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

CERTIFICATION TEST REPORT

FOR

GSM/CDMA/WCDMA/LTE Phone + Bluetooth & WLAN (2.4GHz & 5GHz) and NFC

MODEL NUMBER: LG-D820, LGD820 and D820

FCC ID: ZNFD820
IC: 2703C-D820

REPORT NUMBER: 13U15420-6, Revision A

ISSUE DATE: SEPTEMBER 3, 2013

Prepared for
LG ELECTRONICS MOBILECOMM U.S.A., INC.
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS, NEW JERSEY 07632

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	7/17/13	Initial Issue	P. Kim
A	09/03/13	Fixed corrupted tables and peak measurement that was above the average limit, Section 9.2. In addition, removed non-worst case plots and tabular data.	I. Netto

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A., INC.
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS, NEW JERSEY 07632

EUT DESCRIPTION: GSM/CDMA/WCDMA/LTE Phone + Bluetooth & WLAN (2.4GHz & 5GHz) and NFC

MODEL: LG-D820, LGD820 and D820

SERIAL NUMBER: (0021EDF624E7C39B) CONDUCTED
(0021E9AAE056EE83) RADIATED

DATE TESTED: JUNE 24 – JULY 3, 2013

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 Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested 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 herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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 Verification Services Inc. By:

PHILIP KIM
WiSE PROGRAM MANAGER
UL Verification Services Inc.

Tested By:

STEVEN TRAN
WiSE LAB TECHNICIAN
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2009, 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 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a LTE Phone Bluetooth, WLAN(2.4GHz & 5GHz) and NFC.

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	19.22	83.56
2412 - 2462	802.11g	19.21	83.37
2412 - 2462	802.11n HT20	18.56	71.78
2412 - 2462	802.11ac HT20	18.56	71.78

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -1.96 dBi.

5.4. SOFTWARE AND FIRMWARE

Software version was 3.4.0-g9f6ebe1-00072-gcee1ab4b

The firmware used was M8974A-0.0.19.0.01.

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the 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 Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

Worst-case data rates as provided by the client were:
Based on the baseline scan, the worst-case data rates were:

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0

Radiated emissions for EUT with antenna was performed and passed; therefore, antenna port spurious was not performed.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	LG	MCS.01WR	EAY62768913	N/A
Earphone	QuadBeat	LE 410	EAB62729001	N/A

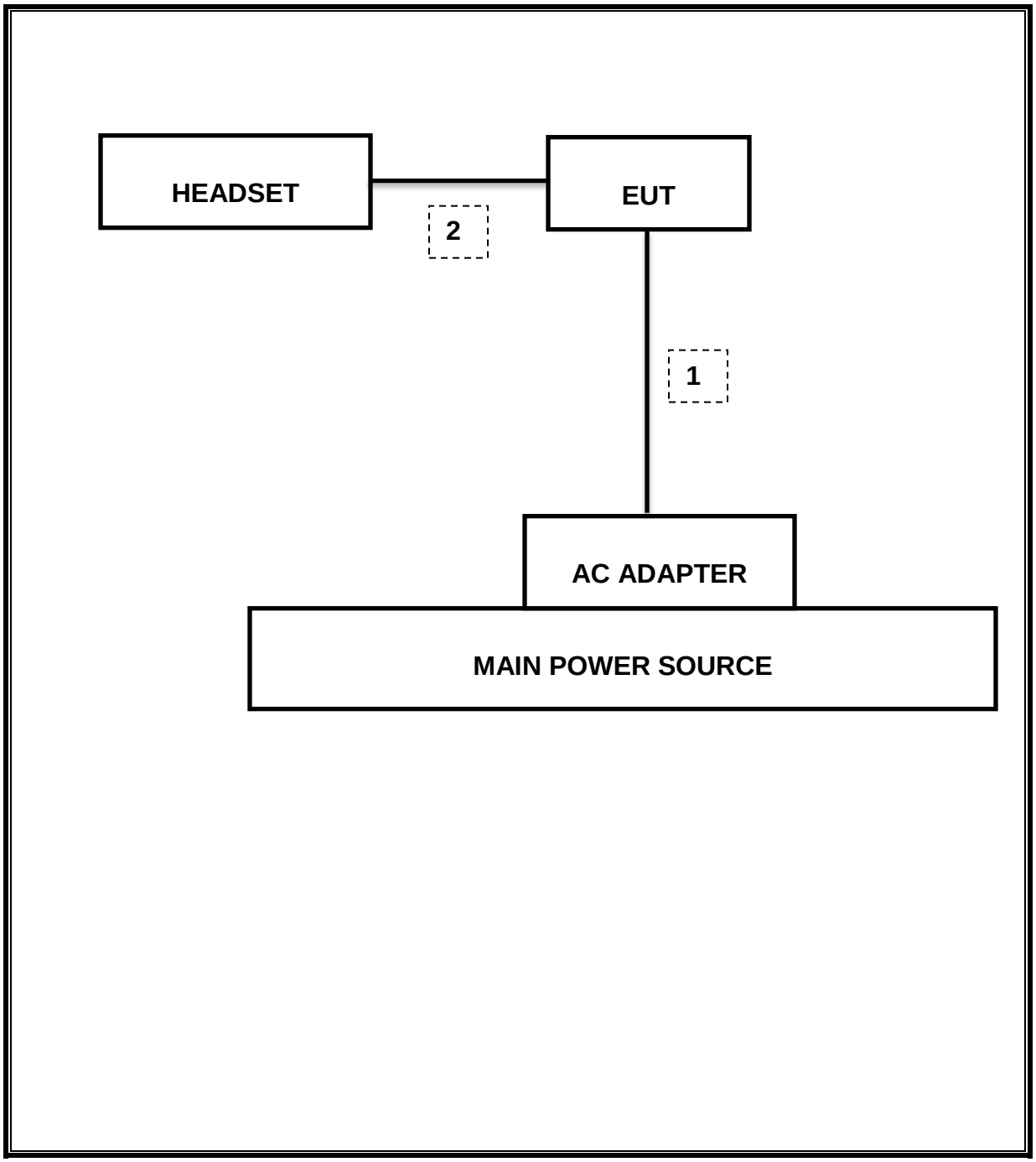
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1m	N/A

TEST SETUP

The EUT is a stand-alone unit during the tests. Test software exercised the radio card.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List					
Description	**Manufacturer**	**Model**	**Asset**	**Cal Date**	**Cal Due**
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	C01016	08/14/12	08/14/13
Antenna, Horn, 18 GHz	ETS	3117	C01006	12/11/12	12/11/13
Antenna, Horn, 25.5 GHz	ARA	MWH-1826/B	C00980	11/14/12	11/14/13
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00885	01/16/13	01/16/14
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	10/22/12	10/22/13
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	10/21/12	10/21/13
PXA SIGNAL ANALYZER	Agilent / HP	N9030A	N/A		05/09/14
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/08/12	08/08/13
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/13	01/14/14
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	N02684	CNR	CNR

7. MEASUREMENT METHODS

KDB 558074 Measurement Procedure PK2 is used for power and PKPSD is used for power spectral density.

Unwanted emissions within Restricted Bands are measured using traditional radiated procedures.

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

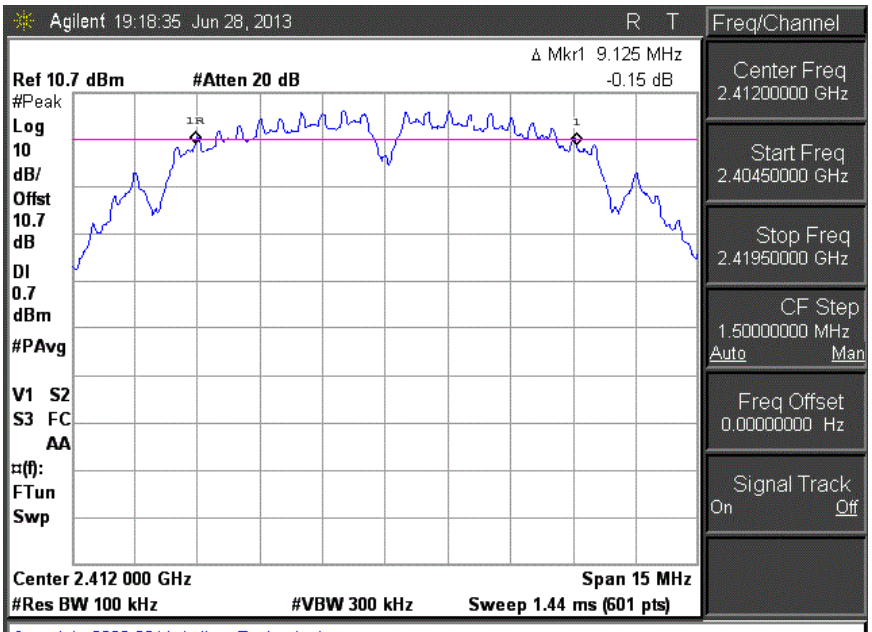
The transmitter output is connected to a spectrum analyzer with the RBW set between 1% and 5% of the EBW, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

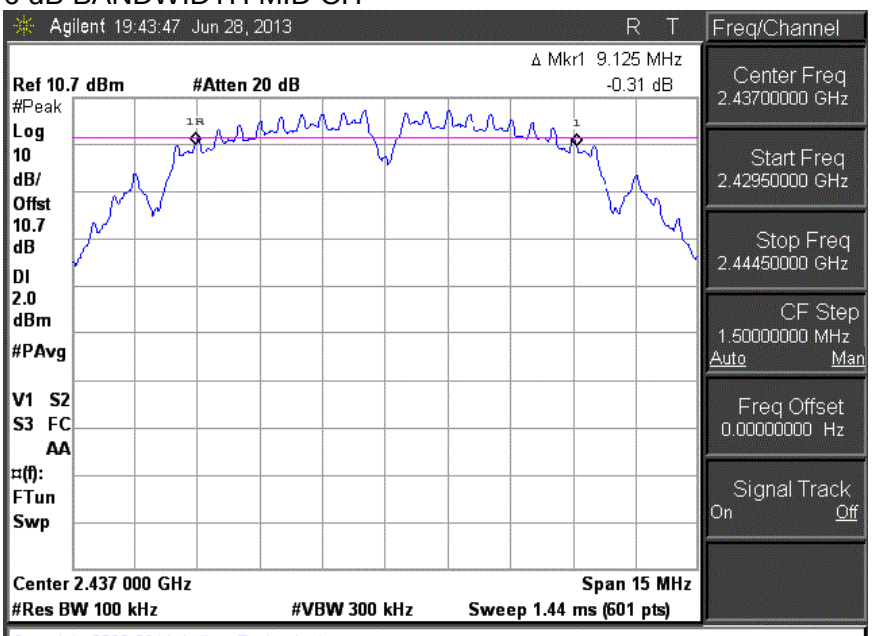
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	9.125	0.5
Mid	2437	9.125	0.5
High	2462	9.125	0.5

6 dB BANDWIDTH

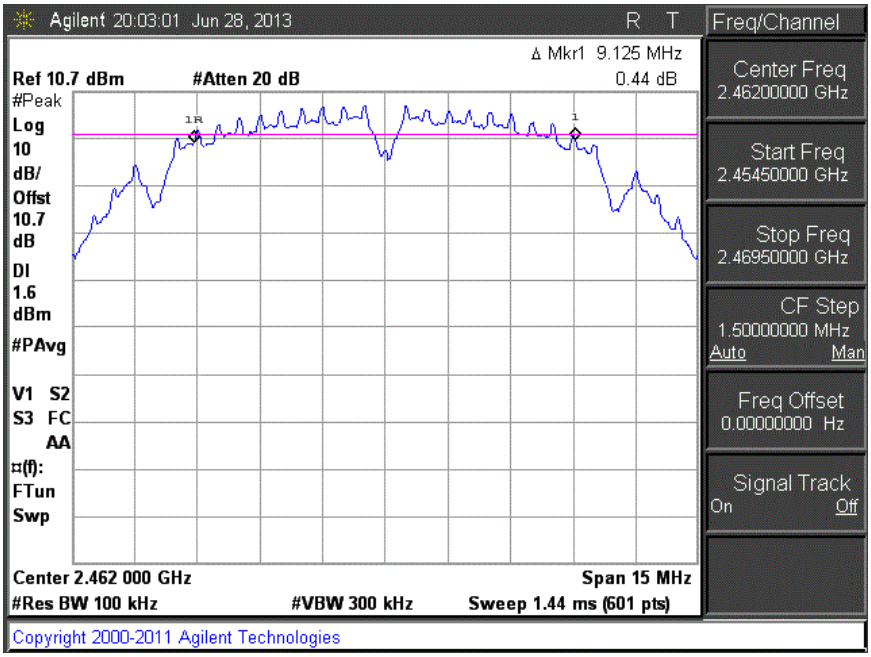
6 dB BANDWIDTH LOW CH



6 dB BANDWIDTH MID CH



6 dB BANDWIDTH HIGH CH



8.1.2. 99% BANDWIDTH

LIMITS

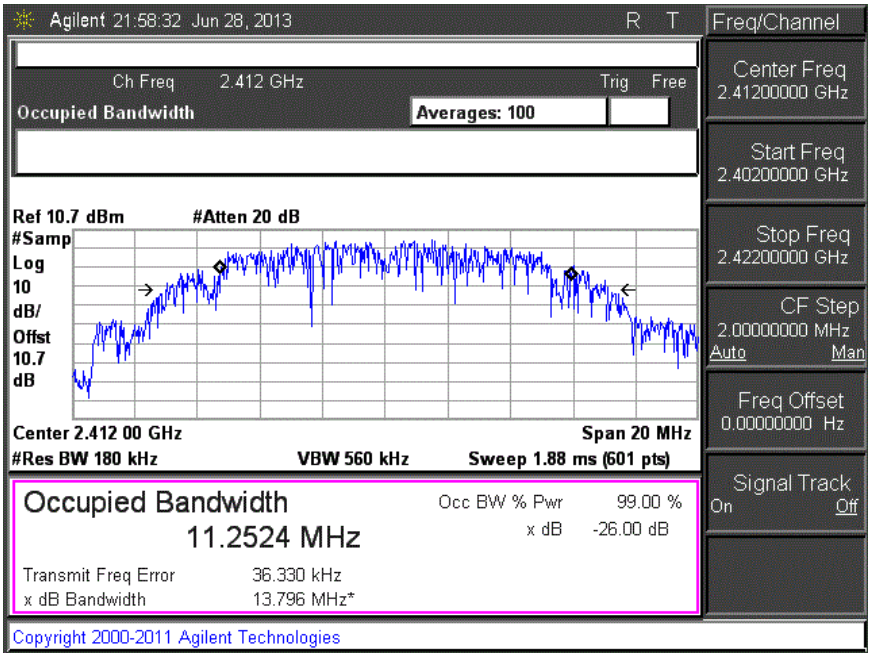
None; for reporting purposes only.

RESULTS

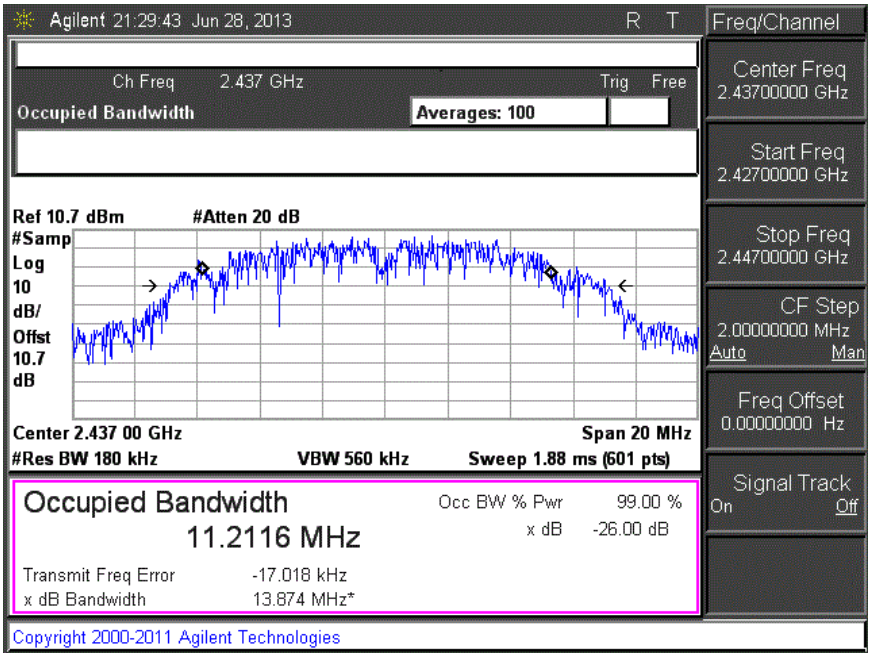
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	11.2524
Mid	2437	11.2116
High	2462	11.2709

99% BANDWIDTH

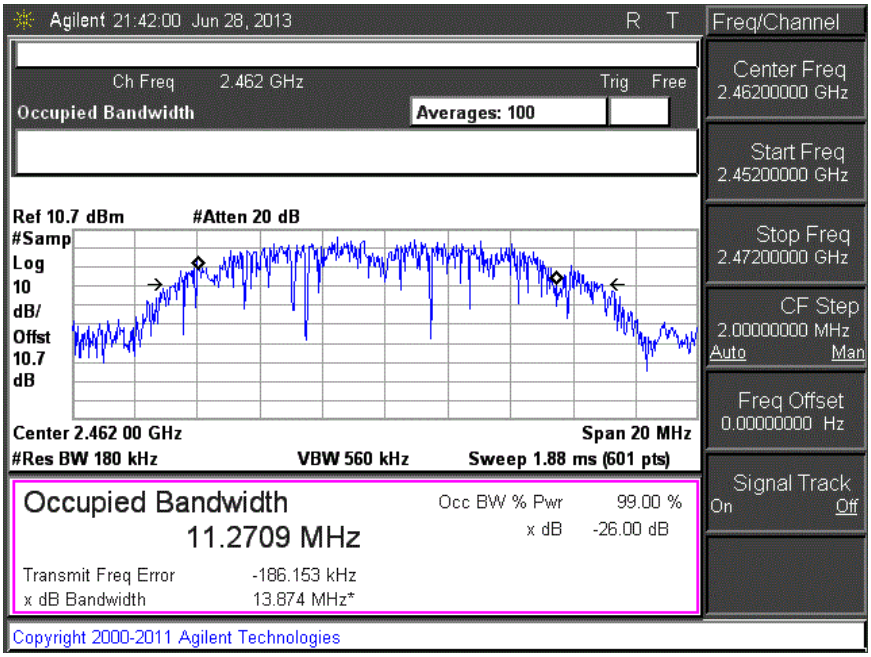
99% BANDWIDTH LOW CH



99% BANDWIDTH MID CH



99% BANDWIDTH HIGH CH



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 0.2 dB (including 10 dB pad and 0.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	2412	15.00
Mid	2437	15.70
High	2462	15.40

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

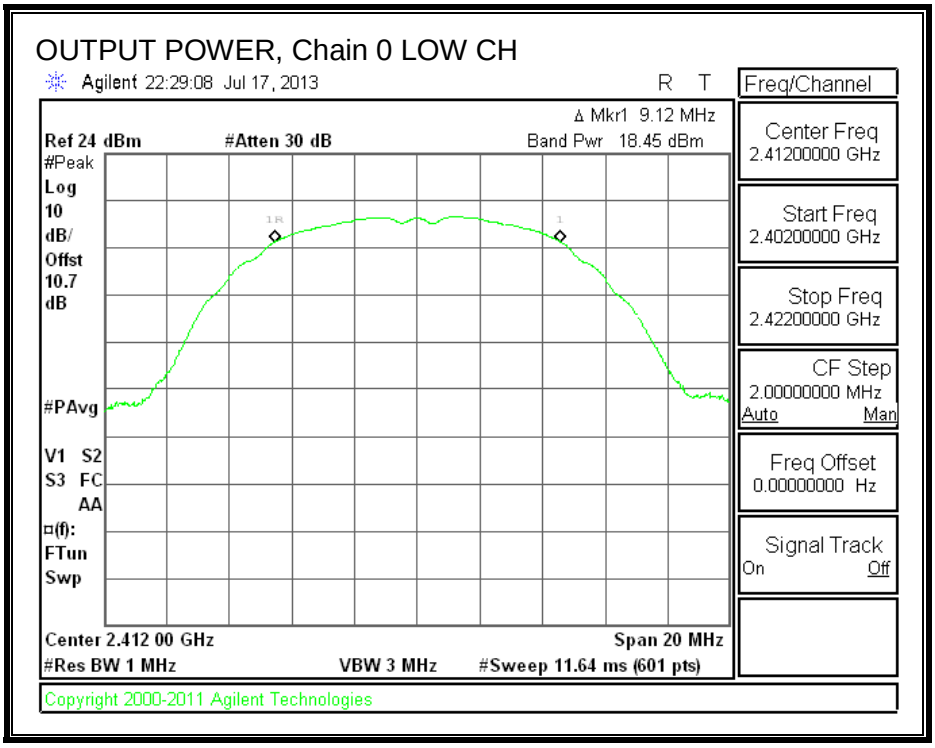
Limits

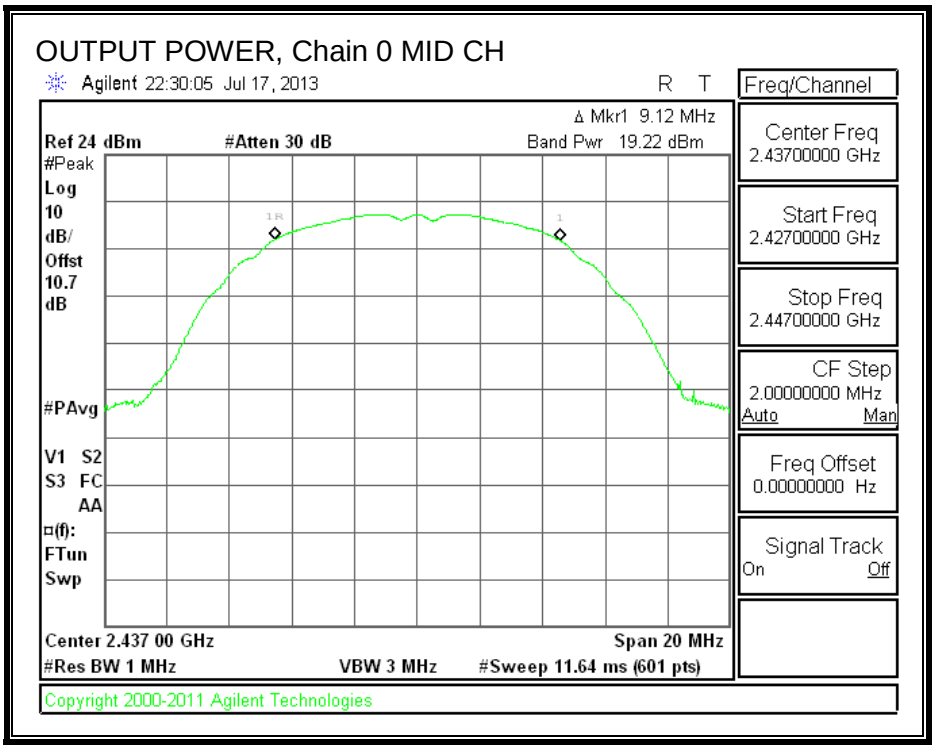
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-1.00	30.00	30	36	30.00
Mid	2437	-1.00	30.00	30	36	30.00
High	2462	-1.00	30.00	30	36	30.00

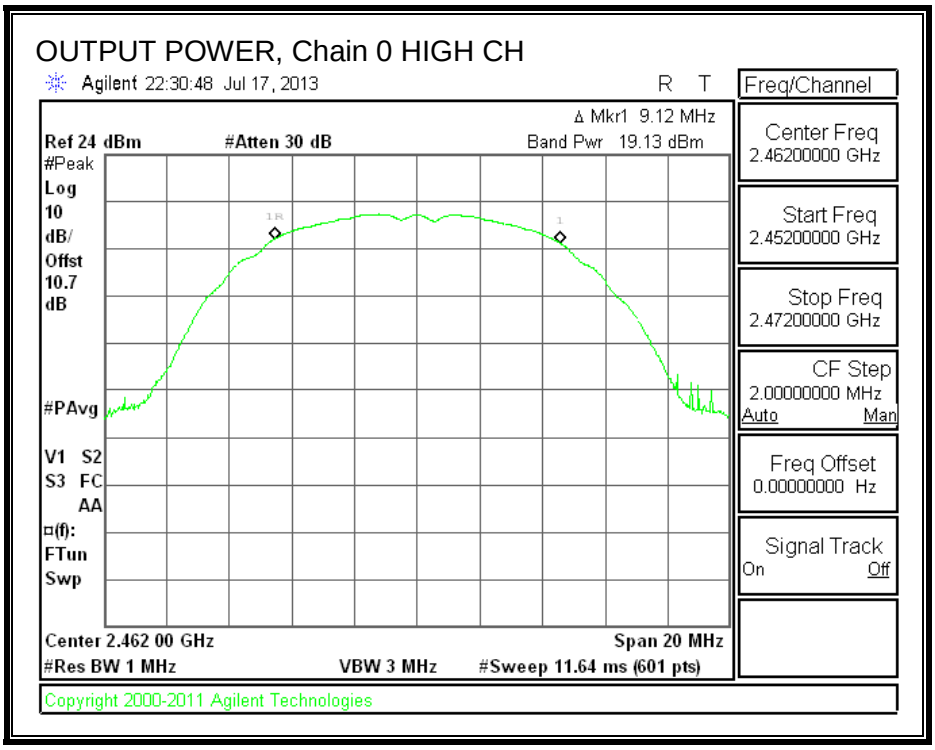
Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	18.45	18.45	30.00	-11.55
Mid	2437	19.22	19.22	30.00	-10.78
High	2462	19.13	19.13	30.00	-10.87

OUTPUT POWER, Chain 0







8.1.5. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

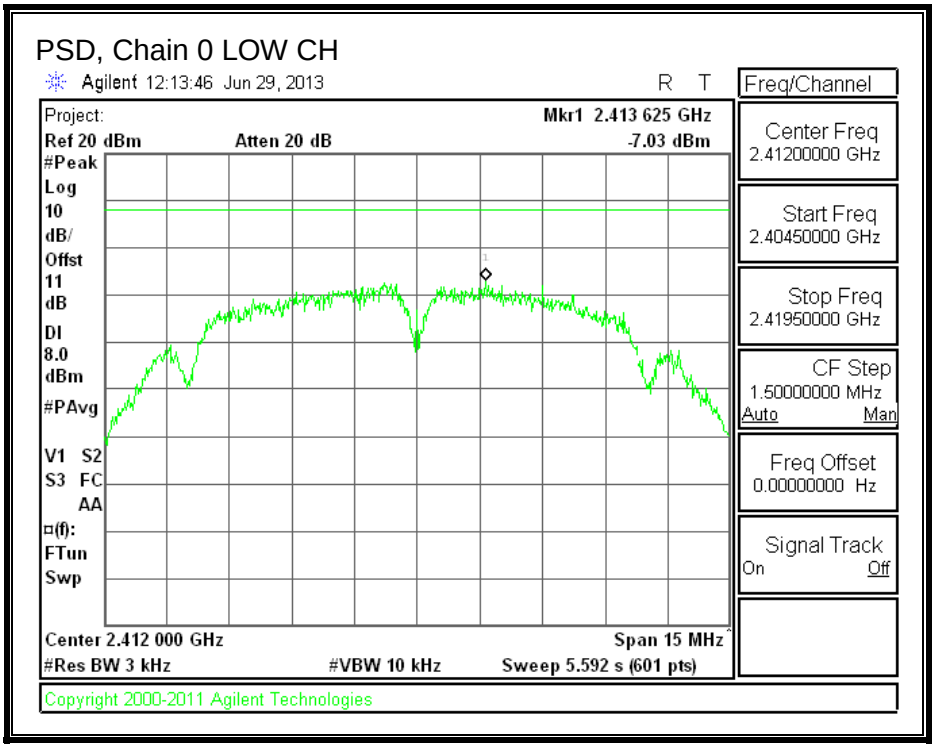
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

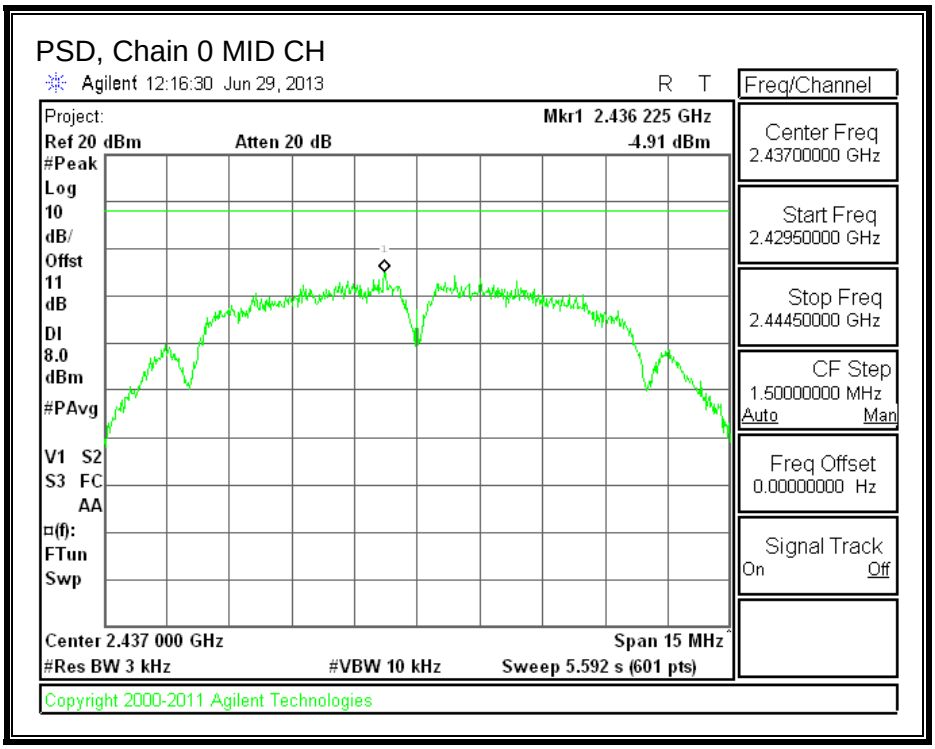
RESULTS

PSD Results

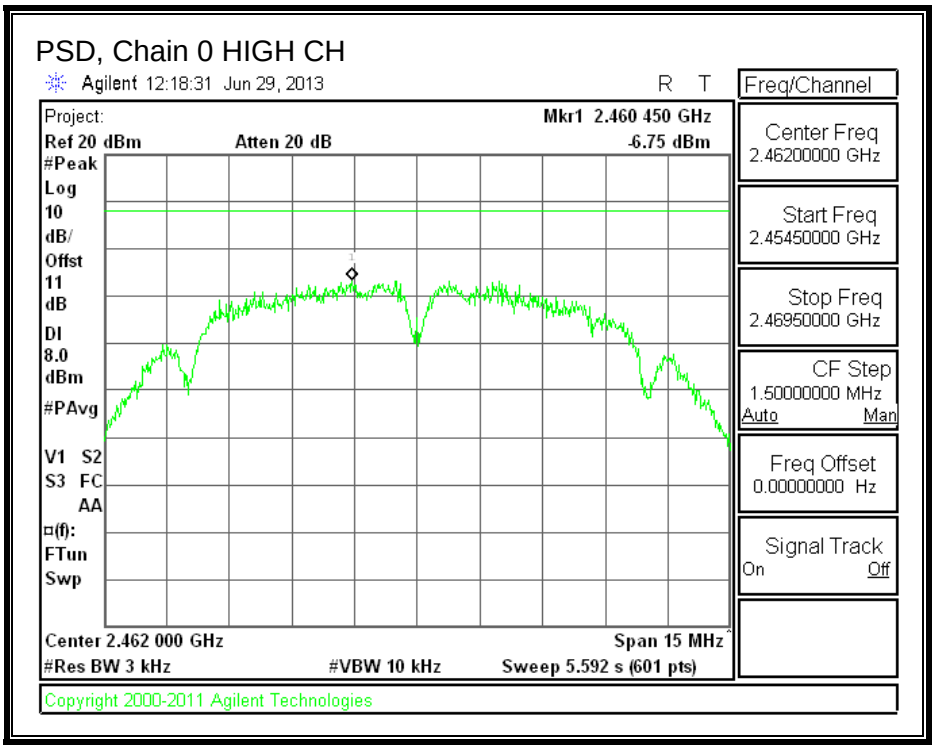
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-7.03	8.0	-15.0
Mid	2437	-4.91	8.0	-12.9
High	2462	-6.75	8.0	-14.8

PSD, Chain 0





PSD, Chain 0 HIGH CH



8.1.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

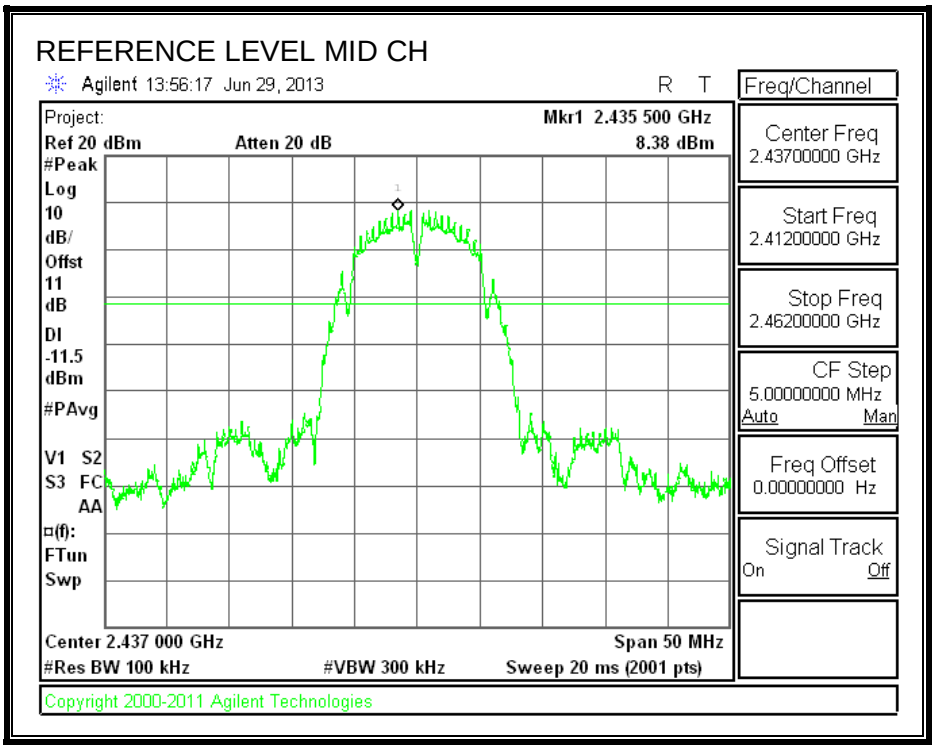
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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

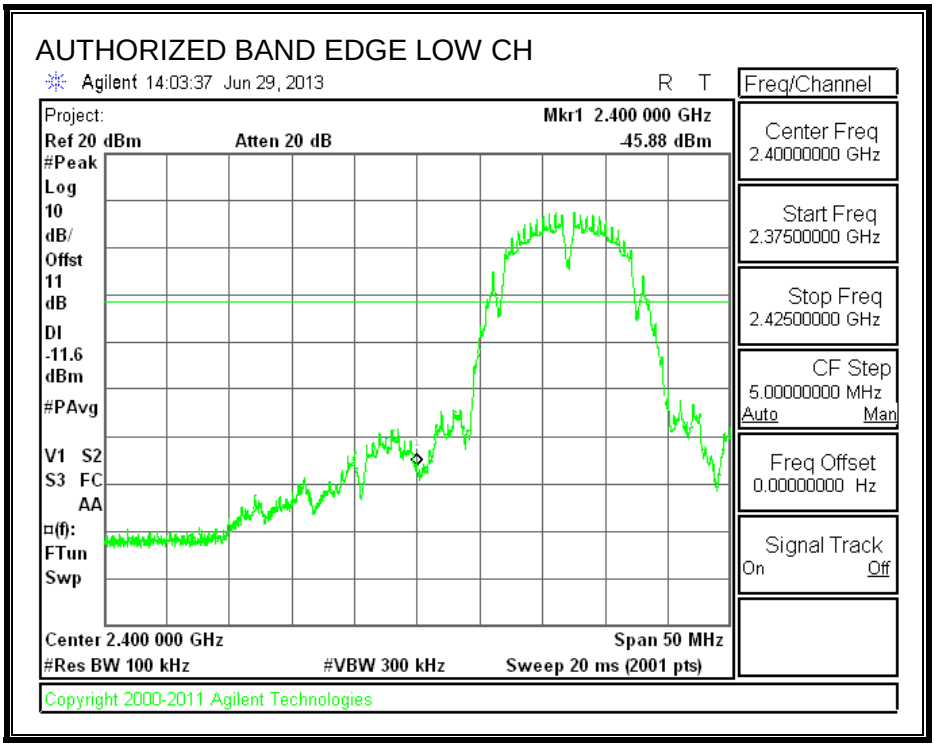
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

