



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

DUAL BAND PHONE WITH BT & WLAN

MODEL NUMBER: LG-P769, LGP769, P769

FCC ID: ZNFP769

REPORT NUMBER: 12U14516

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Prepared for
LG ELECTRONICS USA
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS
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Revision History

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS USA
1000 SYLVAN AVENUE
ENGLEWOOD, NJ 07632, USA

EUT DESCRIPTION: DUAL BAND PHONE WITH BT & WLAN

MODEL: LG-P769, LGP769, P769

SERIAL NUMBER: 205KPYR203330 & 205KPCA203331

DATE TESTED: 2012-07-26 to 2012-08-07

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	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 Underwriters Laboratories Inc. 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:



Bob DeLisi
WiSE Principal Engineer
UL LLC



Mike Antola
WiSE Project Lead
UL LLC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2 and FCC CFR 47 Part 15.

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:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	± 3.3 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.00 dB

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 in the 2.4GHz band and is an 802.11 a/n transceiver in the 5GHz band.

The radio module is manufactured by Broadcom utilizing WLAN chipset: BCM4330X.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	17.70	58.88
2412 - 2462	802.11g	15.90	38.90
2412 - 2462	802.11n	13.90	24.55
5745 - 5825	802.11a	14.00	25.12
5745 - 5825	802.11n	13.00	19.95

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna, with a maximum gain of -0.45 dBi.

5.4. SOFTWARE AND FIRMWARE

The Baseband version was LGP769AT-00-V08_RevC-310-260-JUN-16-2012+0. The Kernel version was 3.0.21. The HW version was Rev.C.

The firmware installed in the EUT during testing was Version 4.0.4.

The EUT software version installed during testing LGP769-V08e.

The test utility software used during testing was WLAN Test and Module Test.

5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power.

In the 2.4GHz band the worse-case data rates for 802.11b/g/n were 1Mbps, 6Mbps and 6.5Mbps, respectively. In the 5GHz band the worse-case data rates for 802.11a/n were 6Mbps and 6.5Mbps, respectively.

It was determined that the x-axis yielded the worse-case orientation.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Travel Adapter	LG Electronics	MCS-02WR	RA250126368	N/A
Headphones	LG Electronics	N/A	N/A	N/A

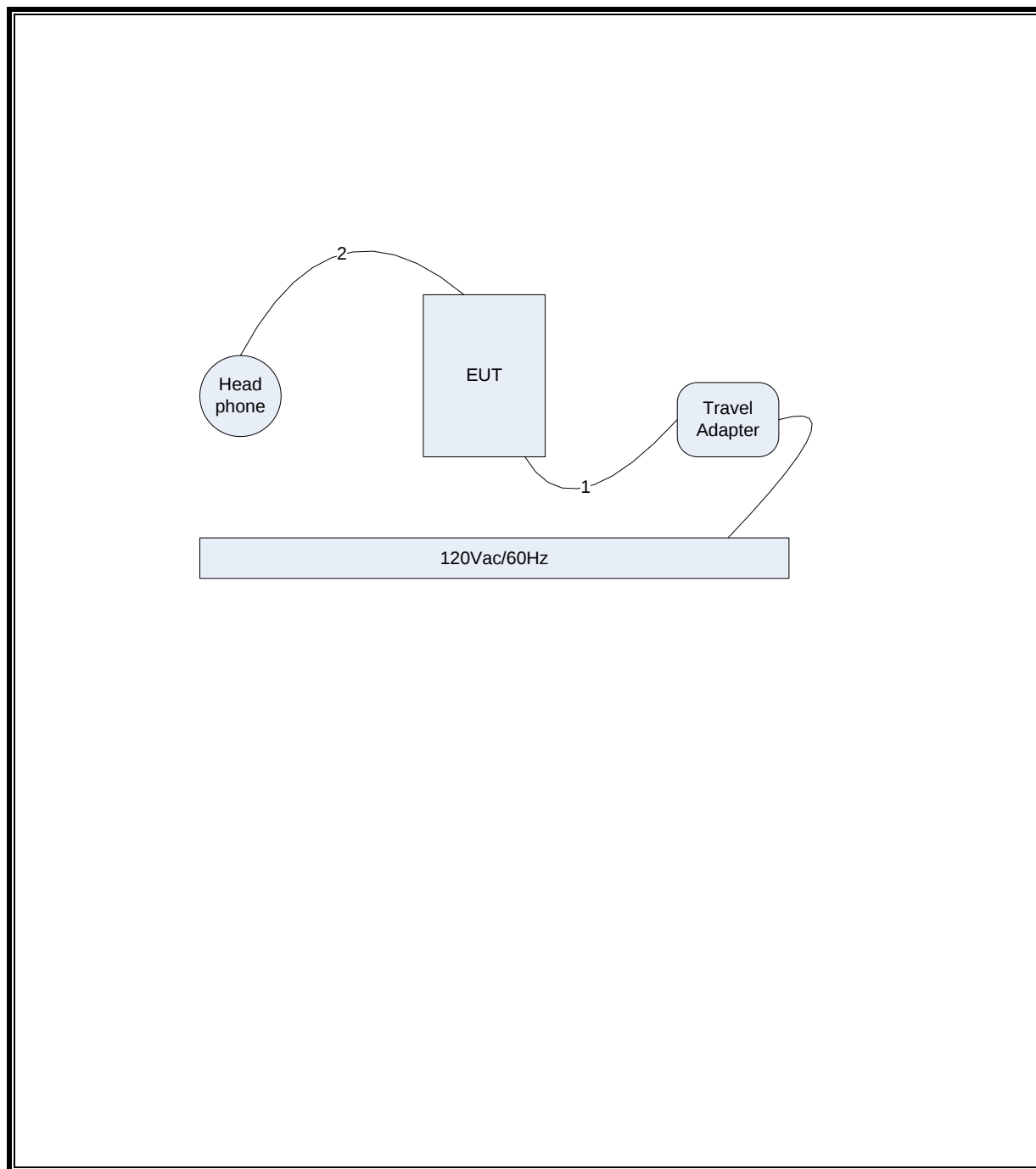
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	USB	1	USB	Shielded	<3M	
2	Headphone	1	Audio	Unshielded	<3M	

TEST SETUP

The EUT is a stand-alone device.

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	ESIB26	ME5B-081	2012-01-30	2013-01-30
Bicon Antenna	Schaffner	VBA6106A	54	2012-04-10	2013-04-10
Log-P Antenna	Schaffner	UPA6109	44067	2012-05-16	2013-05-16
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
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-12-07	2012-12-07
Multimeter	Fluke	83III	ME5B-305	2012-02-01	2013-02-28
Above 1GHz (Band Optimized System)					
EMI Receiver	Rohde & Schwarz	ESIB40	34968	2012-03-06	2013-03-06
Horn Antenna (1-2 GHz)	ETS	3161-01	51442	2008-03-28	See * below
Horn Antenna (2-4 GHz)	ETS	3161-02	48107	2007-09-27	See * below
Horn Antenna (4-8 GHz)	ETS	3161-03	48106	2007-09-27	See * below
Horn Antenna (8-12 GHz)	ETS	3160-07	8933	2008-11-24	See * below
Horn Antenna (12-18 GHz)	ETS	3160-08	8932	2007-09-27	See * below
Horn Antenna (18-26.5 GHz)	ETS	3160-09	8947	2007-09-26	See * below
Horn Antenna (26.5-40 GHz)	ETS	3160-10	73004	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	2010-12-07	2012-12-07
Multimeter	Fluke	83III	ME5B-305	2012-02-01	2013-02-28
* - 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.					

Conducted Antenna Port Tests					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
Spectrum Analyzer	Agilent	E4446A	72822	2012-01-31	2013-02-28
Power Sensor	Rohde & Schwarz	NRP-Z81	73137	2011-09-27	2012-09-27
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43733	2012-03-13	2014-03-13
Multimeter	Fluke	83III	ME5B-305	2012-02-01	2013-02-28

Conducted Emissions - Mains					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
Conducted Emissions – GP 1					
EMI Receiver	Rohde & Schwarz	ESCI7	75141	2012-01-05	2013-01-05
LISN	Solar	9252-50-R-24-BNC	ME5A-636	2012-02-03	2013-02-28
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	2012-03-13	2014-03-13
Multimeter	Fluke	83III	ME5B-305	2012-02-01	2013-02-28

7. ANTENNA PORT TEST RESULTS

7.1. 802.11b MODE IN THE 2.4 GHz BAND

7.1.1. 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.

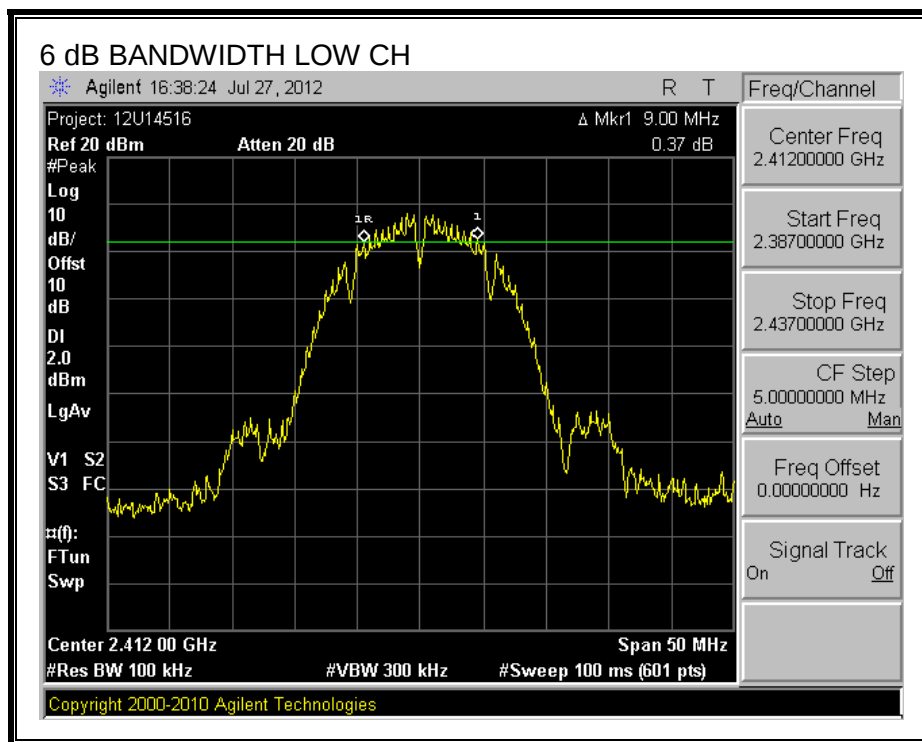
TEST PROCEDURE

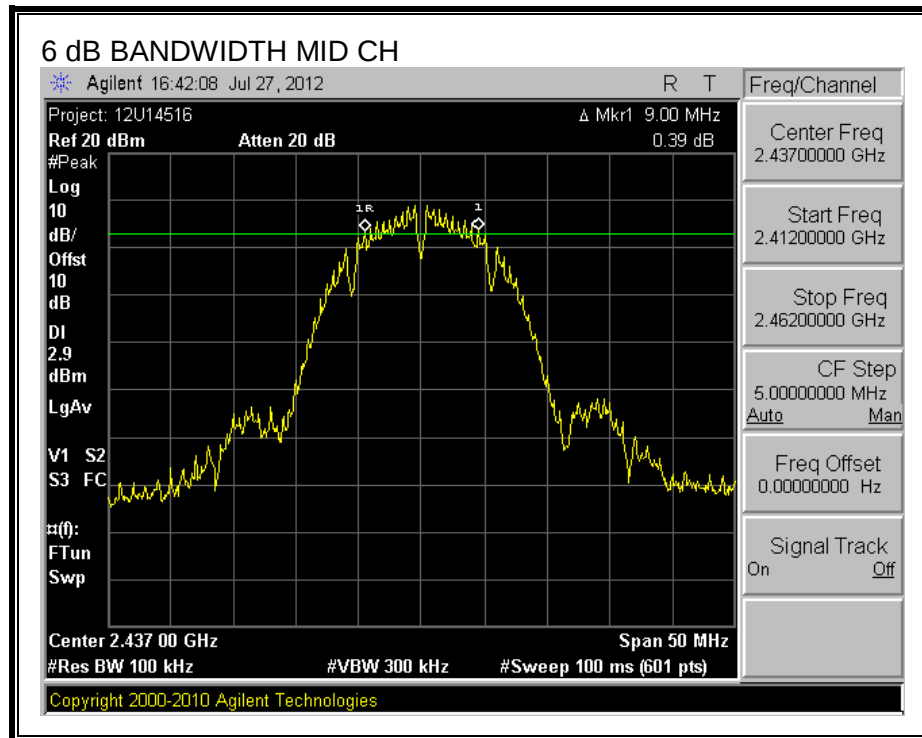
The transmitter output is connected to a spectrum analyzer. The RBW is set to 1-5% of the 6dB BW and the VBW is set to ≥ 3 times the RBW. The sweep time is coupled.

