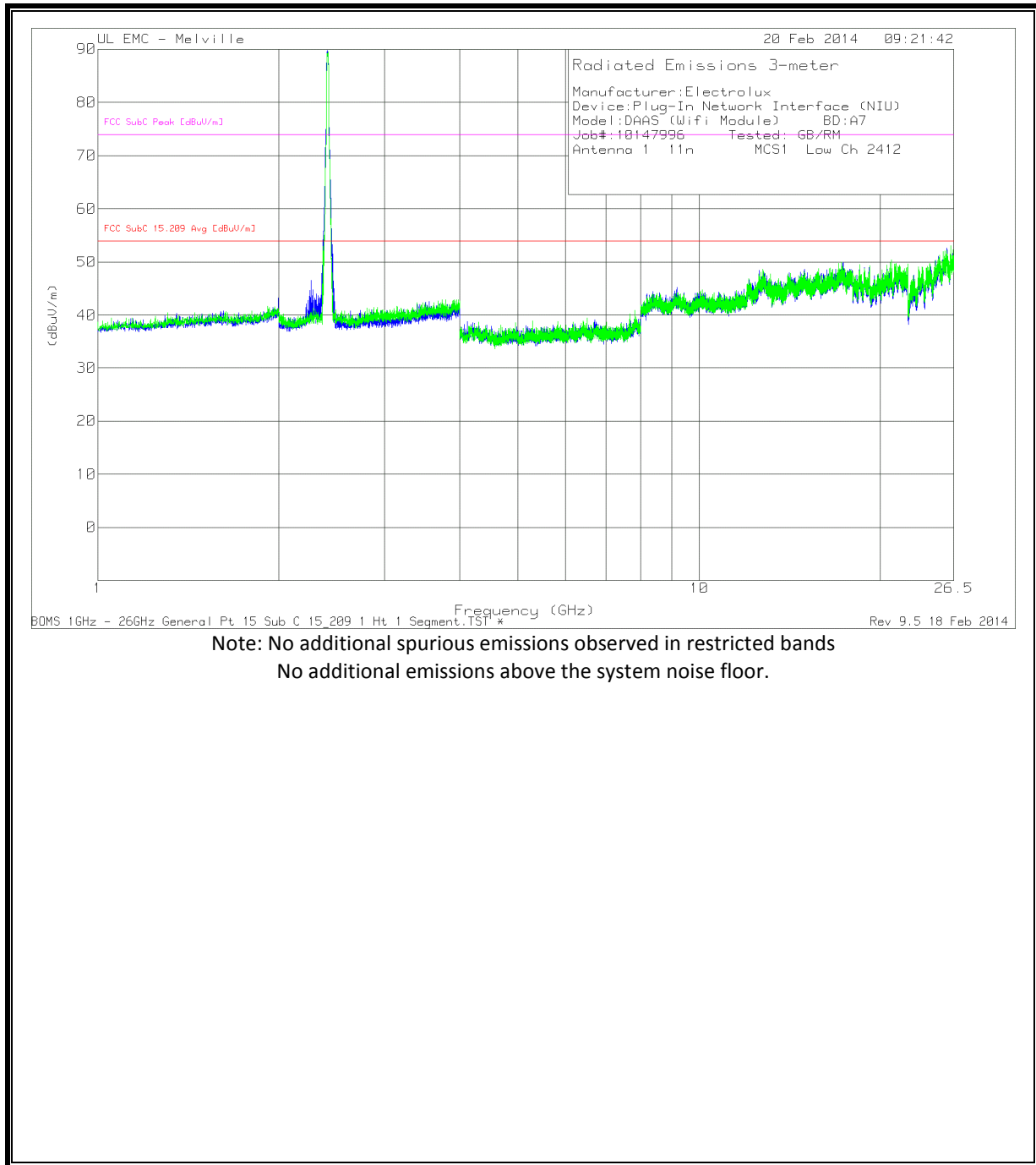
Range (GHz)	Set	RBW	VBW / Avg Freq	Sweep	Pks	Emissions Mode	Label
2.246-2.563	P20K	10	30 / LogPwr(10dBm)	Auto/Cycled	100	100 W000	Horizontal-Avg