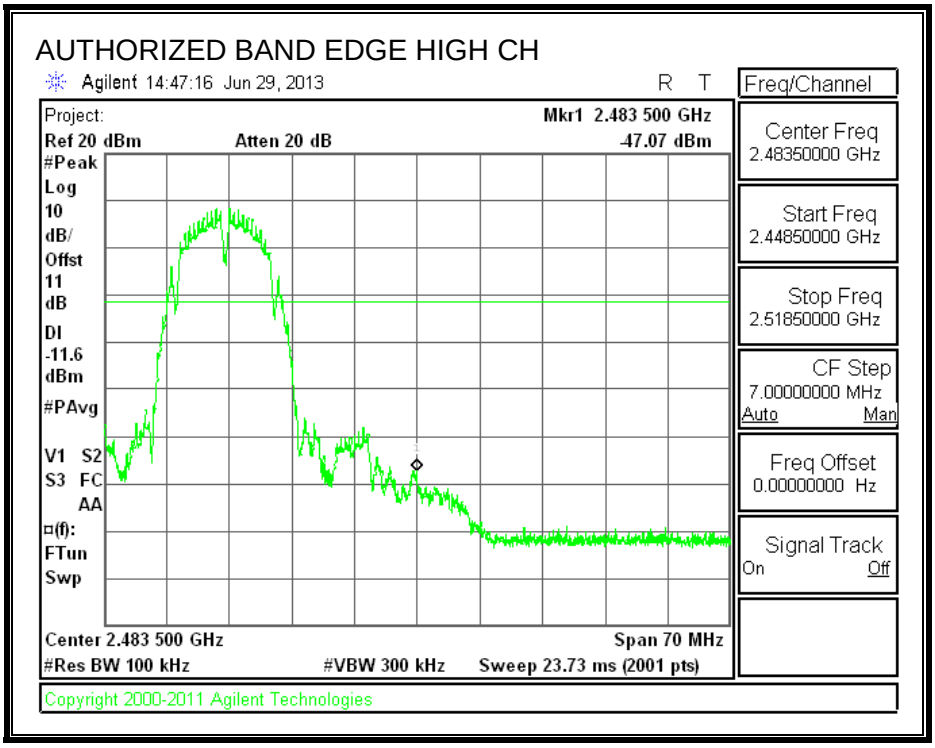
IN-BAND REFERENCE LEVEL



LOW CHANNEL BANDEDGE

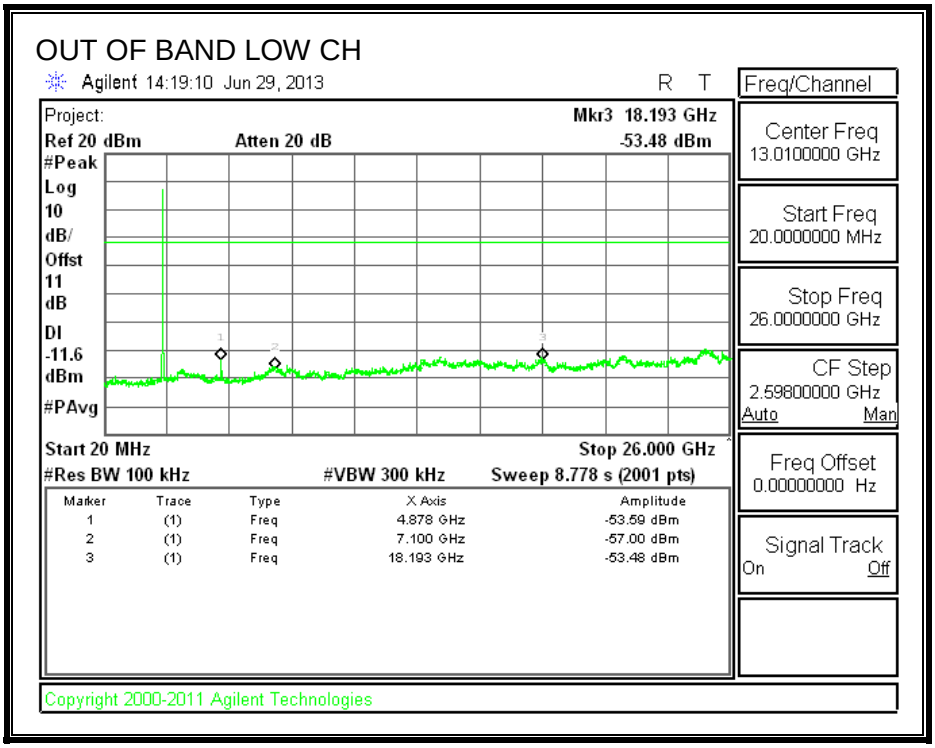


HIGH CHANNEL BANDEDGE

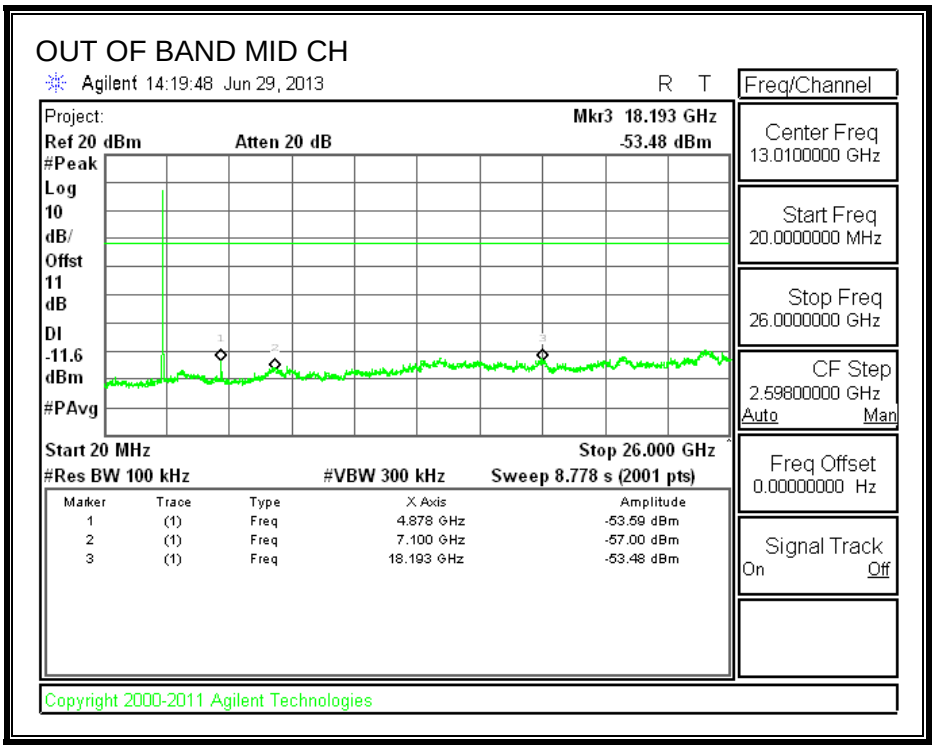


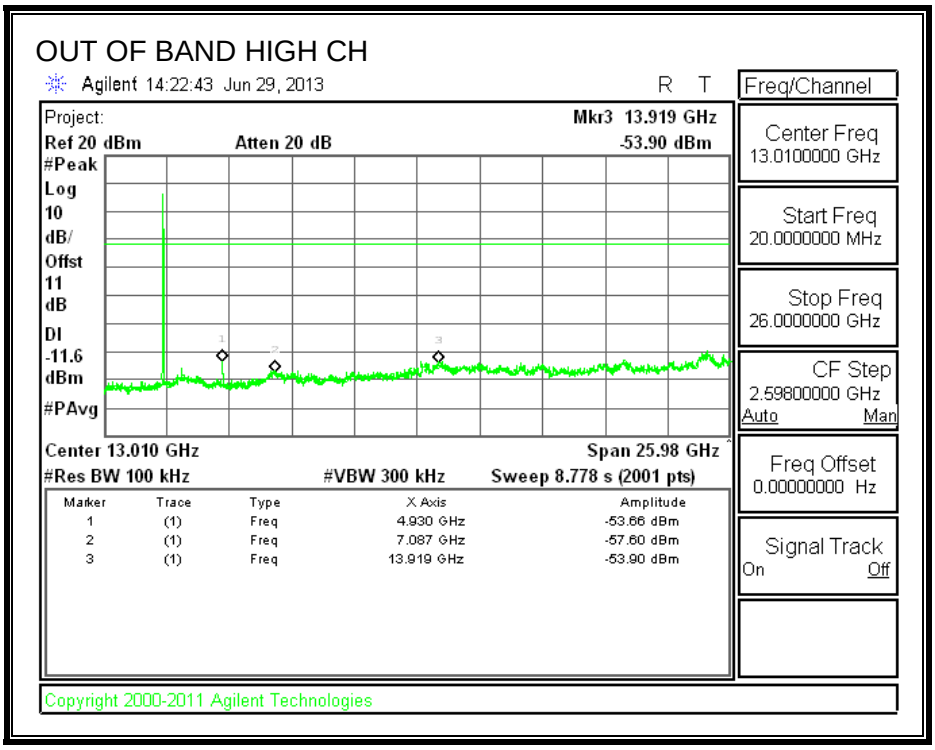
OUT-OF-BAND EMISSIONS

OUT OF BAND LOW CH



OUT OF BAND MID CH





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

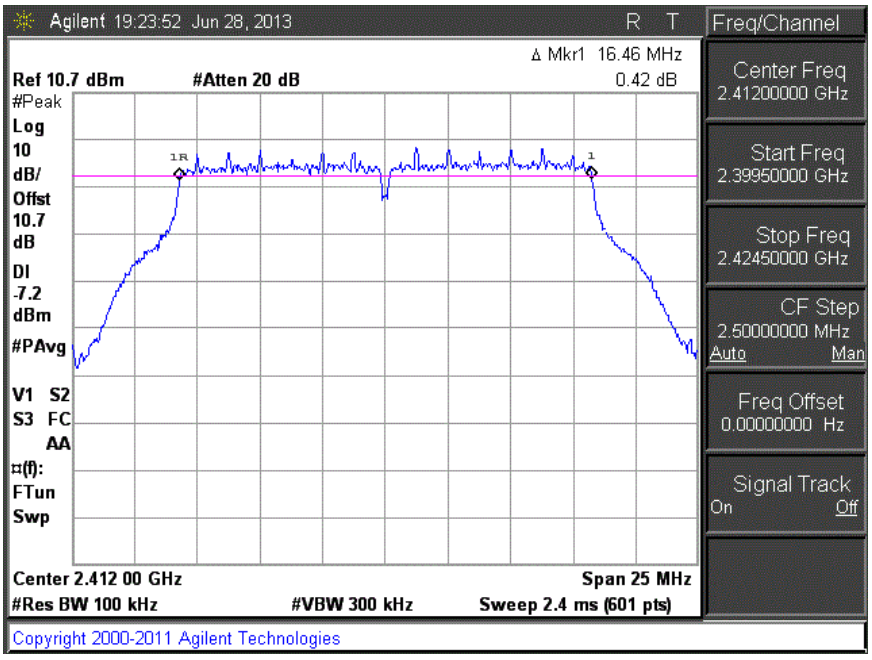
The transmitter output is connected to a spectrum analyzer with the RBW set between 1% and 5% of the EBW, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

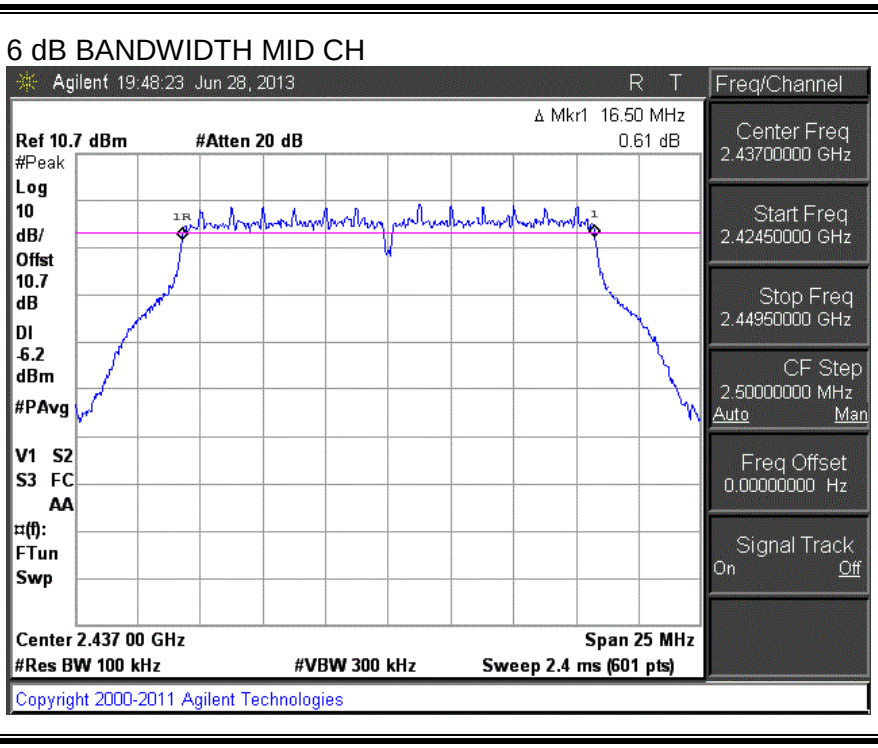
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.460	0.5
Mid	2437	16.500	0.5
High	2462	16.500	0.5

6 dB BANDWIDTH

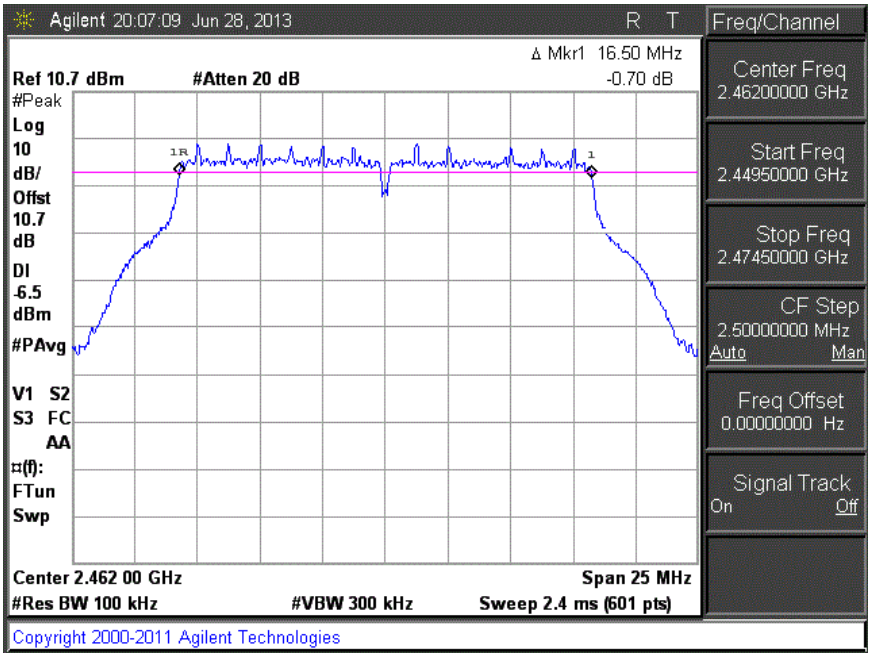
6 dB BANDWIDTH LOW CH



6 dB BANDWIDTH MID CH



6 dB BANDWIDTH HIGH CH



8.2.2. 99% BANDWIDTH

LIMITS

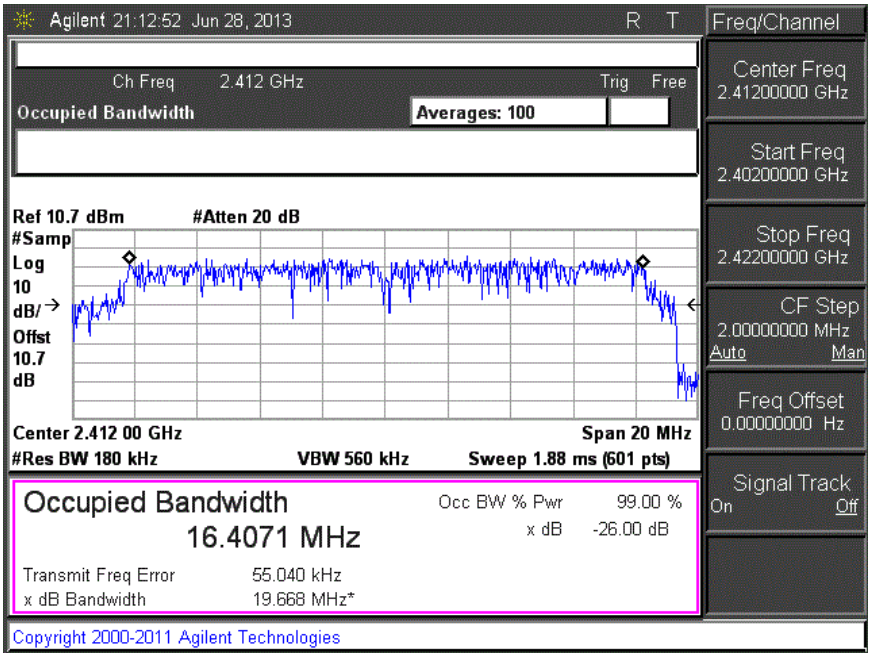
None; for reporting purposes only.

RESULTS

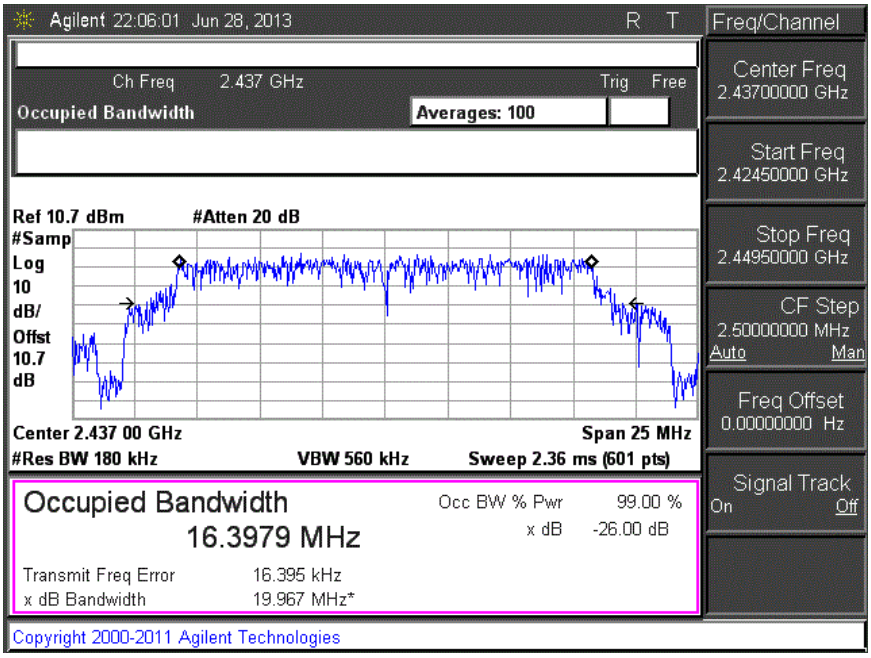
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.4071
Mid	2437	16.3979
High	2462	16.4323

99% BANDWIDTH

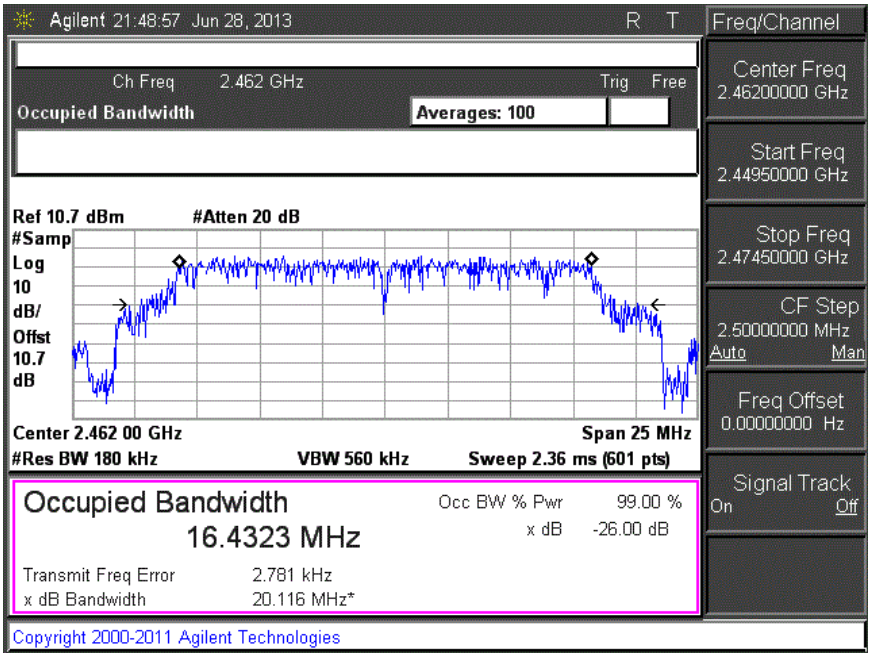
99% BANDWIDTH LOW CH



99% BANDWIDTH MID CH



99% BANDWIDTH HIGH CH



8.2.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.74
Mid	2437	10.24
High	2462	10.04

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

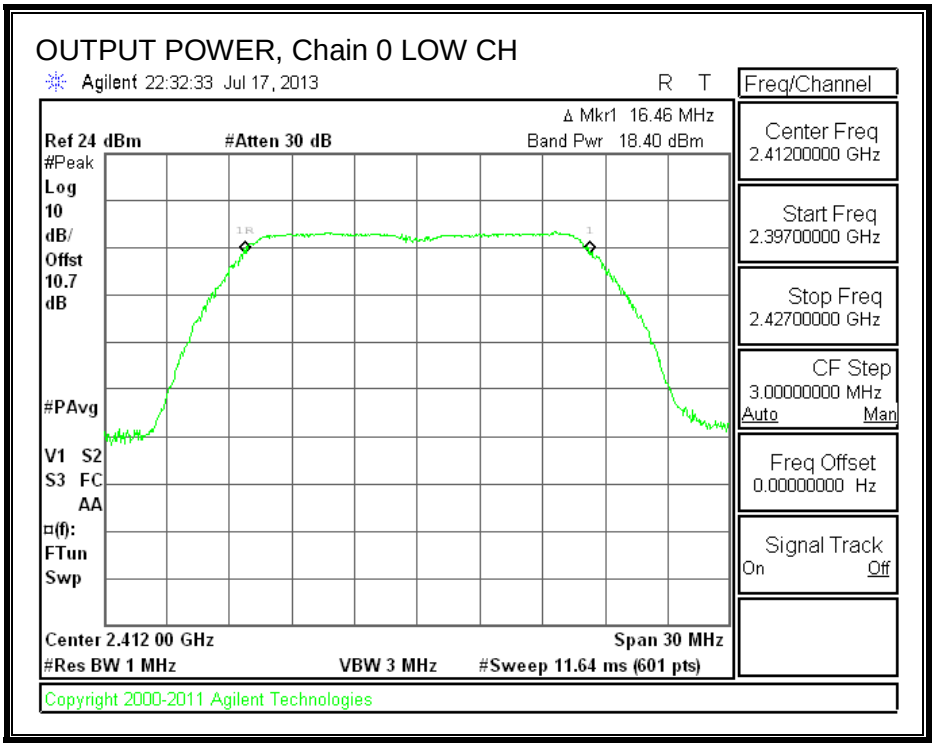
Limits

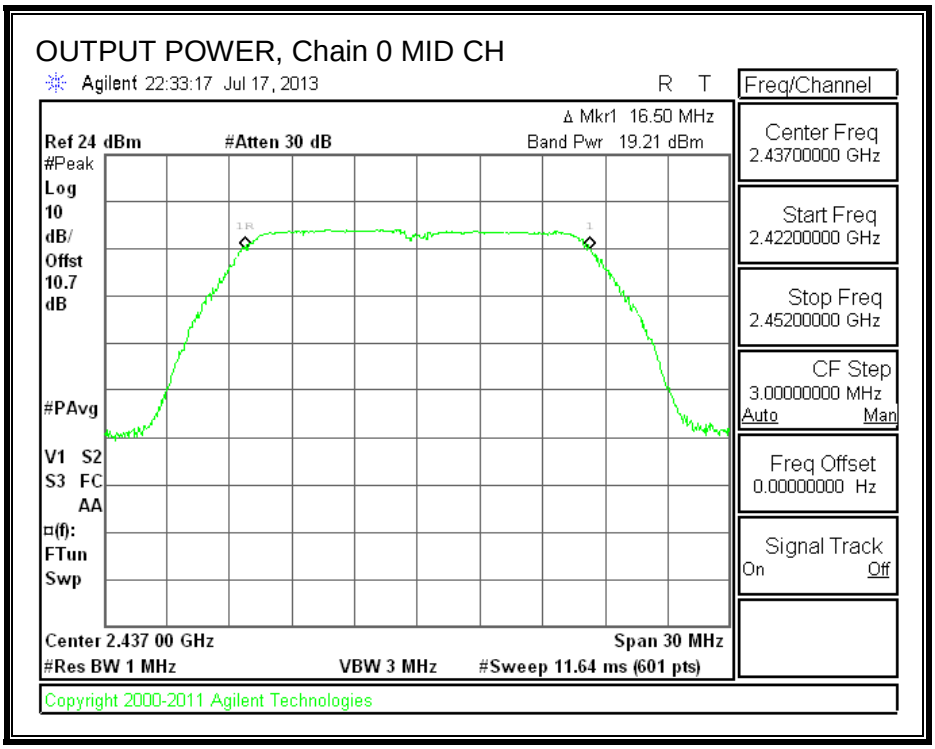
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-1.00	30.00	30	36	30.00
Mid	2437	-1.00	30.00	30	36	30.00
High	2462	-1.00	30.00	30	36	30.00

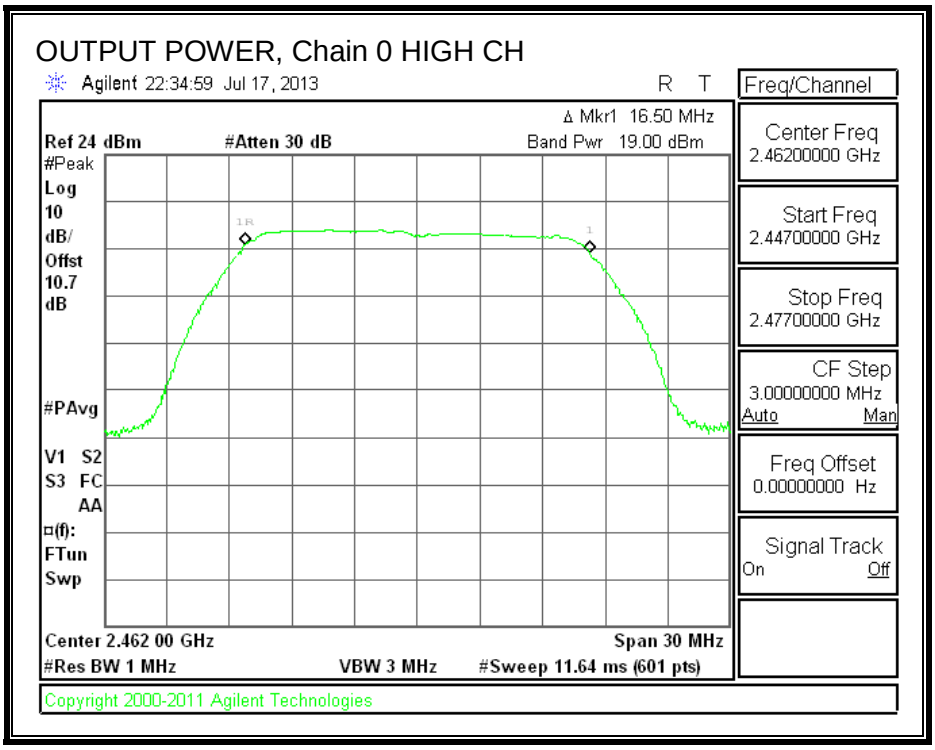
Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	18.40	18.40	30.00	-11.60
Mid	2437	19.21	19.21	30.00	-10.79
High	2462	19.00	19.00	30.00	-11.00

OUTPUT POWER, Chain 0







8.2.5. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

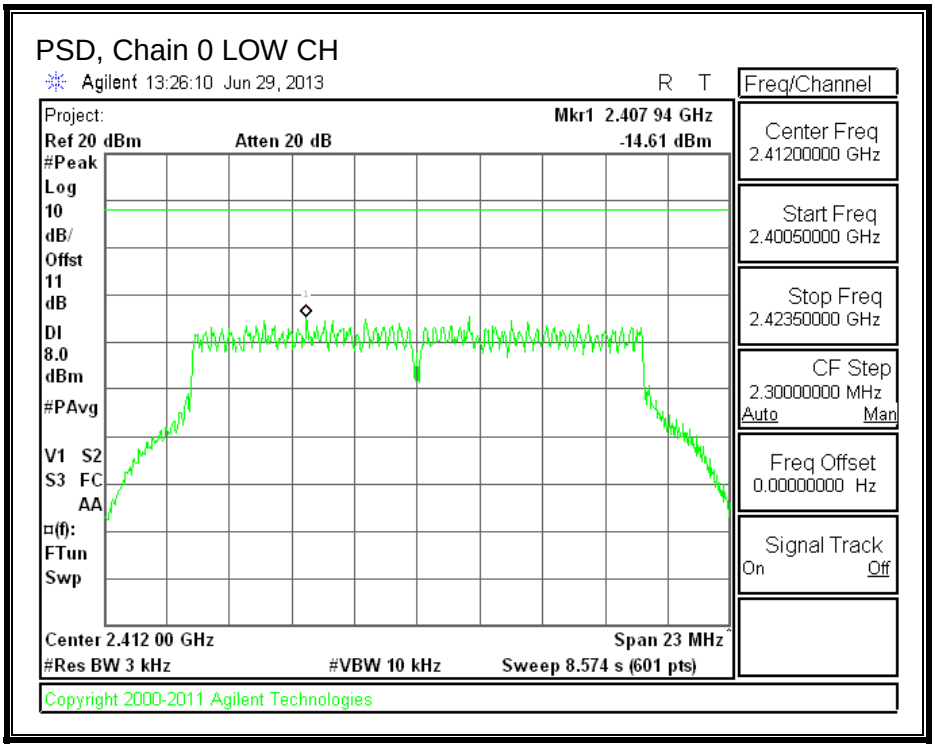
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

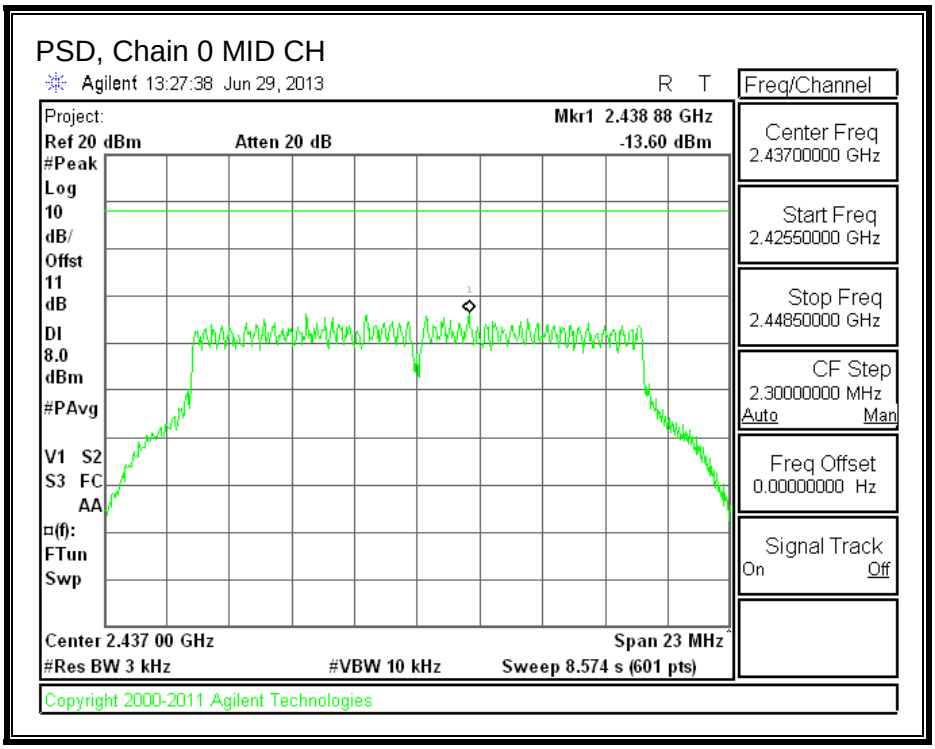
RESULTS

PSD Results

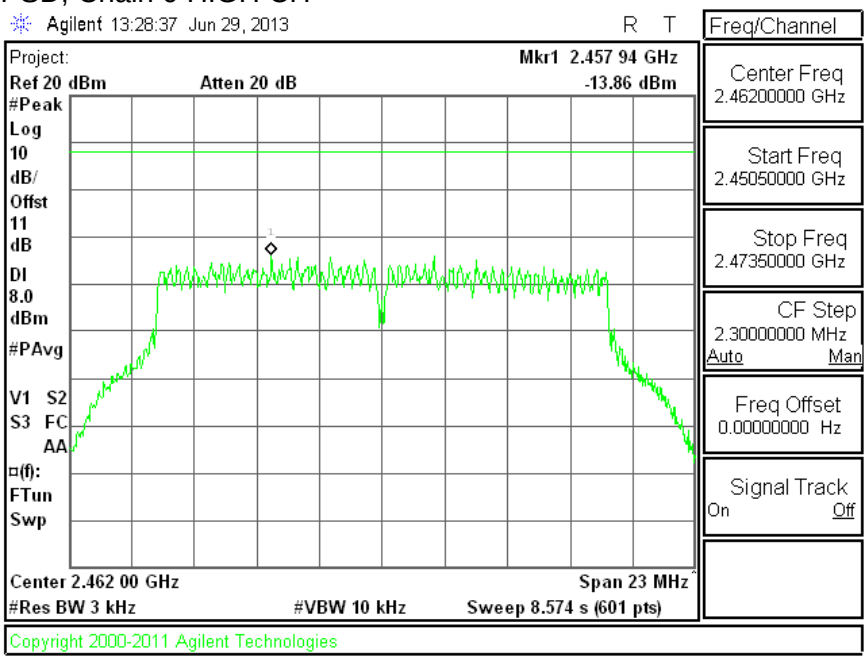
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.61	8.0	-22.6
Mid	2437	-13.60	8.0	-21.6
High	2462	-13.86	8.0	-21.9