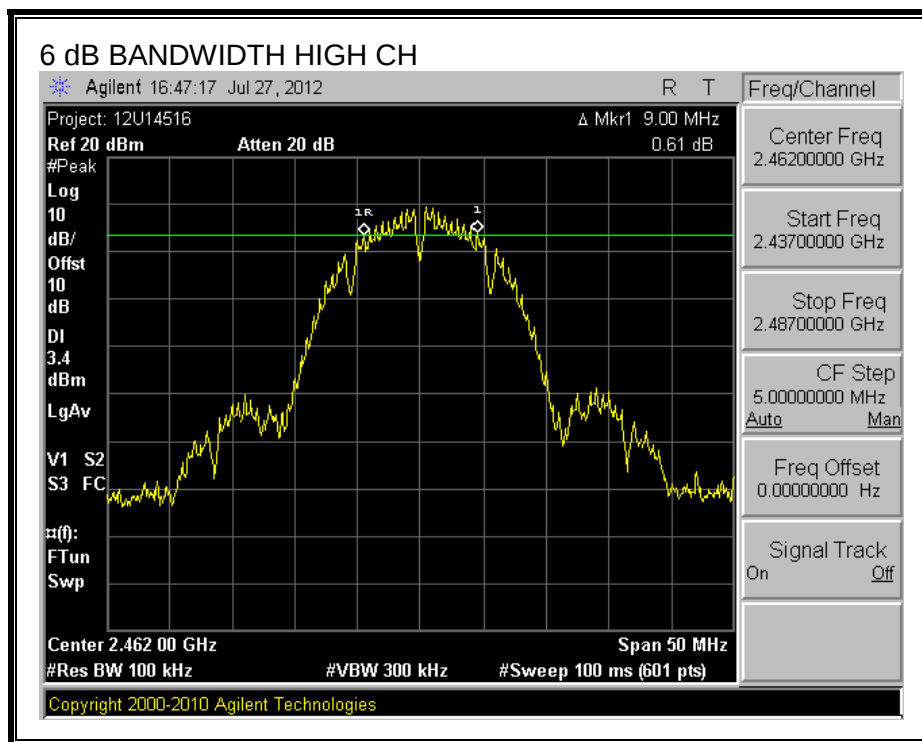
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	9.0000	0.5
Middle	2437	9.0000	0.5
High	2462	9.0000	0.5

6 dB BANDWIDTH







7.1.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

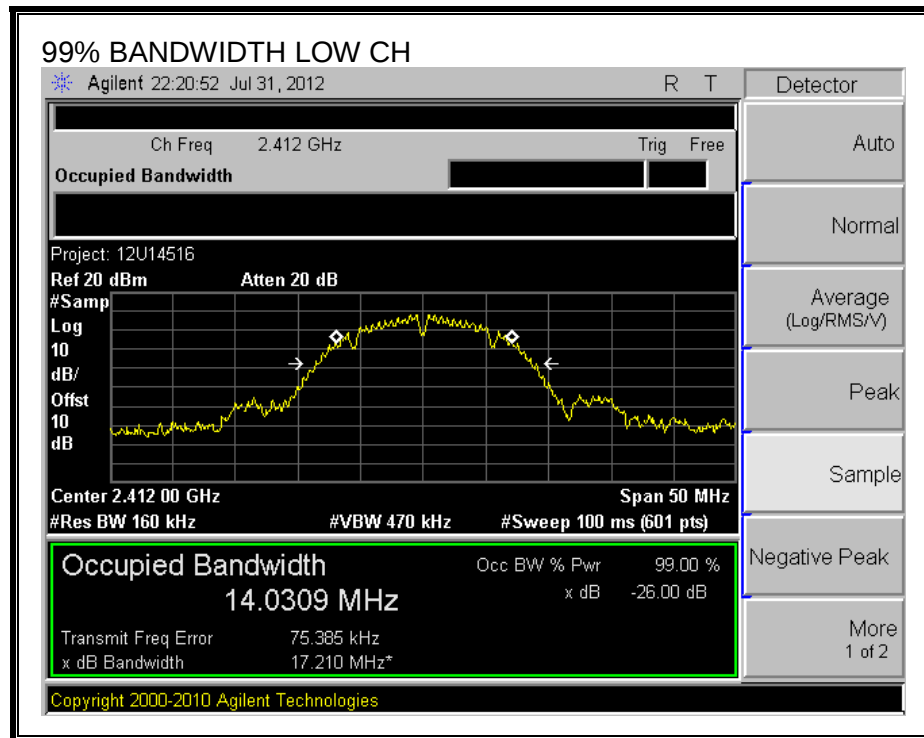
TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

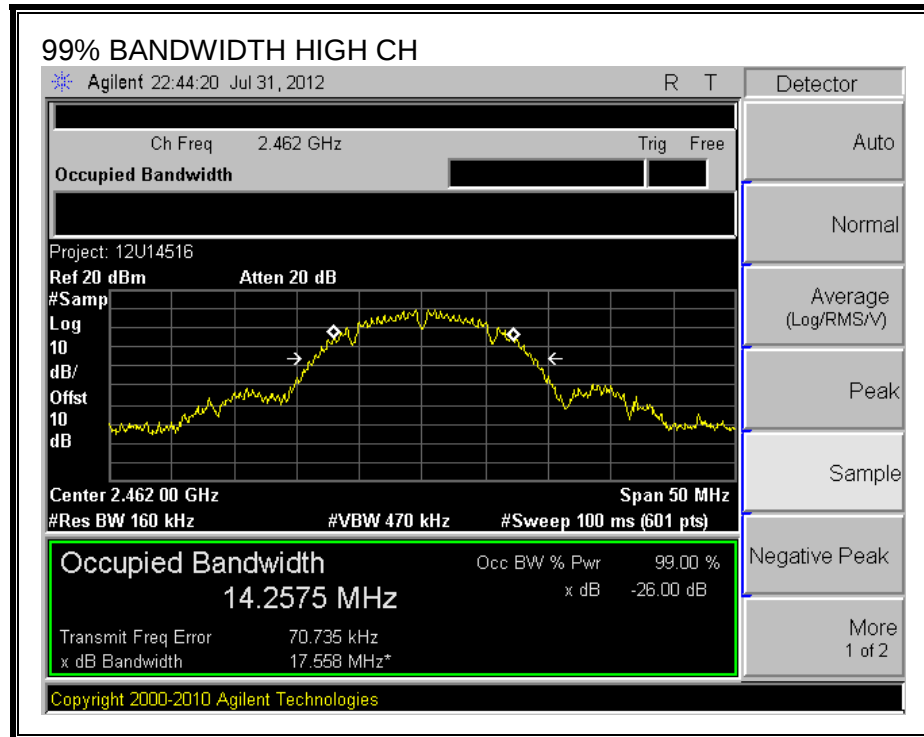
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	14.0309
Middle	2437	14.0584
High	2462	14.2575

99% BANDWIDTH







7.1.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

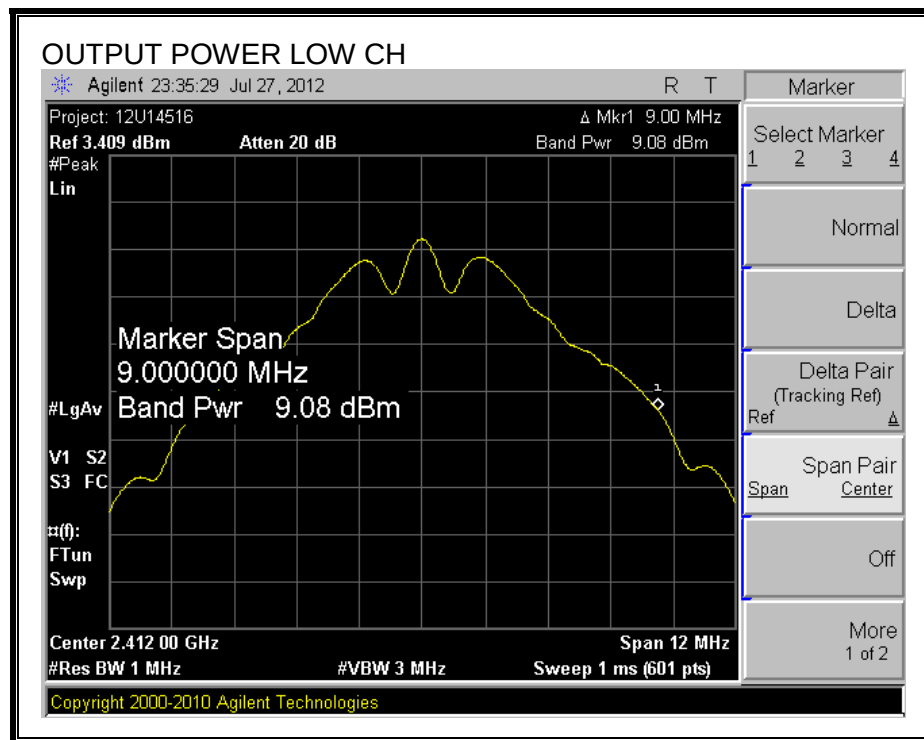
TEST PROCEDURE

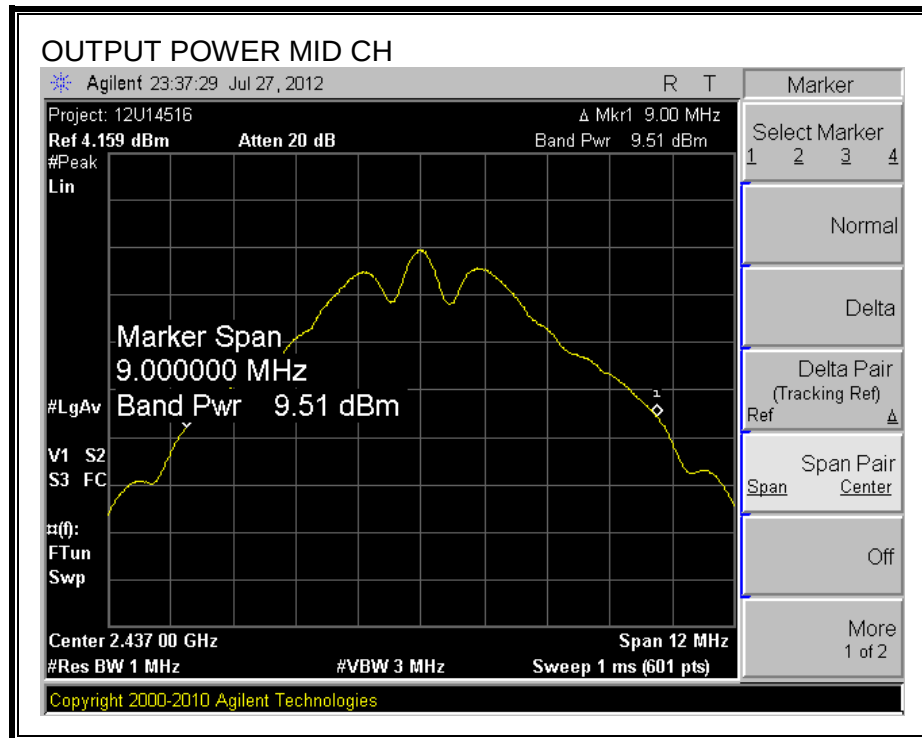
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

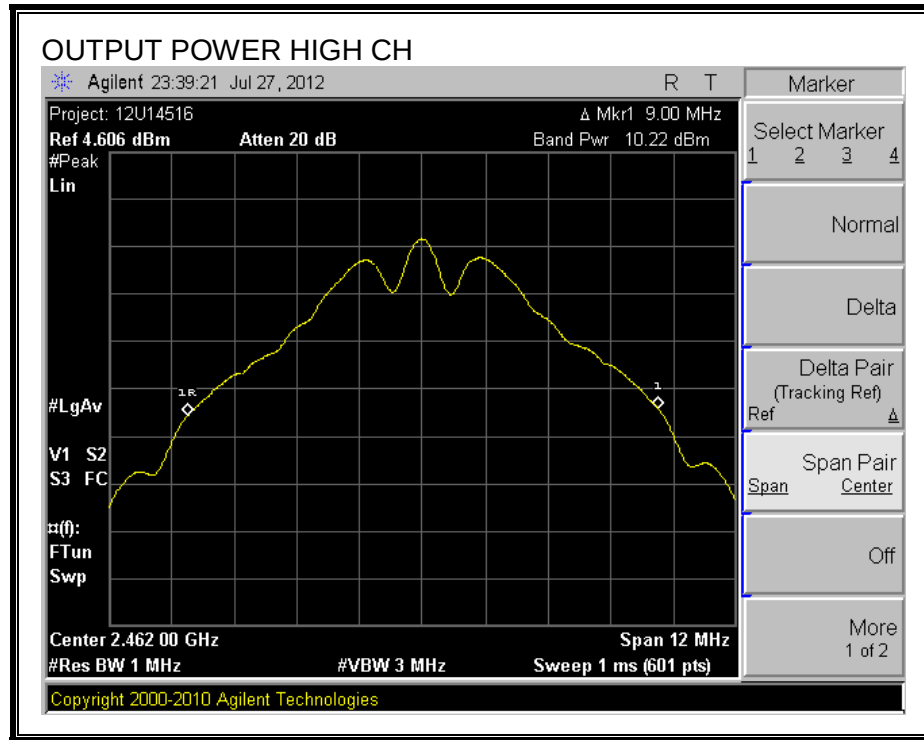
RESULTS

Channel	Frequency (MHz)	Measured Reading (dBm)	Offset (dB)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	9.08	10	19.08	30	-10.92
Middle	2437	9.51	10	19.51	30	-10.49
High	2462	10.22	10	20.22	30	-9.78

OUTPUT POWER







7.1.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10 dB (including 10 dB pad and 0 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	AV power (dBm)
Low	2412	16.6
Middle	2437	17.2
High	2462	17.7

7.1.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

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.