Bandedge 1 In MCS1 Ant 2 pur - 15.2462 Mhz Horiz.DAT *

Rev 9.5 17 Mar 2014



HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

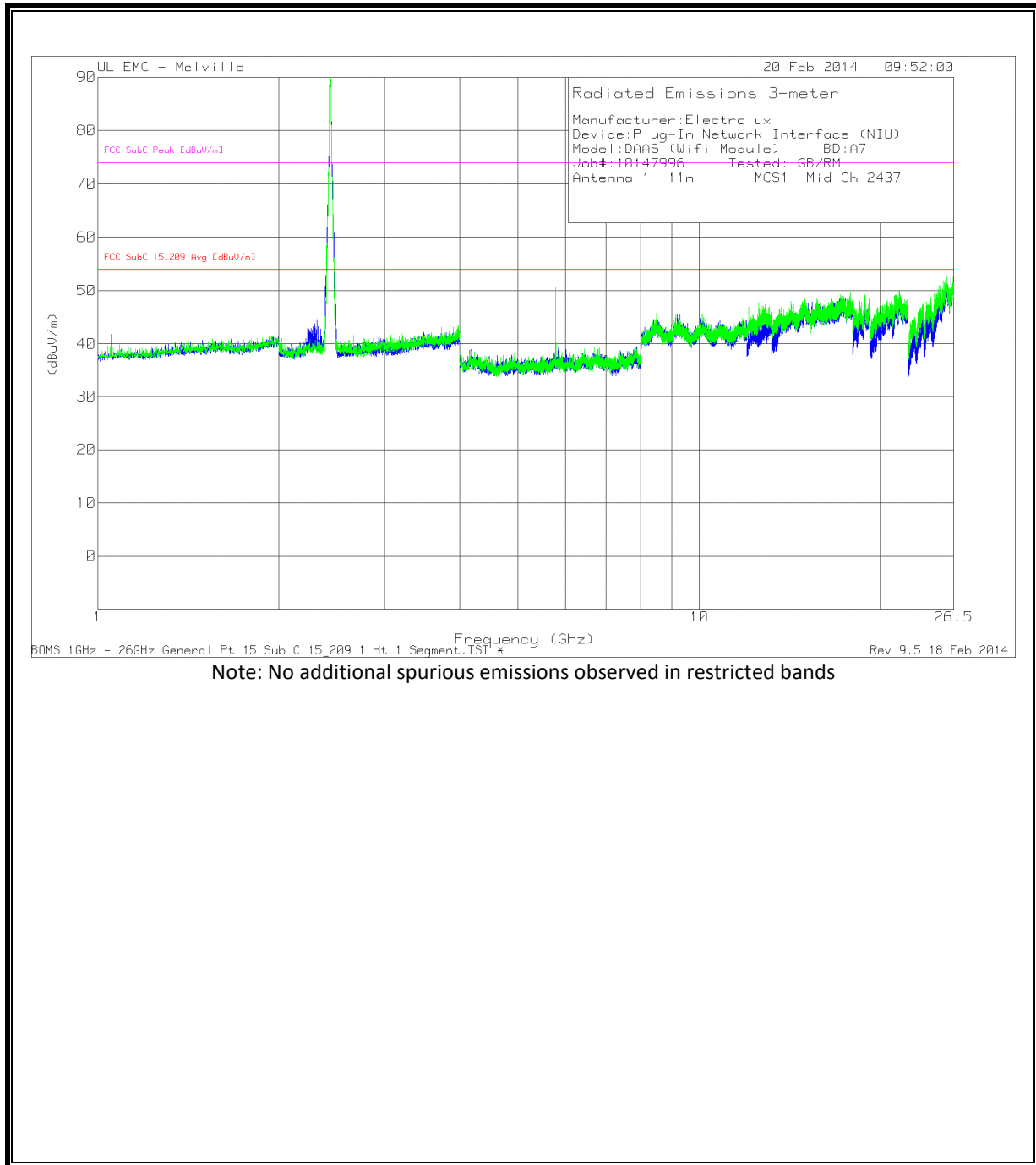
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

Horizontal 1 - 2GHz												
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-51442 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 1.0941	64.52	PK2	20	-44.29	40.23	54	-13.77	74	-33.77	188	171	H
* 1.0939	52.8	MAv1	20	-44.3	28.5	54	-25.5	-	-	188	171	H

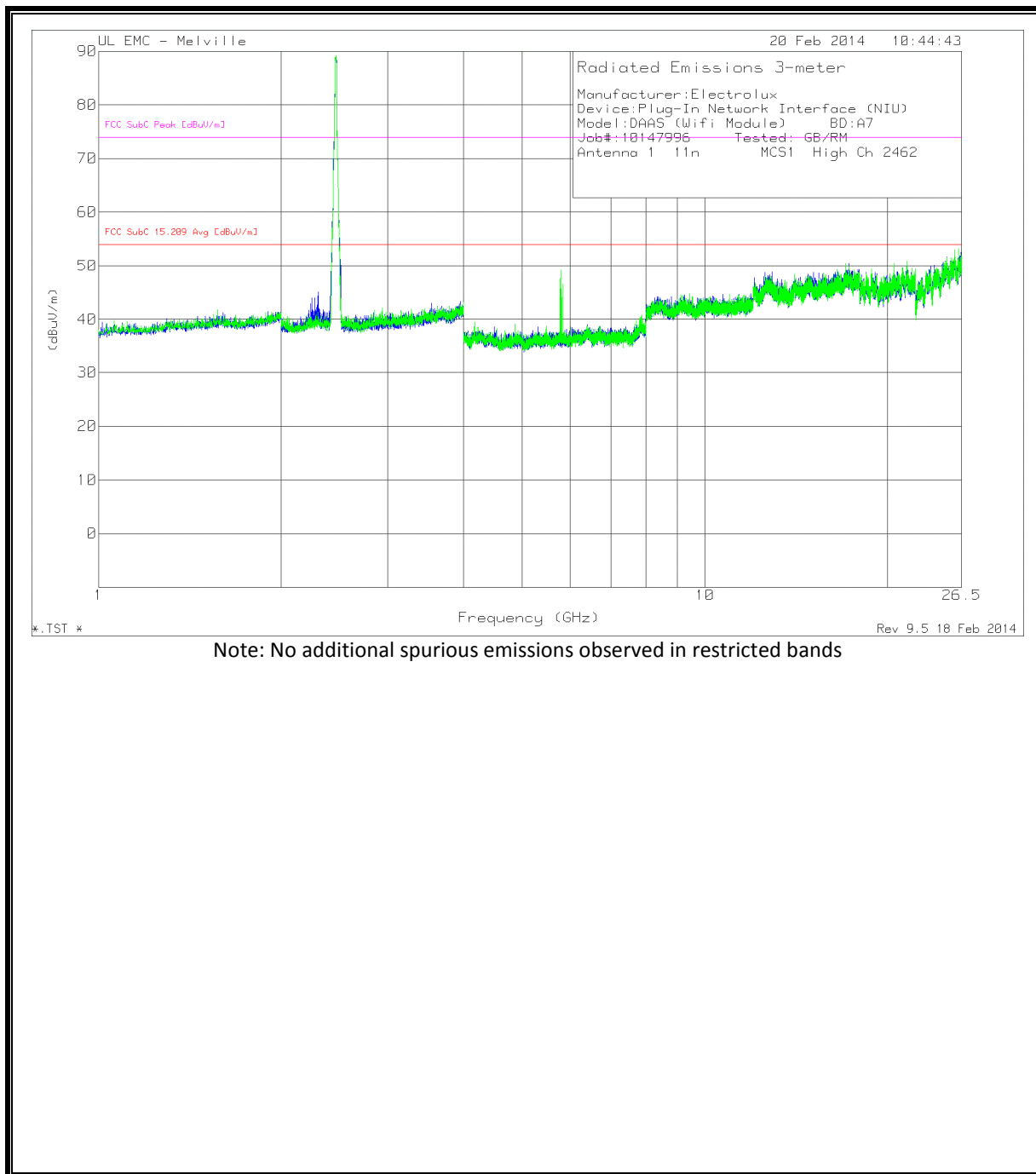
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 1