PSD, Chain 0





PSD, Chain 0 HIGH CH



8.2.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

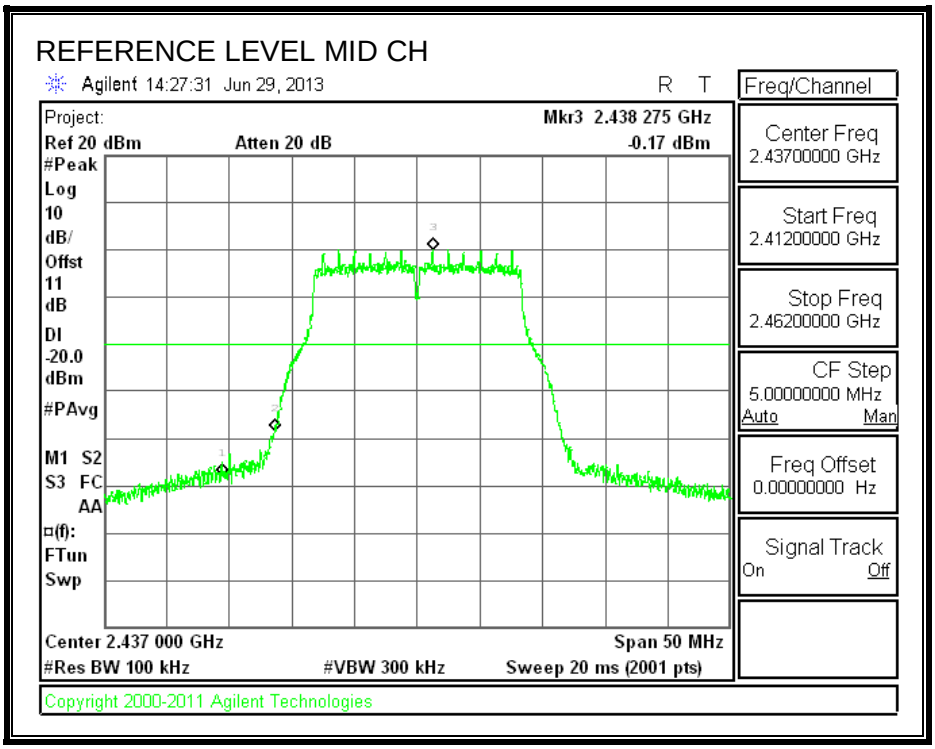
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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

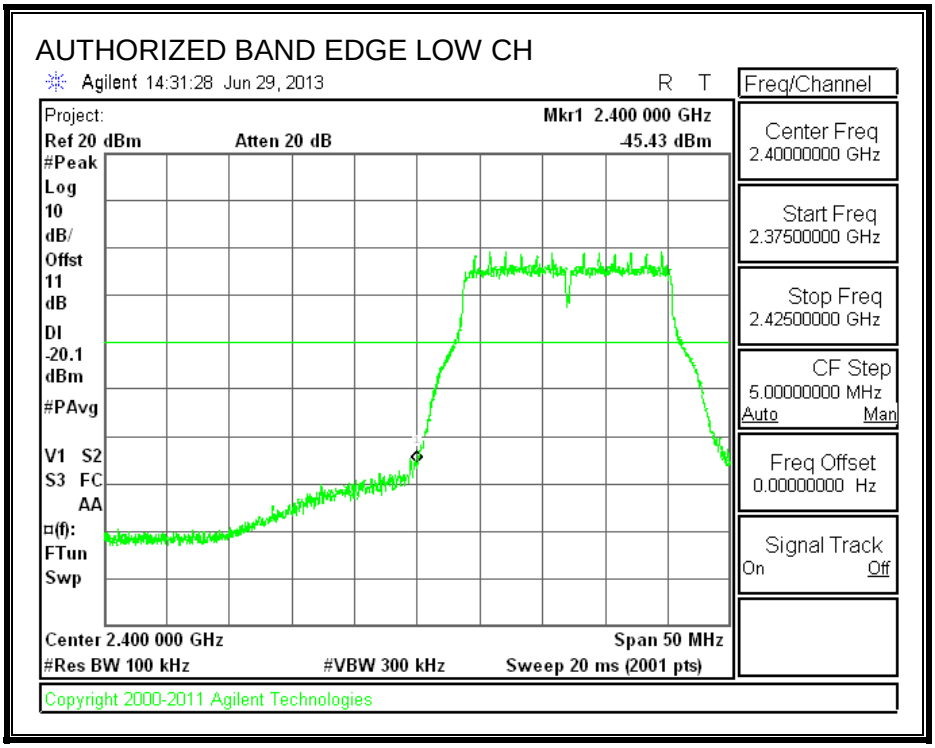
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

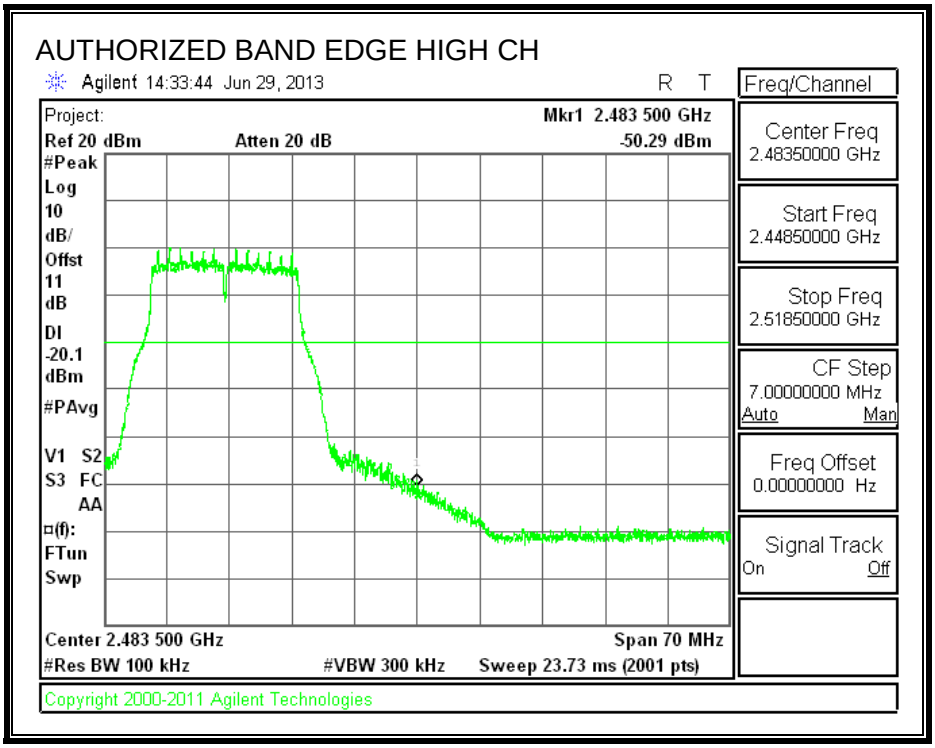
IN-BAND REFERENCE LEVEL



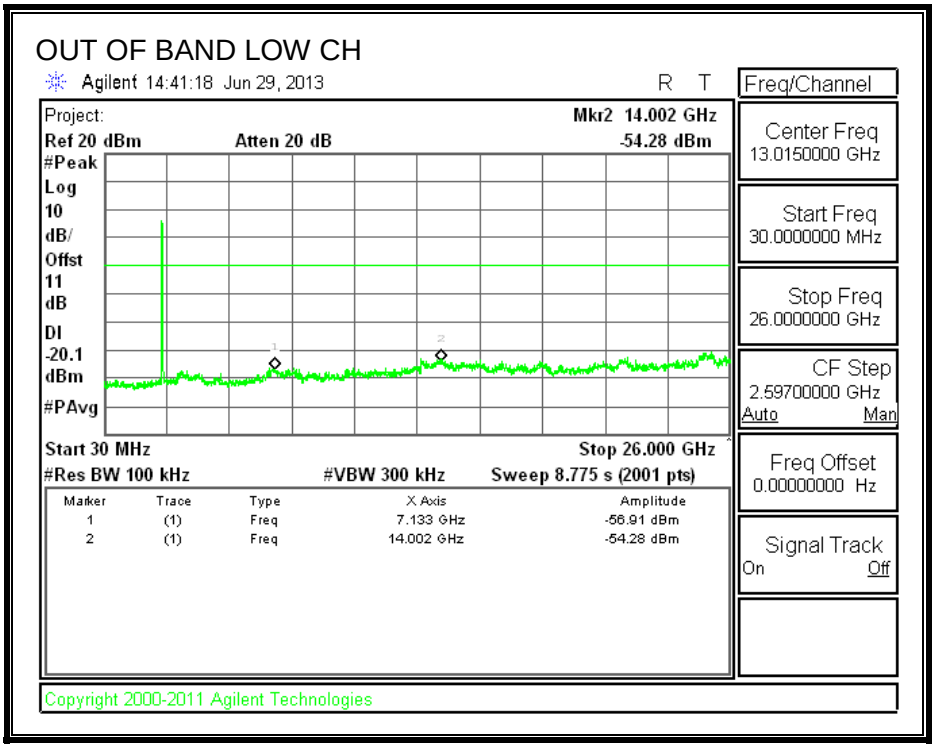
LOW CHANNEL BANDEDGE

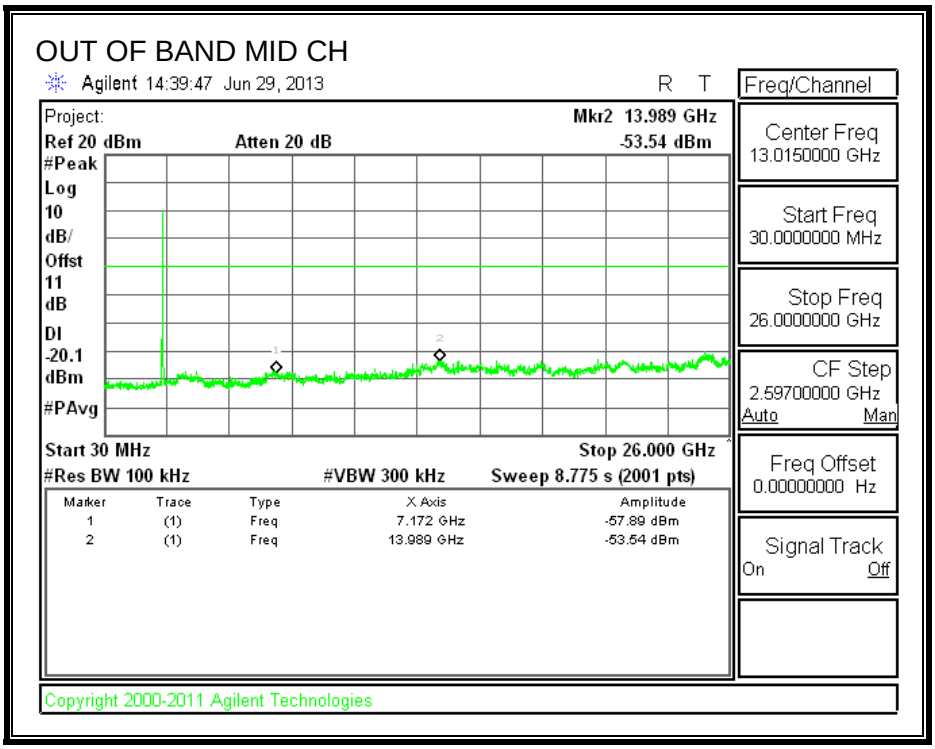


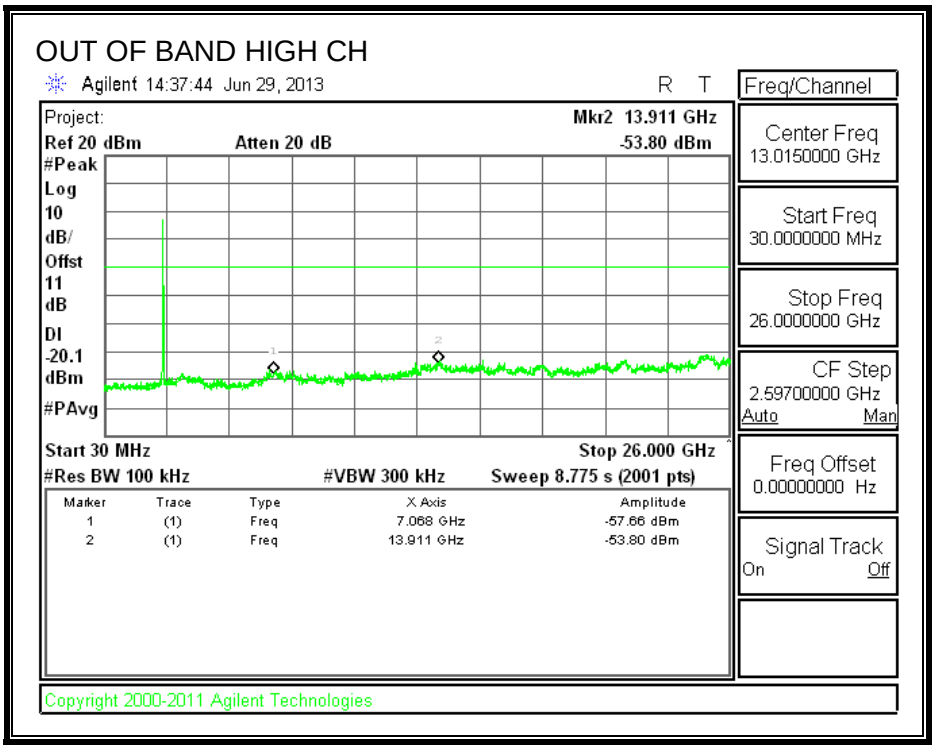
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS







8.3. 802.11n HT20 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

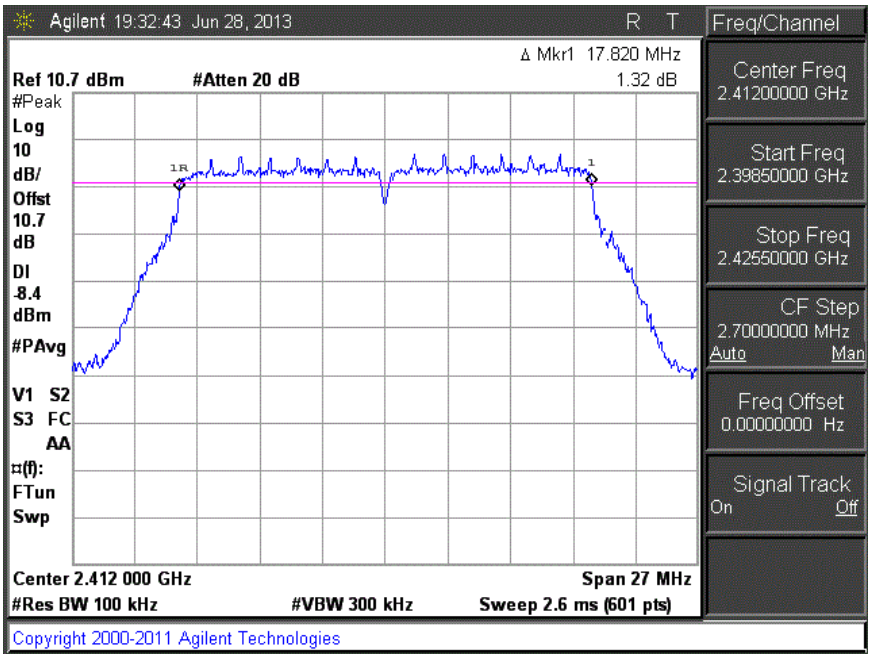
The transmitter output is connected to a spectrum analyzer with the RBW set between 1% and 5% of the EBW, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

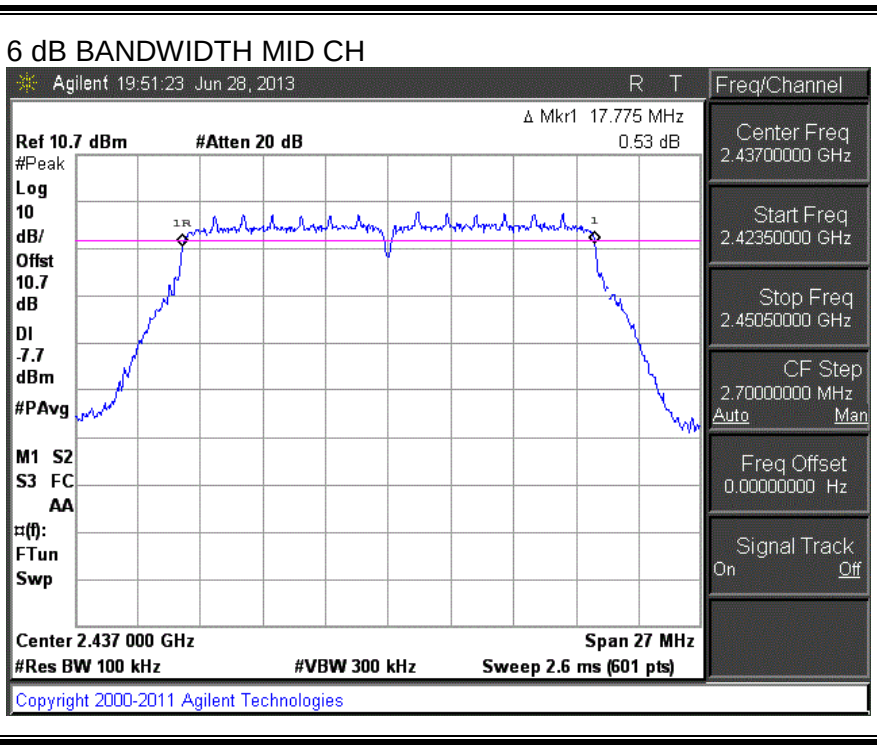
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.820	0.5
Mid	2437	17.775	0.5
High	2462	17.775	0.5

6 dB BANDWIDTH

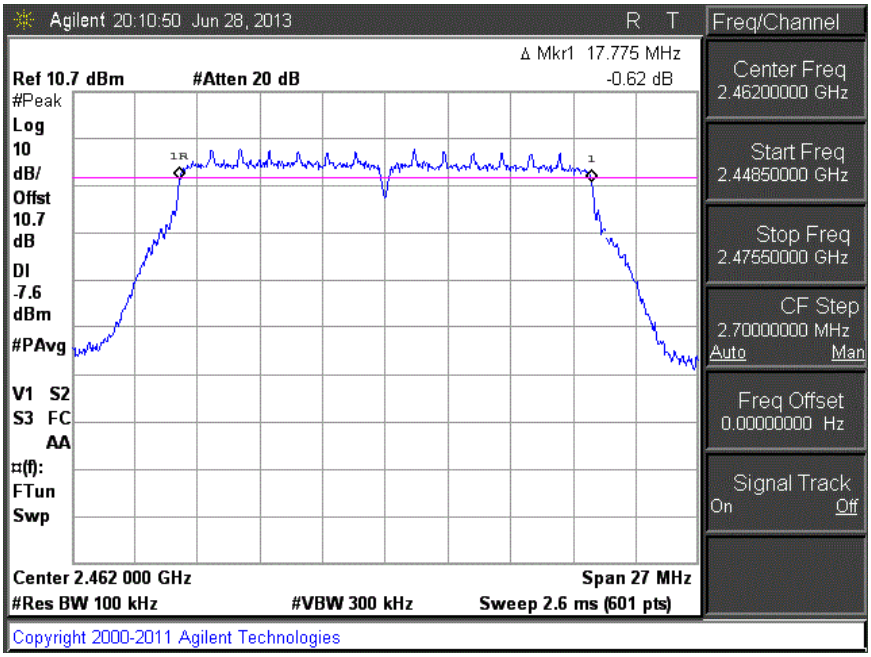
6 dB BANDWIDTH LOW CH



6 dB BANDWIDTH MID CH



6 dB BANDWIDTH HIGH CH



8.3.2. 99% BANDWIDTH

LIMITS

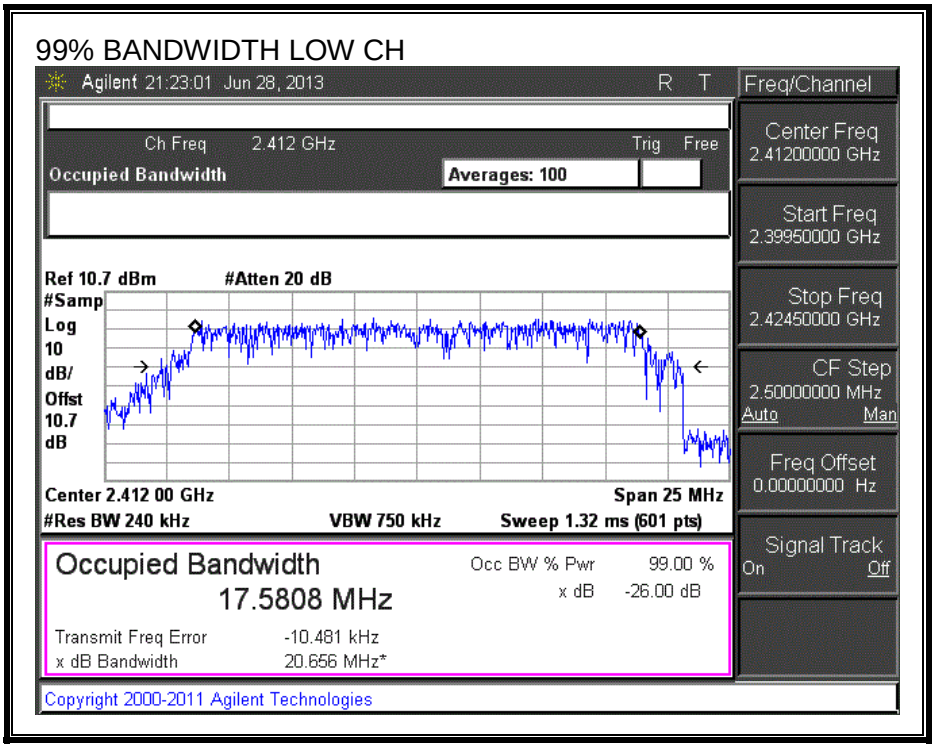
None; for reporting purposes only.

RESULTS

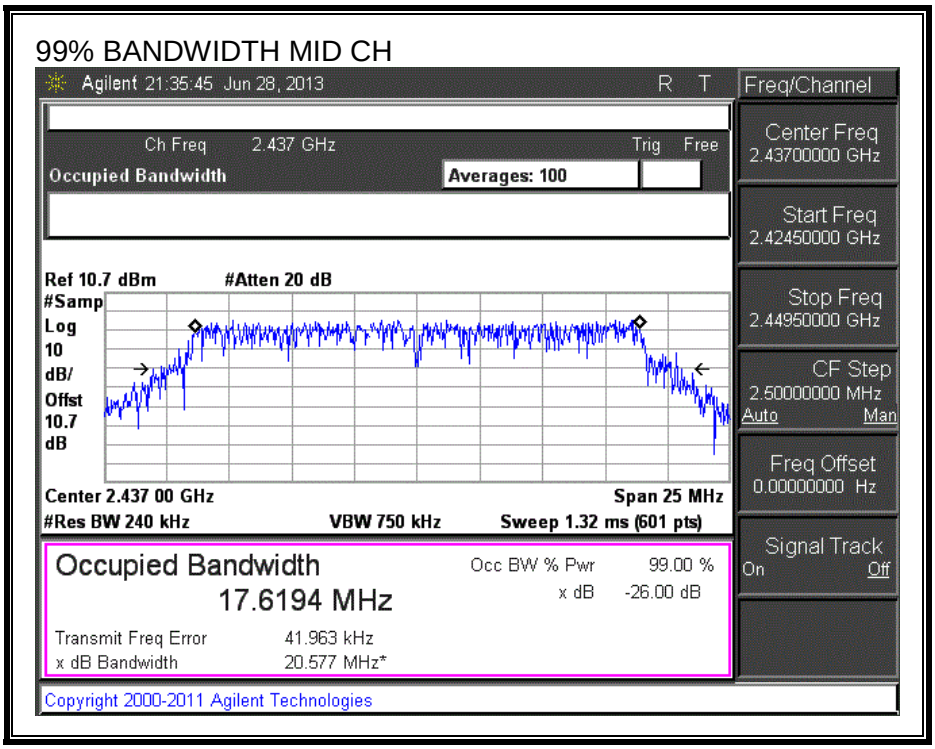
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.5808
Mid	2437	17.6194
High	2462	17.6113

99% BANDWIDTH

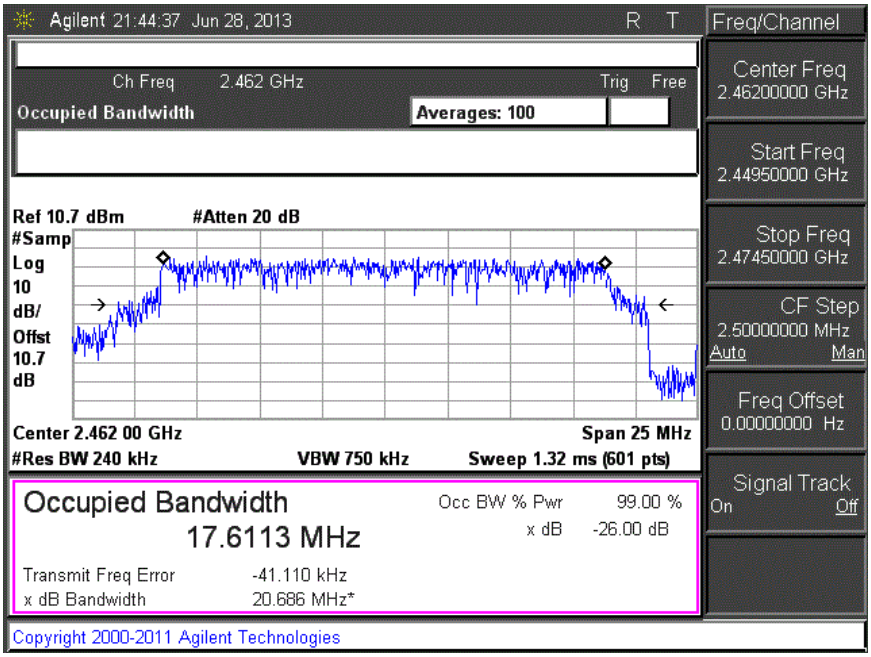
99% BANDWIDTH LOW CH



99% BANDWIDTH MID CH



99% BANDWIDTH HIGH CH



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 0.2 dB (including 10 dB pad and 0.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	2412	8.78
Mid	2437	9.28
High	2462	8.98

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

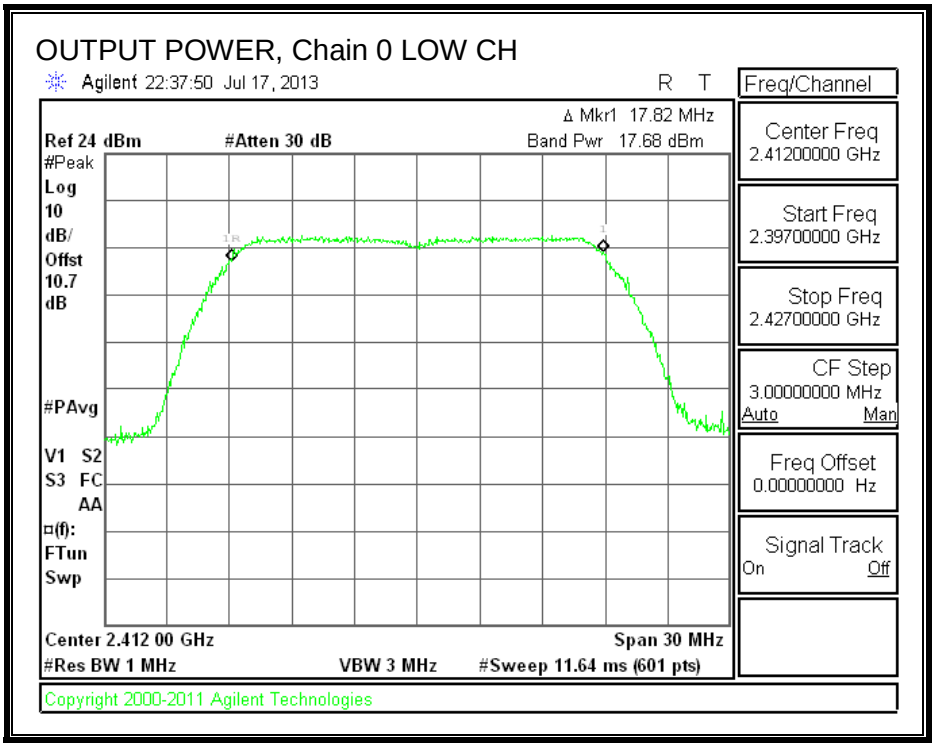
Limits

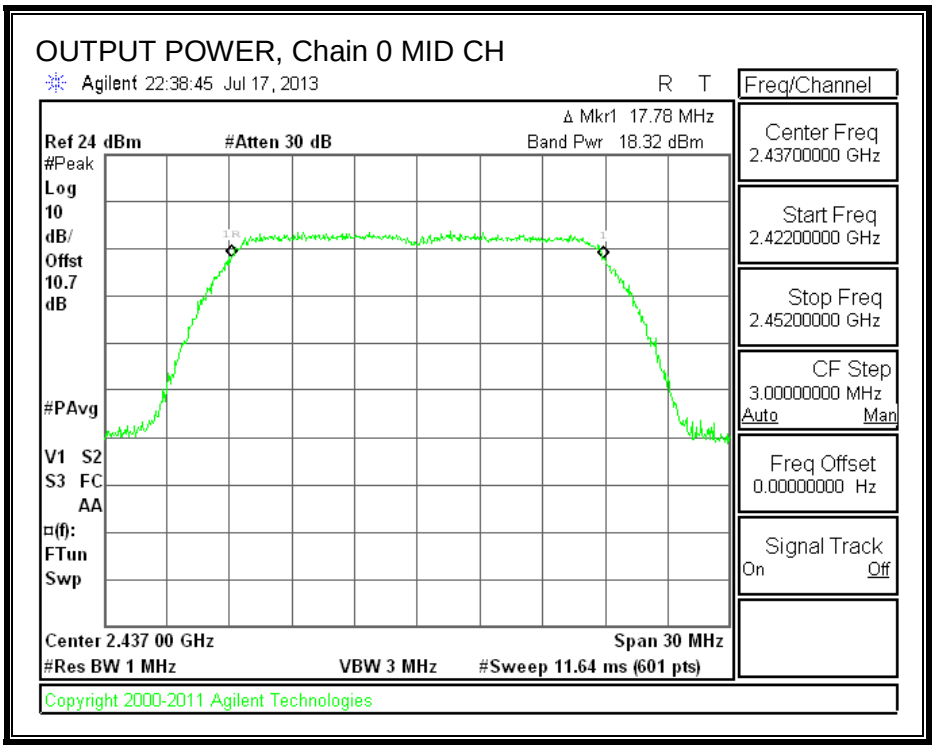
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-1.00	30.00	30	36	30.00
Mid	2437	-1.00	30.00	30	36	30.00
High	2462	-1.00	30.00	30	36	30.00

Results

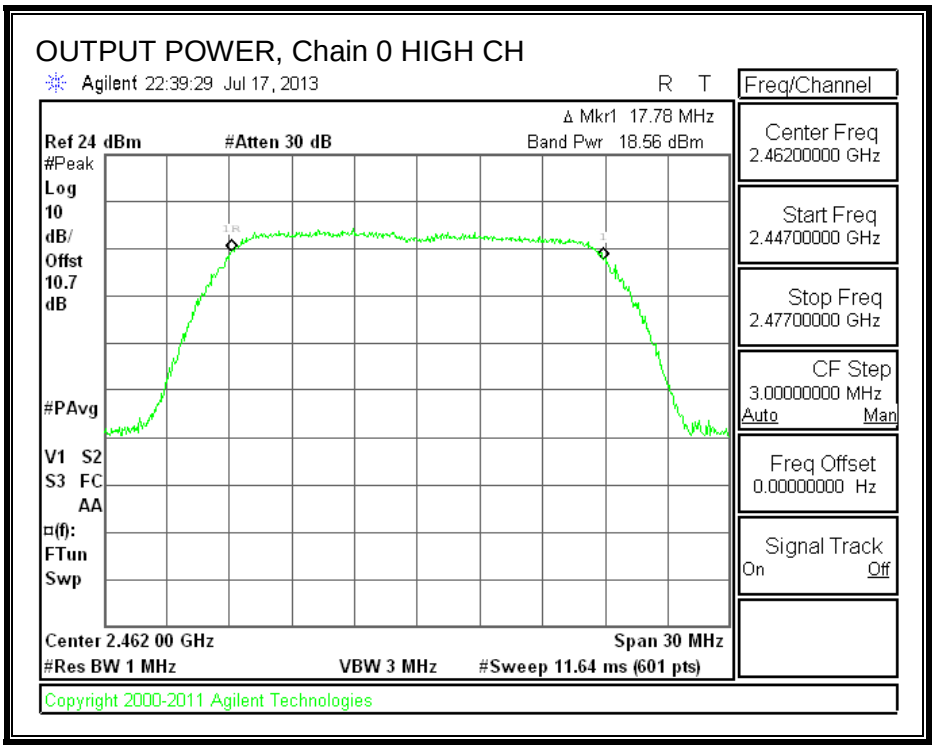
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	17.68	17.68	30.00	-12.32
Mid	2437	18.32	18.32	30.00	-11.68
High	2462	18.56	18.56	30.00	-11.44

OUTPUT POWER, Chain 0





OUTPUT POWER, Chain 0 HIGH CH



8.3.5. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

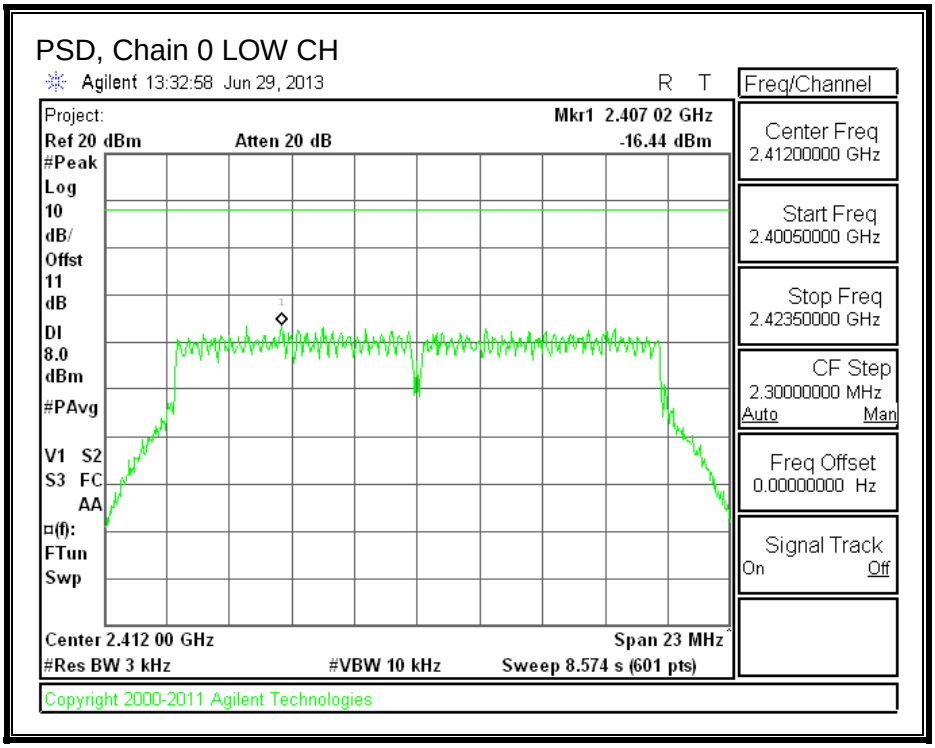
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