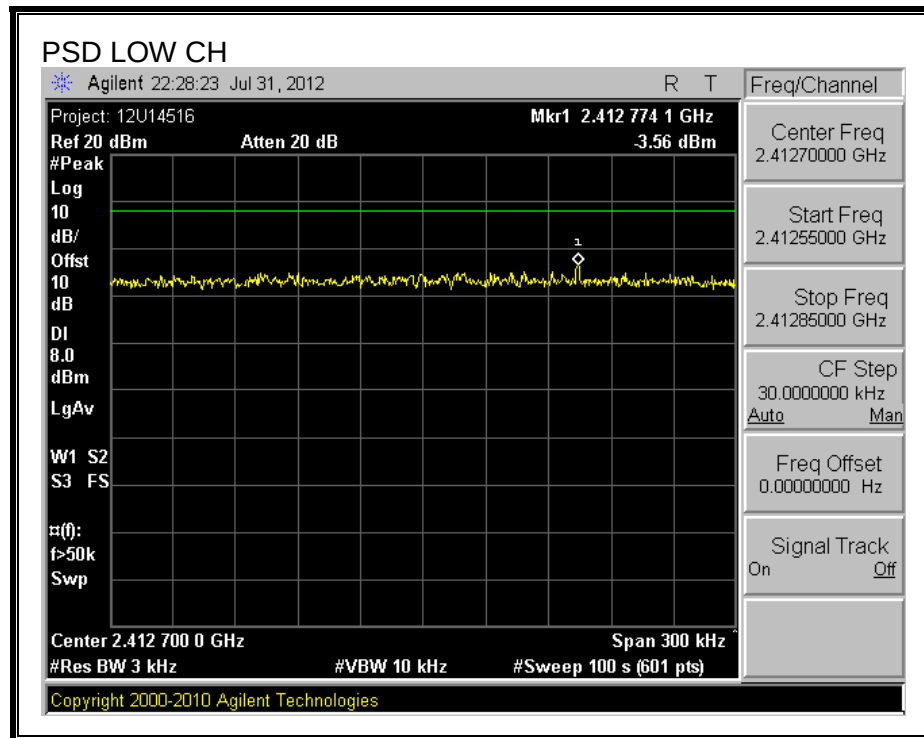
TEST PROCEDURE

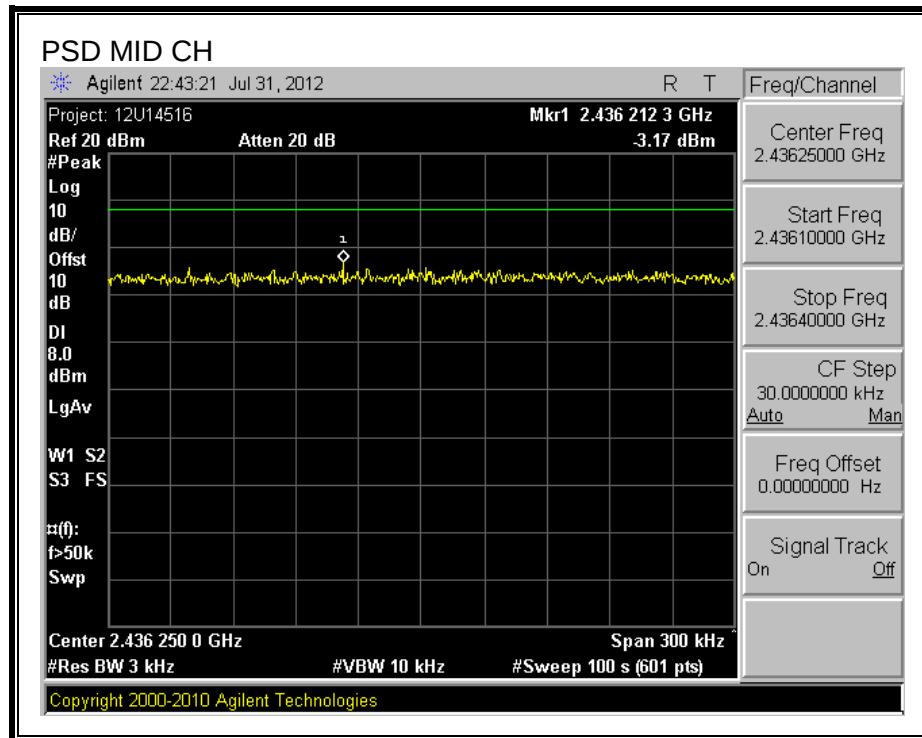
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

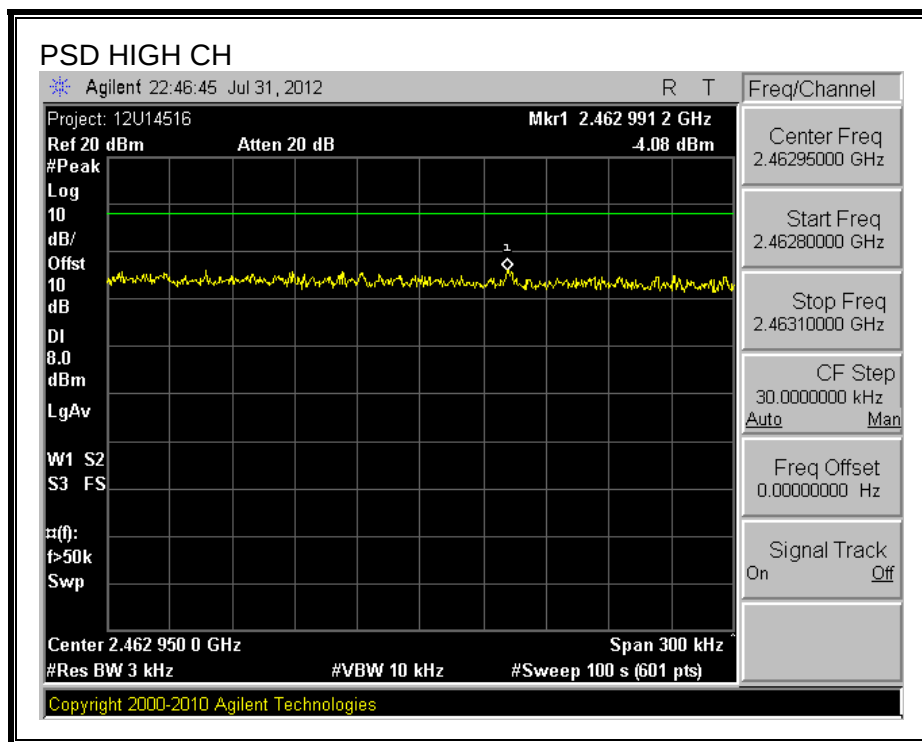
RESULTS

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-3.56	8	-11.56
Middle	2437	-3.17	8	-11.17
High	2462	-4.08	8	-12.08

POWER SPECTRAL DENSITY







7.1.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

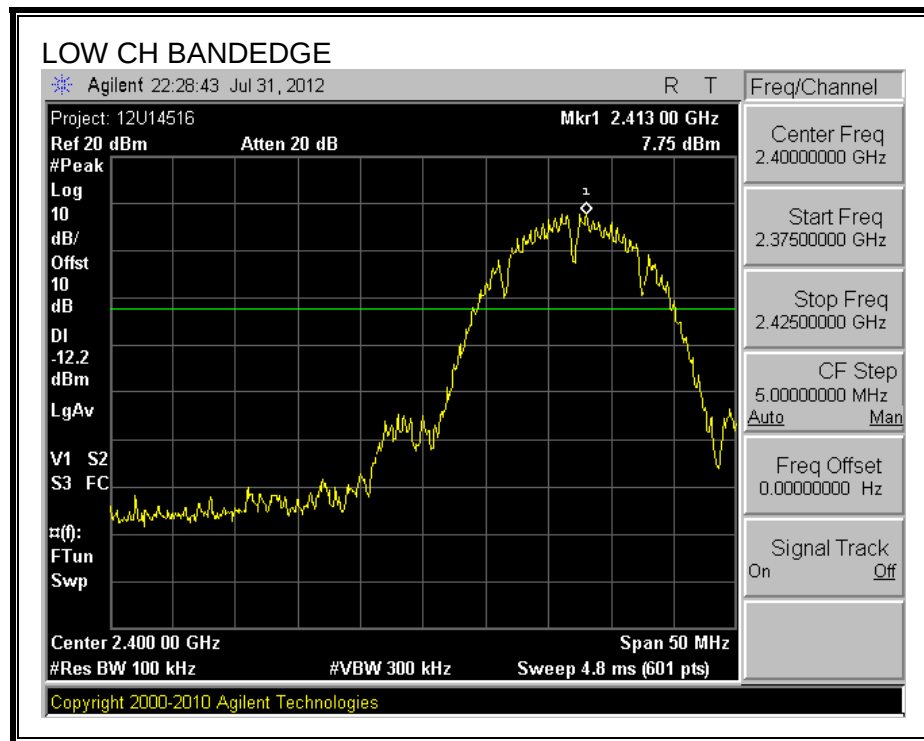
TEST PROCEDURE

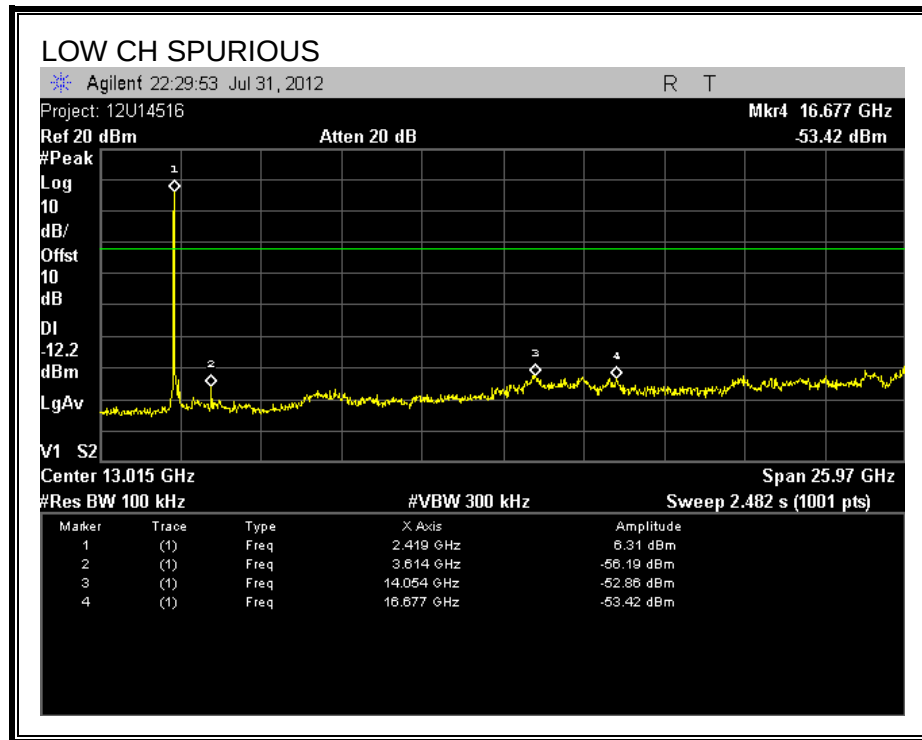
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