HORIZONTAL/VERTICAL DATA

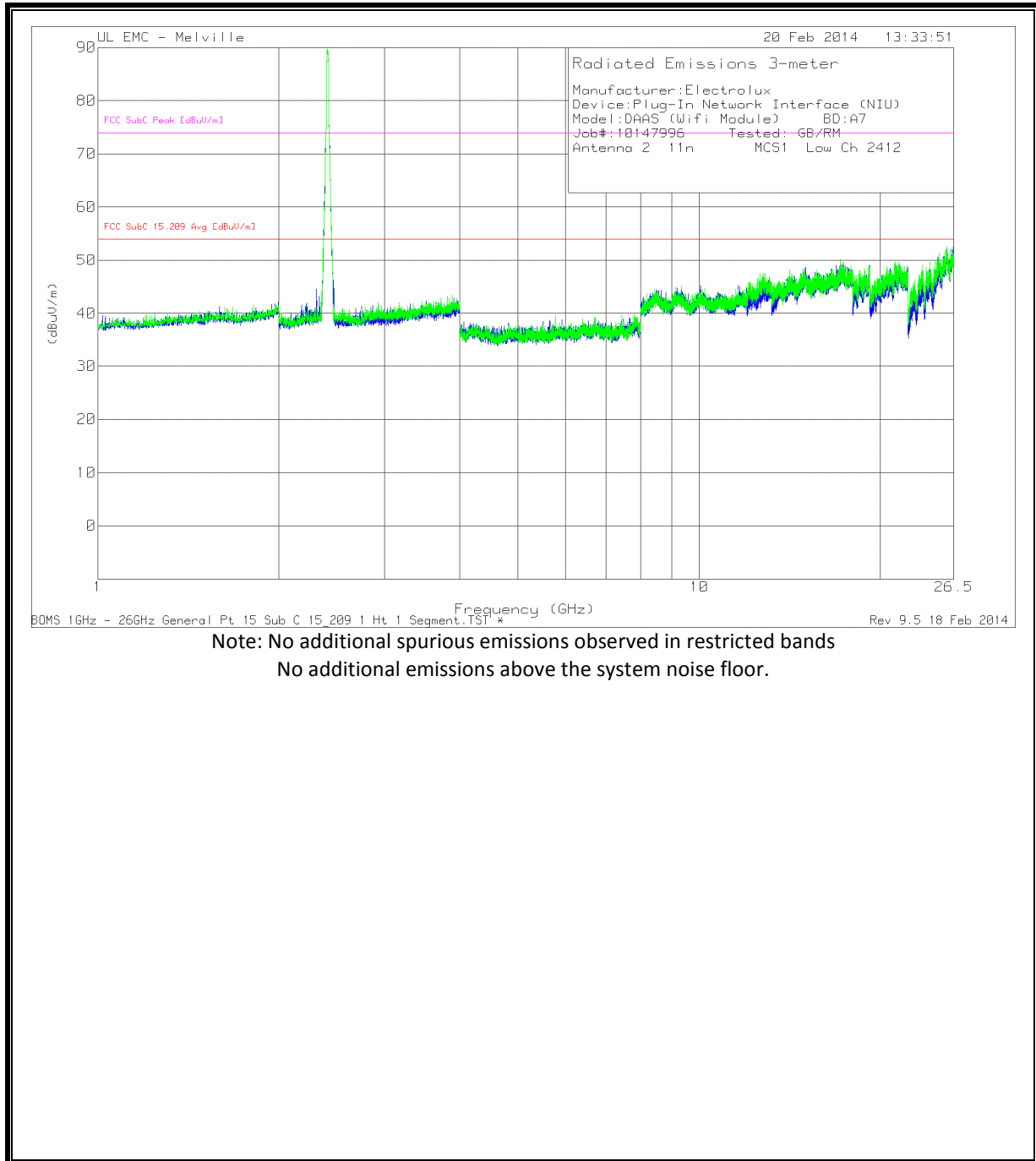
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