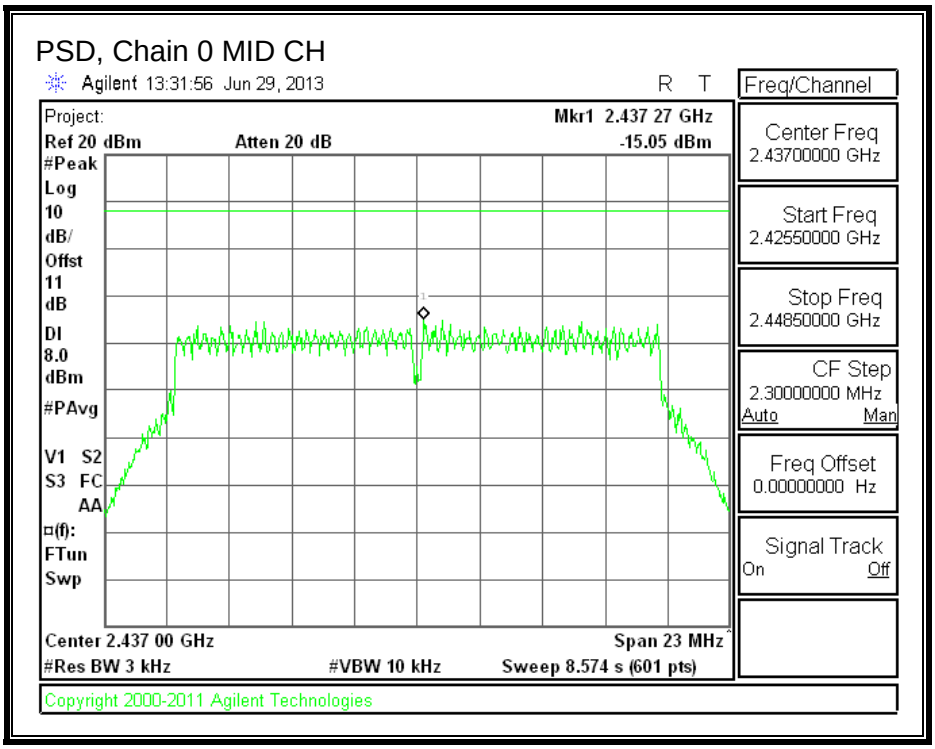
RESULTS

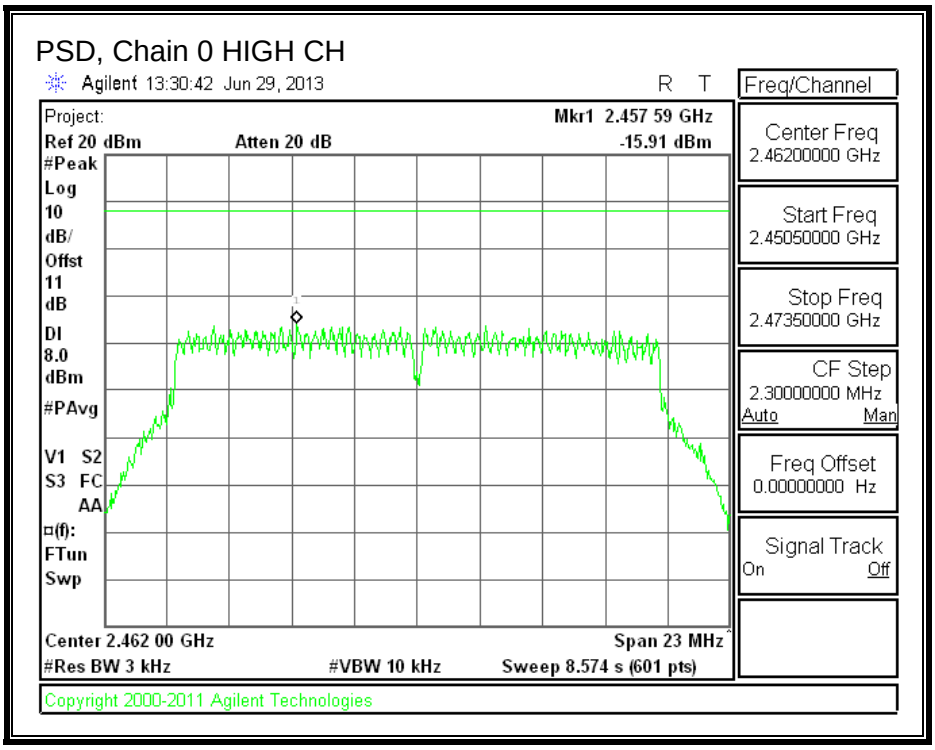
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-16.44	8.0	-24.4
Mid	2437	-15.05	8.0	-23.1
High	2462	-15.91	8.0	-23.9

PSD, Chain 0







8.3.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

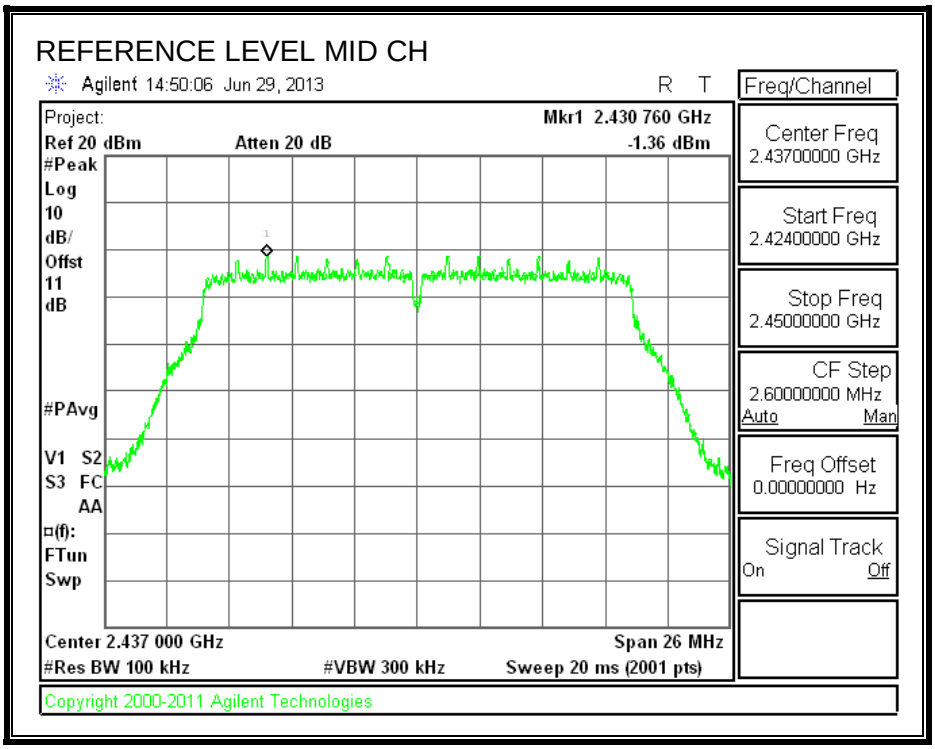
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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

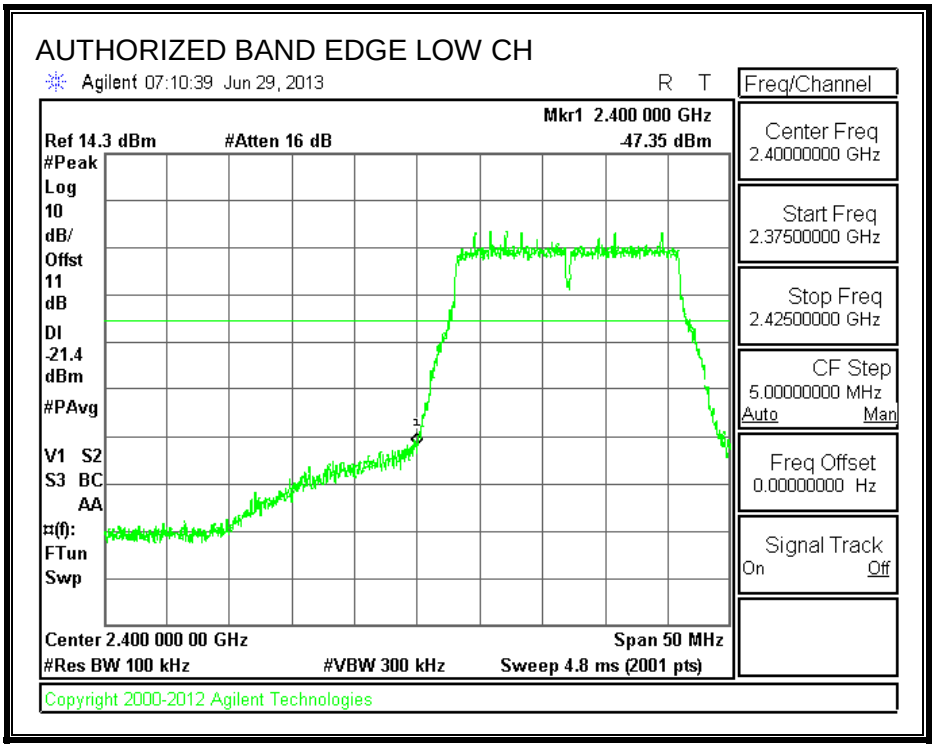
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

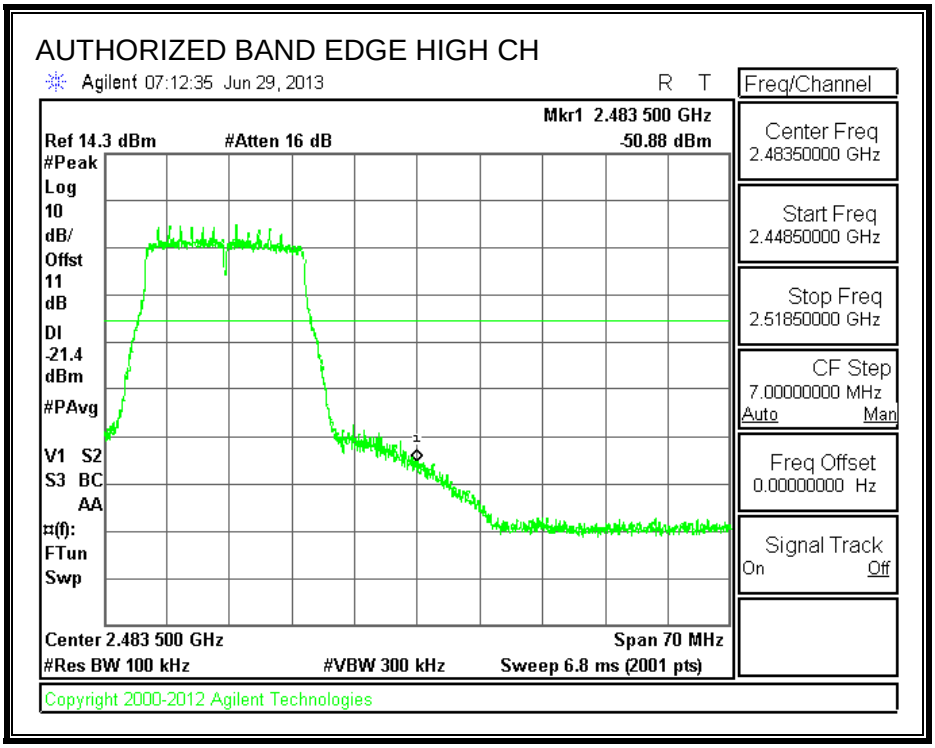
IN-BAND REFERENCE LEVEL



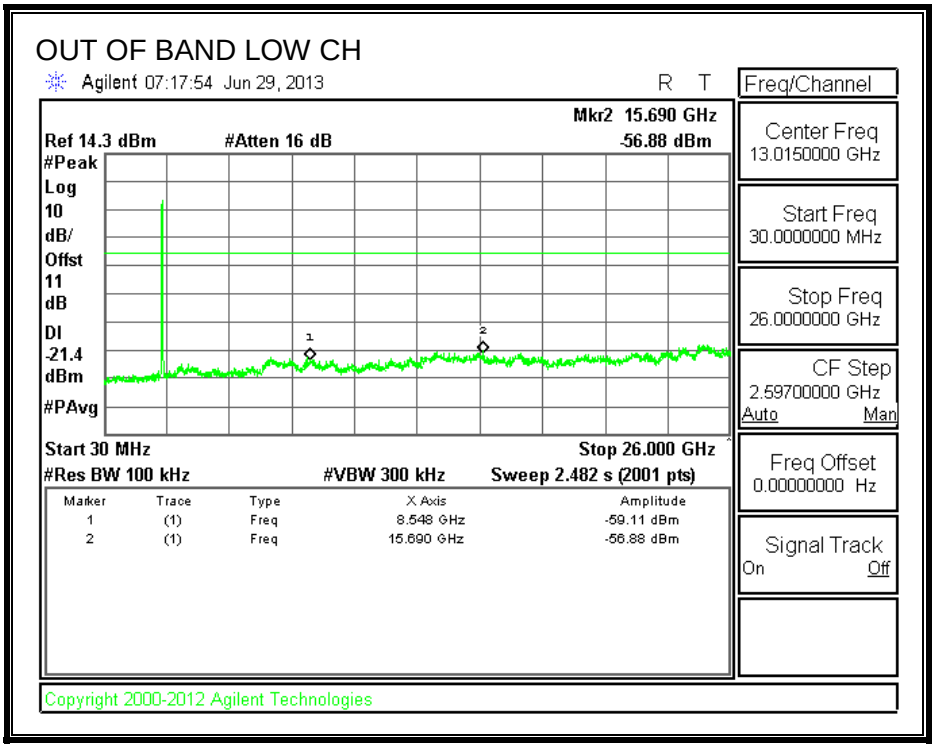
LOW CHANNEL BANDEDGE

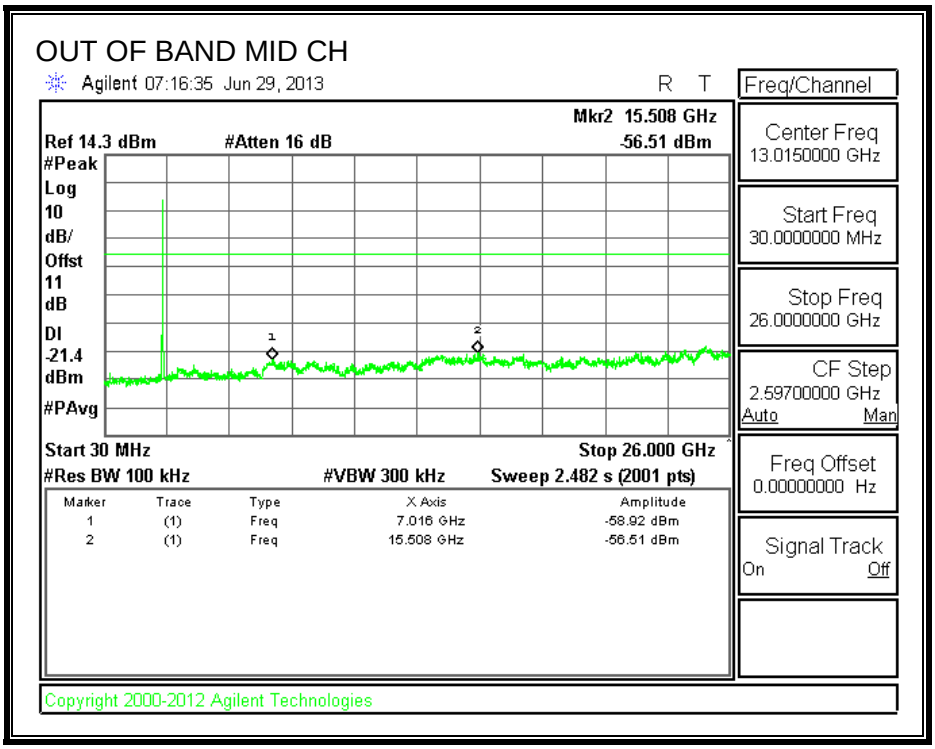


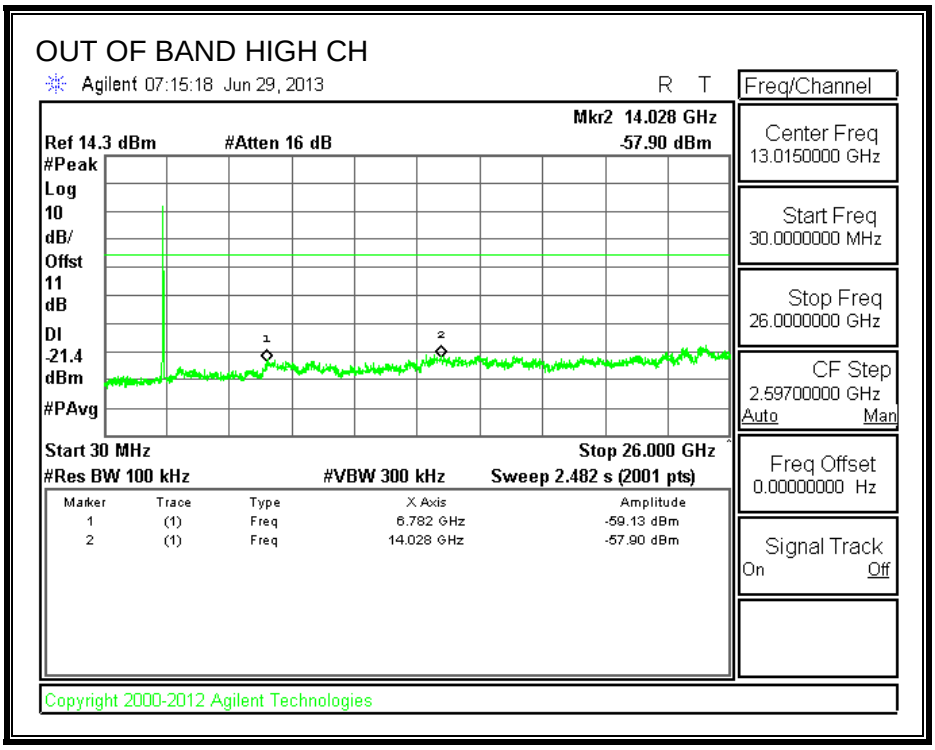
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS







8.4. 802.11ac HT20 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

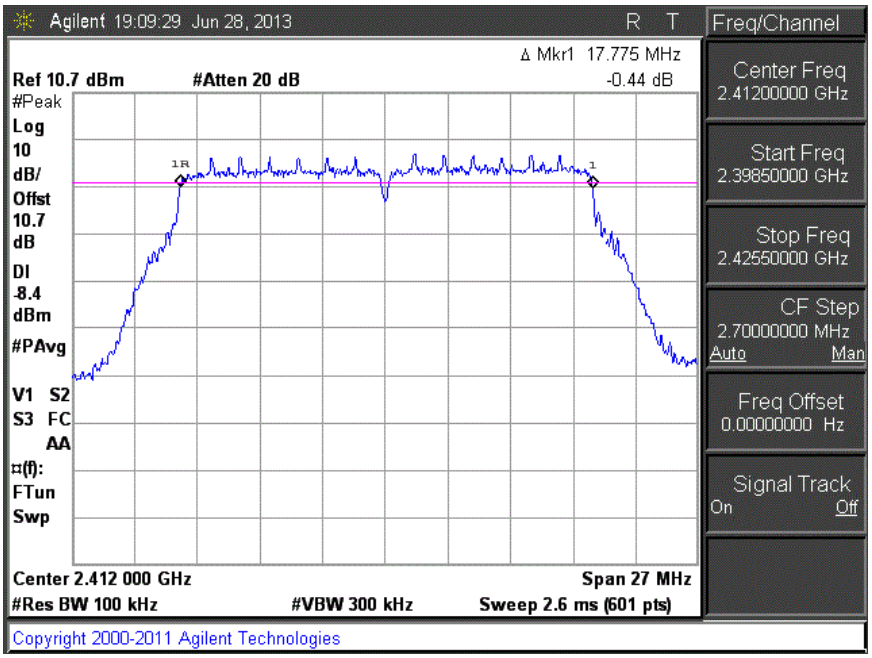
The transmitter output is connected to a spectrum analyzer with the RBW set between 1% and 5% of the EBW, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

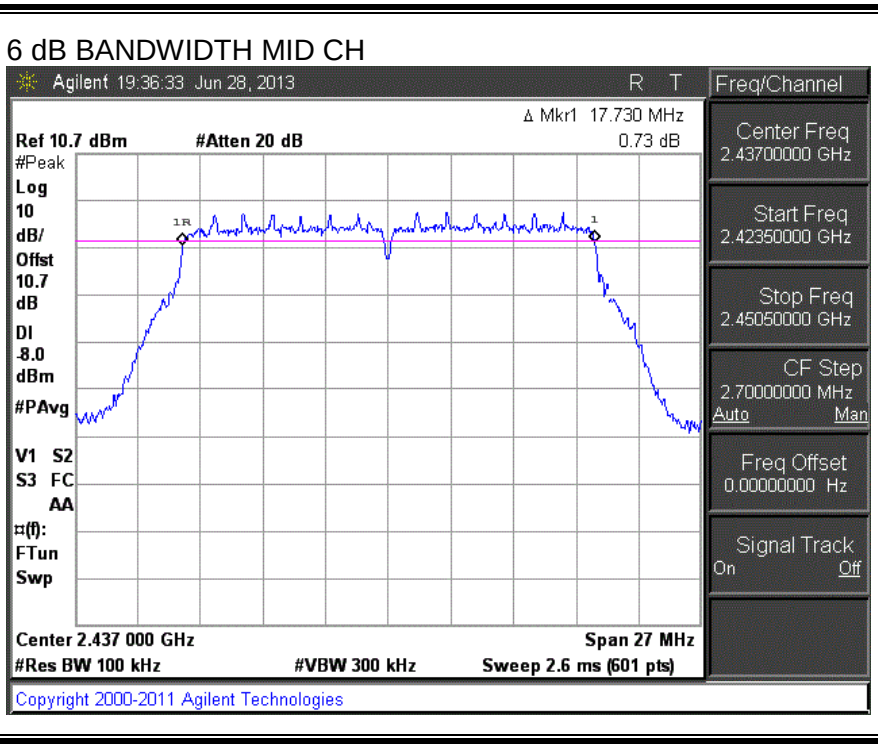
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.775	0.5
Mid	2437	17.730	0.5
High	2462	17.730	0.5

6 dB BANDWIDTH

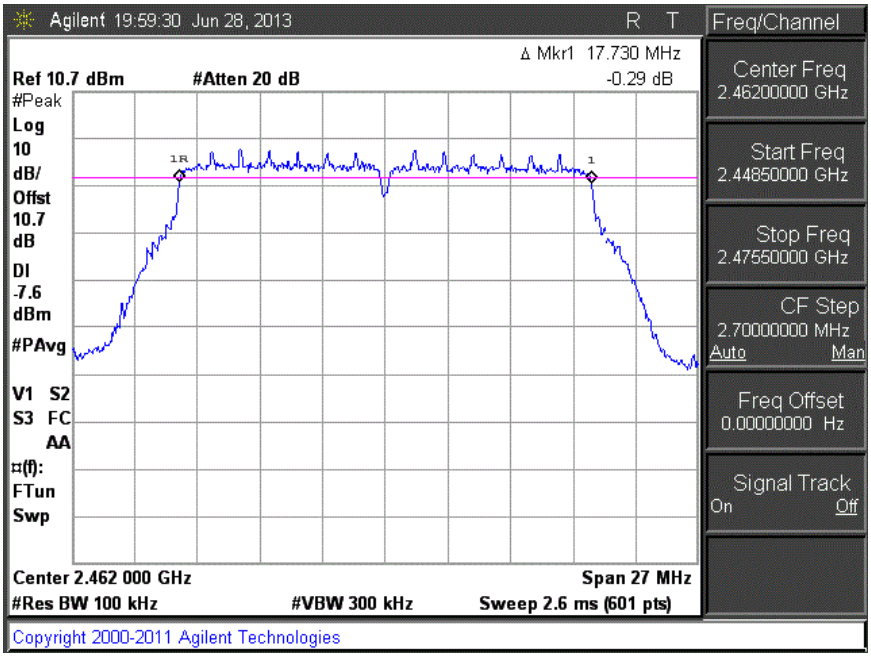
6 dB BANDWIDTH LOW CH



6 dB BANDWIDTH MID CH



6 dB BANDWIDTH HIGH CH



8.4.2. 99% BANDWIDTH

LIMITS

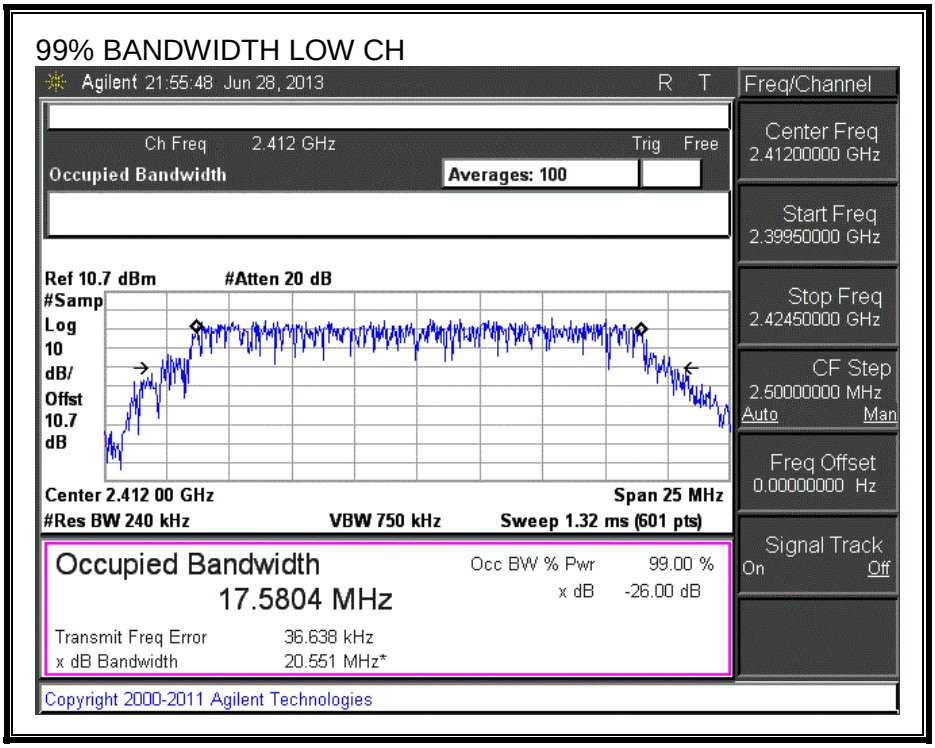
None; for reporting purposes only.

RESULTS

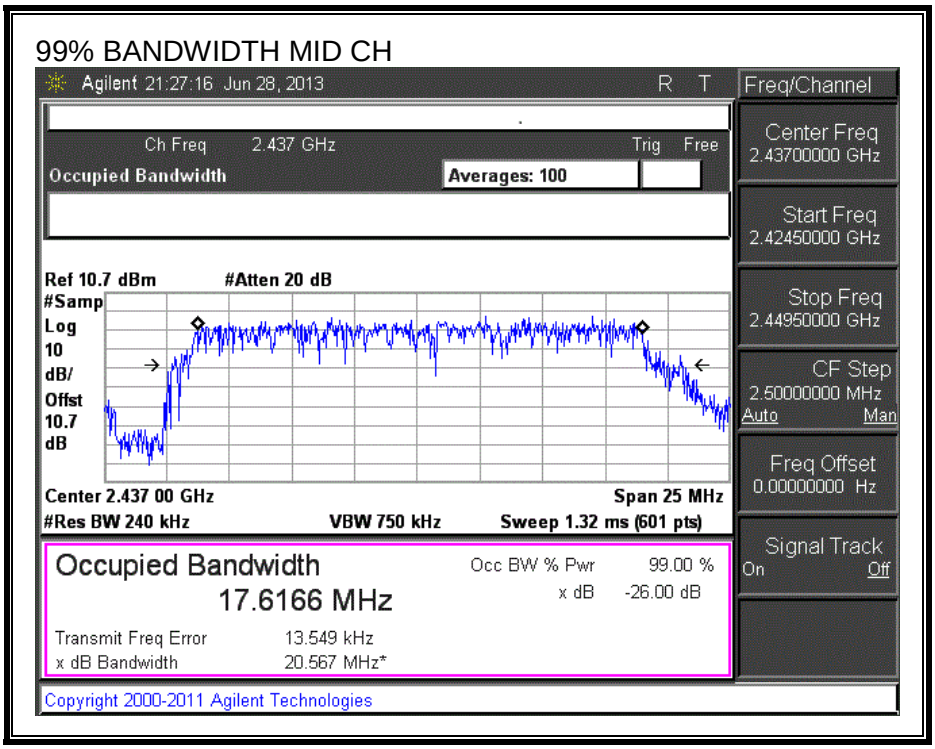
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.5804
Mid	2437	17.6166
High	2462	17.5825

99% BANDWIDTH

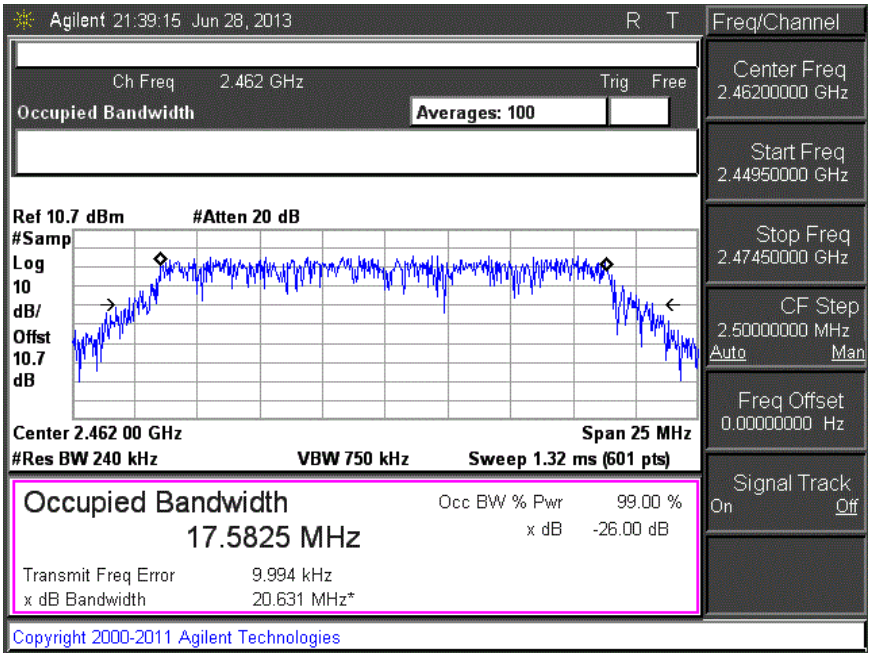
99% BANDWIDTH LOW CH



99% BANDWIDTH MID CH



99% BANDWIDTH HIGH CH



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 0.2 dB (including 10 dB pad and 0.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	2412	9.76
Mid	2437	10.36
High	2462	9.86

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

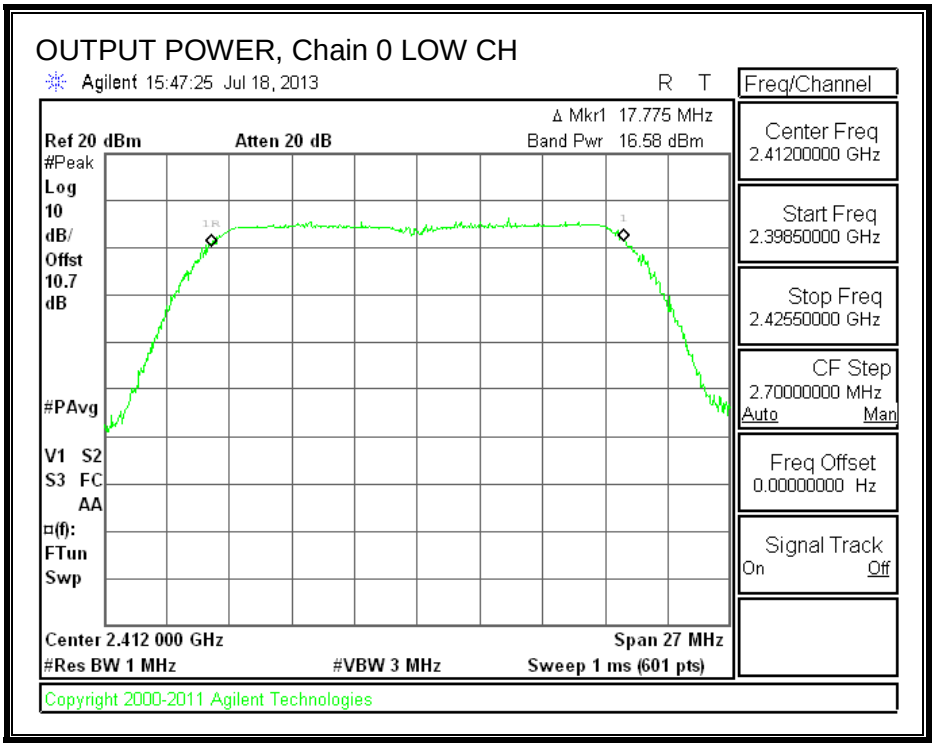
Limits

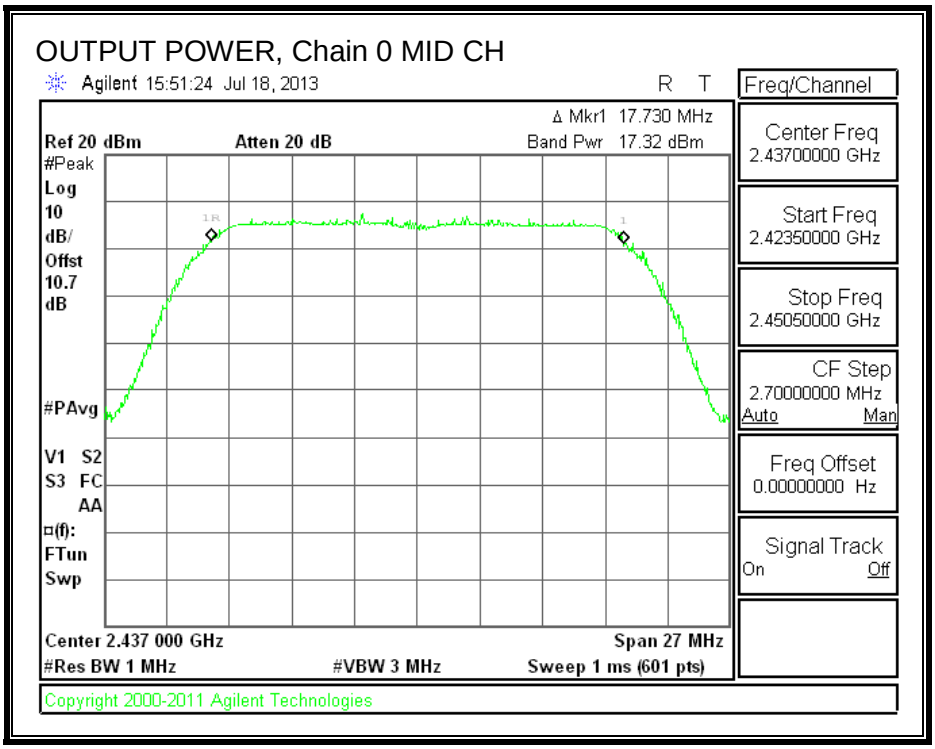
Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-1.00	30.00	30	36	30.00
Mid	2437	-1.00	30.00	30	36	30.00
High	2462	-1.00	30.00	30	36	30.00

Results

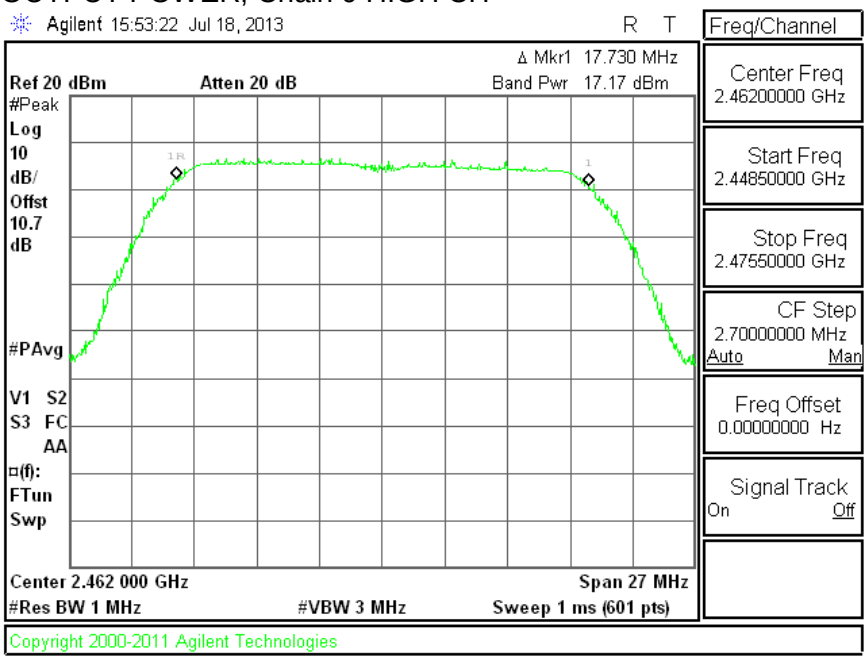
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	16.58	16.58	30.00	-13.42
Mid	2437	17.32	17.32	30.00	-12.68
High	2462	17.17	17.17	30.00	-12.83