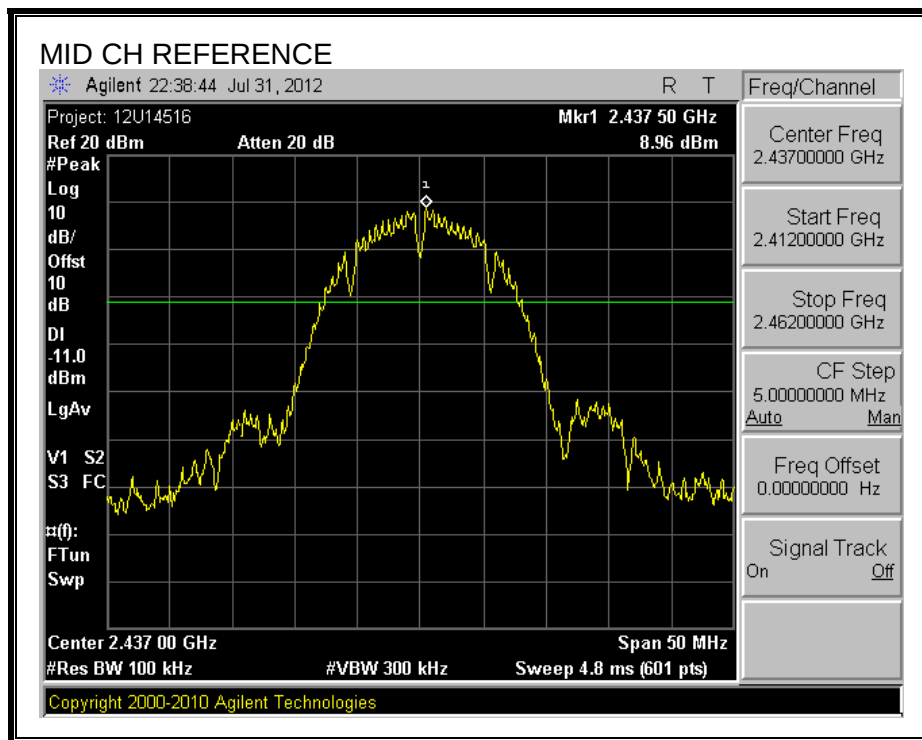
RESULTS

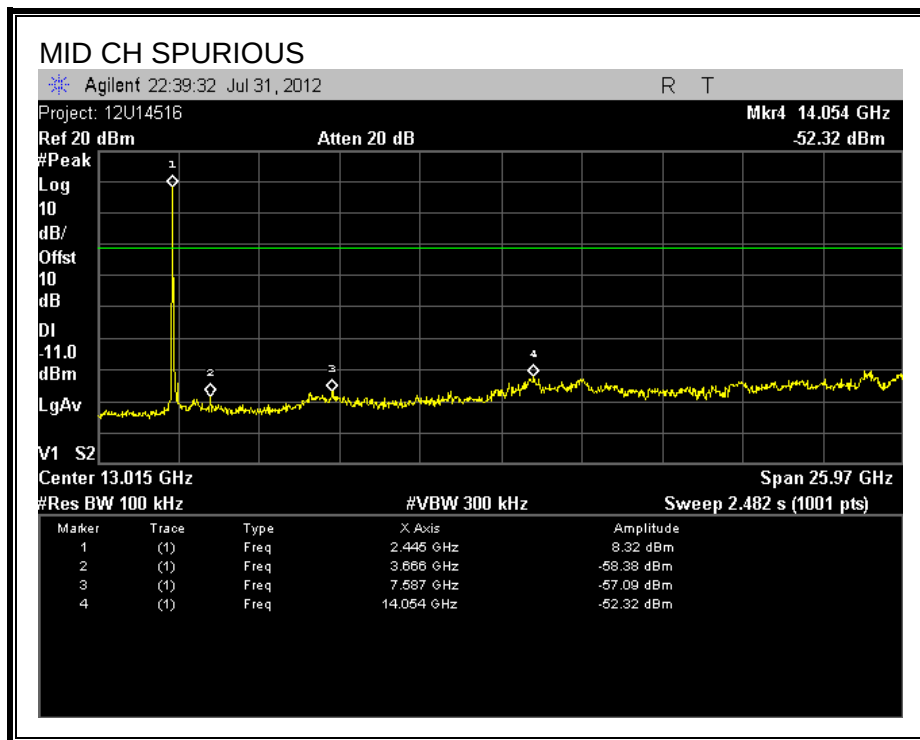
SPURIOUS EMISSIONS, LOW CHANNEL



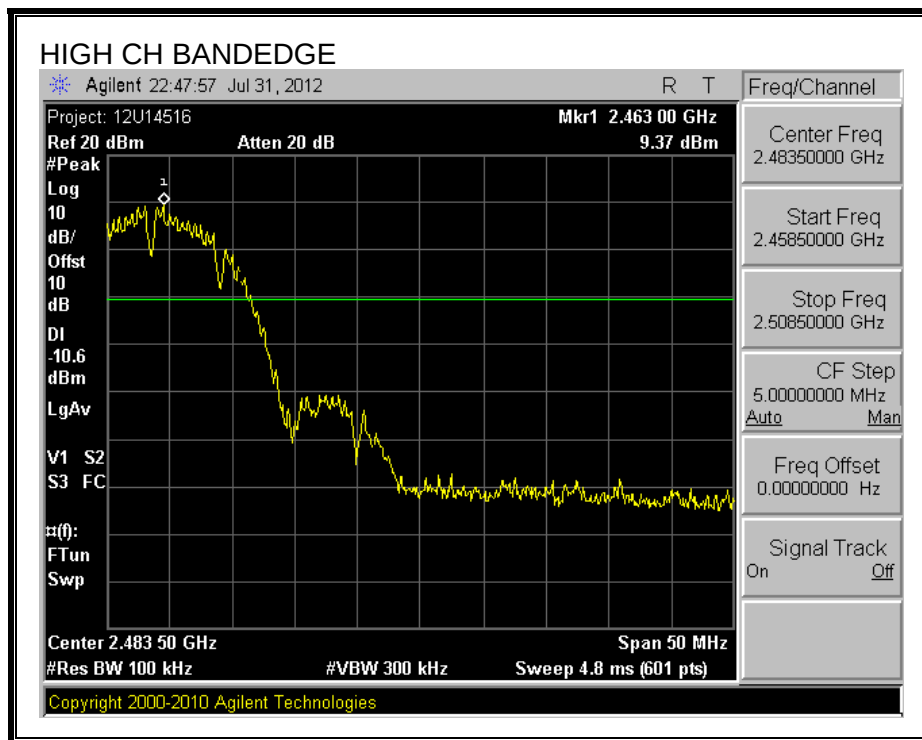


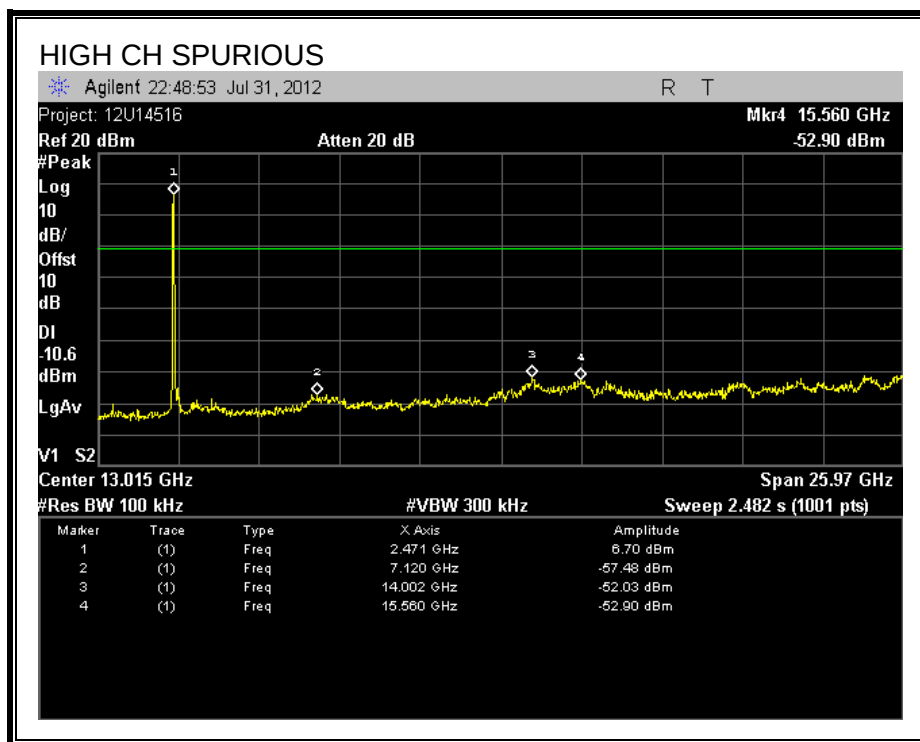
SPURIOUS EMISSIONS, MID CHANNEL





SPURIOUS EMISSIONS, HIGH CHANNEL





7.2. 802.11g MODE IN THE 2.4 GHz BAND

7.2.1. 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.

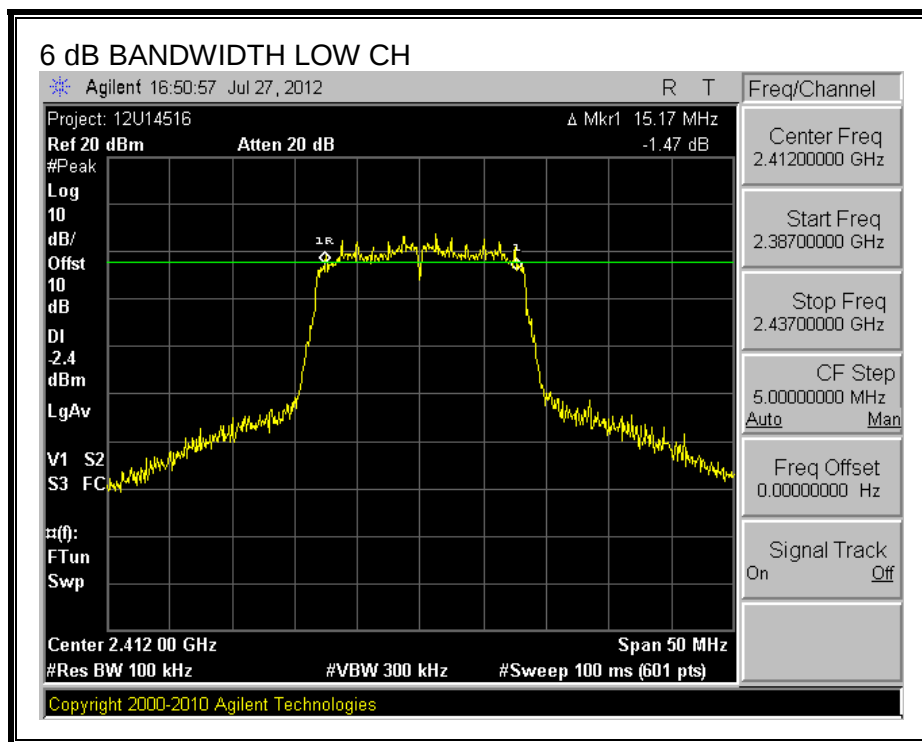
TEST PROCEDURE

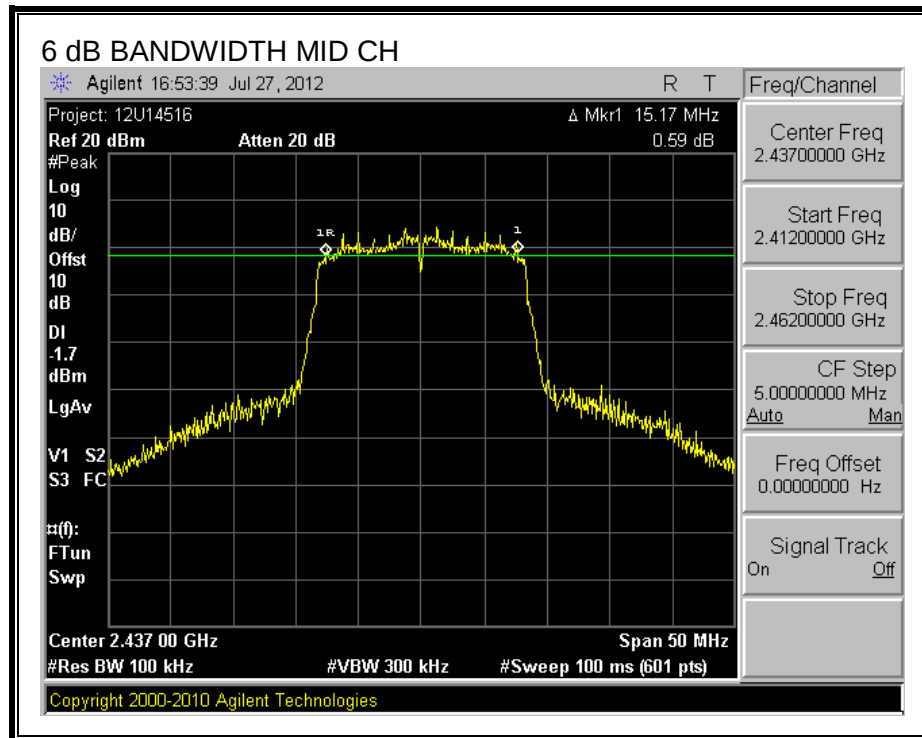
The transmitter output is connected to a spectrum analyzer. The RBW is set to 1-5% of the 6dB BW and the VBW is set to ≥ 3 times the RBW. The sweep time is coupled.