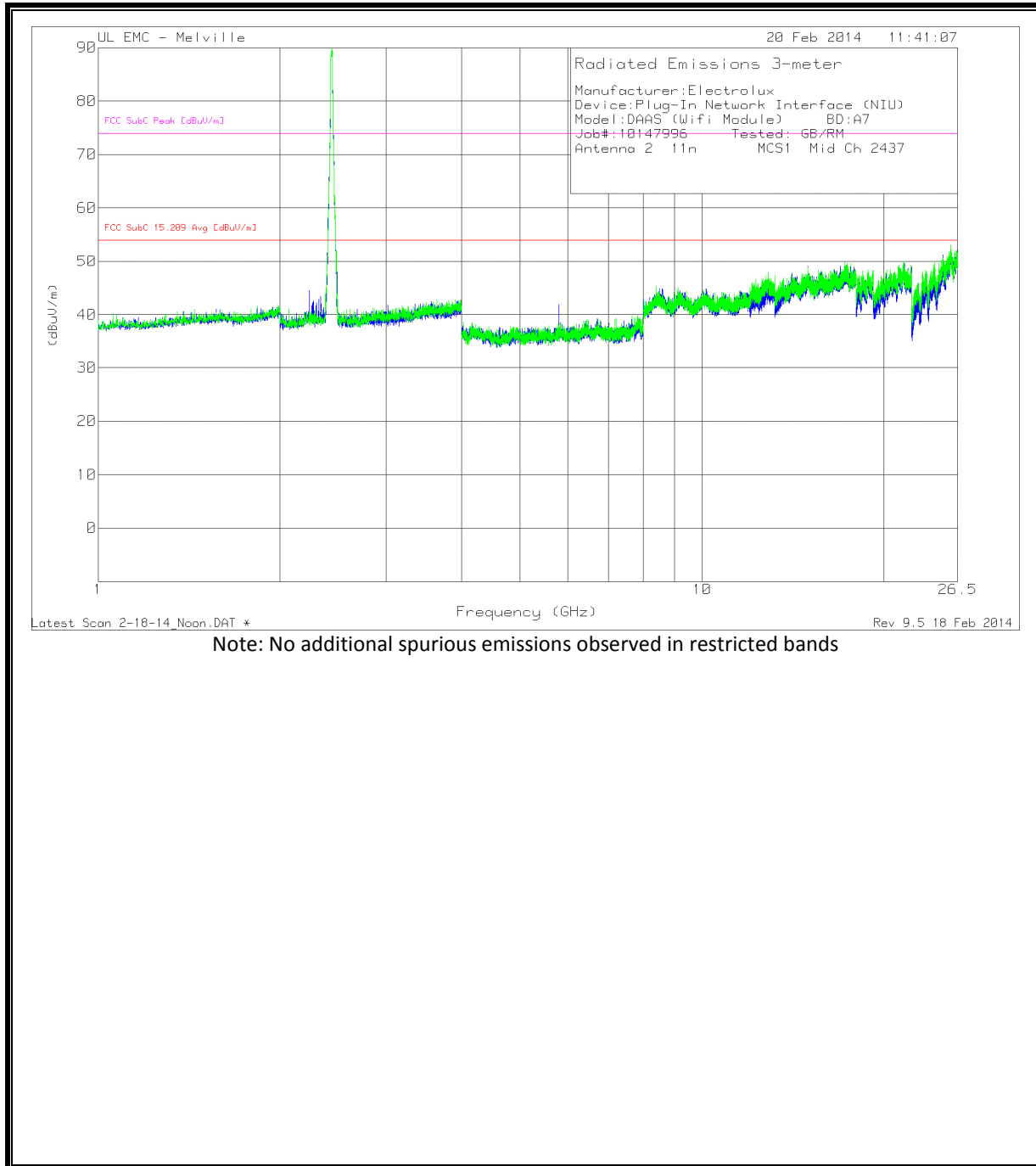
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL ANTENNA PORT 2



HORIZONTAL/VERTICAL DATA

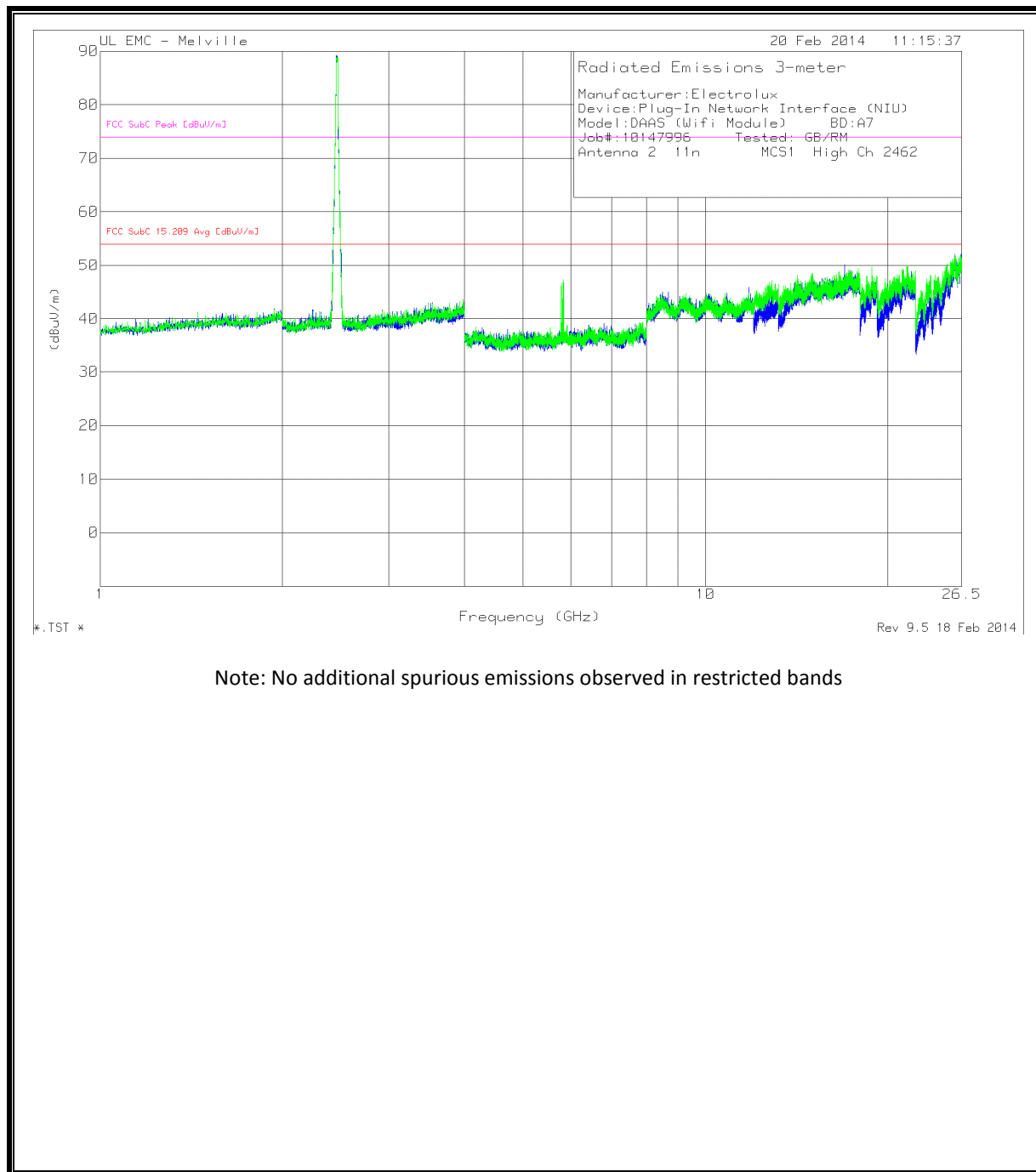
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
*2.2515	66.65	PK2	21.3	-42.75	45.2	54	-8.8	74	-28.8	147	329	H
*2.2518	52.79	MAv1	21.3	-42.75	31.34	54	-22.66	-	-	147	329	H
Test Frequency (GHz)	Meter Reading (dBuV)	Detector	AF-48107 [dB/m]	Gain/Loss (dB)	Corrected Reading (dBuV/m)	FCC SubC 15.209 Avg [dBuV/m]	Margin (dB)	FCC SubC Peak [dBuV/m]	PK Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
* 2.2915	64.19	PK2	21.1	-42.72	42.57	54	-11.43	74	-31.43	117	330	H
* 2.2911	51.3	MAv1	21.1	-42.75	29.65	54	-24.35	-	-	117	330	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL ANTENNA PORT 2