OUTPUT POWER, Chain 0





OUTPUT POWER, Chain 0 HIGH CH



8.4.5. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

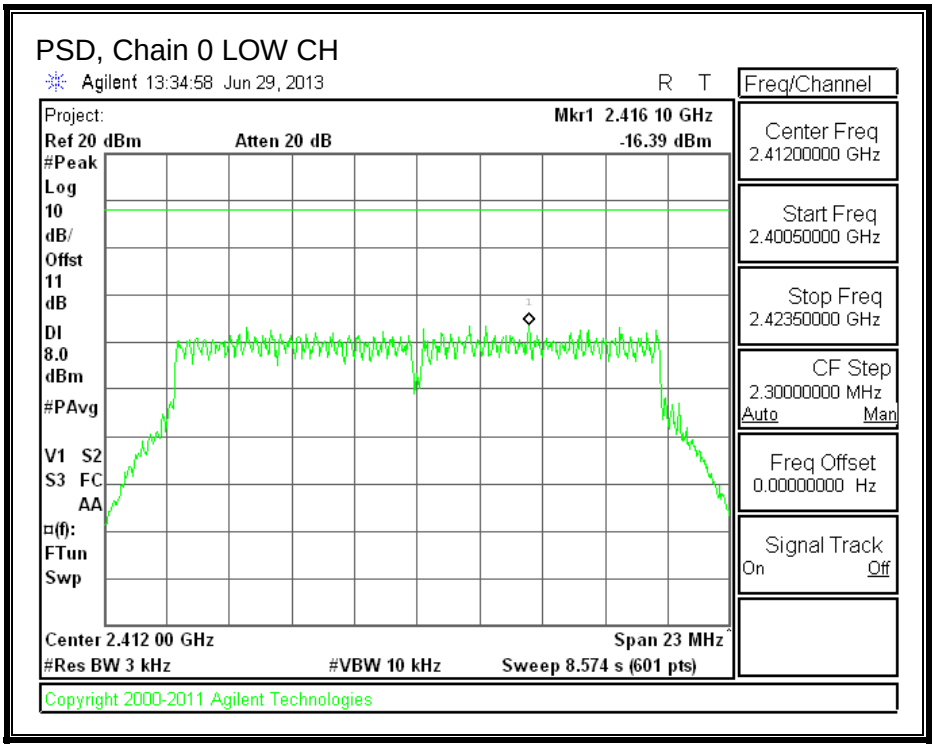
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

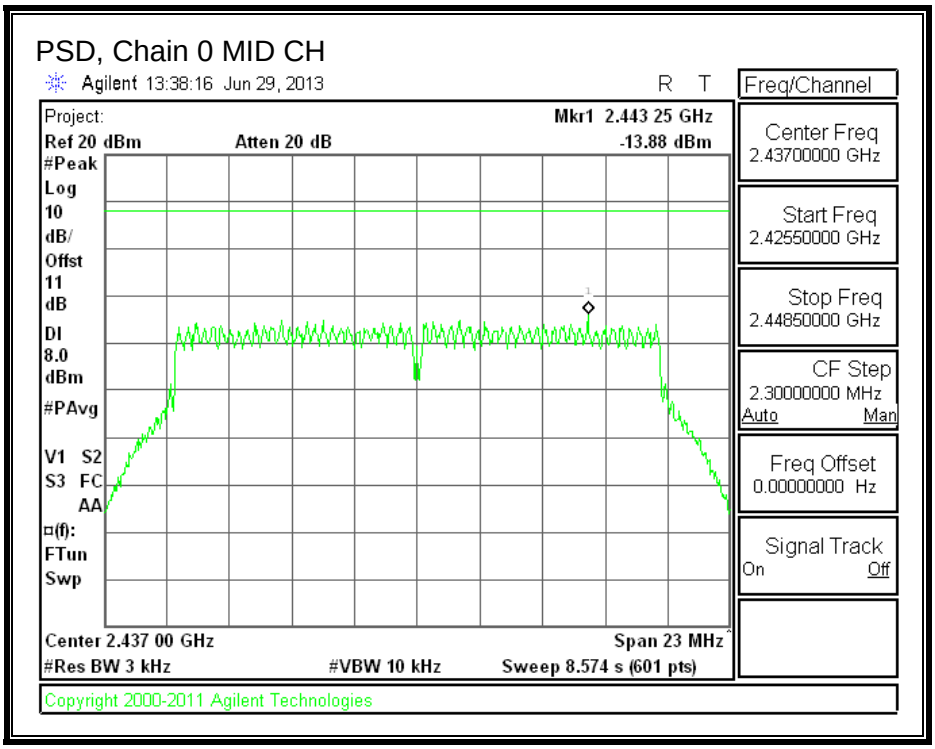
RESULTS

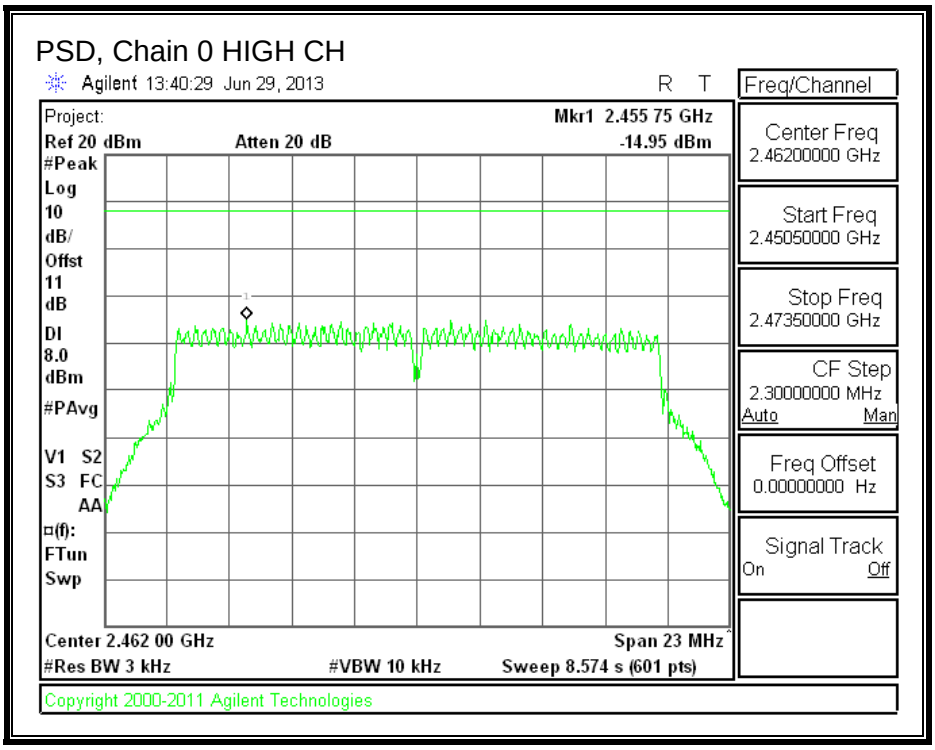
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-16.39	8.0	-24.4
Mid	2437	-13.88	8.0	-21.9
High	2462	-14.95	8.0	-23.0

PSD, Chain 0







8.4.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

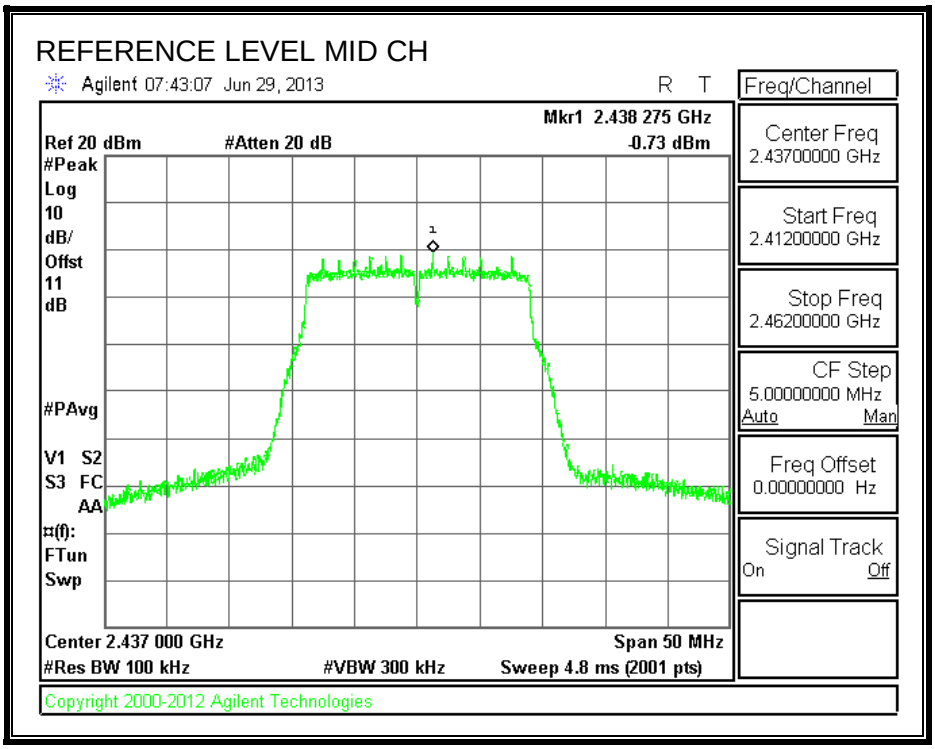
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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

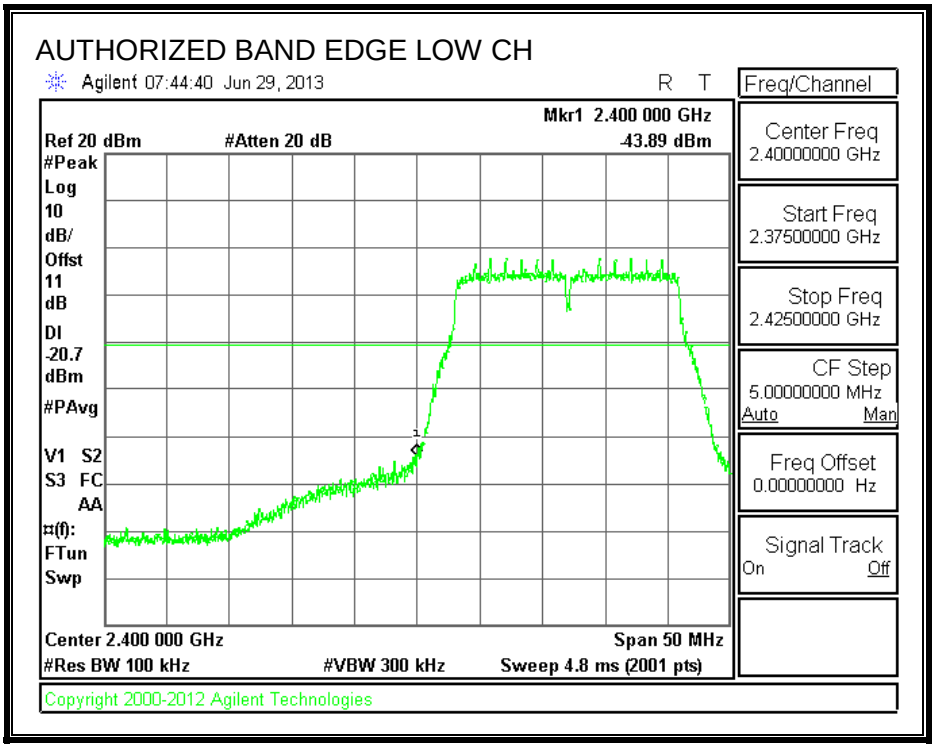
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

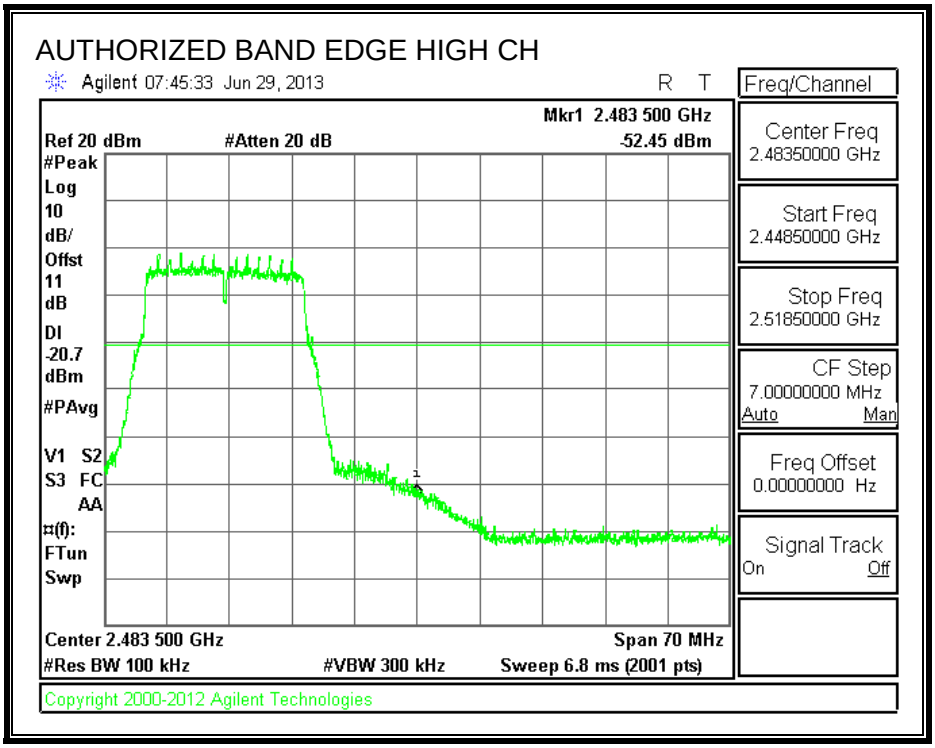
IN-BAND REFERENCE LEVEL



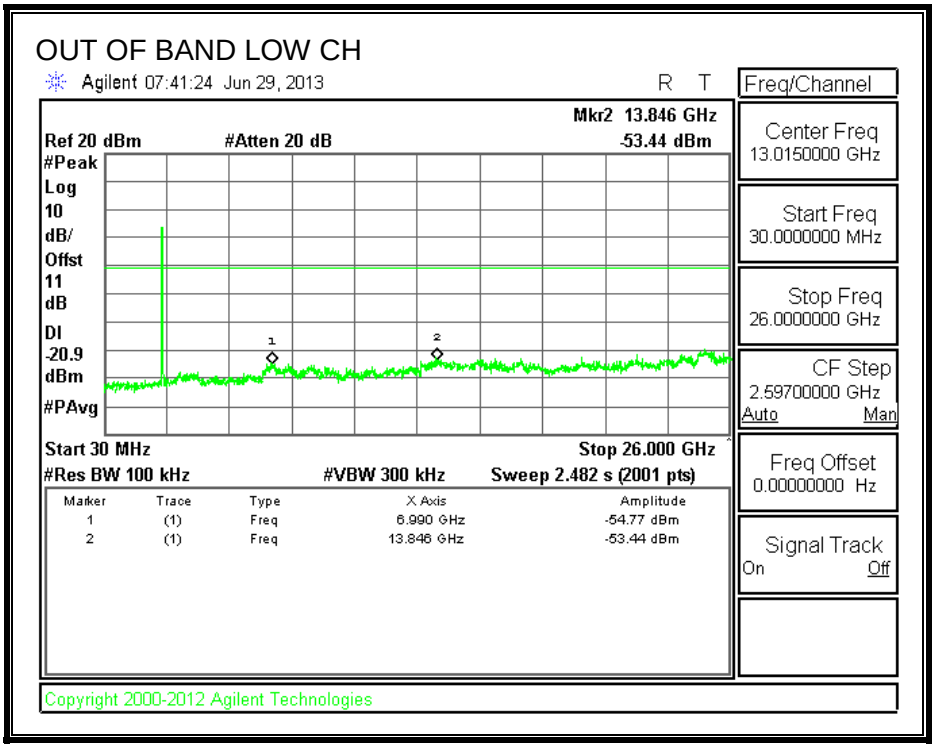
LOW CHANNEL BANDEDGE

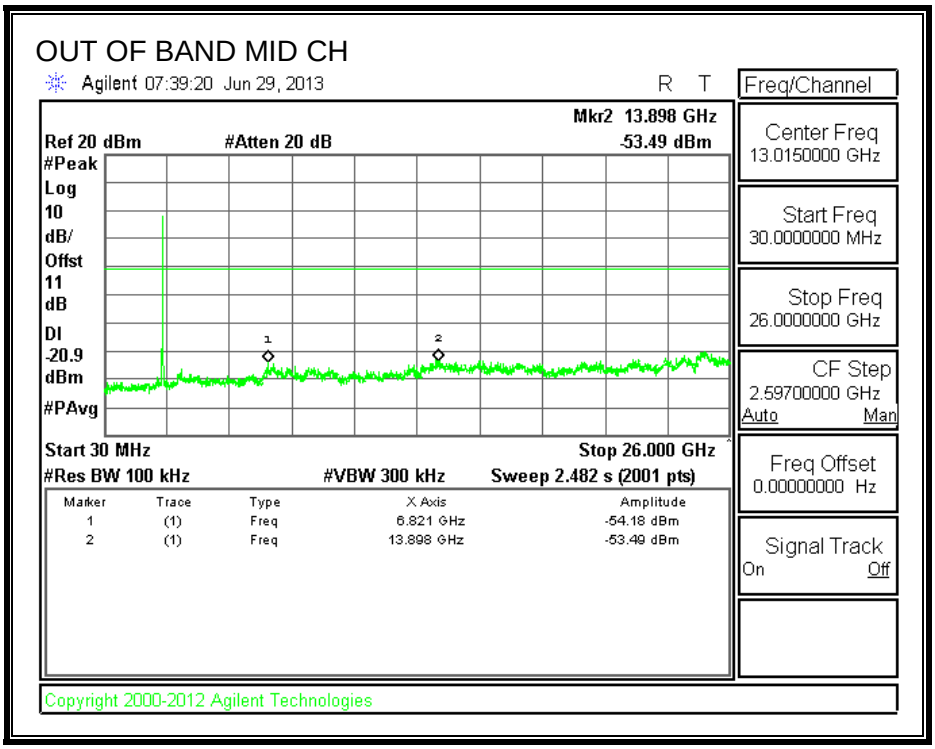


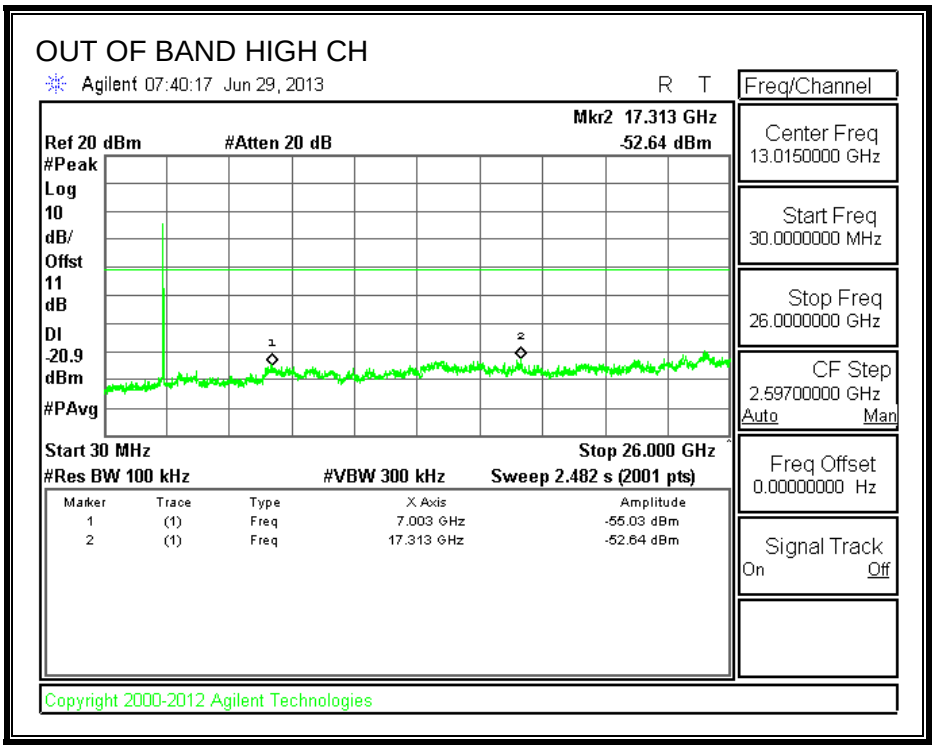
HIGH CHANNEL BANDEDGE



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)

IC RSS-GEN Clause 6 (Receiver)

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.

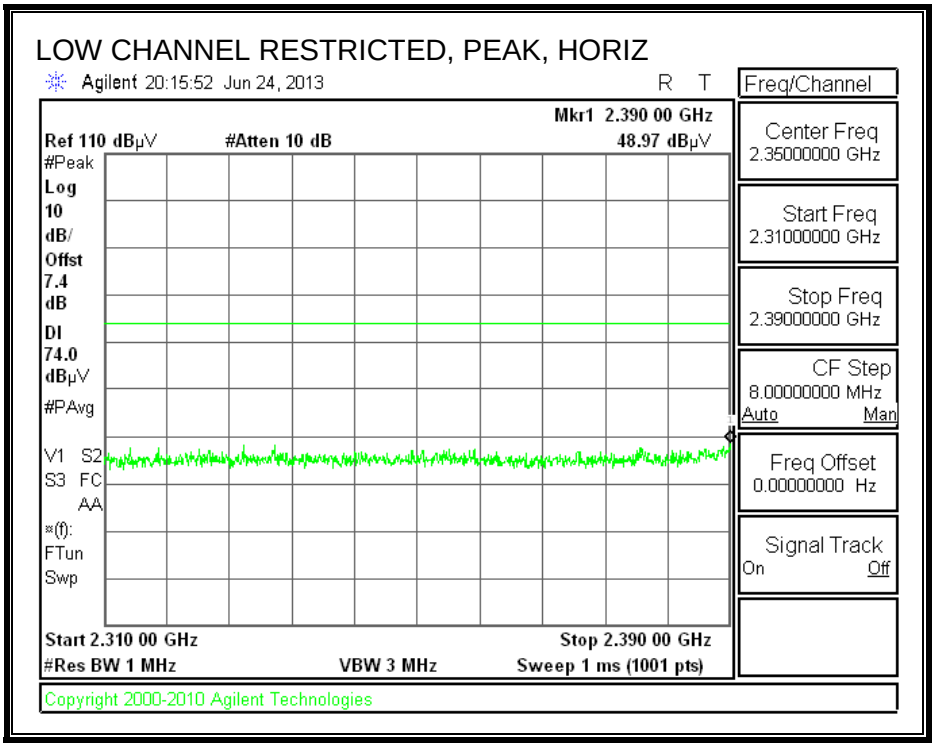
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and as applicable for average measurements.

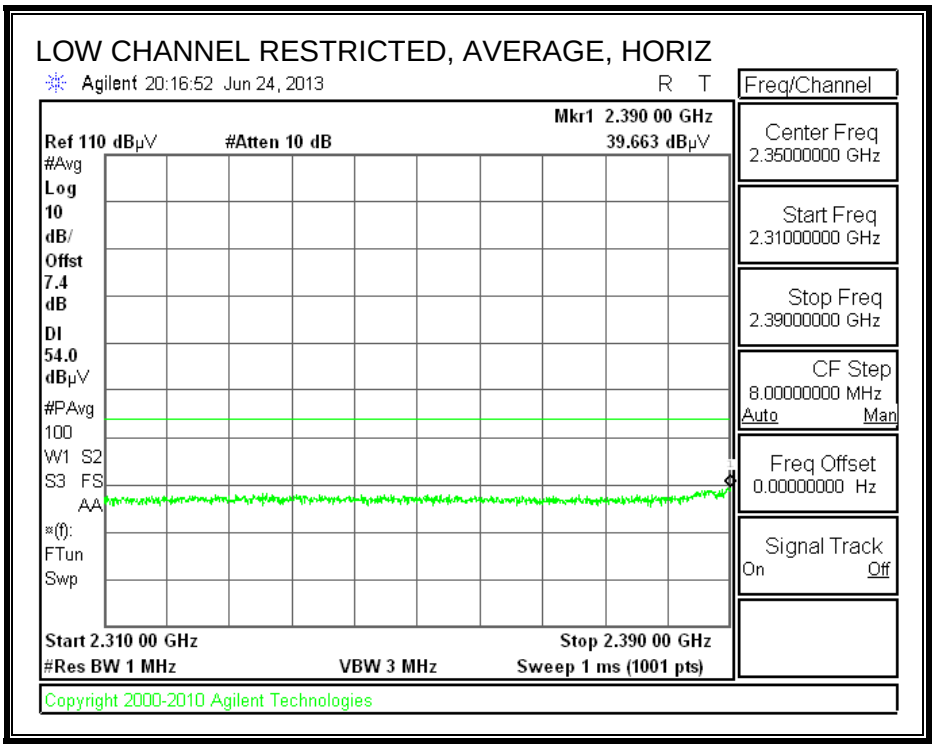
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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.

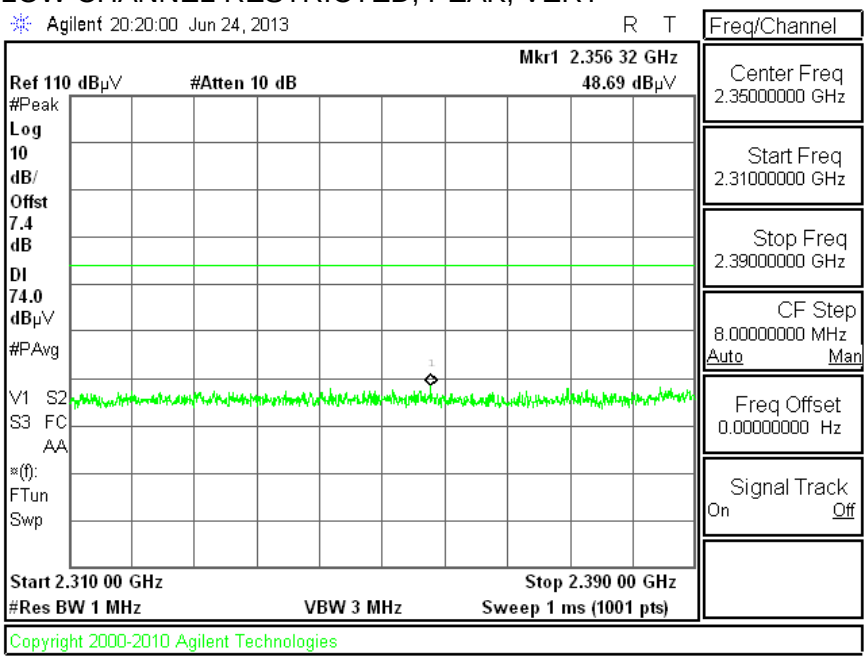
9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

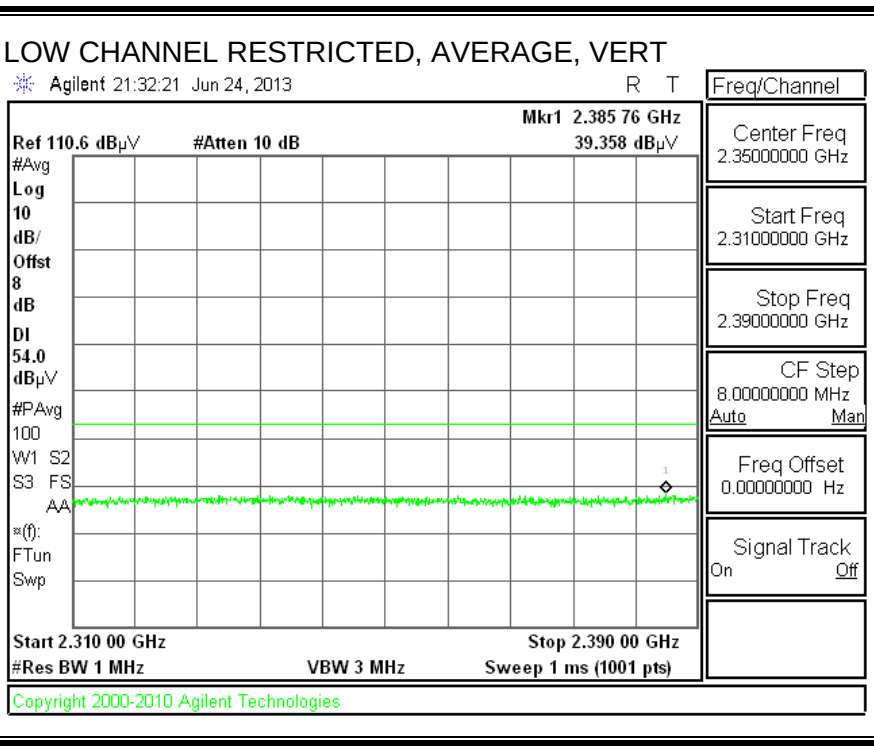




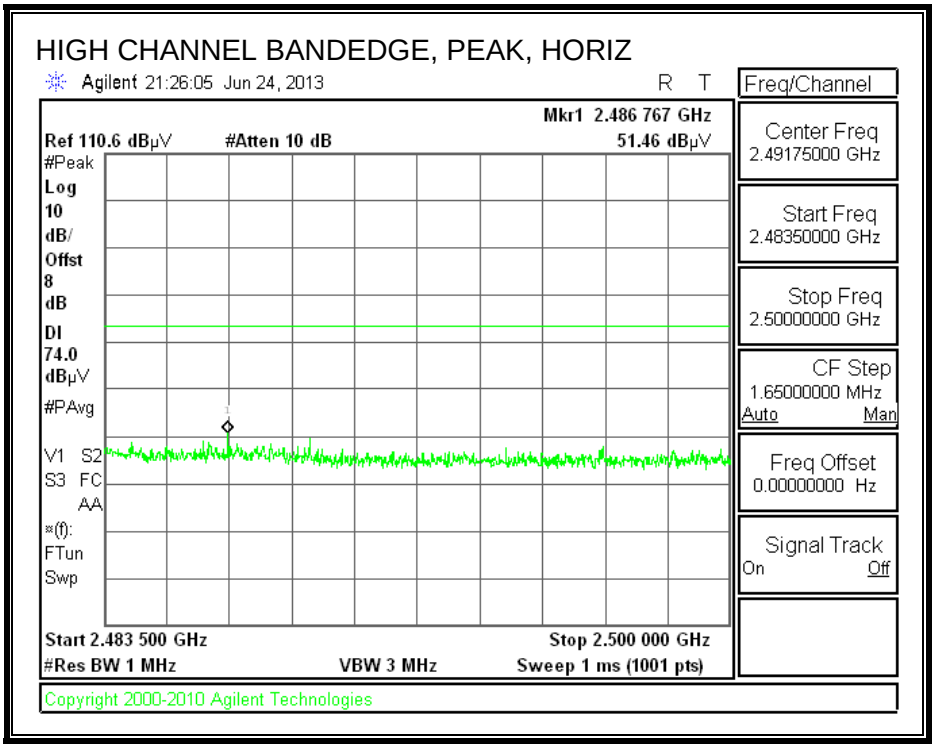
LOW CHANNEL RESTRICTED, PEAK, VERT

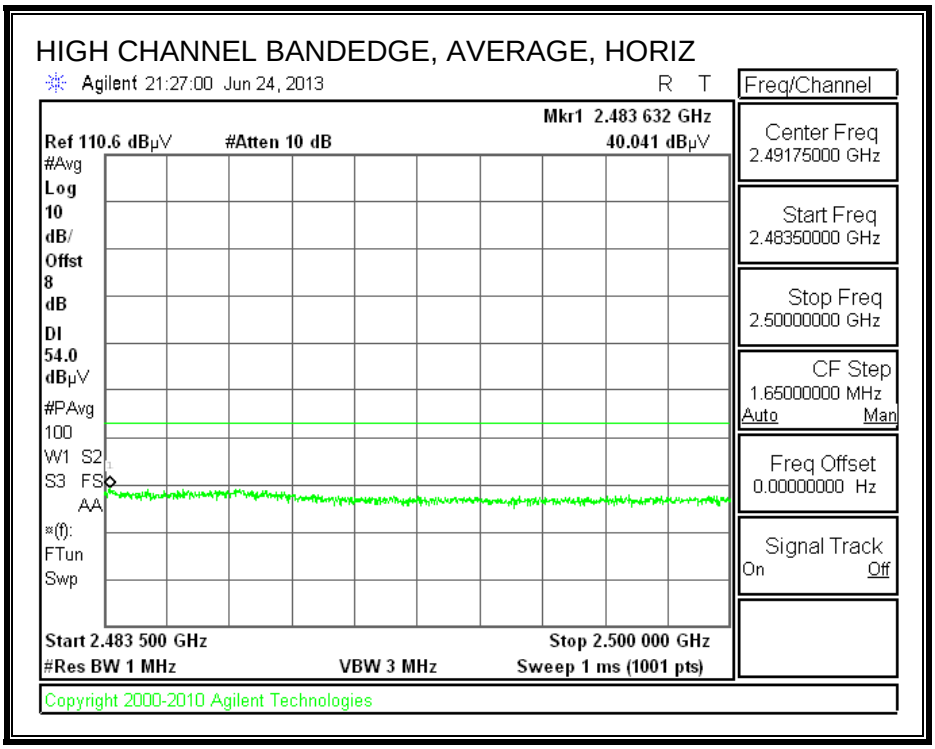


LOW CHANNEL RESTRICTED, AVERAGE, VERT

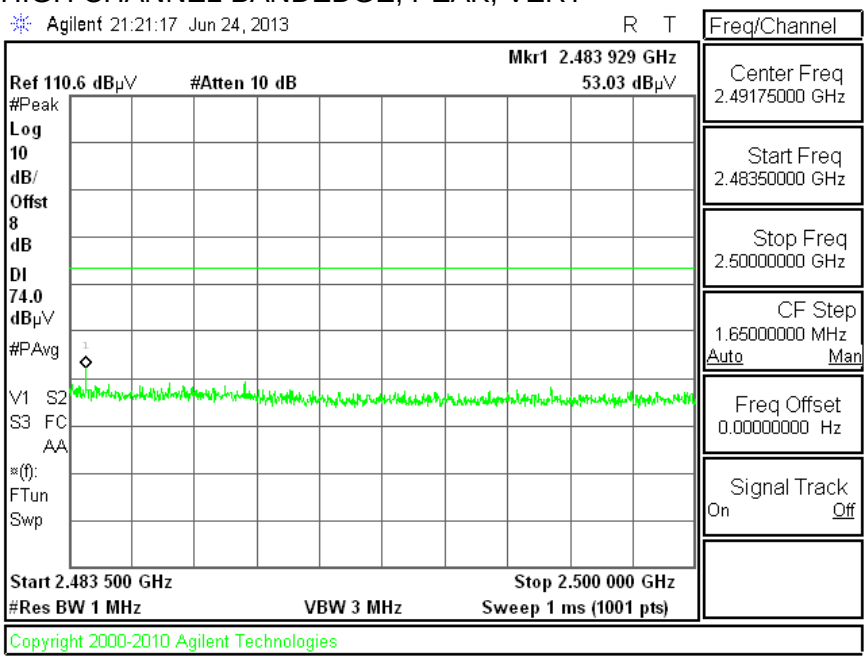


AUTHORIZED BANDEDGE (HIGH CHANNEL)