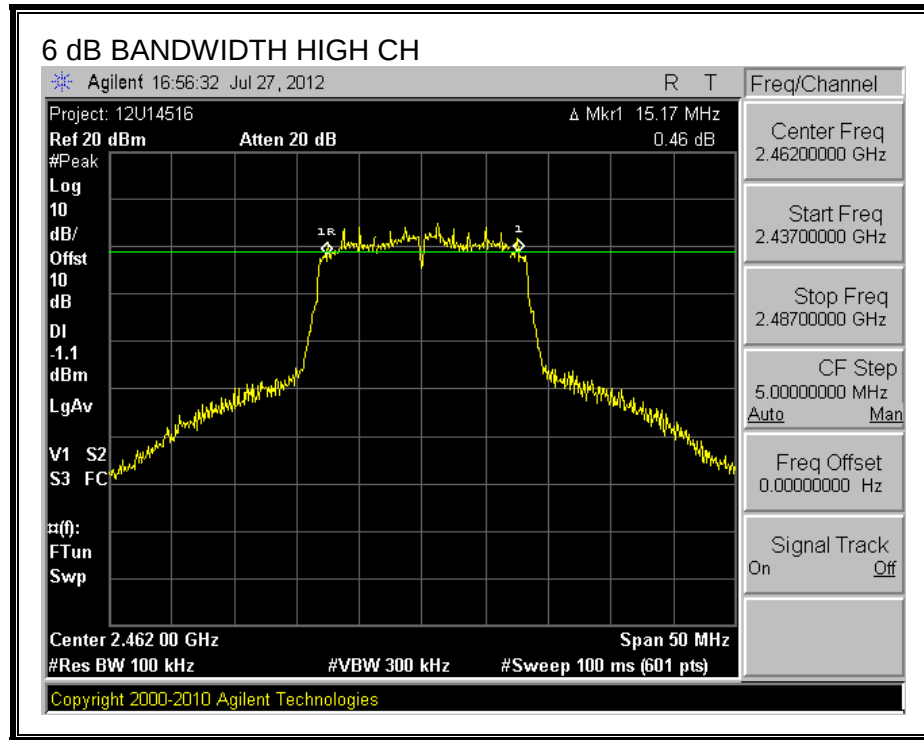
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	15.1700	0.5
Middle	2437	15.1700	0.5
High	2462	15.1700	0.5

6 dB BANDWIDTH







7.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

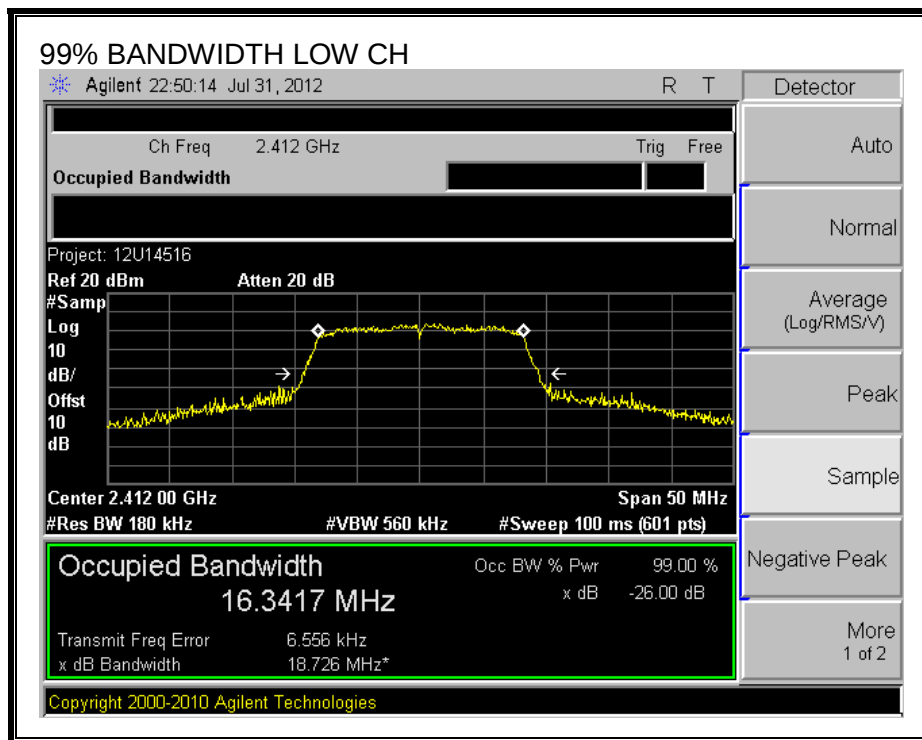
TEST PROCEDURE

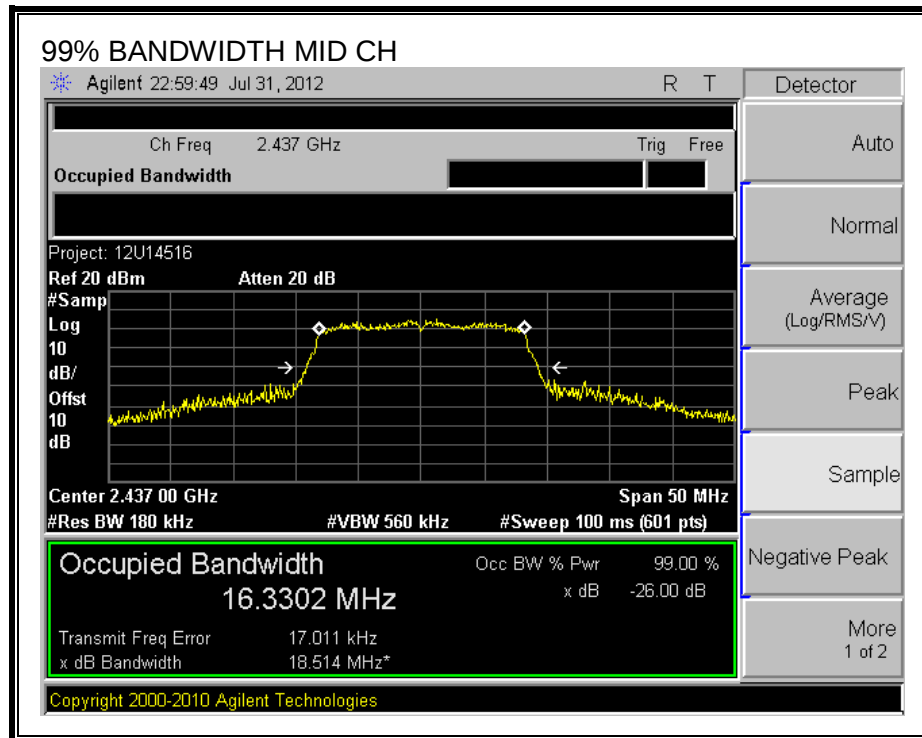
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

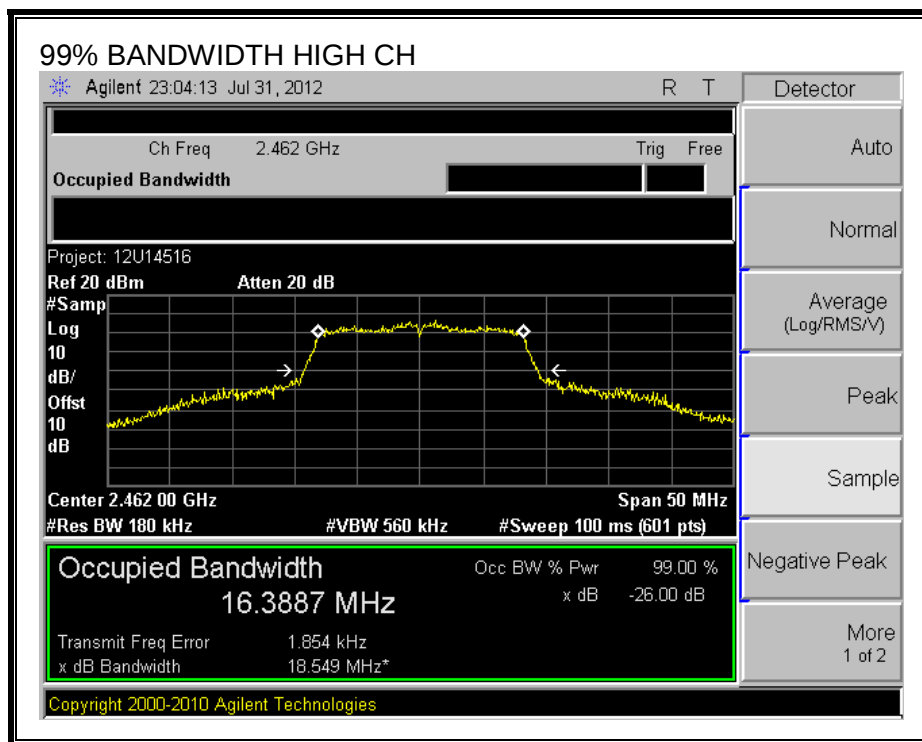
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.3417
Middle	2437	16.3302
High	2462	16.3887

99% BANDWIDTH







7.2.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

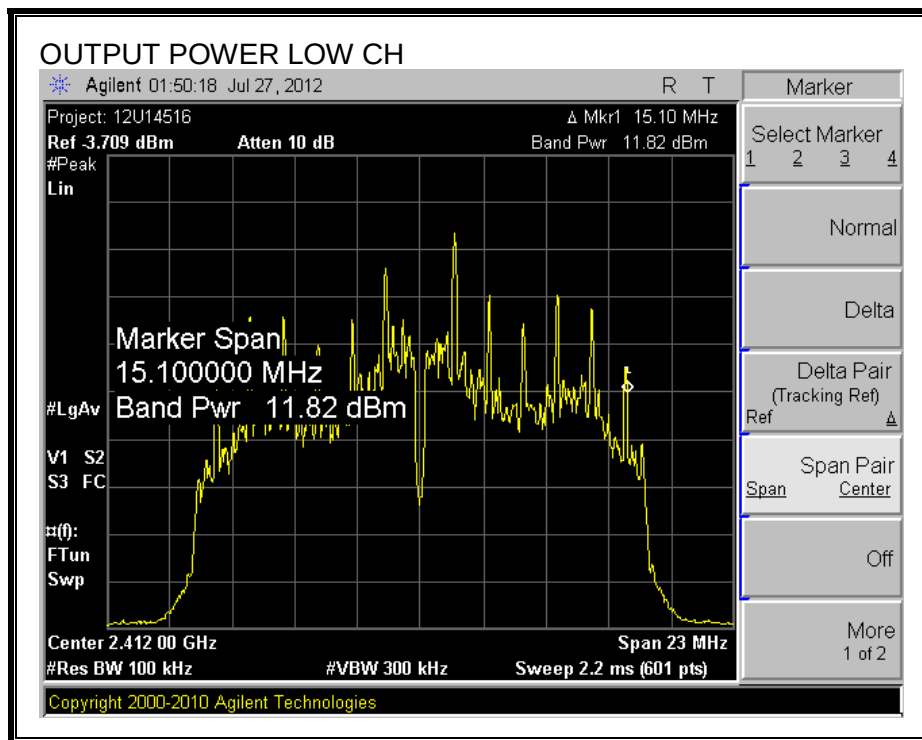
TEST PROCEDURE

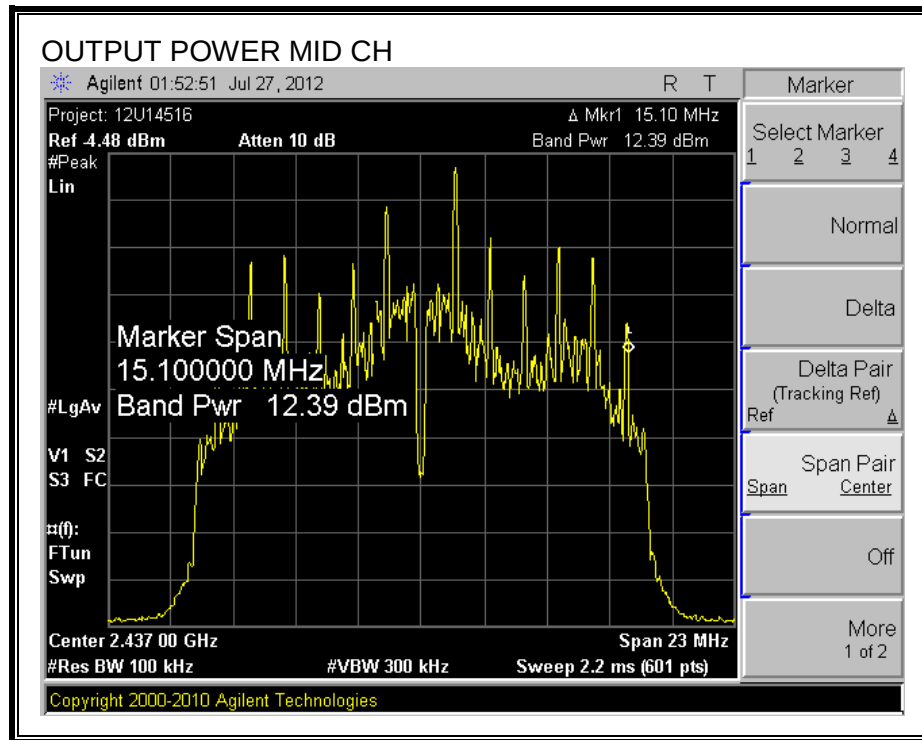
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