10 AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4-2009.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS DAAS VERSION

6 WORST EMISSIONS

Frequency (MHz)	Meter Reading (dBuV)	Det	Line 1 G/L (dB)	Corrected Reading (dBuV)	Class B QPK Limit (dBuV)	Margin (dB)	Class B Avg Limit (dBuV)	Margin (dB)
.15341	41.35	PK	10	51.35	65.81	-14.46	-	-
.16363	38.41	PK	10	48.41	65.28	-16.87	-	-
.19088	49.66	PK	10	59.66	64	-4.34	-	-
.26924	43.8	PK	10	53.8	61.14	-7.34	-	-
.31864	35.29	PK	10	45.29	59.74	-14.45	-	-
.38507	34.7	PK	10	44.7	58.17	-13.47	-	-

PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	Line 2 G/L (dB)	Corrected Reading (dBuV)	Class B QPK Limit (dBuV)	Margin (dB)	Class B Avg Limit (dBuV)	Margin (dB)
.19259	48.02	PK	10	58.02	63.92	-5.9	-	-
.20536	47.91	PK	10	57.91	63.39	-5.48	-	-
.25902	44.01	PK	10	54.01	61.46	-7.45	-	-
.26924	43.11	PK	10	53.11	61.14	-8.03	-	-
.31523	34.51	PK	10	44.51	59.83	-15.32	-	-
.38337	33.77	PK	10	43.77	58.21	-14.44	-	-

PK - Peak detector

Peak/Average/RMS Emissions

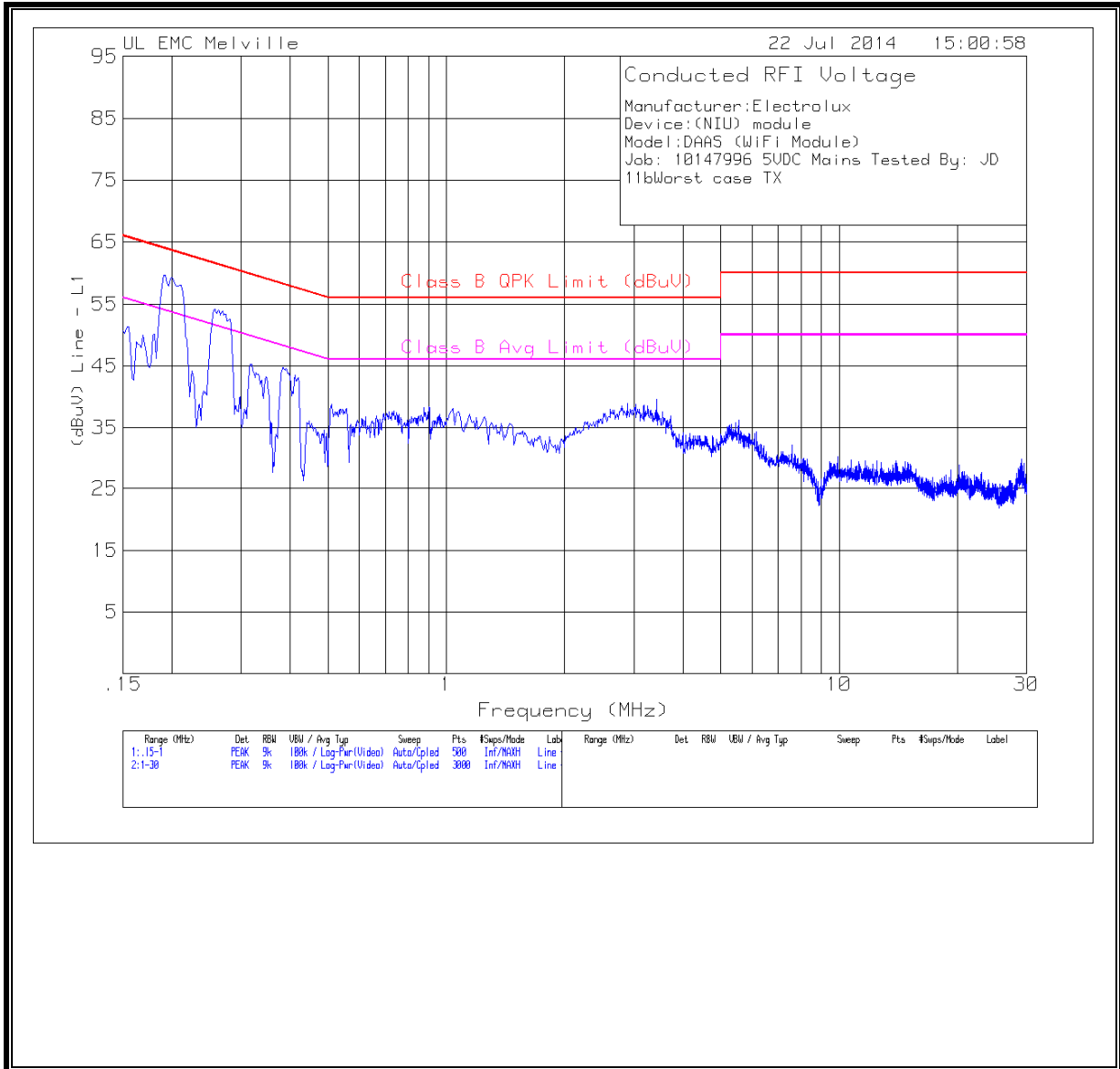
Frequency (MHz)	Meter Reading (dBuV)	Det	Line 1 G/L (dB)	Corrected Reading (dBuV)	Class B QPK Limit (dBuV)	Margin (dB)	Class B Avg Limit (dBuV)	Margin (dB)
.1514	15.95	CAV	10	25.95	-	-	55.92	-29.97
.16049	20.96	CAV	10	30.96	-	-	55.44	-24.48
.19242	37.48	CAV	10	47.48	-	-	53.93	-6.45
.27277	36.64	CAV	10	46.64	-	-	51.03	-4.39
.31673	25.37	CAV	10	35.37	-	-	49.79	-14.42
.38254	23.71	CAV	10	33.71	-	-	48.22	-14.51