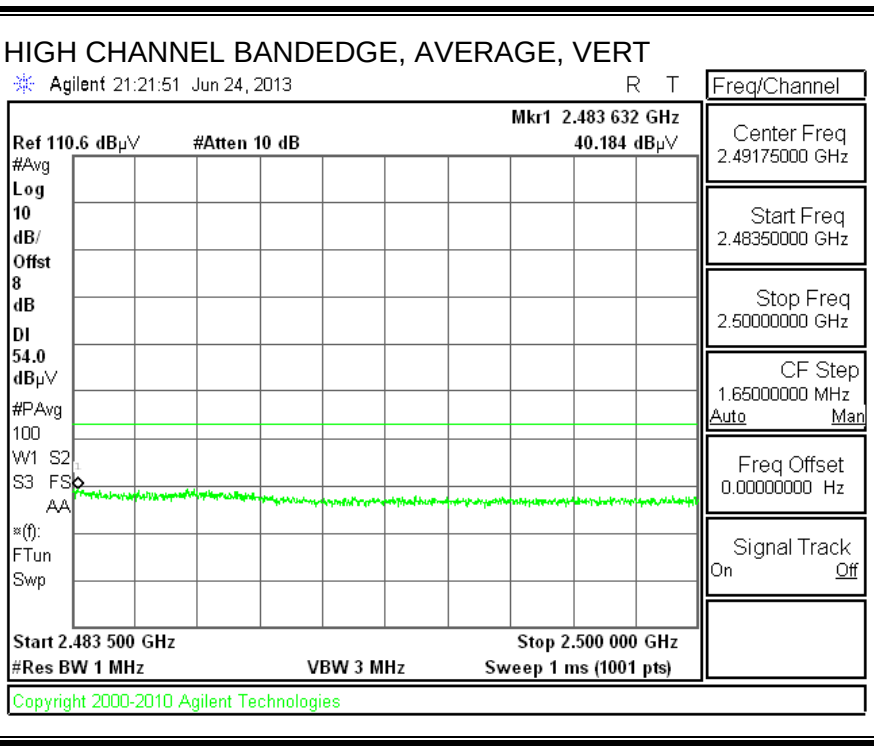




HIGH CHANNEL BANDEDGE, PEAK, VERT

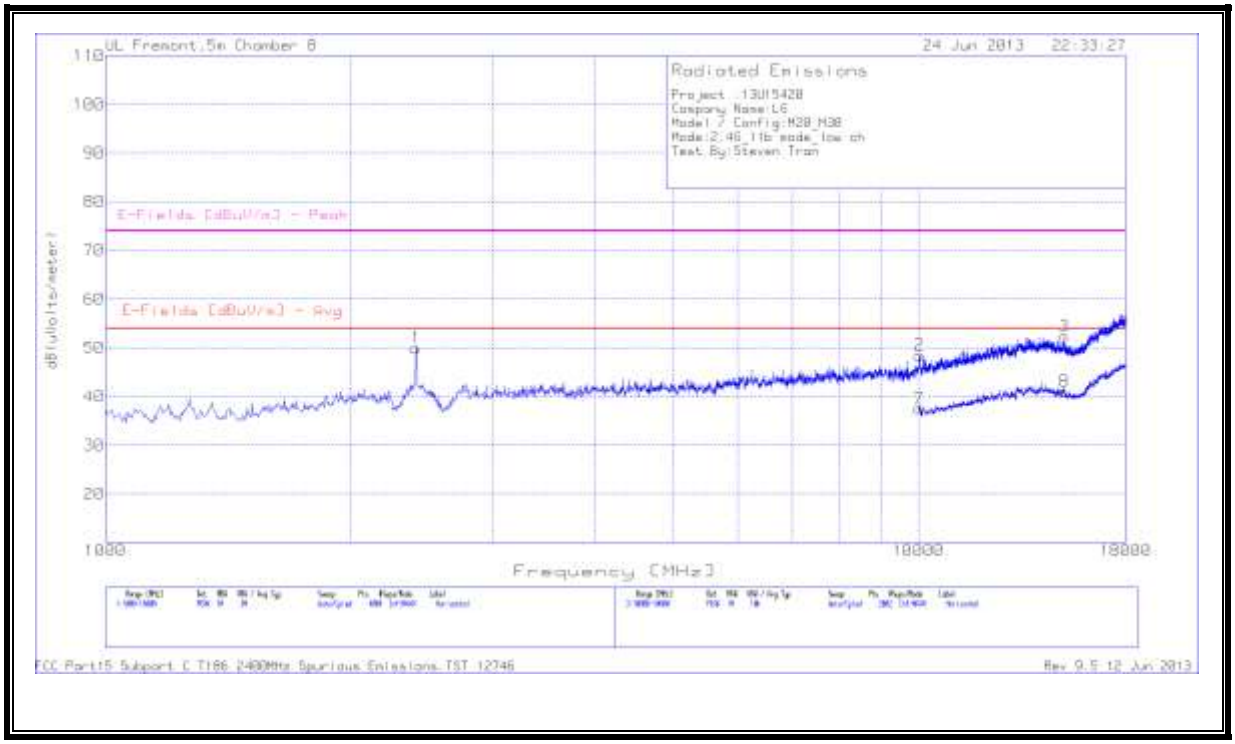


HIGH CHANNEL BANDEDGE, AVERAGE, VERT



HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL
HORIZONTAL



LOW CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts /meter)	E-Fields [dBuV/ m] - Avg	Margin (dB)	E-Fields [dBuV/ m] - Peak	Margin (dB)	Height (cm)	Polarity
2.41	47.45	PK	32.4	-35	4.6	0.5	49.95	54	-4.05	74	-24.05	200	H
10.016	23.64	PK	37.8	-34.9	10.5	0.5	37.54	54	-16.46	74	-36.46	100	H
15.129	19.86	PK	40.2	-32.9	13.3	0.5	40.96	54	-13.04	74	-33.04	100	H

PK - Peak detector

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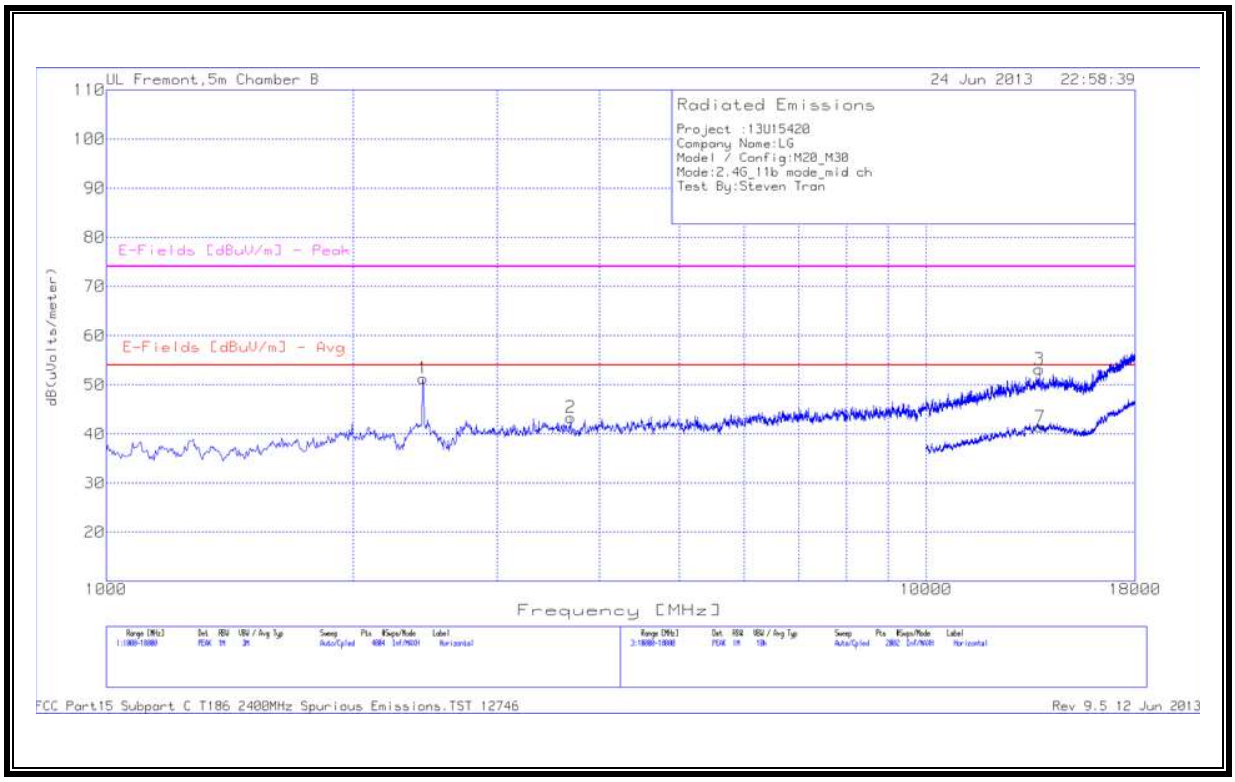
MID CHANNEL
HORIZONTAL



MID CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts /meter)	E-Fields [dBuV/ m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.435	48.71	PK	32.4	-35	4.7	0.5	51.31	54	-2.69	74	-22.69	200	H
3.688	38.13	PK	33.7	-34.9	5.9	0.5	43.33	54	-2.69	74	-30.67	200	H
13.749	33.16	PK	39.1	-32.1	12.5	0.5	53.16	54	-10.67	74	-20.84	200	H
13.802	21.41	PK	39.1	-32.1	12.5	0.5	41.41	54	-3.47	74	-32.59	100	H

PK - Peak detector

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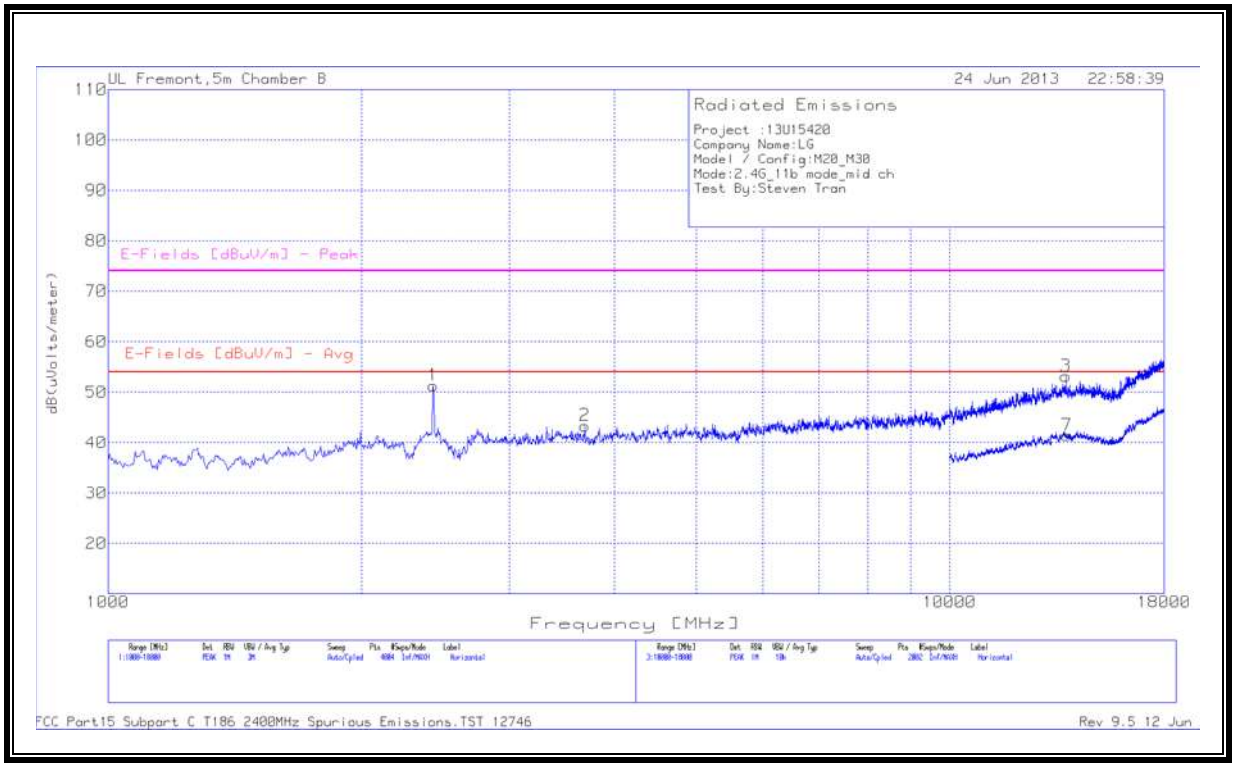
HIGH CHANNEL
HORIZONTAL

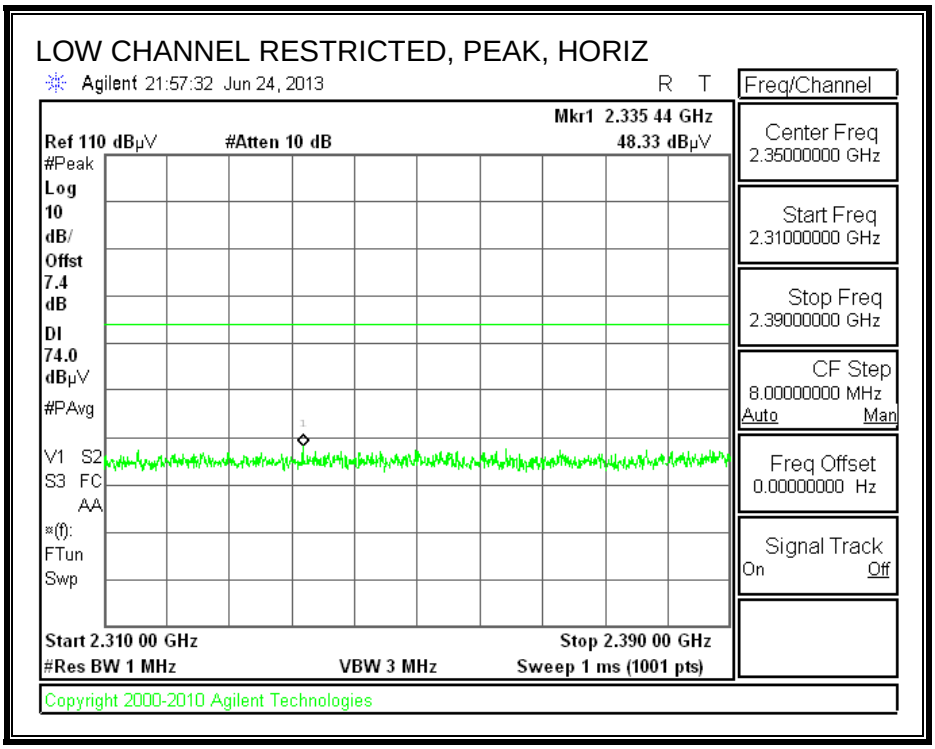


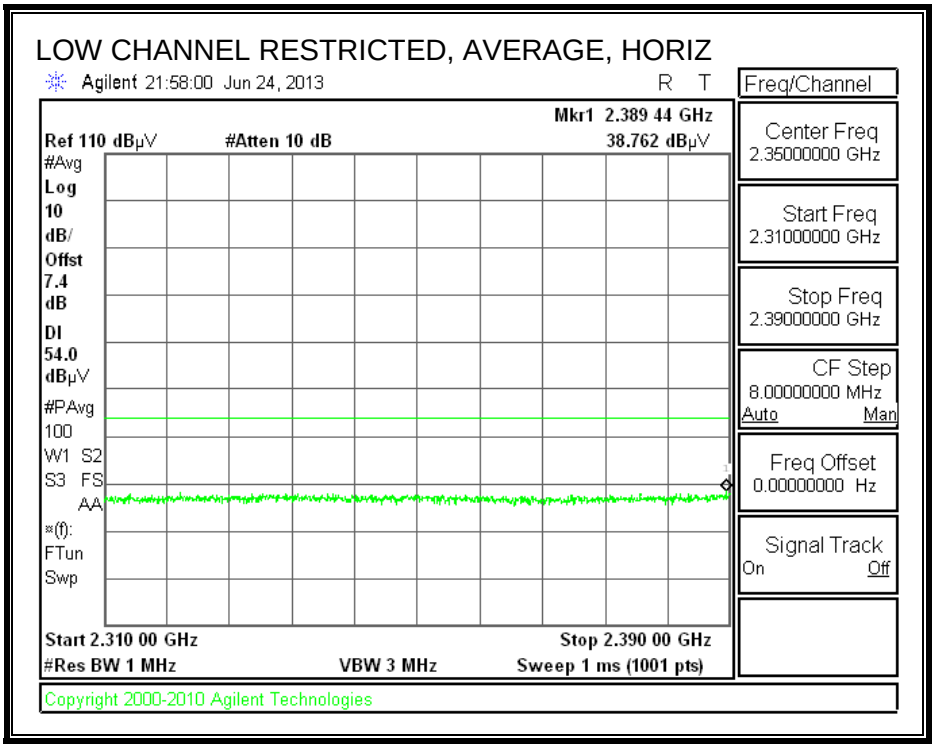
HIGH CHANNEL DATA

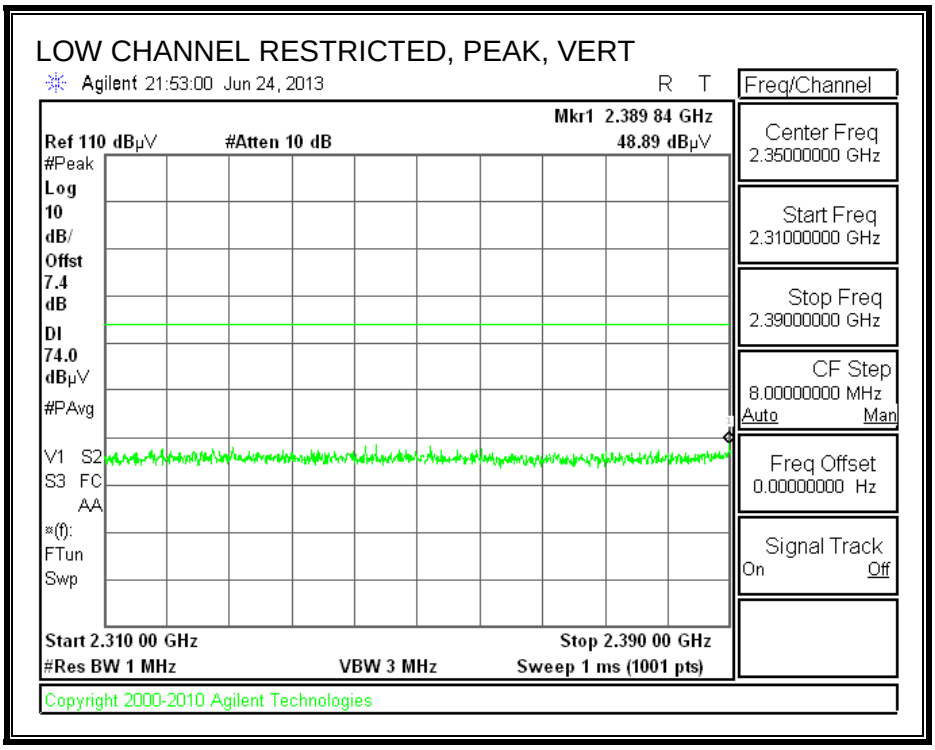
Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.435	48.71	PK	32.4	-35	4.7	0.5	51.31	54	-2.69	74	-22.69	200	H
3.688	38.13	PK	33.7	-34.9	5.9	0.5	43.33	54	-10.67	74	-30.67	200	H
13.802	21.41	PK	39.1	-32.1	12.5	0.5	41.41	54	-12.59	74	-32.59	100	H

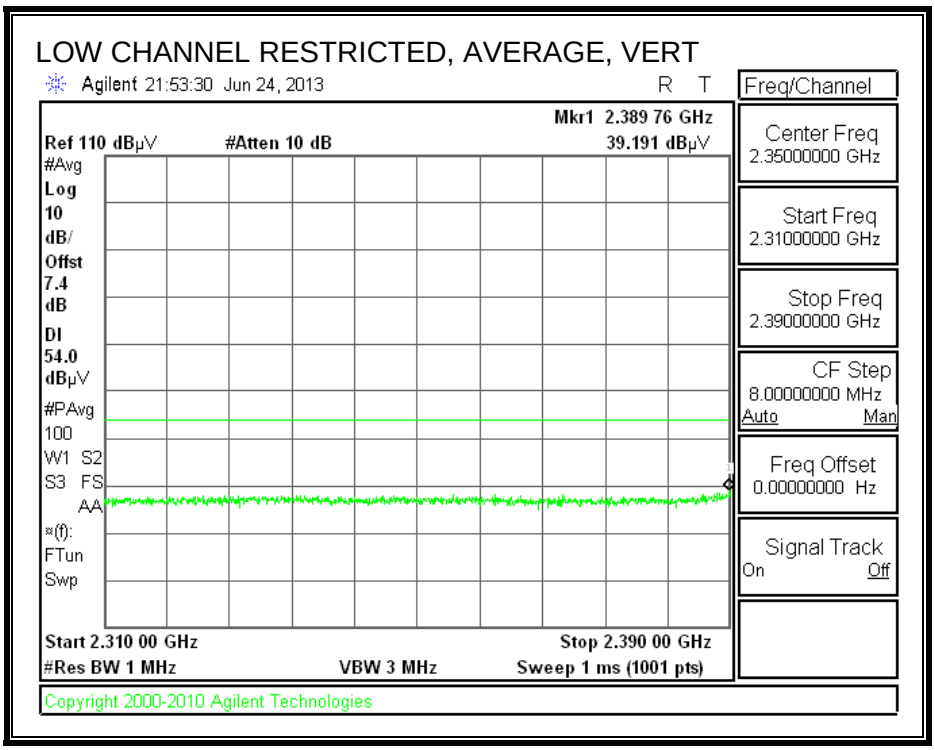
PK - Peak detector

9.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

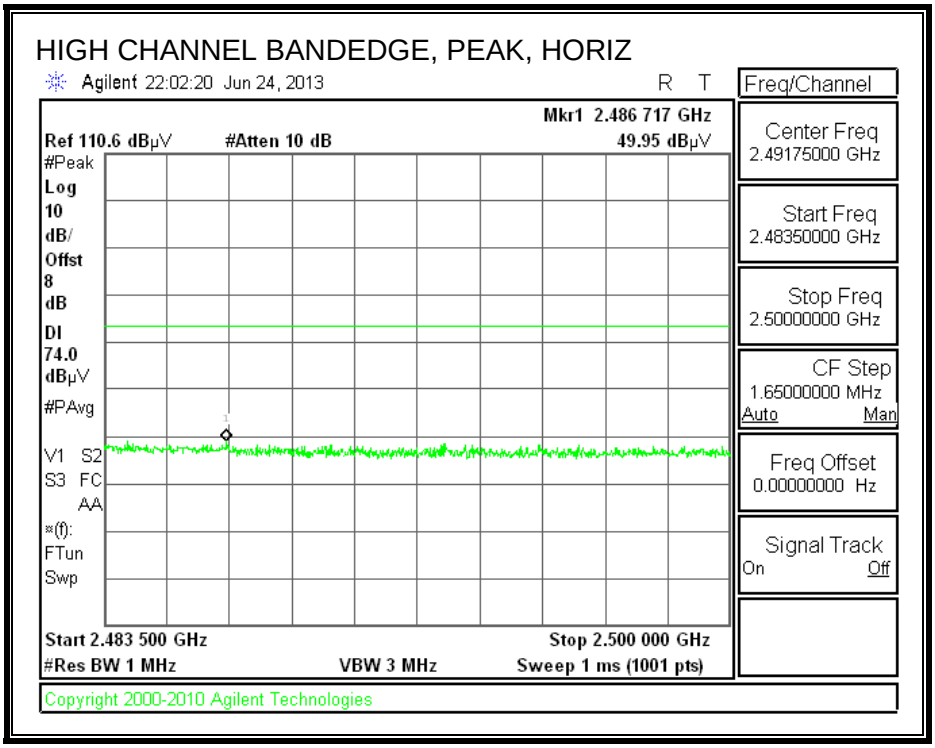


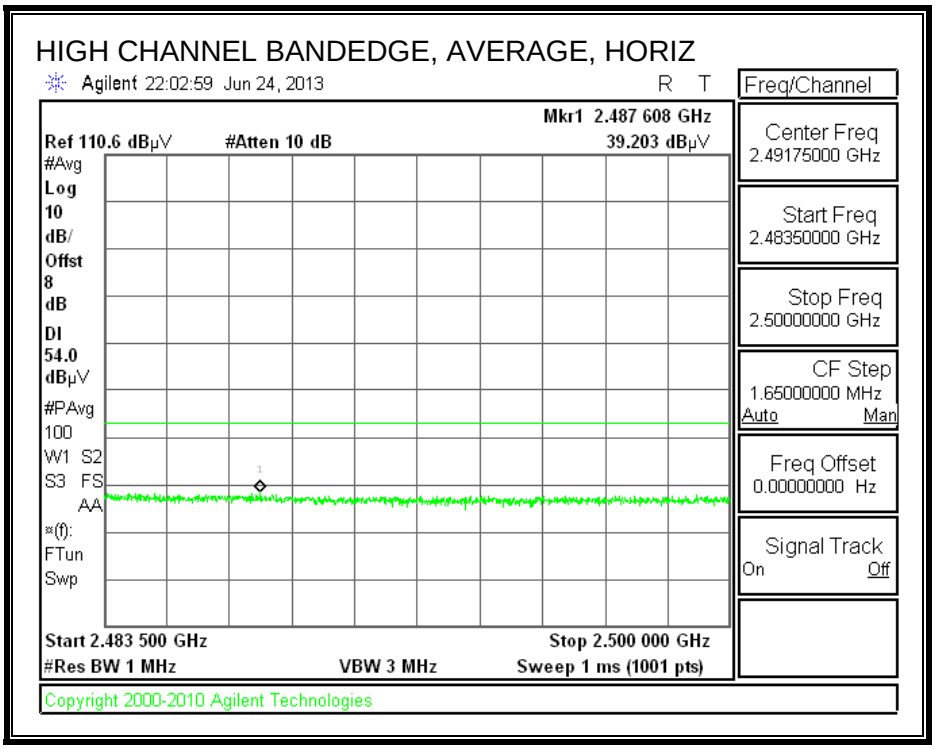




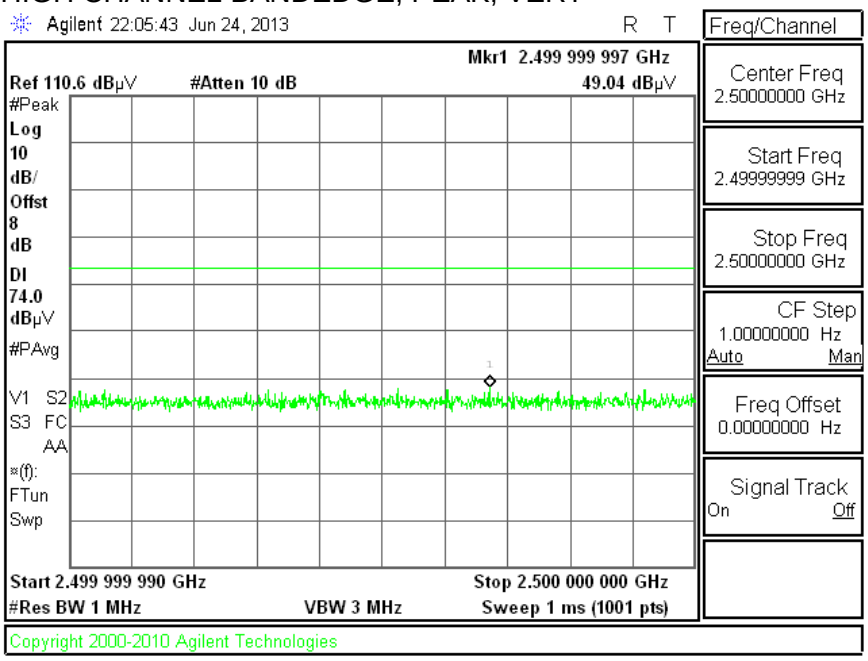


AUTHORIZED BANDEDGE (HIGH CHANNEL)

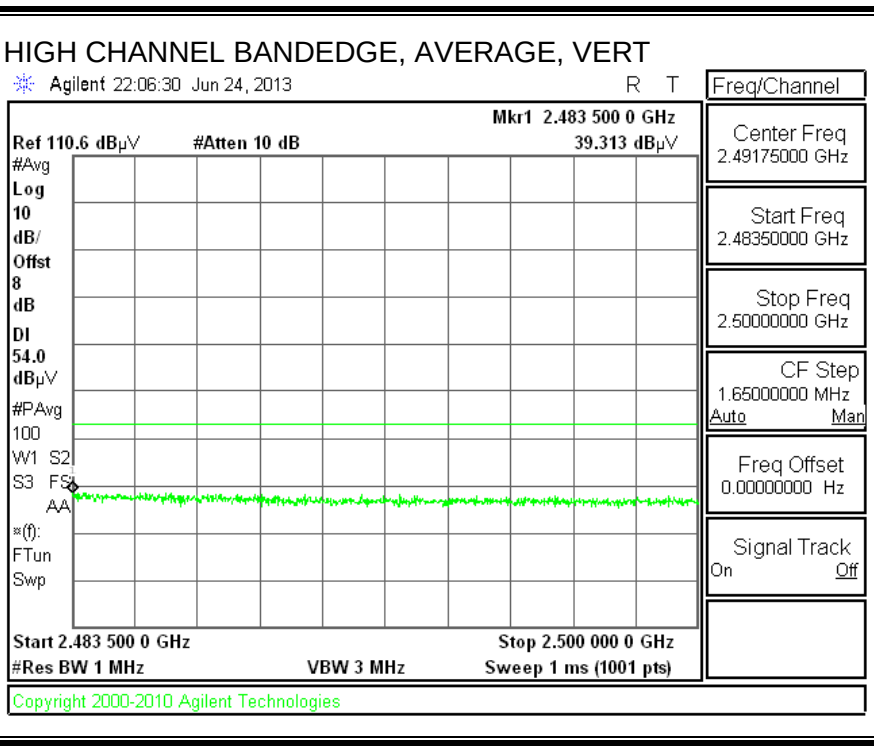




HIGH CHANNEL BANDEDGE, PEAK, VERT

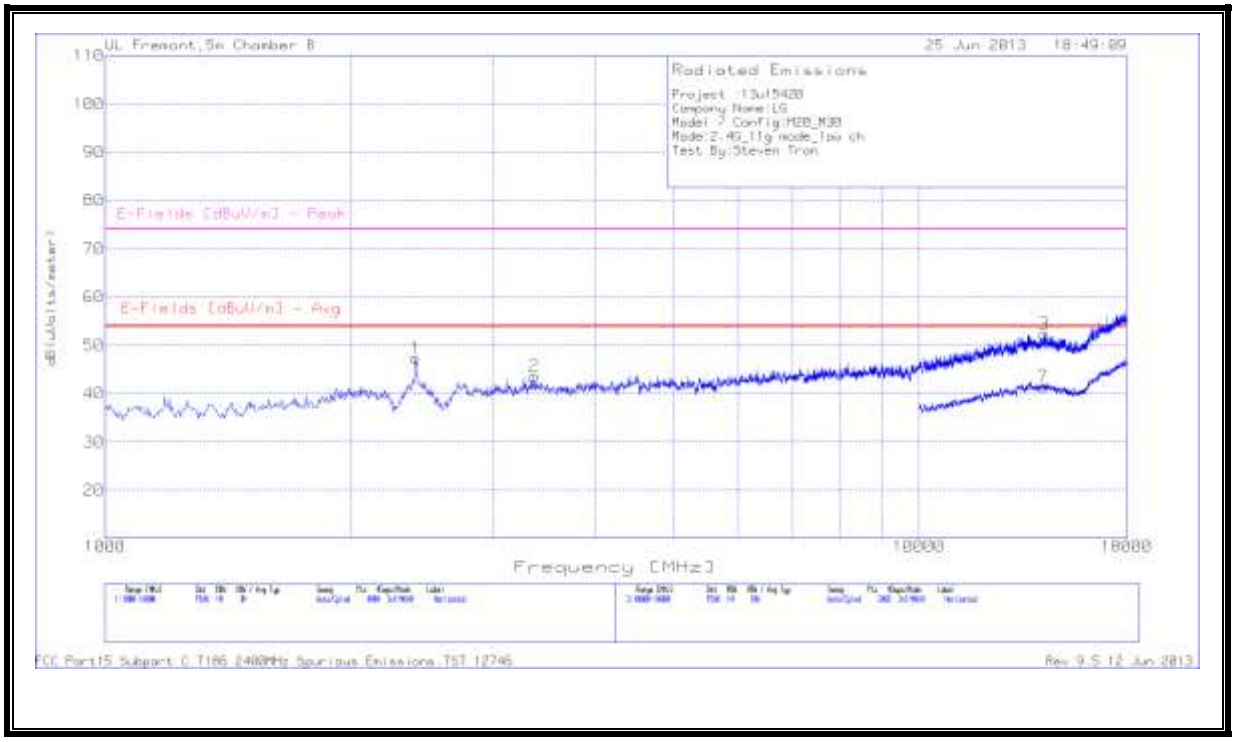


HIGH CHANNEL BANDEDGE, AVERAGE, VERT



HARMONICS AND SPURIOUS EMISSIONS

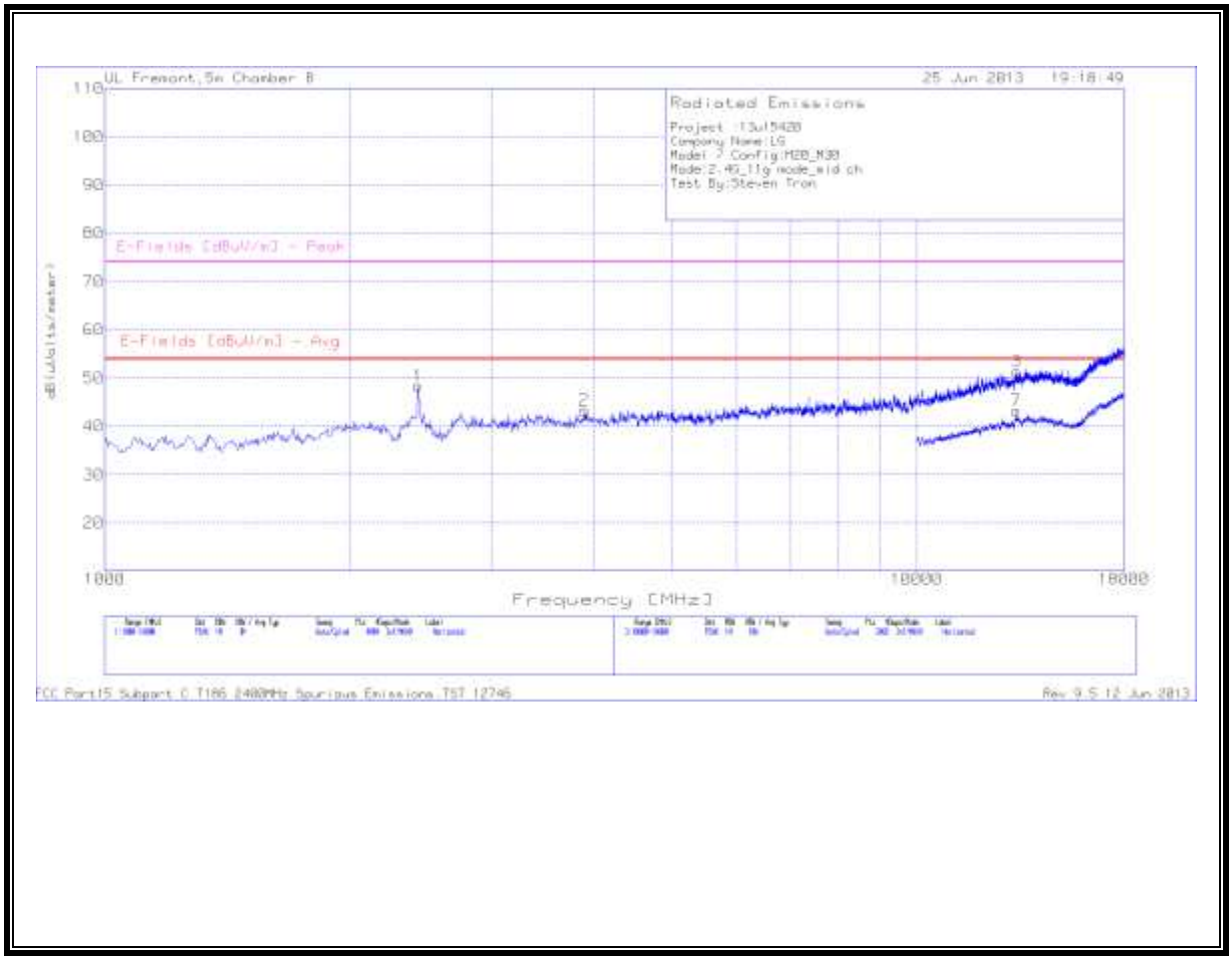
LOW CHANNEL
HORIZONTAL



LOW CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.406	44.97	PK	32.3	-35	4.6	0.5	47.37	54	-6.6	74	-26.63	200	H
3.365	39.28	PK	33.3	-35.1	5.6	0.5	43.58	54	-10.39	74	-30.42	200	H
14.214	20.89	PK	39.5	-32.3	12.8	0.5	41.39	54	-12.58	74	-32.61	100	H