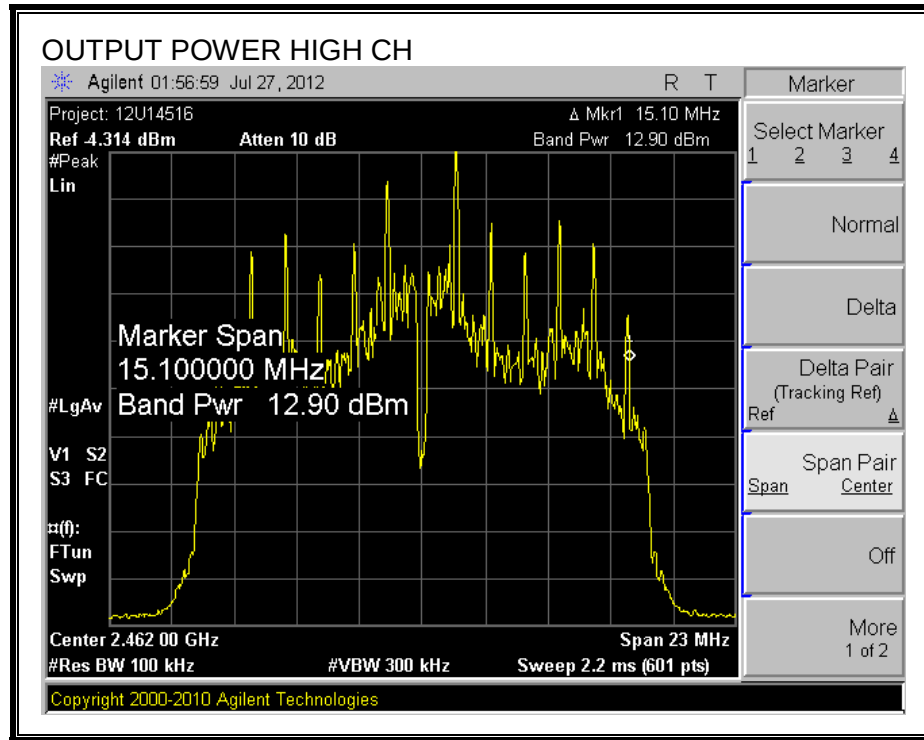
RESULTS

Channel	Frequency (MHz)	Measured Reading (dBm)	Offset (dB)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	11.82	10	21.82	30	-8.18
Middle	2437	12.39	10	22.39	30	-7.61
High	2462	12.90	10	22.90	30	-7.10

OUTPUT POWER







7.2.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10 dB (including 10 dB pad and 0 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	14.50
Middle	2437	15.40
High	2462	15.90

7.2.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

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.

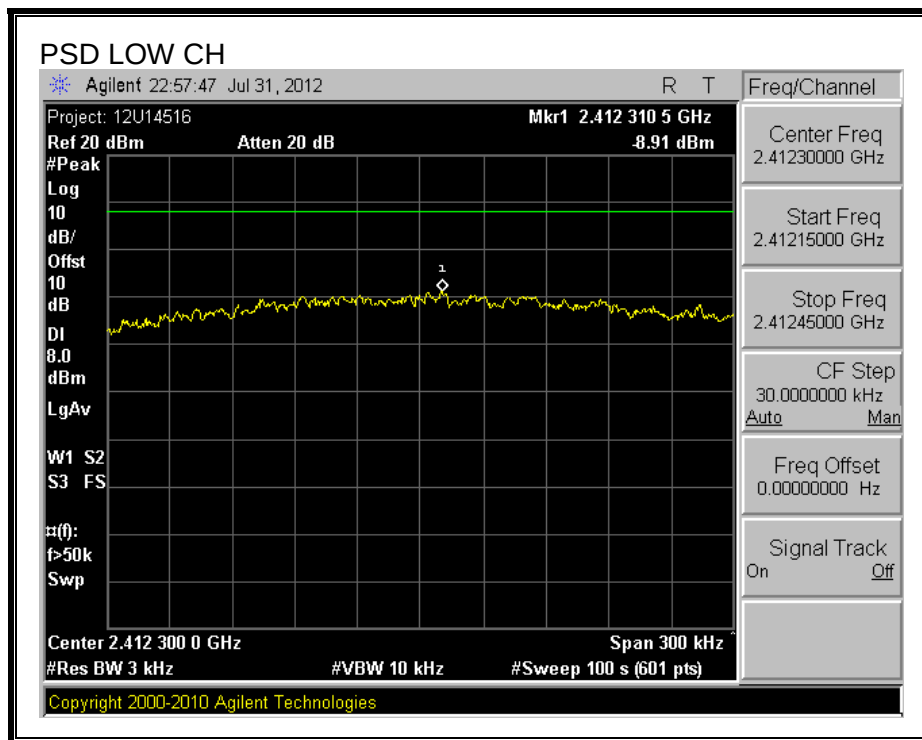
TEST PROCEDURE

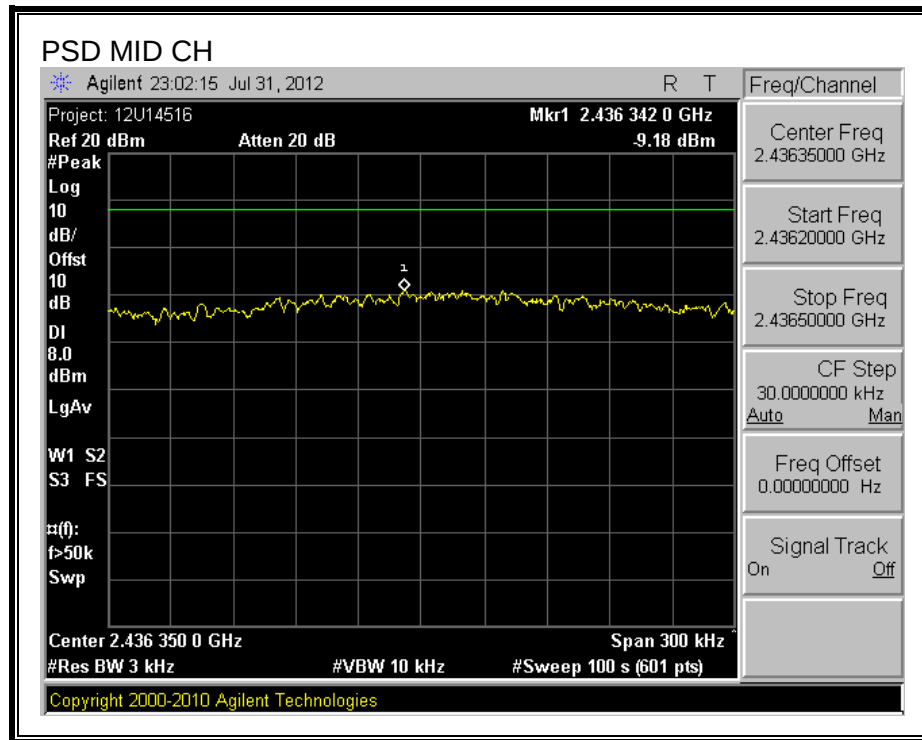
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

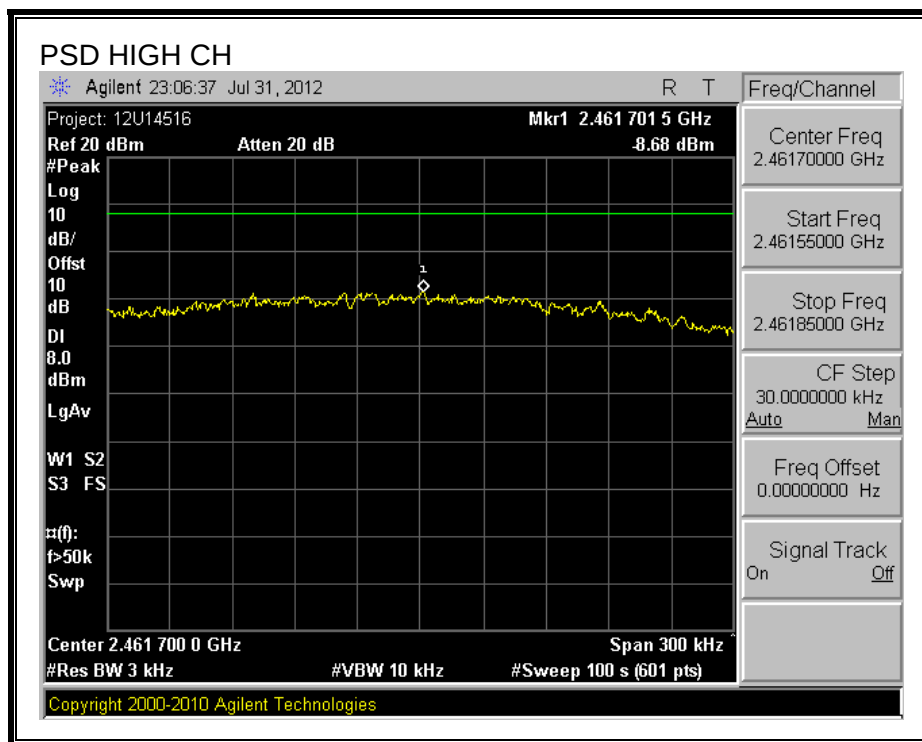
RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-8.91	8	-16.91
Middle	2437	-9.18	8	-17.18
High	2462	-8.68	8	-16.68