CAV - CISPR average detection

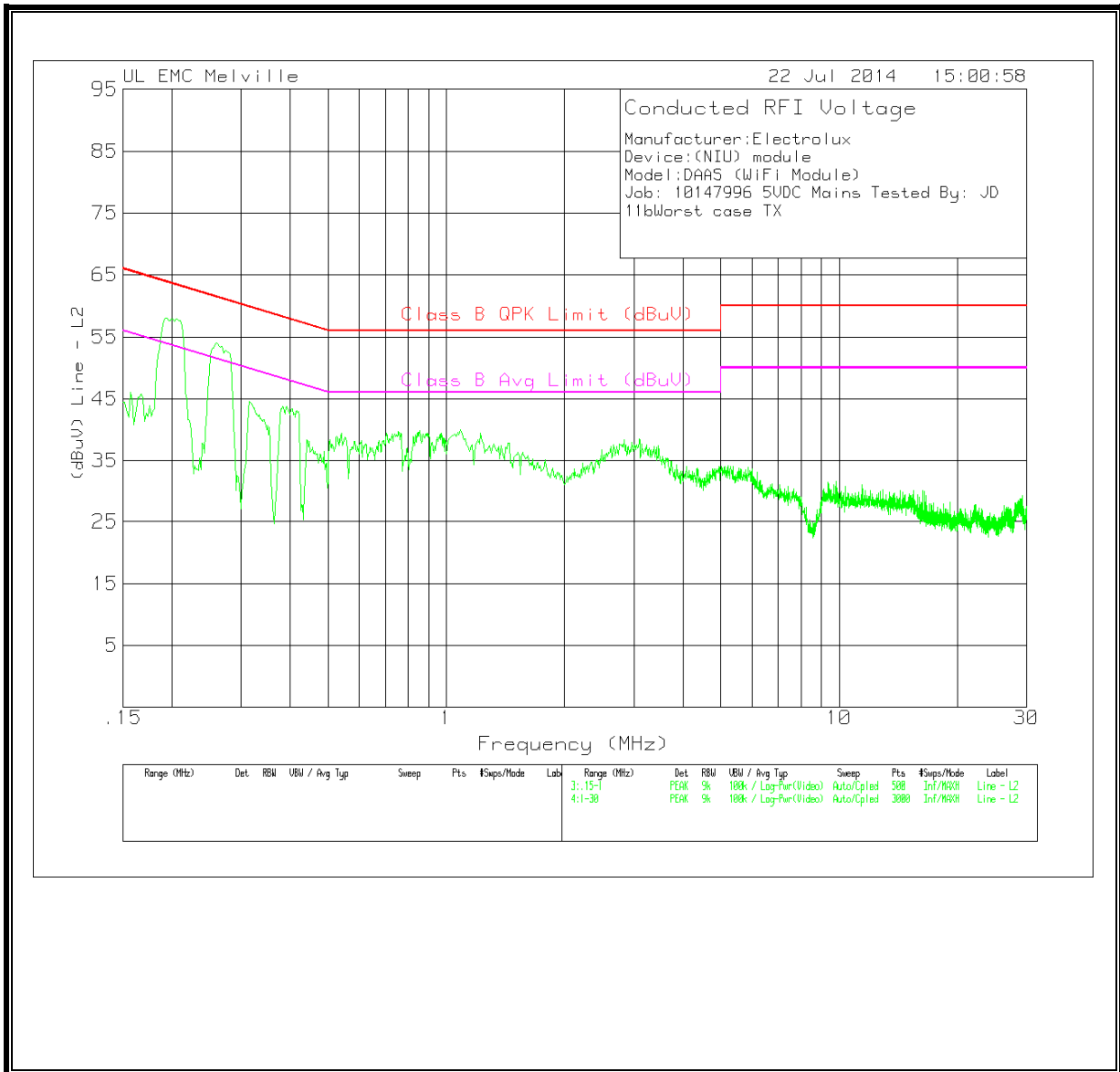
Frequency (MHz)	Meter Reading (dBuV)	Det	Line 2 G/L (dB)	Corrected Reading (dBuV)	Class B QPK Limit (dBuV)	Margin (dB)	Class B Avg Limit (dBuV)	Margin (dB)
.19306	37.76	CAV	10	47.76	-	-	53.9	-6.14
.20489	37.67	CAV	10	47.67	-	-	53.41	-5.74
.25615	35.92	CAV	10	45.92	-	-	51.56	-5.64
.27315	32.77	CAV	10	42.77	-	-	51.02	-8.25
.31696	25.09	CAV	10	35.09	-	-	49.79	-14.7
.38193	23.95	CAV	10	33.95	-	-	48.24	-14.29