MID CHANNEL
HORIZONTAL



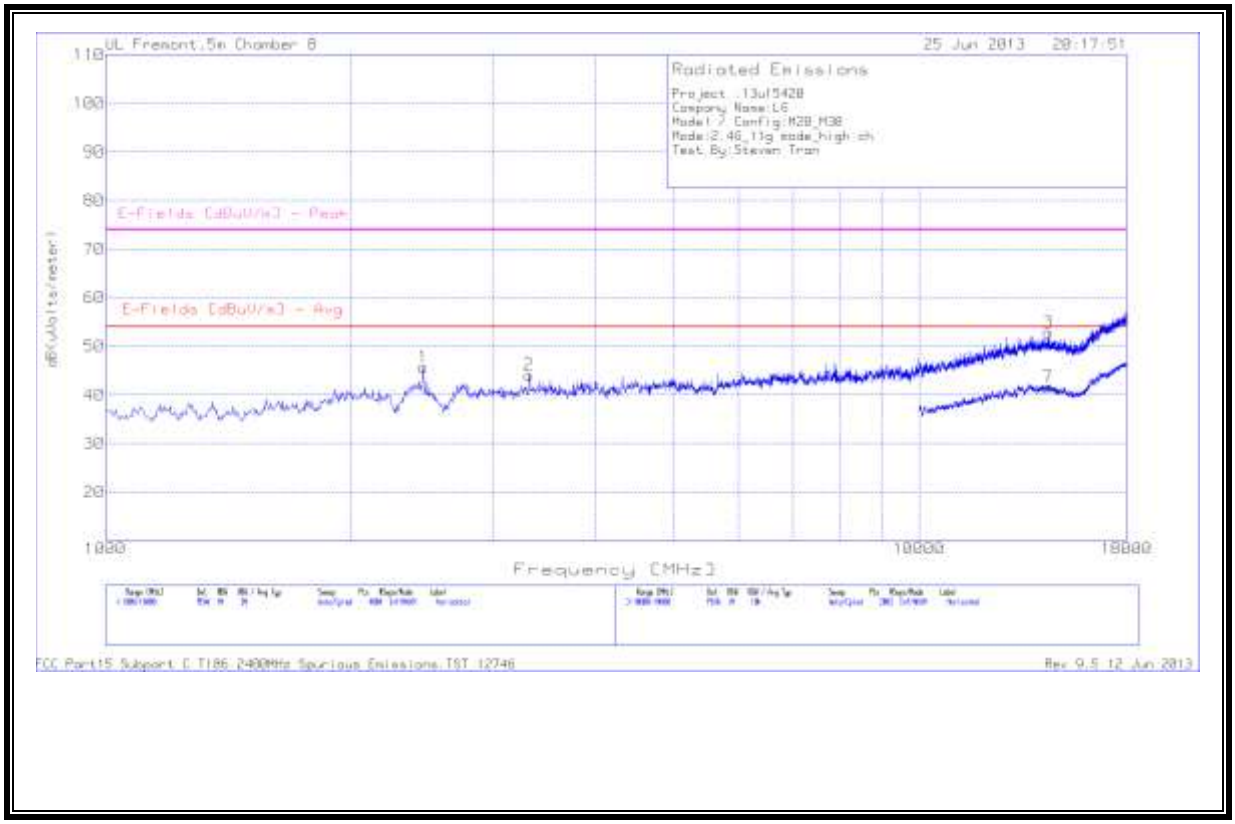
MID CHANNEL DATA

Trace Markers

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts /meter)	E-Fields [dBuV/ m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.431	45.77	PK	32.4	-35	4.7	0.5	48.37	54	-5.6	74	-25.63	200	H
3.896	37.72	PK	33.9	-34.9	6.1	0.5	43.32	54	-10.65	74	-30.68	100	H
13.254	23.33	PK	39.1	-31.9	12.2	0.5	43.23	54	-10.74	74	-30.77	100	H

PK - Peak detector

HIGH CHANNEL
HORIZONTAL

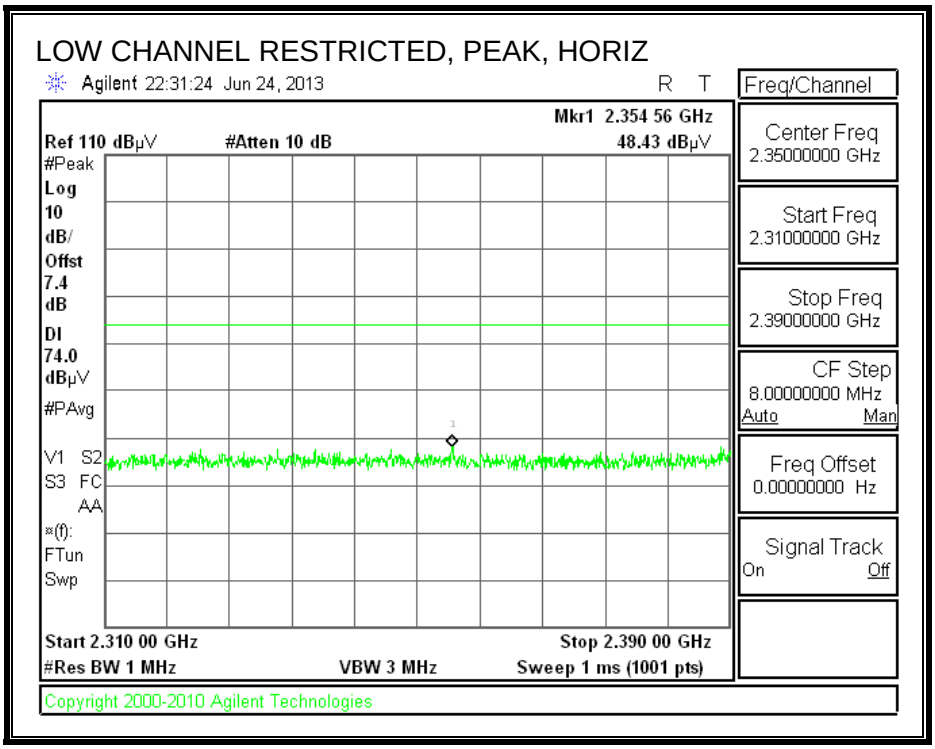


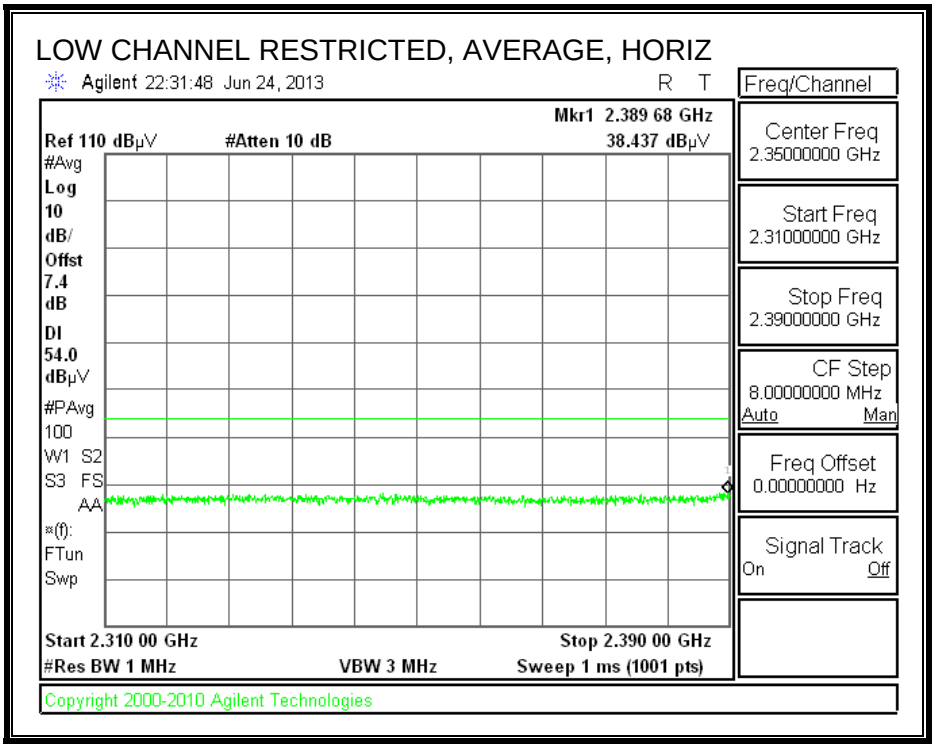
HIGH CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts /meter)	E-Fields [dBuV/ m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.457	43.14	PK	32.4	-35	4.7	0.5	45.74	54	-8.23	74	-28.26	200	H
3.315	39.78	PK	33.3	-35.1	5.6	0.5	44.08	54	-9.89	74	-29.92	100	H
14.406	21.11	PK	39.6	-32.5	12.9	0.5	41.61	54	-12.36	74	-32.39	200	H

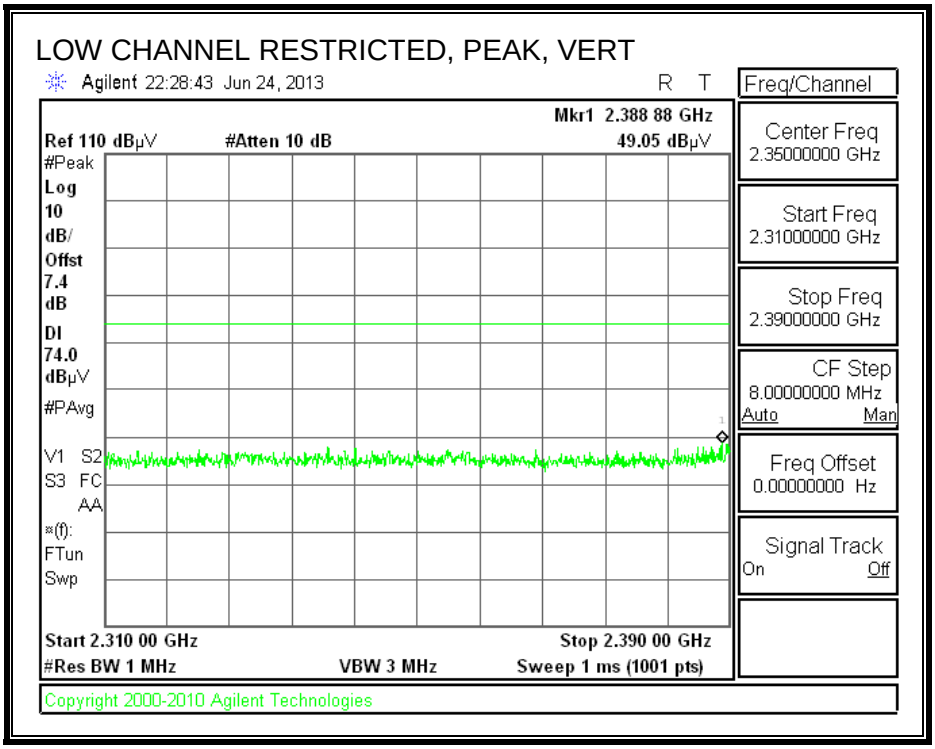
PK - Peak detector

9.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

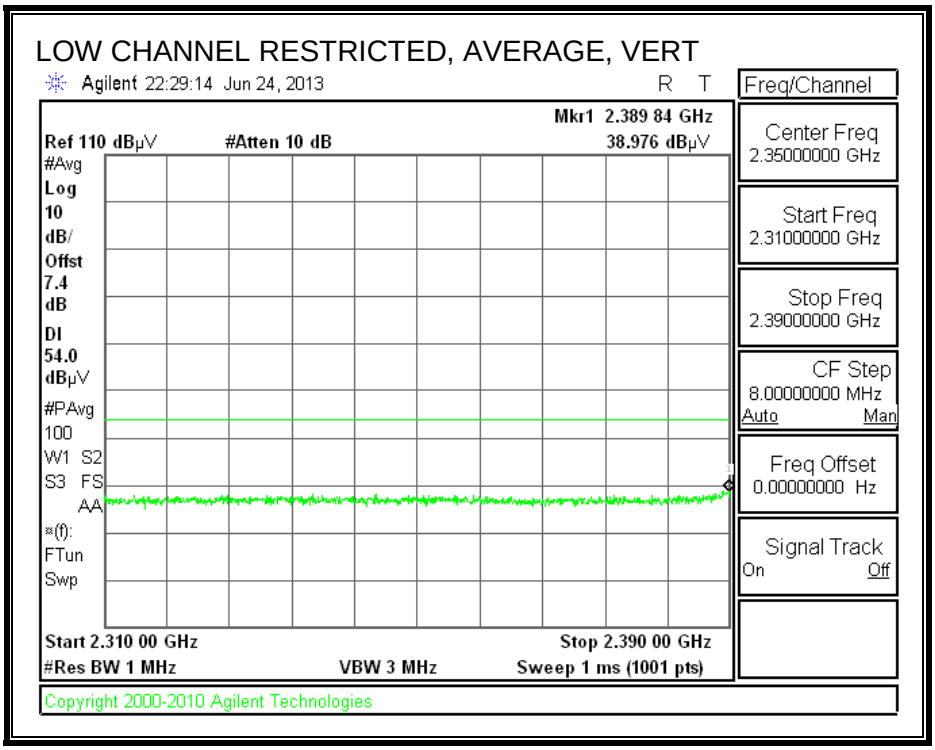




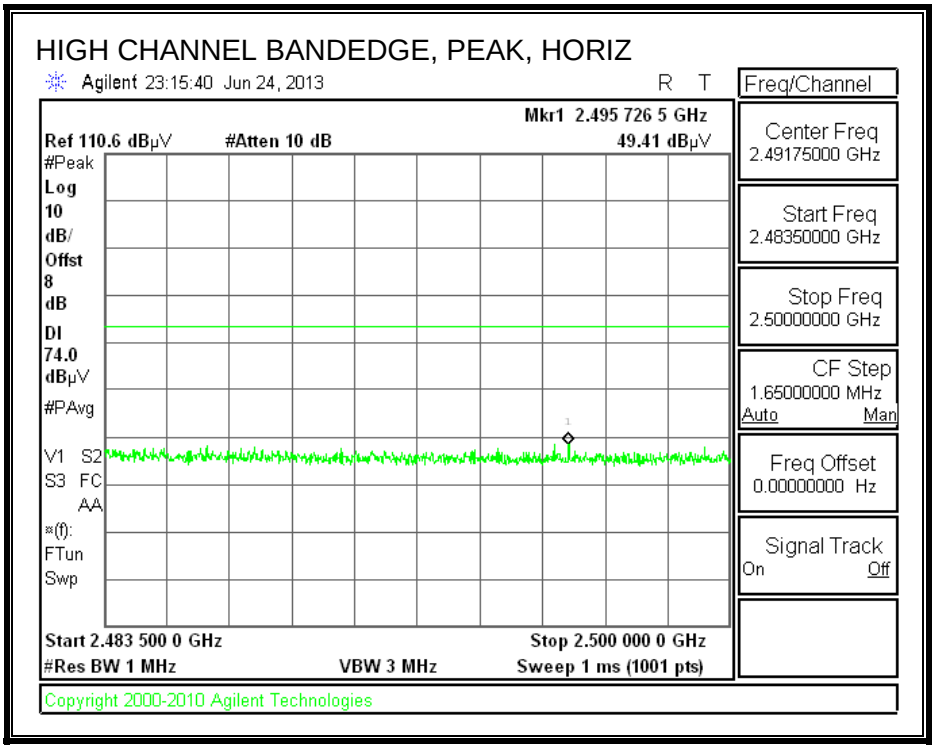
LOW CHANNEL RESTRICTED, PEAK, VERT

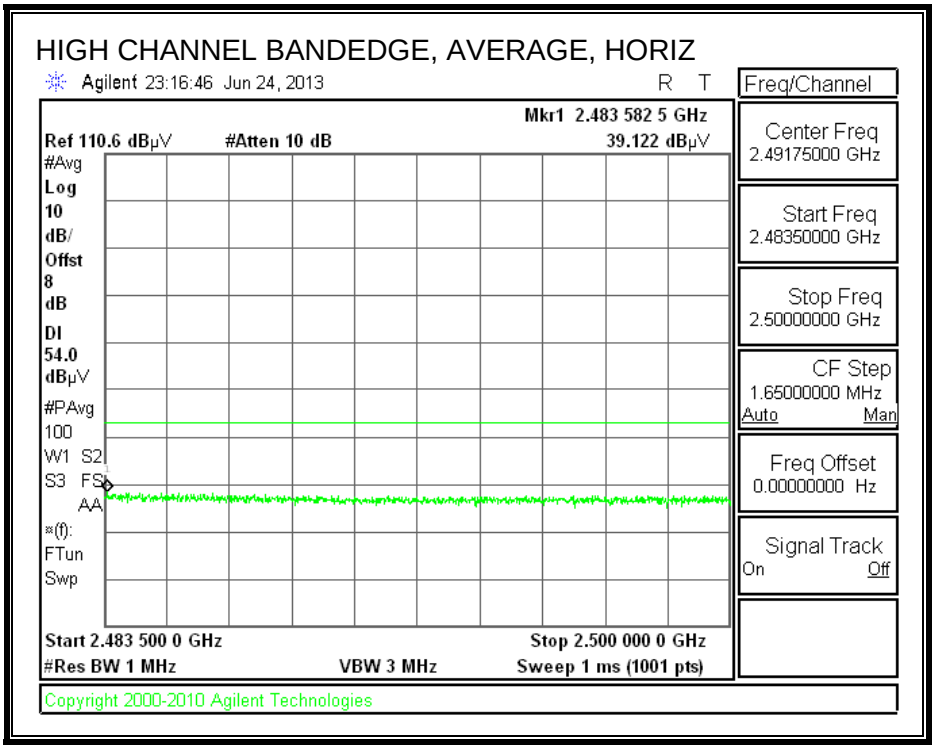


LOW CHANNEL RESTRICTED, AVERAGE, VERT

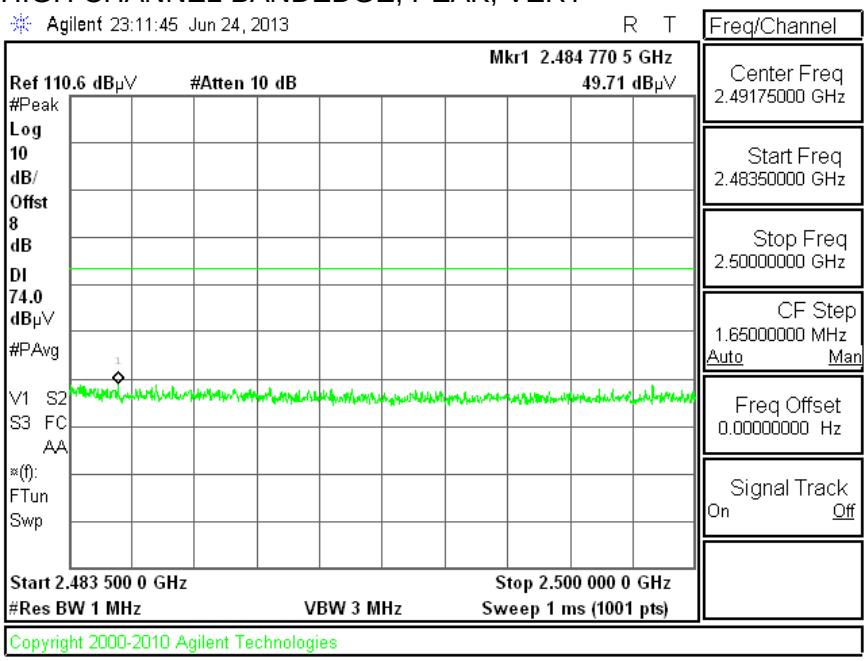


AUTHORIZED BANDEDGE (HIGH CHANNEL)

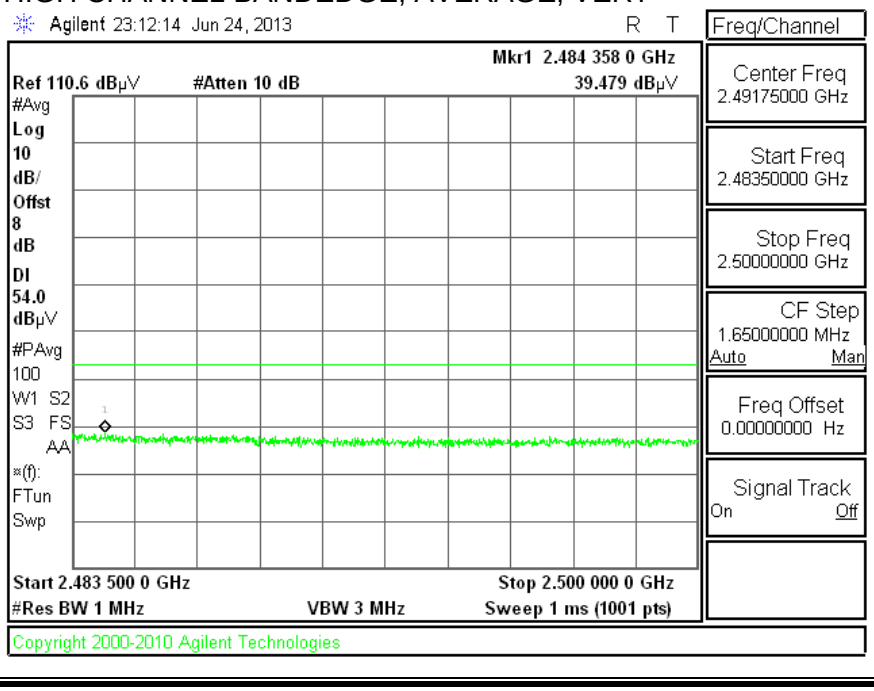




HIGH CHANNEL BANDEDGE, PEAK, VERT

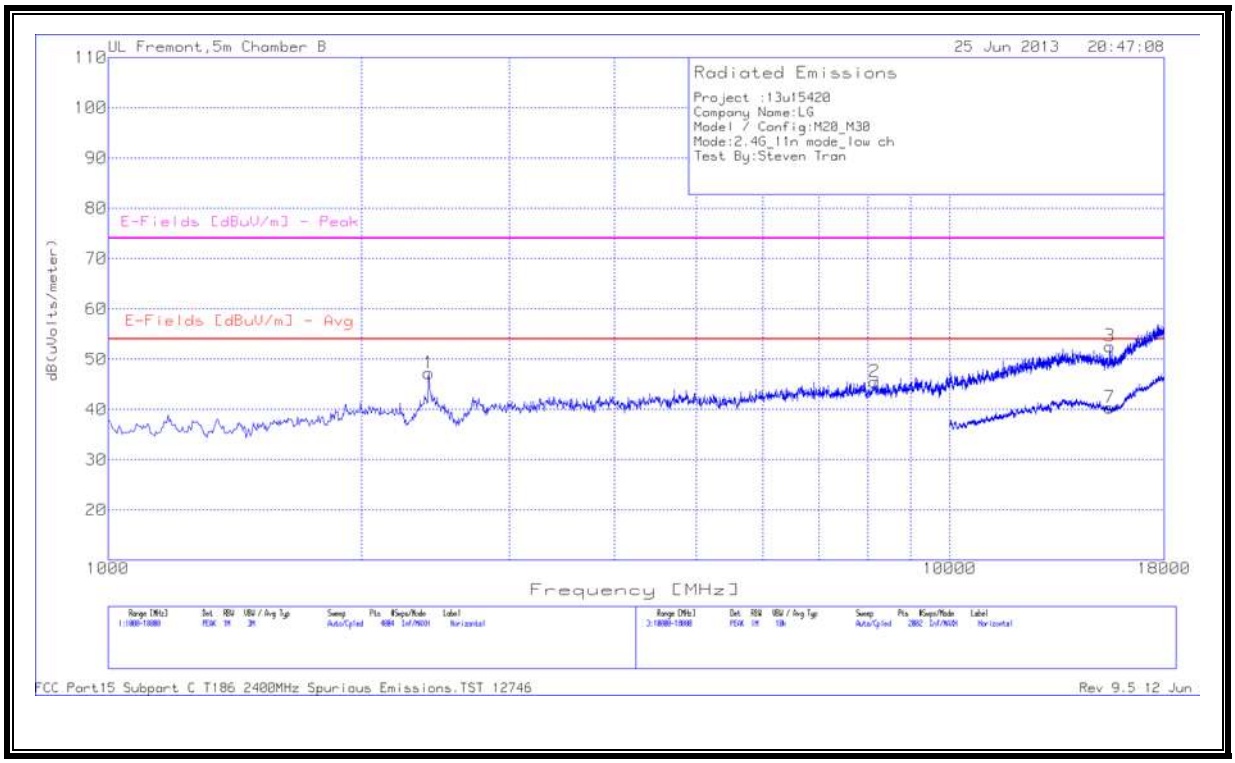


HIGH CHANNEL BANDEDGE, AVERAGE, VERT



HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL
HORIZONTAL

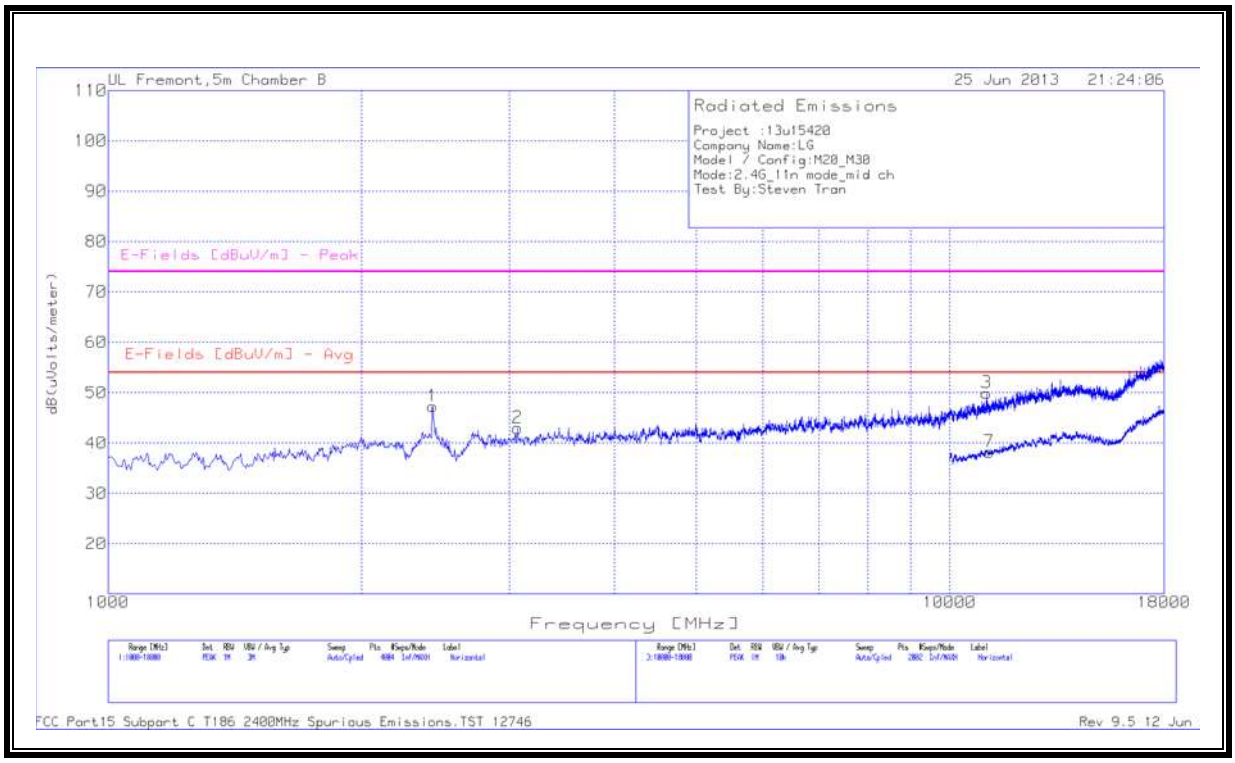


LOW CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Readingd B(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] Peak	Margin (dB)	Heig ht (cm)	Polarity
2.406	44.83	PK	32.3	-35	4.6	0.5	47.23	54	-6.74	74	-26.77	200	H
8.147	34.69	PK	36.1	-35.2	9.4	0.5	45.49	54	-8.48	74	-28.51	100	H
15.501	18.34	PK	40.9	-32.9	13.5	0.5	40.34	54	-13.63	74	-33.66	100	H

PK - Peak detector
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL
HORIZONTAL

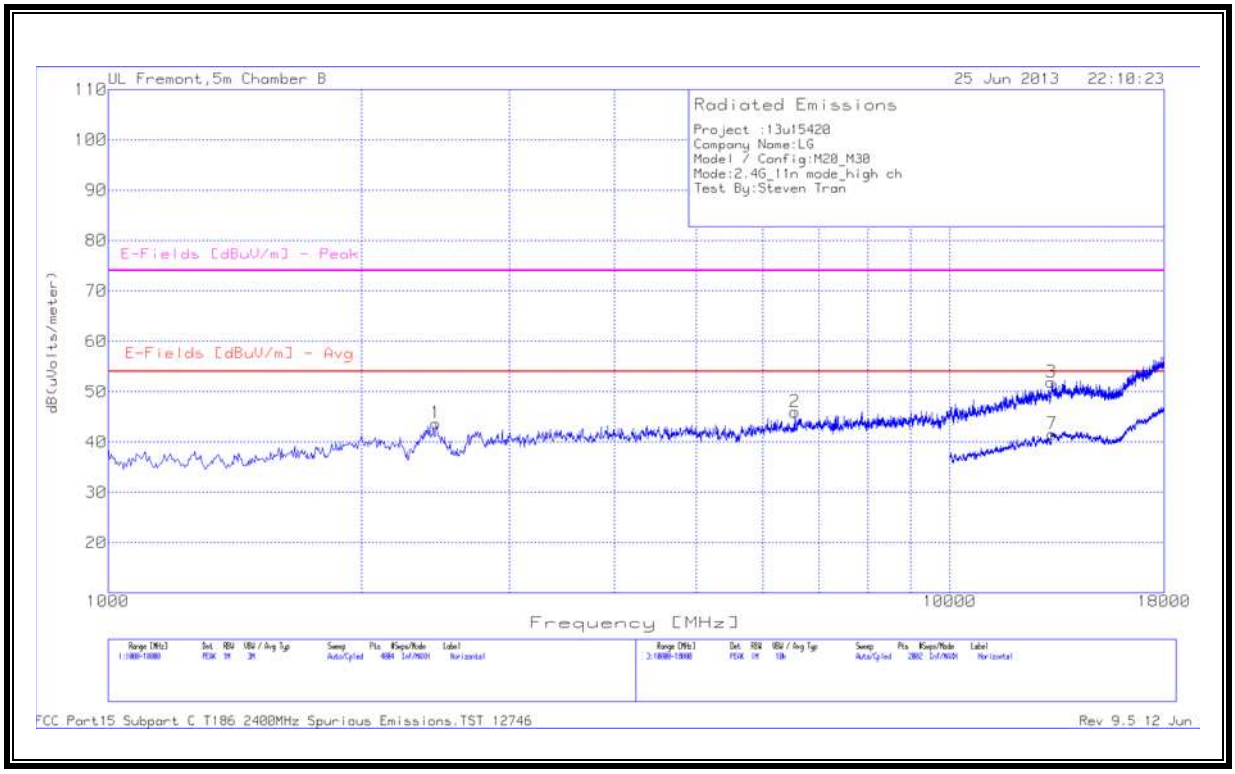


MID CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.431	44.69	PK	32.4	-35	4.7	0.5	47.29	54	-6.68	74	-26.71	200	H
3.068	39.2	PK	33.2	-35.2	5.3	0.5	43	54	-10.97	74	-31	100	H
11.151	22.03	PK	38.4	-33.8	11.1	0.5	38.23	54	-15.74	74	-35.77	100	H

PK - Peak detector
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

HIGH CHANNEL
HORIZONTAL

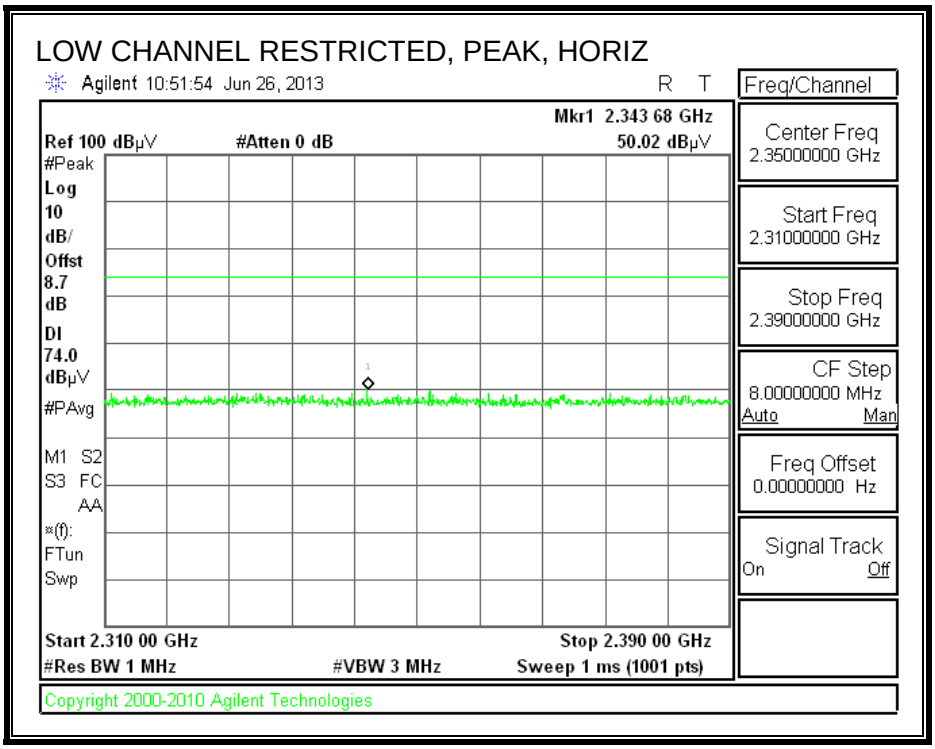


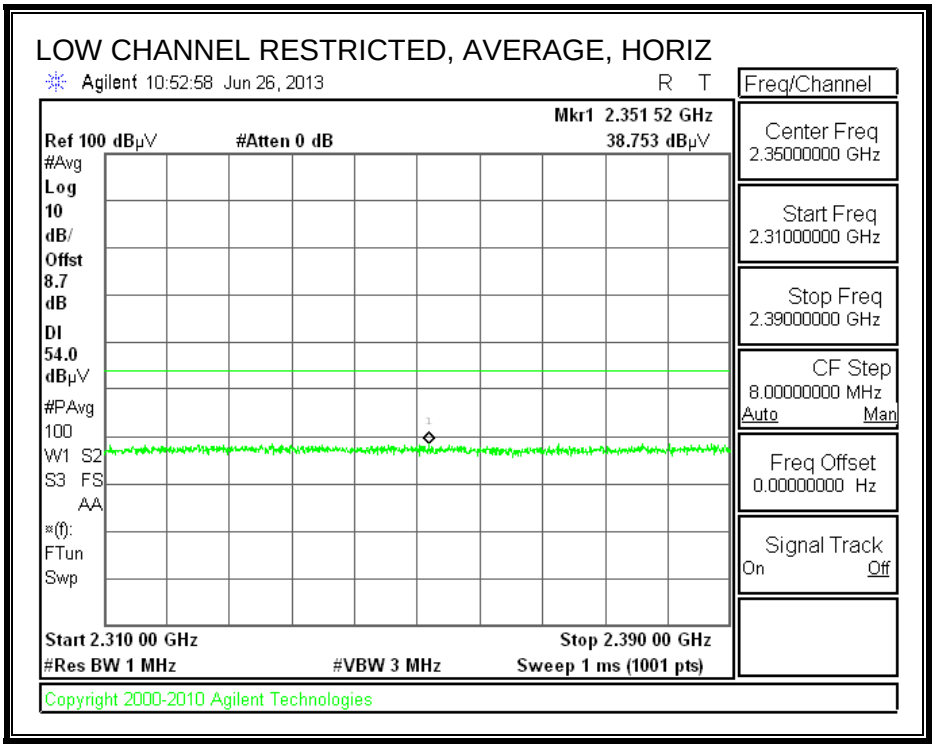
HIGH CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.452	41.1	PK	32.4	-35	4.7	0.5	43.7	53.97	-10.27	74	-30.3	200	H
6.555	36.17	PK	35.9	-35	8.4	0.5	45.97	53.97	-8	74	-28.03	200	H
13.246	21.67	PK	39.1	-31.9	12.2	0.5	41.57	53.97	-12.4	74	-32.43	100	H