POWER SPECTRAL DENSITY







7.2.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

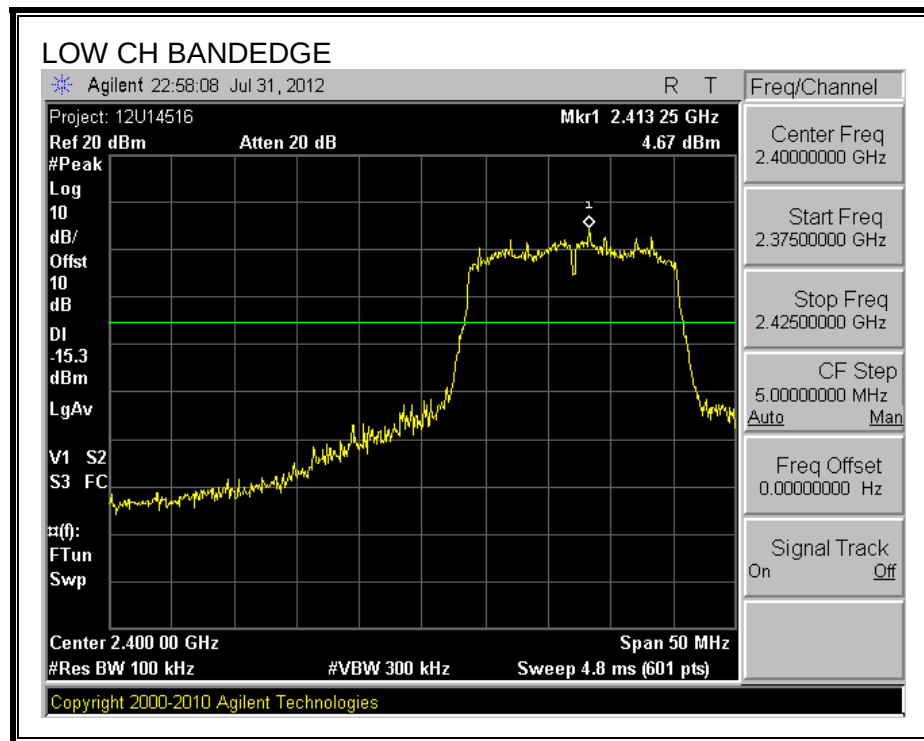
TEST PROCEDURE

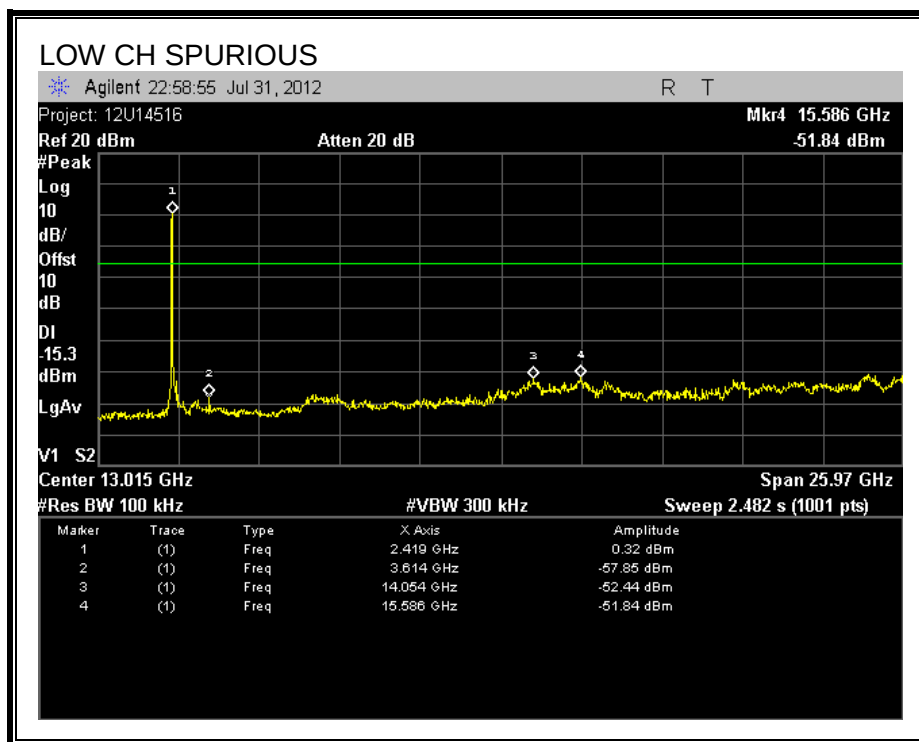
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

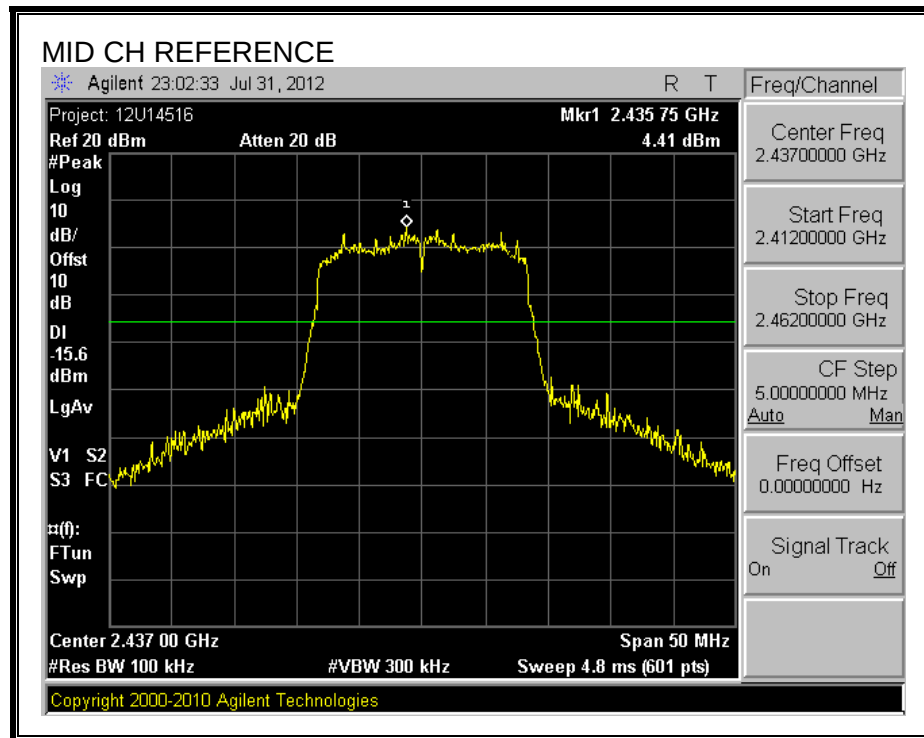
RESULTS

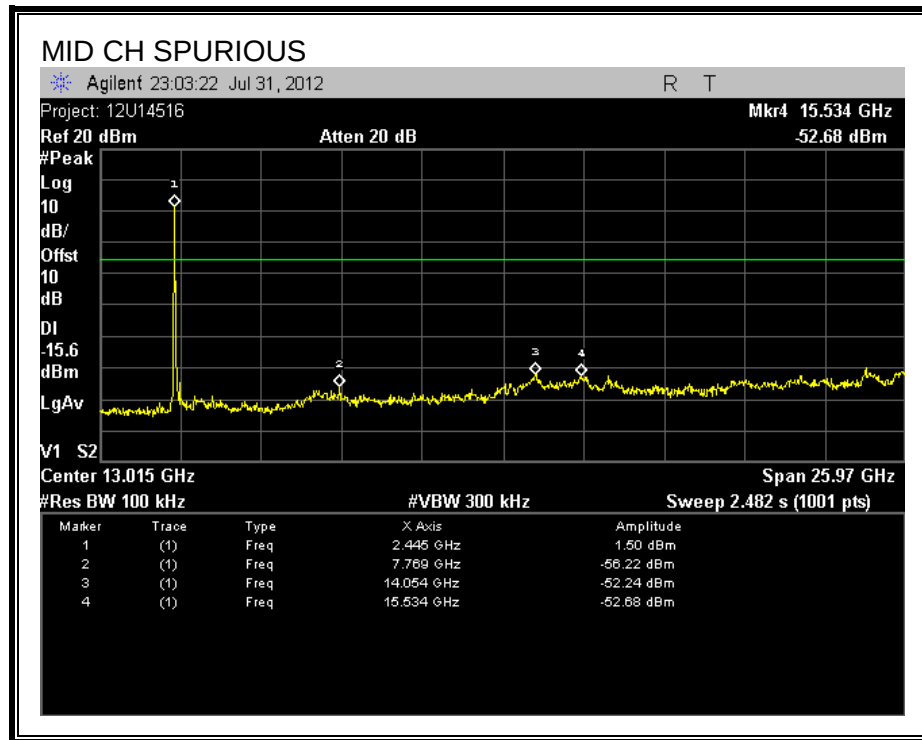
SPURIOUS EMISSIONS, LOW CHANNEL



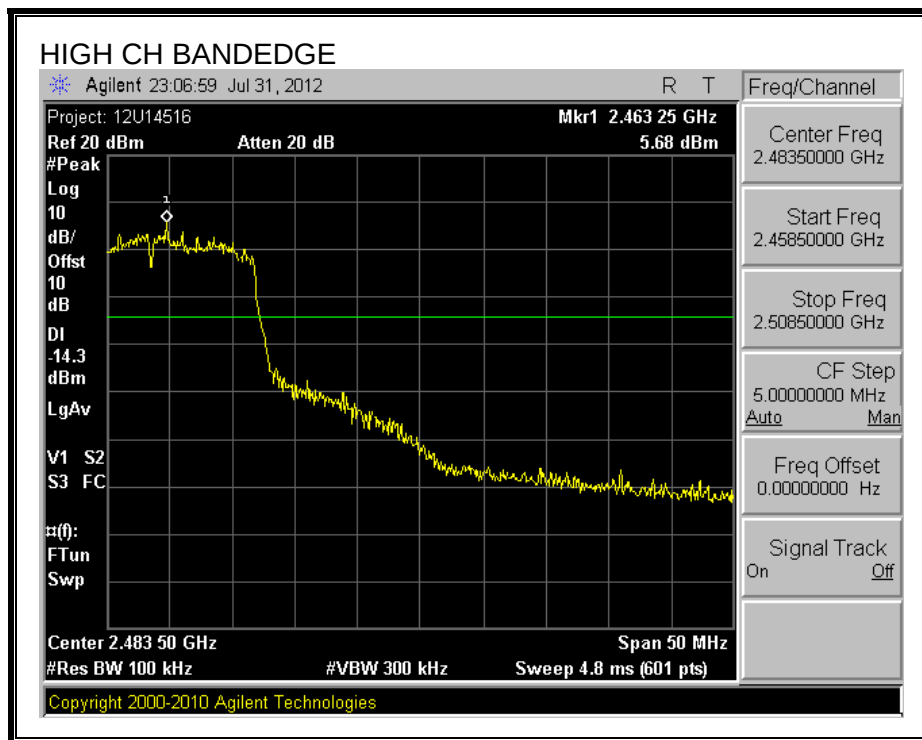


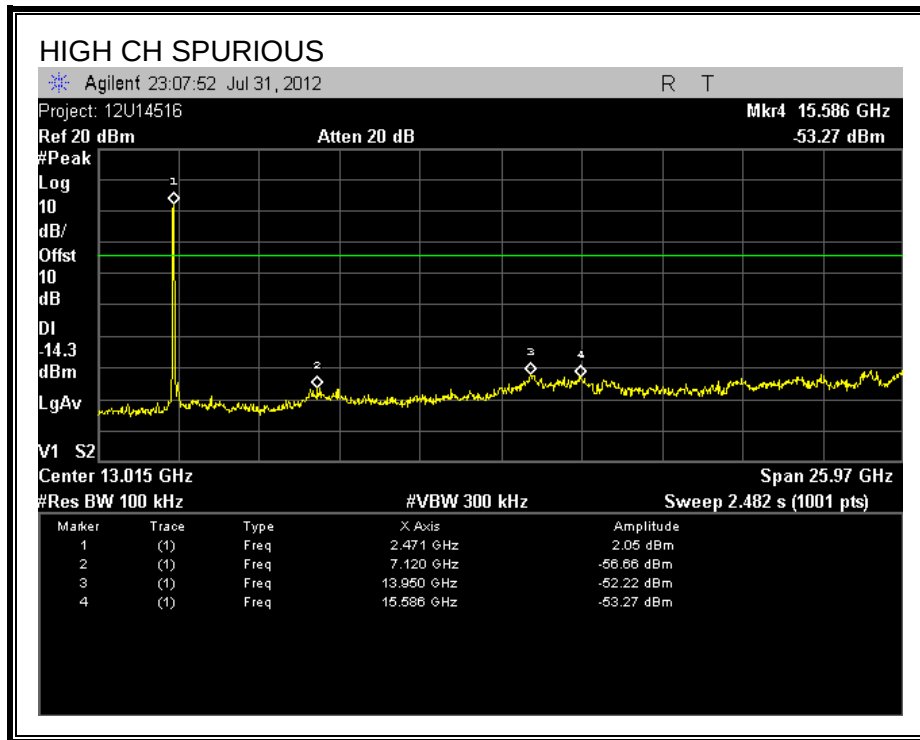
SPURIOUS EMISSIONS, MID CHANNEL





SPURIOUS EMISSIONS, HIGH CHANNEL





7.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

7.3.1. 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.