CAV - CISPR average detection

LINE 1 RESULTS DAAS VERSION

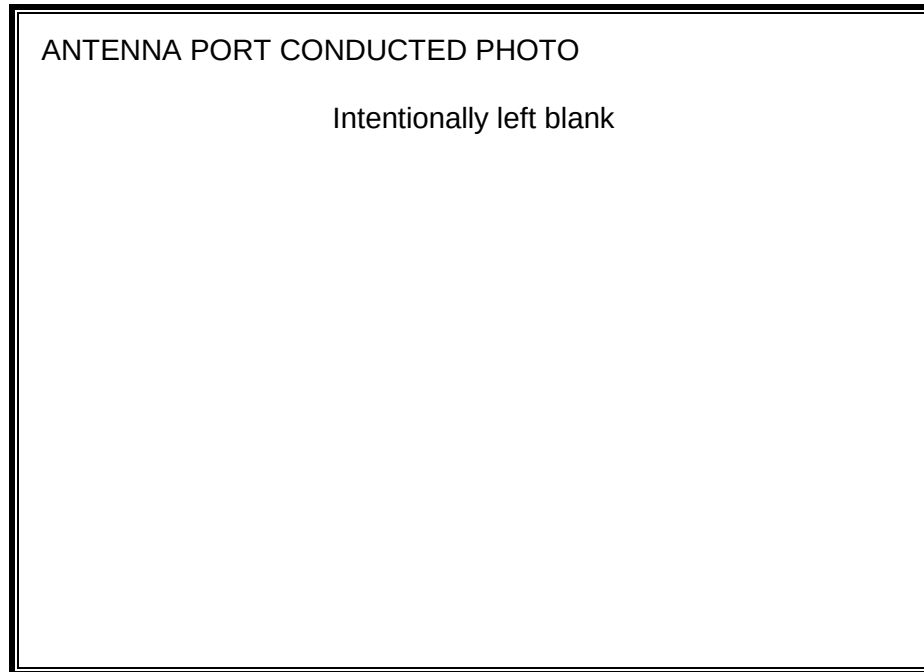


LINE 2 RESULTS DAAS VERSION



11 SETUP PHOTOS

ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP

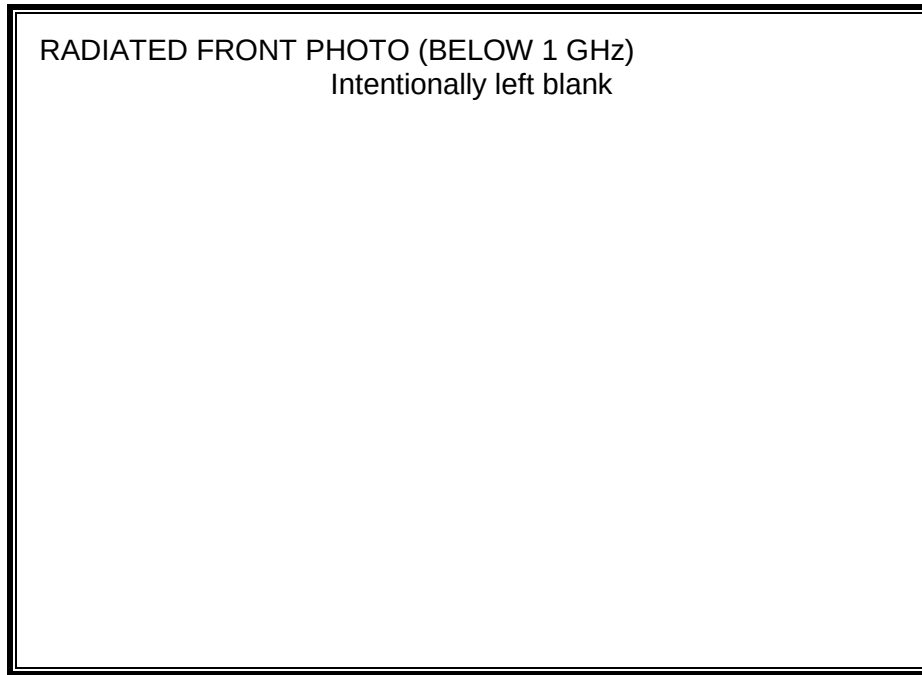


POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP

LINE CONDUCTED FRONT PHOTO
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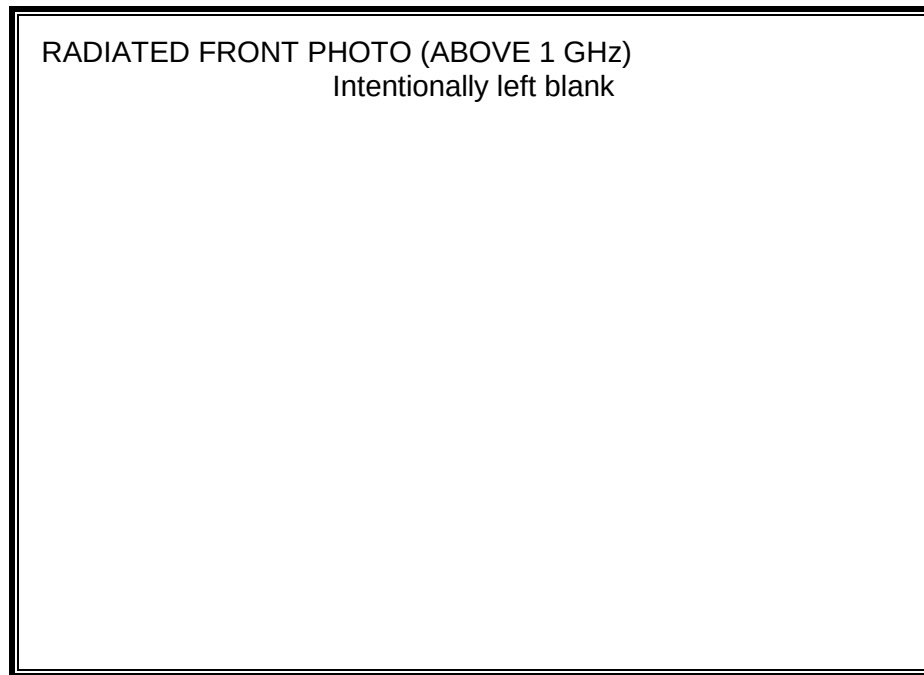
LINE CONDUCTED BACK PHOTO
Intentionally left blank

RADIATED RF MEASUREMENT SETUP (BELOW 1 GHz)