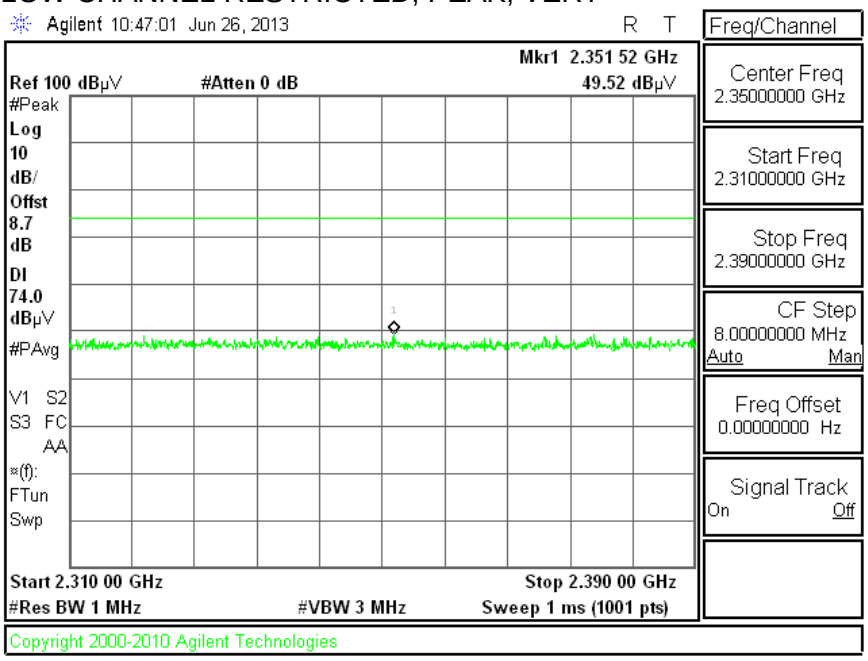
PK - Peak detector

9.2.1. TX ABOVE 1 GHz 802.11ac MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

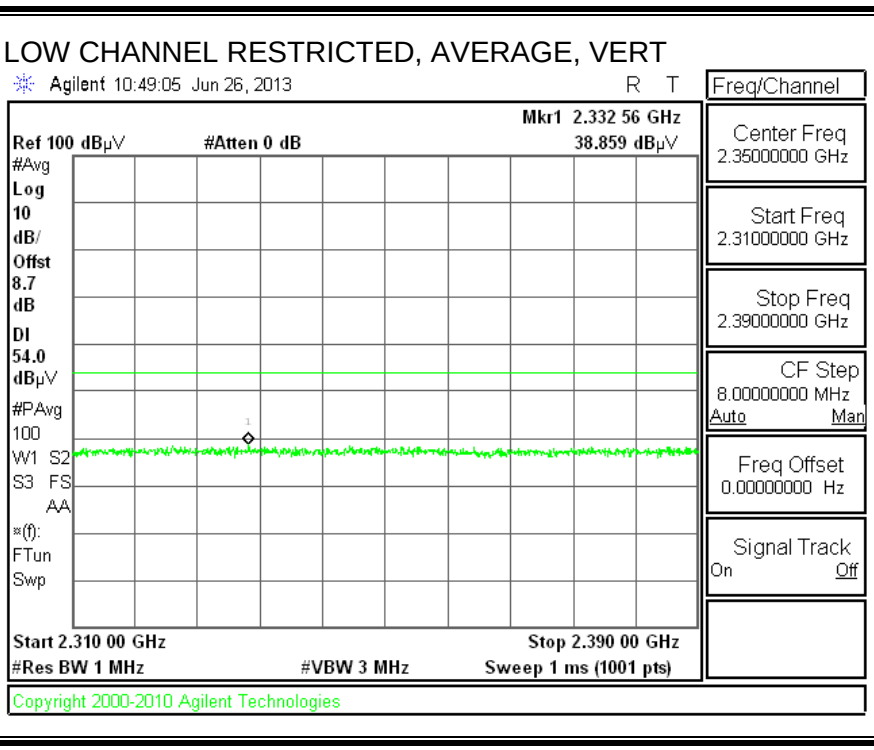




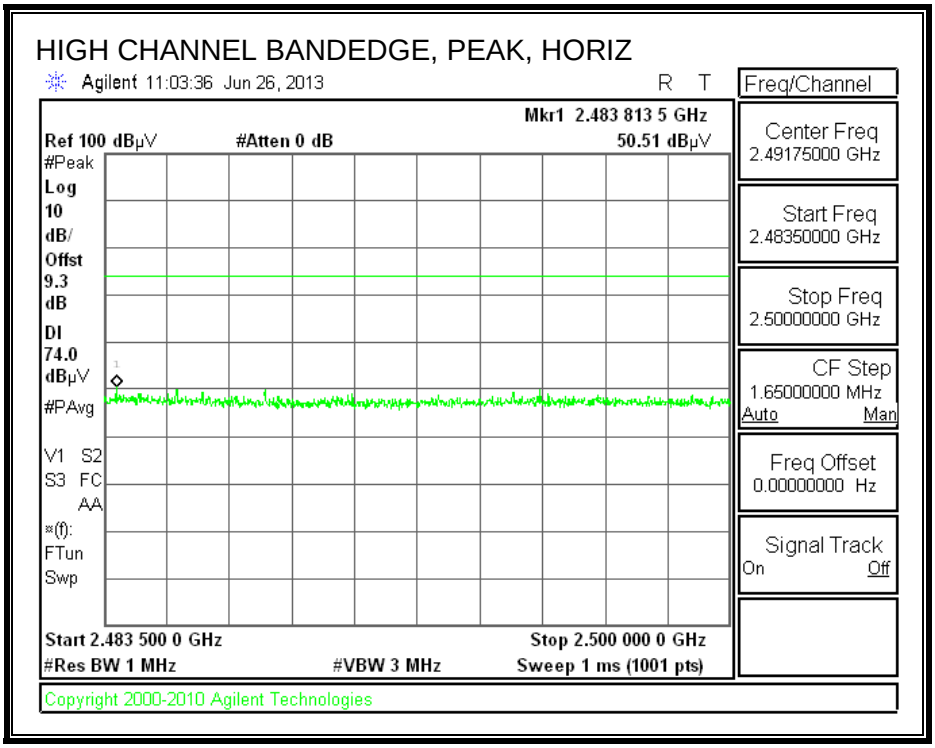
LOW CHANNEL RESTRICTED, PEAK, VERT

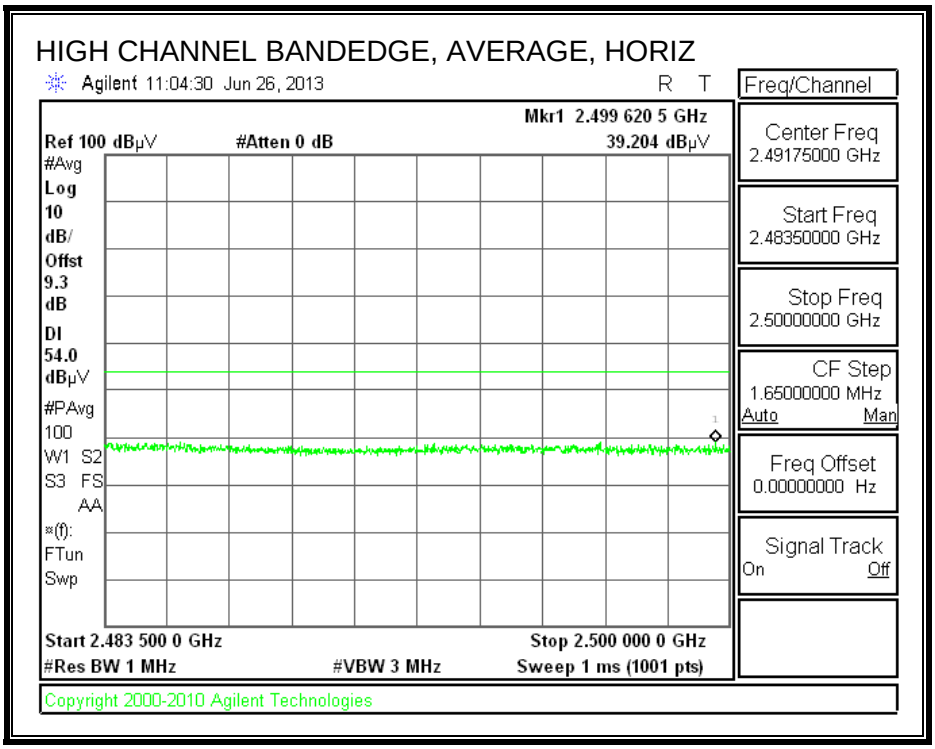


LOW CHANNEL RESTRICTED, AVERAGE, VERT

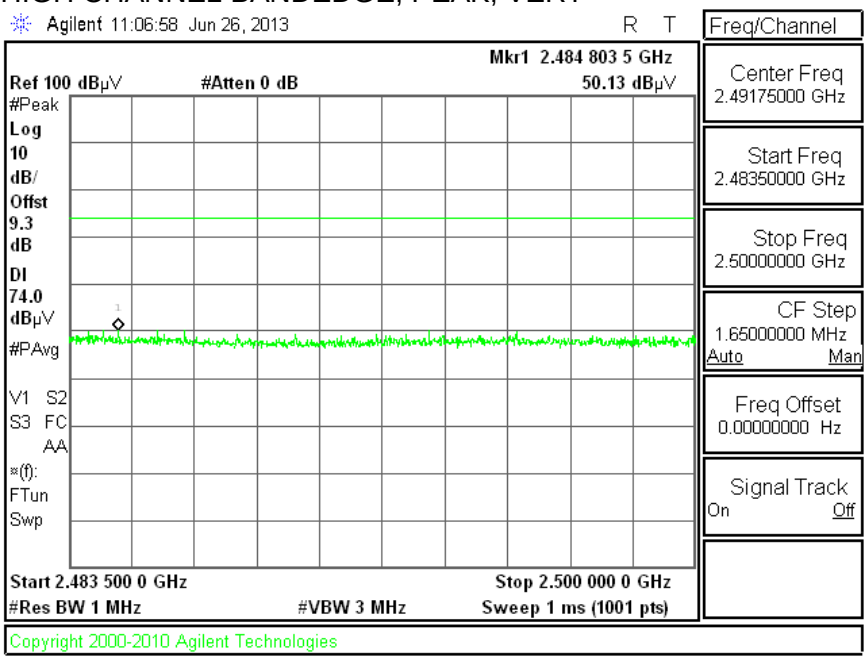


AUTHORIZED BANDEDGE (HIGH CHANNEL)

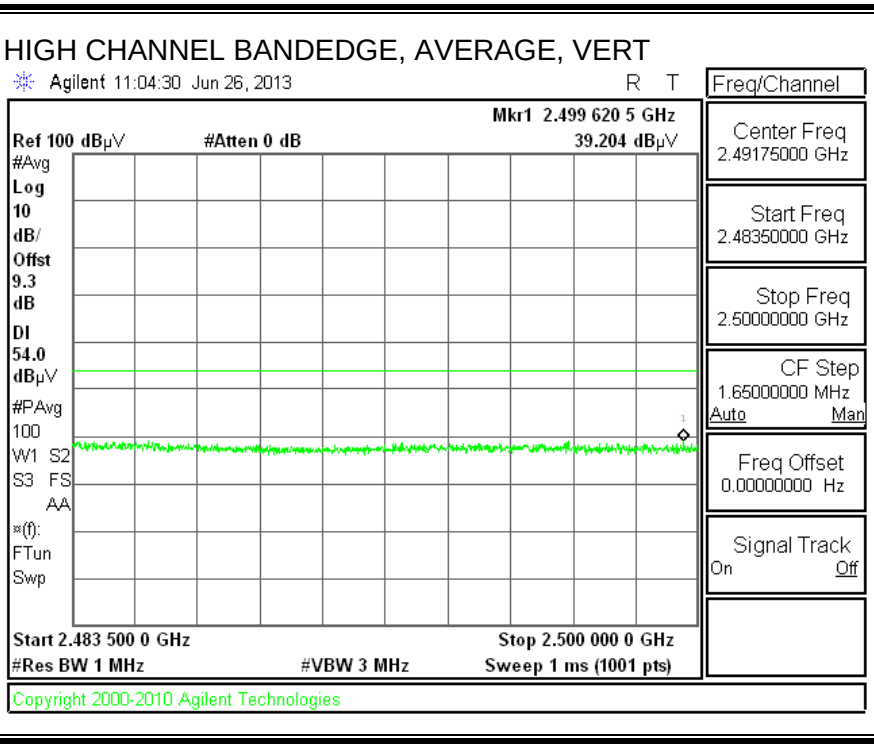




HIGH CHANNEL BANDEDGE, PEAK, VERT

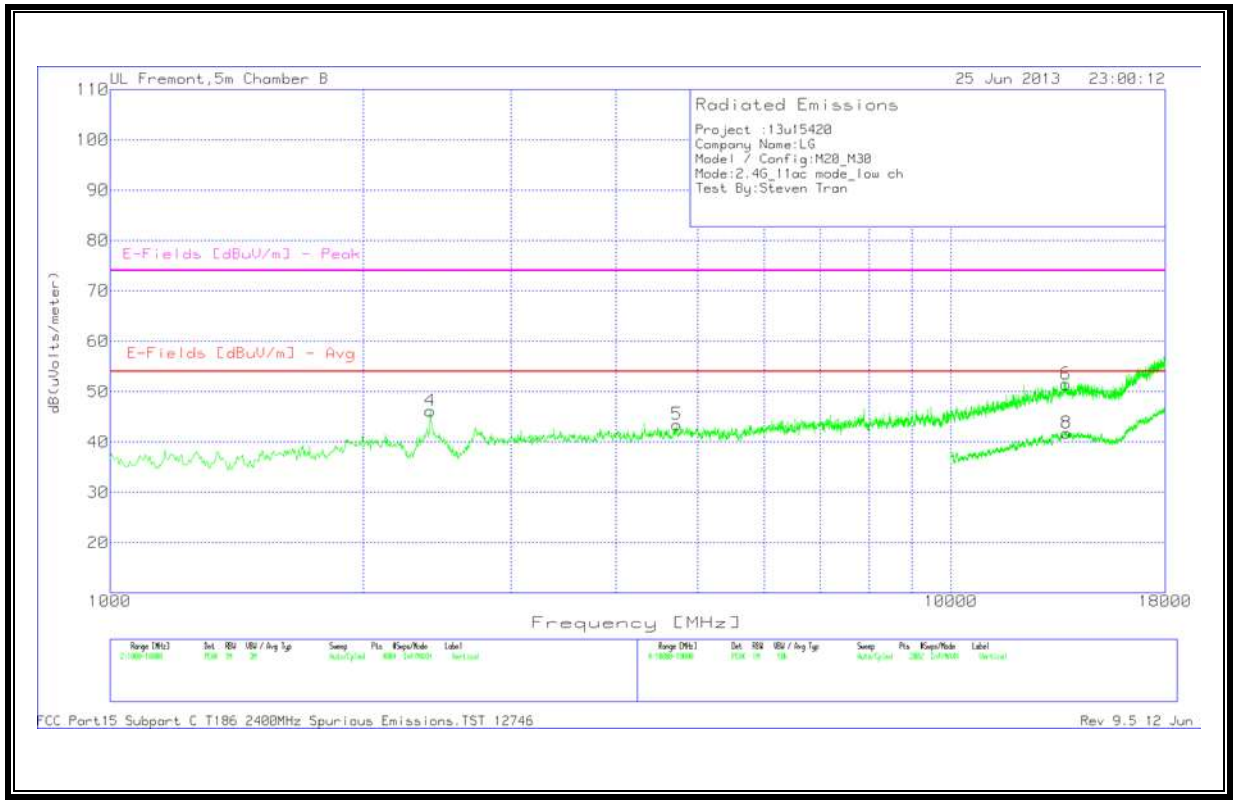


HIGH CHANNEL BANDEDGE, AVERAGE, VERT



HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL
VERTICAL

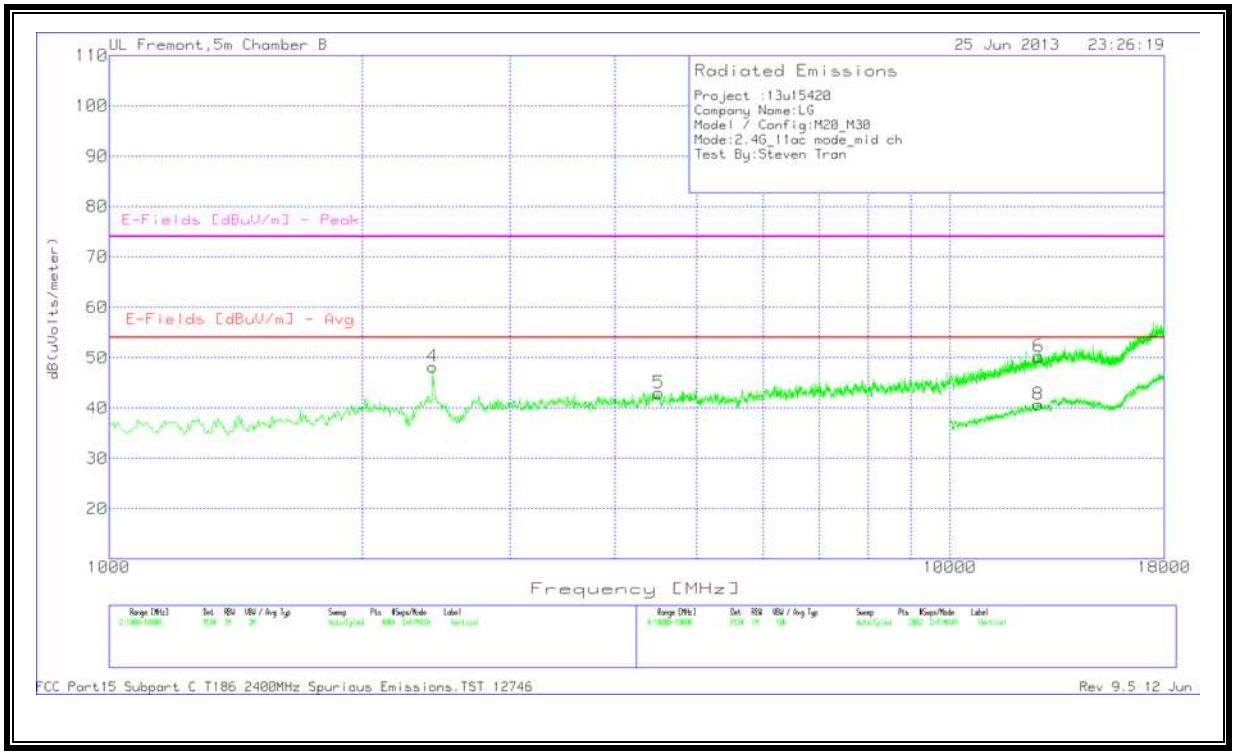


LOW CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.406	43.77	PK	32.3	-35	4.6	0.5	46.17	54	-7.8	74	-27.83	200	V
4.724	36.25	PK	34.7	-34.9	6.9	0.5	43.45	54	-10.52	74	-30.55	200	V
13.738	21.78	PK	39.1	-32.1	12.5	0.5	41.78	54	-12.19	74	-32.22	200	V

PK - Peak detector

MID CHANNEL
VERTICAL

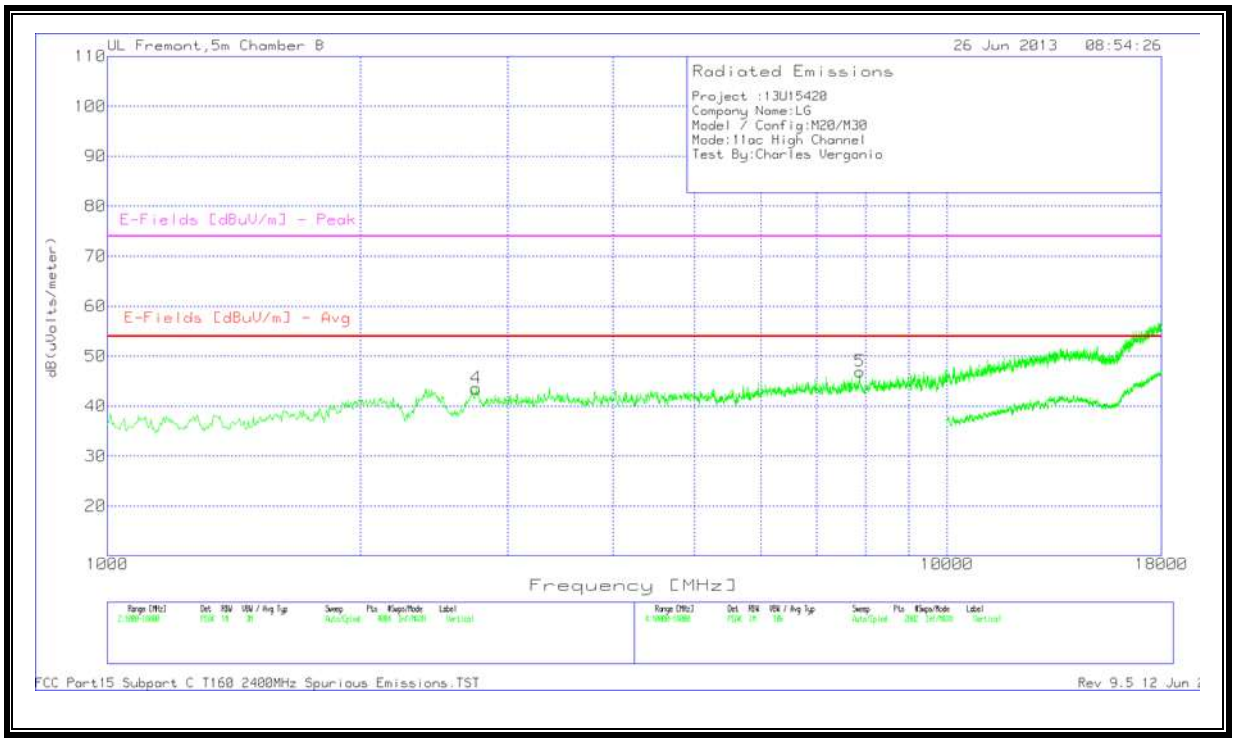


MID CHANNEL DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T186 BRF 2.4-2.5GHz	Corrected Reading dB(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.427	45.6	PK	32.4	-35	4.7	0.5	48.2	53.97	-5.77	74	-25.8	100	V
4.508	36.2	PK	34.5	-34.9	6.7	0.5	43	53.97	-10.97	74	-31	200	V
12.747	21.18	PK	39.2	-32.2	12	0.5	40.68	53.97	-13.29	74	-33.32	100	V

PK - Peak detector

HIGH CHANNEL
VERTICAL



HIGH CHANNEL DATA

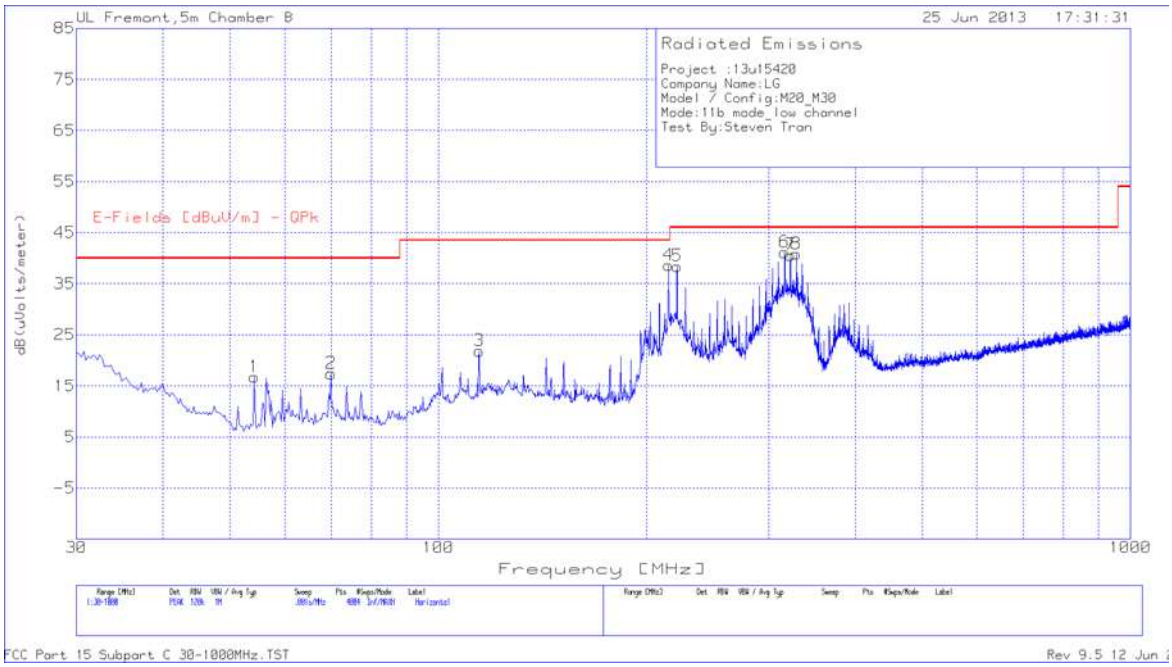
Frequency (GHz)	Meter Reading (dBuV)	Det	T345 Ant Factor [dB/m]	T145 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	Corrected Readingd B(uVolts/ meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height (cm)	Polarity
2.75	39.97	PK	32.8	-35.1	5	0.9	43.57	54	-10.43	74	-30.43	100	Vert
7.876	36.41	PK	36.1	-35.1	9.2	0.3	46.91	54	-7.09	74	-27.09	100	Vert

PK - Peak detector

9.3. WORST-CASE BELOW 1 GHz

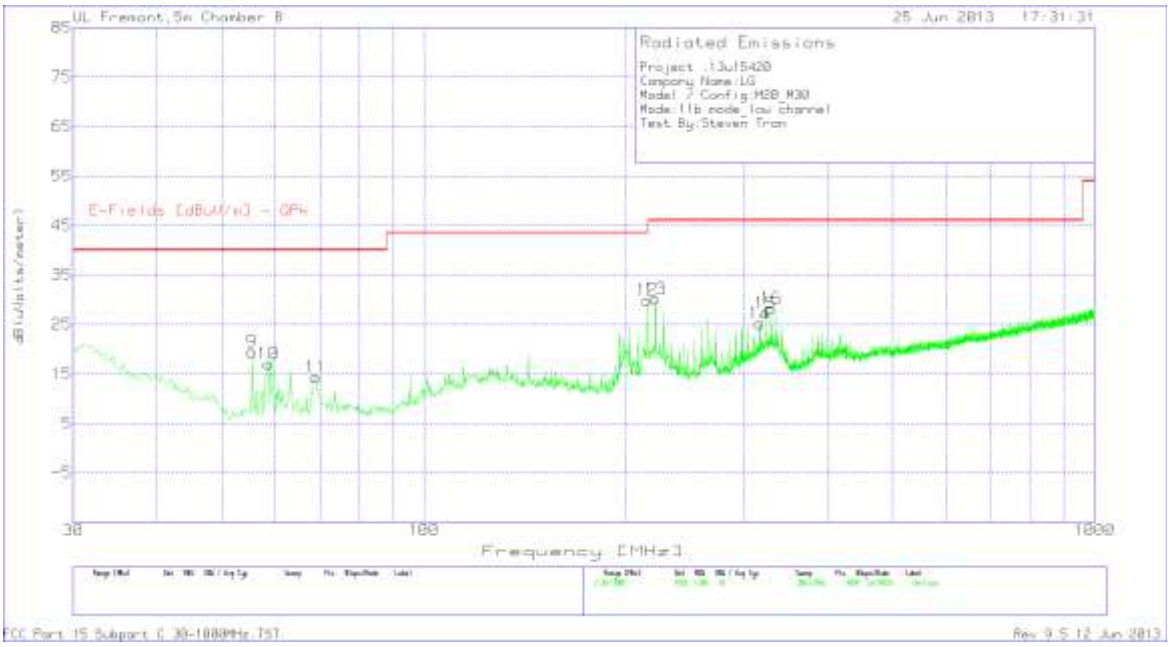
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

VERTICAL PLOT



Below 1G Data

Frequency (MHz)	Meter Reading (dBuV)	Det	T243 Antenna Factor dB/m	T10 preamp/Cable loss [dB]	Corrected Reading dB(uVolts/meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height (cm)	Polarity
54.2318	38.74	PK	6.9	-28.9	16.74	40	-23.26	400	H
69.9825	38.21	PK	7.9	-28.7	17.41	40	-22.59	100	H
114.5691	36.84	PK	13.3	-28.3	21.84	43.52	-21.68	200	H
215.1312	55.22	PK	10.5	-27.1	38.62	43.52	-4.9	100	H
221.4314	54.81	PK	10.7	-27.1	38.41	46.02	-7.61	100	H
316.4202	53.76	PK	13.8	-26.4	41.16	46.02	-4.86	100	H
322.7205	53.13	PK	13.9	-26.4	40.63	46.02	-5.39	100	H
329.0207	53.23	PK	13.9	-26.3	40.83	46.02	-5.19	100	H
55.4434	41.38	PK	6.8	-28.8	19.38	40	-20.62	300	V
58.5936	38.81	PK	7	-28.8	17.01	40	-22.99	400	V
69.0132	35.24	PK	7.8	-28.7	14.34	40	-25.66	200	V
215.1312	46.49	PK	10.5	-27.1	29.89	43.52	-13.63	200	V
221.4314	46.5	PK	10.7	-27.1	30.1	46.02	-15.92	200	V
316.6625	37.78	PK	13.8	-26.4	25.18	46.02	-20.84	300	V
322.9628	39.71	PK	13.9	-26.4	27.21	46.02	-18.81	300	V
329.2631	40.54	PK	13.9	-26.3	28.14	46.02	-17.88	300	V

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.

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

6 WORST EMISSIONS

Project No:13U15420
Client Name:LG
Model/Device:M20_M30
Test Volt/Freq:120V/60Hz
Test By:Steven Tran

Line-L1 .15 - 30MHz

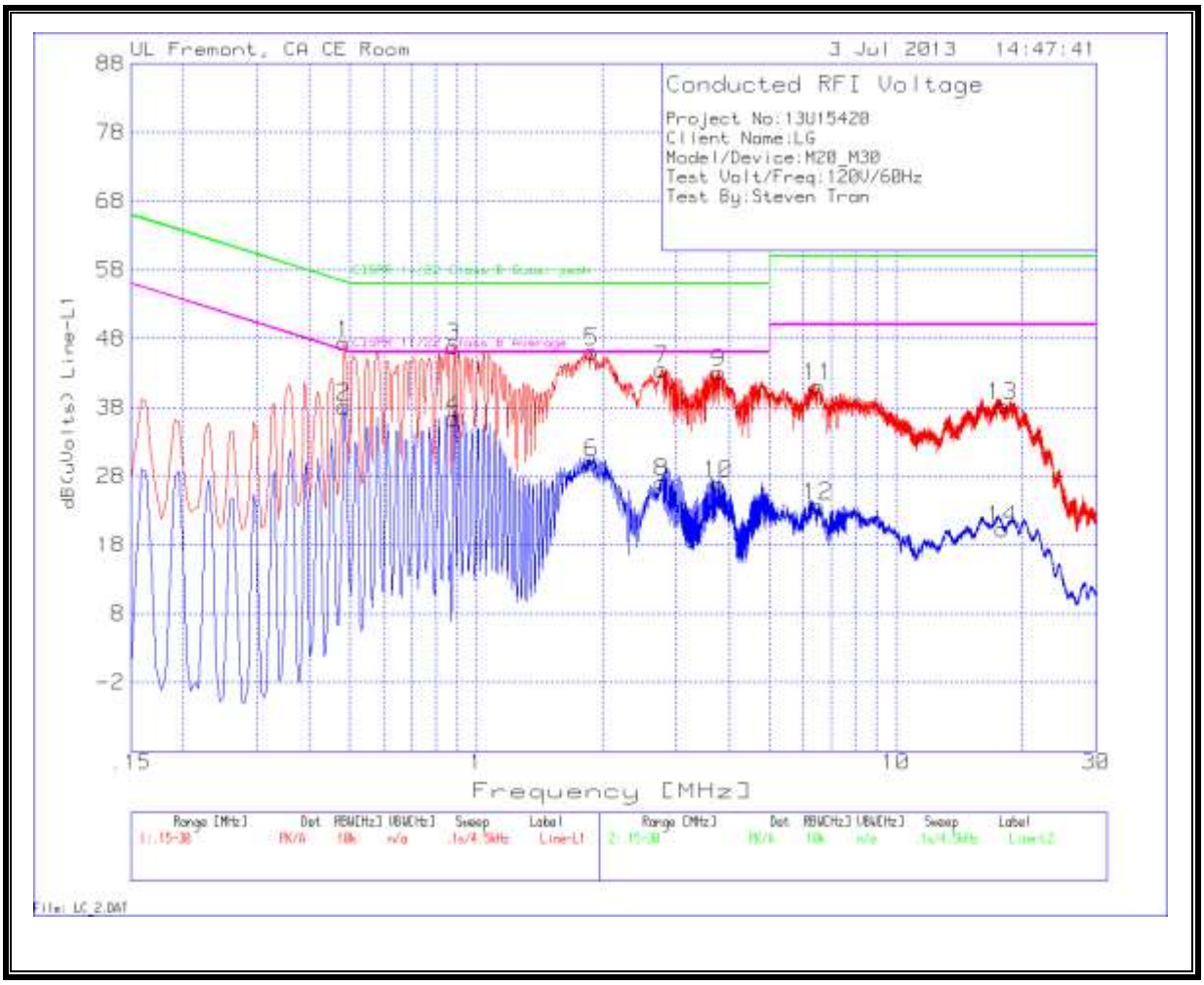
Test Frequency	Meter Reading	Detector	T24 IL L1.TXT (dB)	LC Cables 1&3.TXT (dB)	dB(uVolts)	CISPR 11/22 Class B Quasi-peak	Margin	CISPR 11/22 Class B Average	Margin
0.483	47.22	PK	0.1	0	47.32	56.3	-8.98	-	-
0.483	38.05	Av	0.1	0	38.15	-	-	46.3	-8.15
0.8835	46.8	PK	0.1	0	46.9	56	-9.1	-	-
0.8835	36.27	Av	0.1	0	36.37	-	-	46	-9.63
1.8825	45.88	PK	0.1	0.1	46.08	56	-9.92	-	-
1.8825	29.75	Av	0.1	0.1	29.95	-	-	46	-16.05
2.7735	43.28	PK	0.1	0.1	43.48	56	-12.52	-	-
2.7735	26.9	Av	0.1	0.1	27.1	-	-	46	-18.9
3.7725	42.87	PK	0.1	0.1	43.07	56	-12.93	-	-
3.7725	26.72	Av	0.1	0.1	26.92	-	-	46	-19.08
6.5085	40.84	PK	0.1	0.1	41.04	60	-18.96	-	-
6.5085	23.46	Av	0.1	0.1	23.66	-	-	50	-26.34
17.9745	37.85	PK	0.2	0.2	38.25	60	-21.75	-	-
17.9745	19.96	Av	0.2	0.2	20.36	-	-	50	-29.64

Line-L2 .15 - 30MHz

Test Frequency	Meter Reading	Detector	T24 IL L1.TXT (dB)	LC Cables 1&3.TXT (dB)	dB(uVolts)	CISPR 11/22 Class B Quasi-peak	Margin	CISPR 11/22 Class B Average	Margin
0.5865	43.53	PK	0.1	0	43.63	56	-12.37	-	-
0.5865	22.5	Av	0.1	0	22.6	-	-	46	-23.4
0.8565	43.17	PK	0.1	0	43.27	56	-12.73	-	-
0.8565	23.35	Av	0.1	0	23.45	-	-	46	-22.55
1.8195	39.68	PK	0.1	0.1	39.88	56	-16.12	-	-
1.8195	23.81	Av	0.1	0.1	24.01	-	-	46	-21.99
2.8455	38.33	PK	0.1	0.1	38.53	56	-17.47	-	-
2.8455	20.76	Av	0.1	0.1	20.96	-	-	46	-25.04
4.9155	35.09	PK	0.1	0.1	35.29	56	-20.71	-	-
4.9155	17.4	Av	0.1	0.1	17.6	-	-	46	-28.4
16.7595	35.09	PK	0.2	0.2	35.49	60	-24.51	-	-
16.7595	16.08	Av	0.2	0.2	16.48	-	-	50	-33.52

PK - Peak detector
Av - Average detector

LINE 1 RESULTS



LINE 2 RESULTS