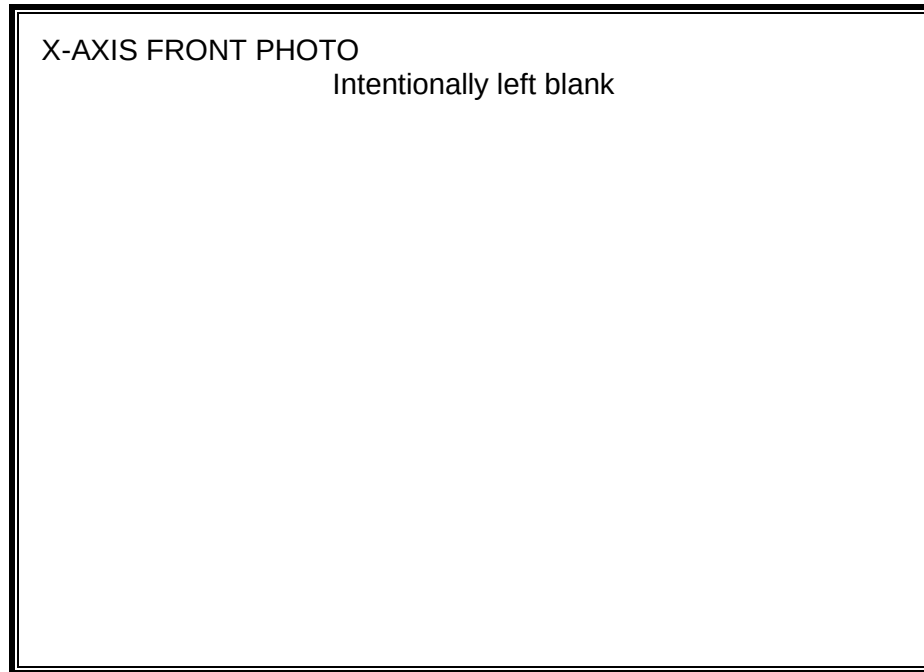
RADIATED BACK PHOTO (BELOW 1 GHz)
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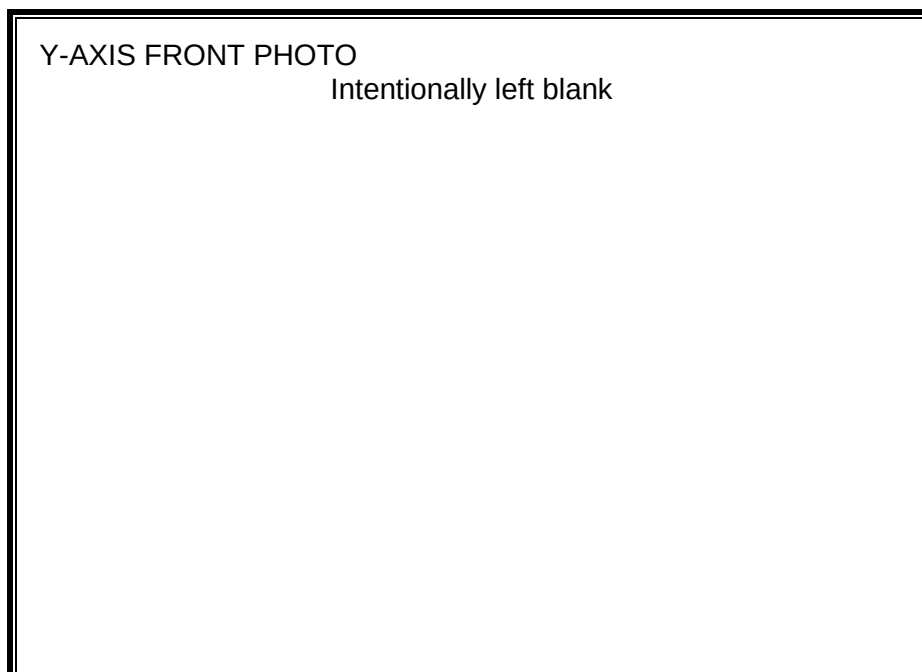
RADIATED RF MEASUREMENT SETUP (ABOVE 1 GHz)

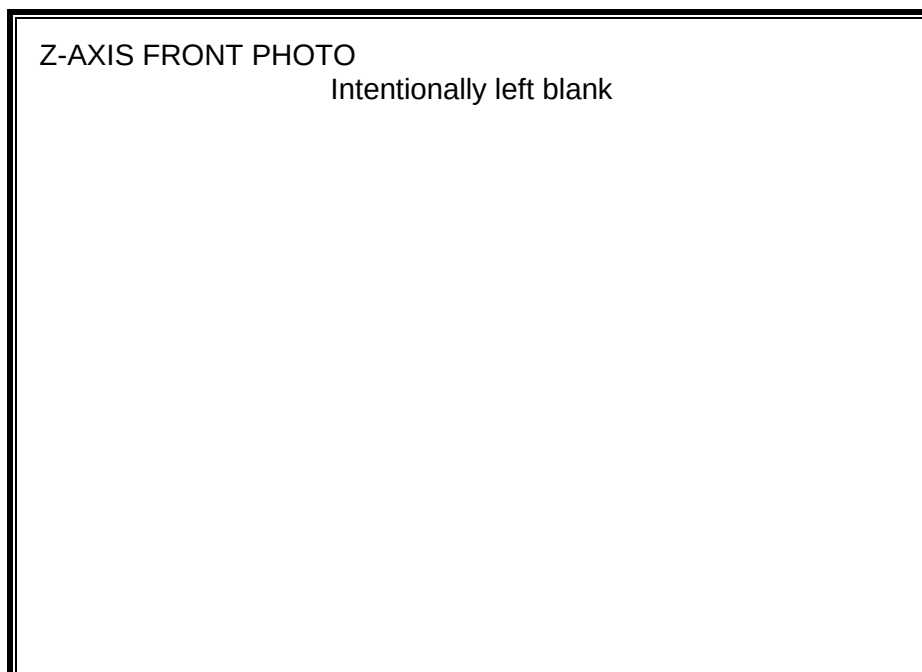


RADIATED BACK PHOTO (ABOVE 1 GHz)
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RADIATED RF MEASUREMENT SETUP FOR PORTABLE CONFIGURATION DASS VERSION







END OF REPORT