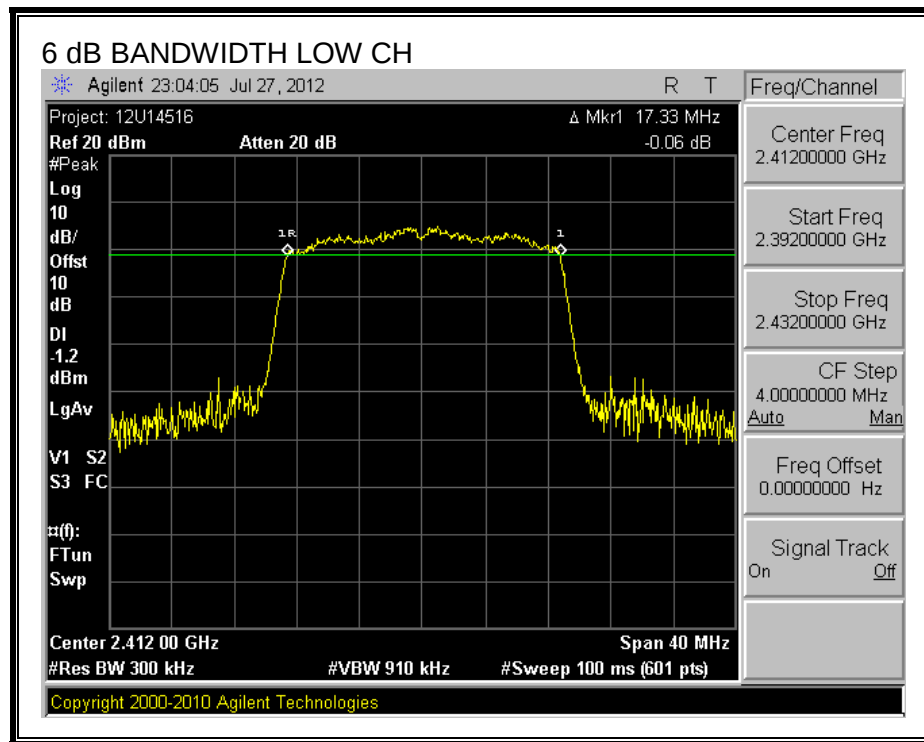
TEST PROCEDURE

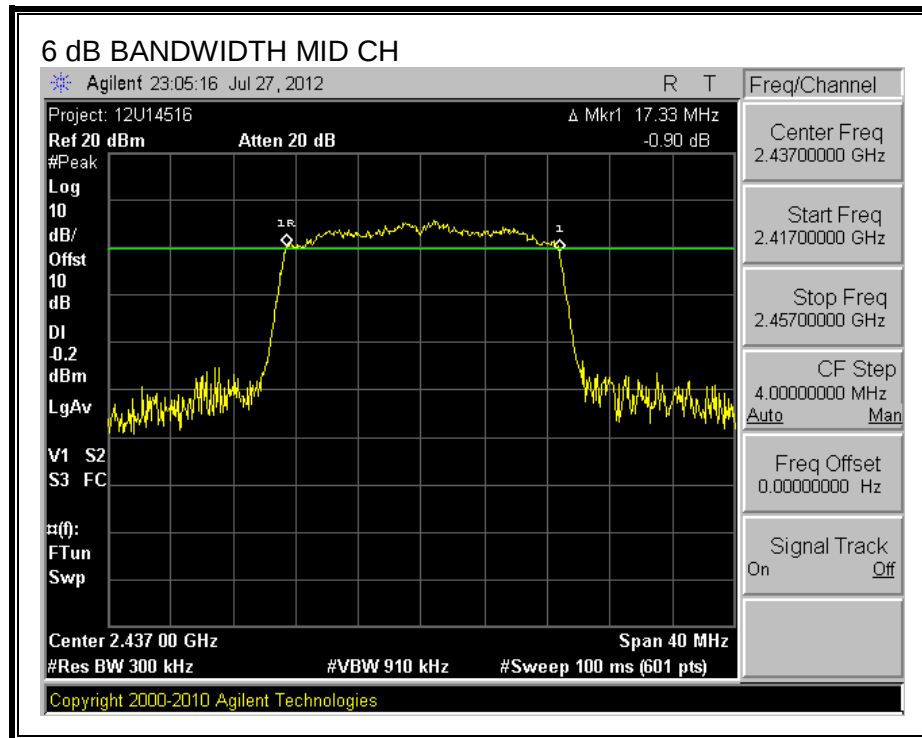
The transmitter output is connected to a spectrum analyzer. The RBW is set to 1-5% of the 6dB BW and the VBW is set to ≥ 3 times the RBW. The sweep time is coupled.

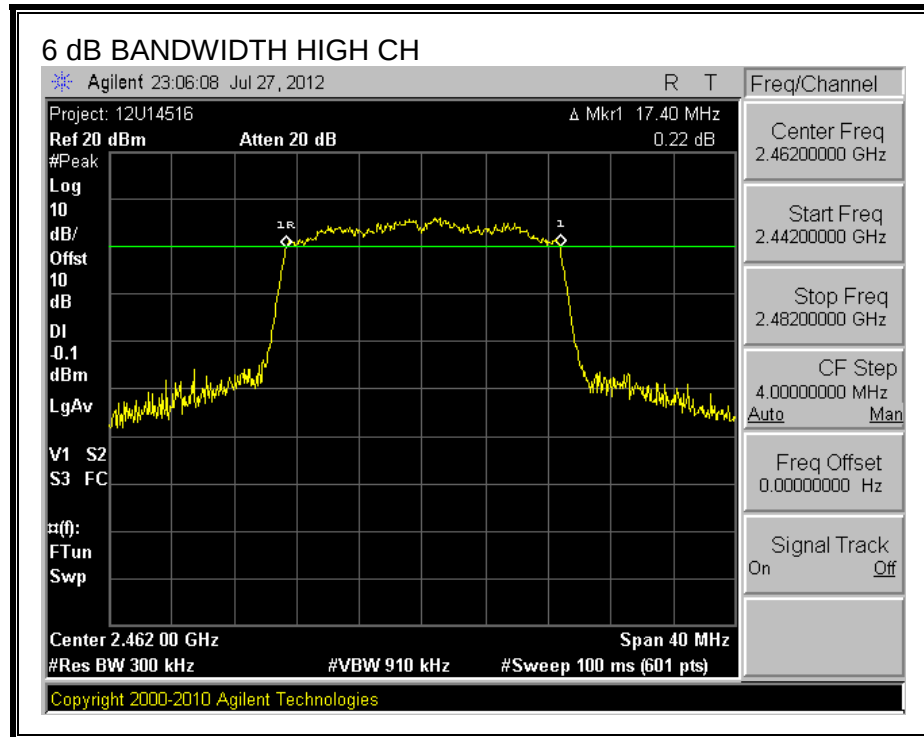
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.3300	0.5
Middle	2437	17.3300	0.5
High	2462	17.4000	0.5

6 dB BANDWIDTH







7.3.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

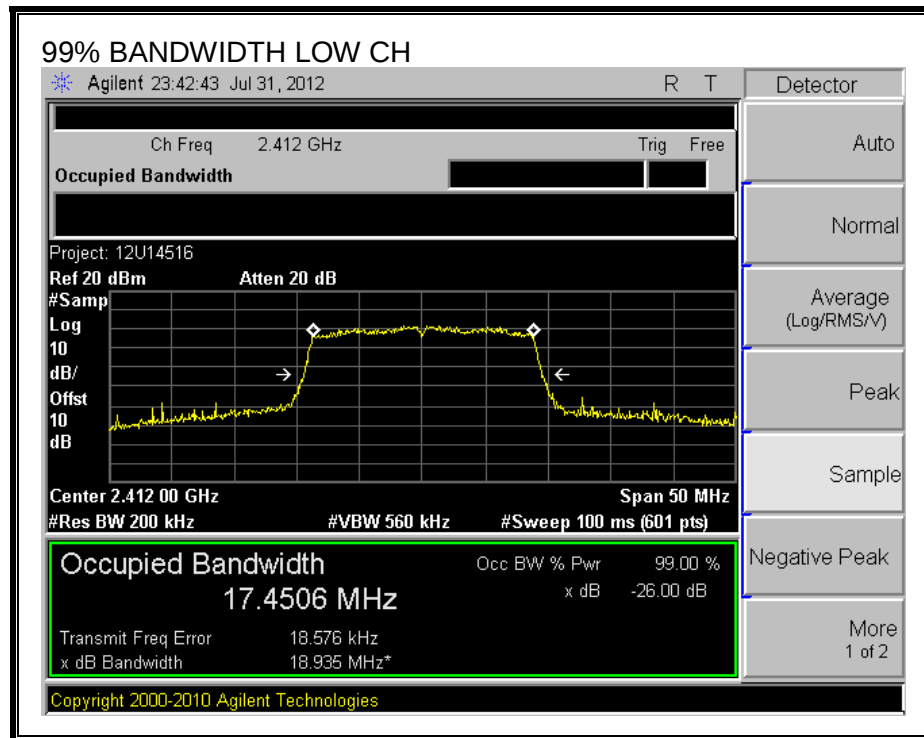
TEST PROCEDURE

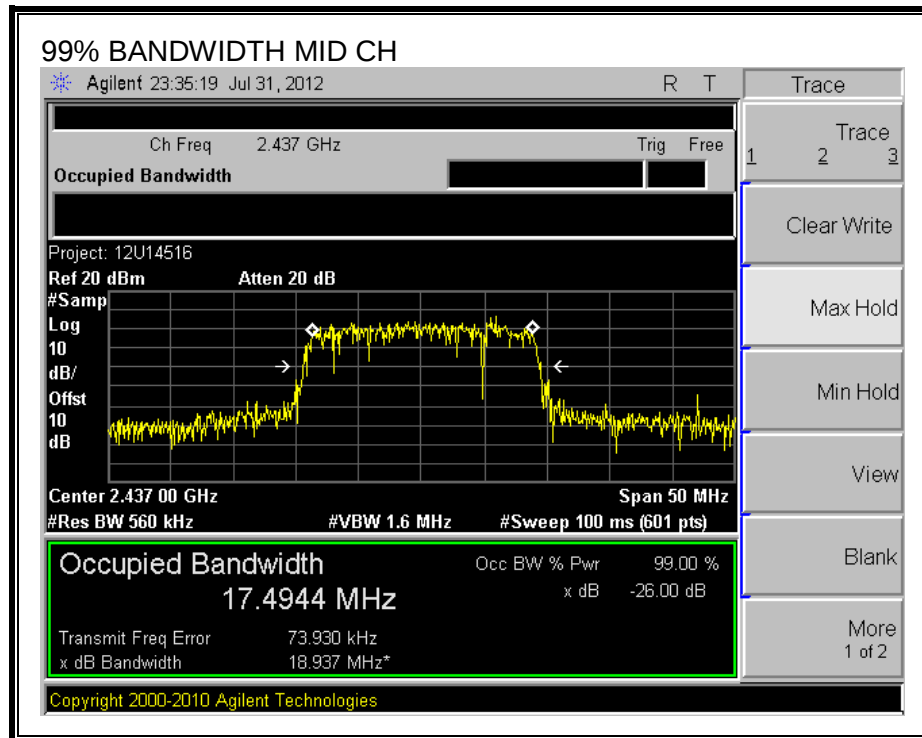
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.4506
Middle	2437	17.4944
High	2462	17.4531

99% BANDWIDTH







7.3.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

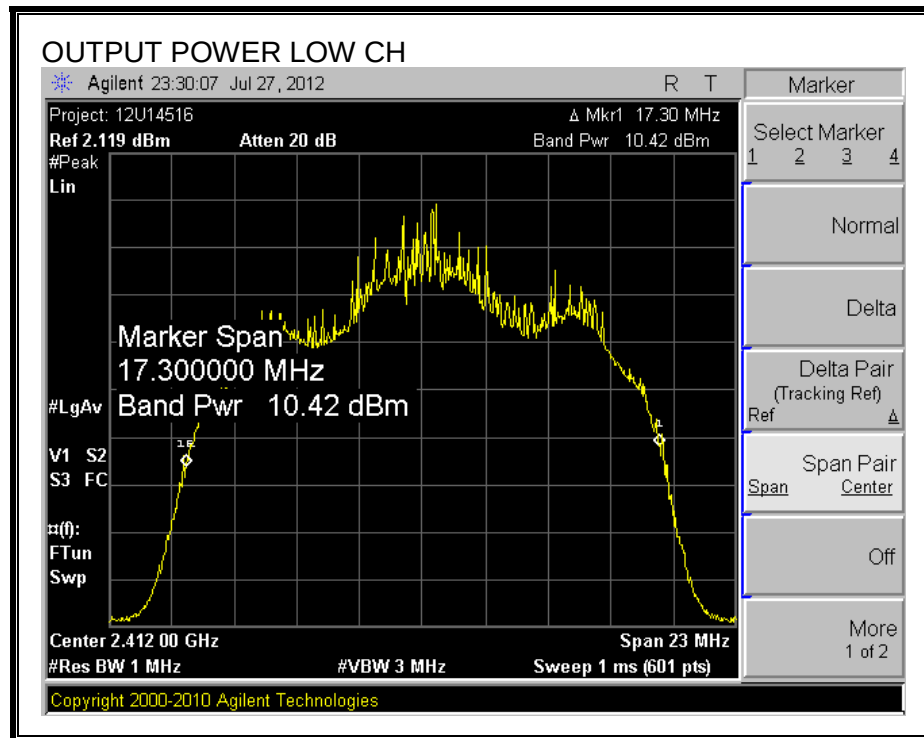
TEST PROCEDURE

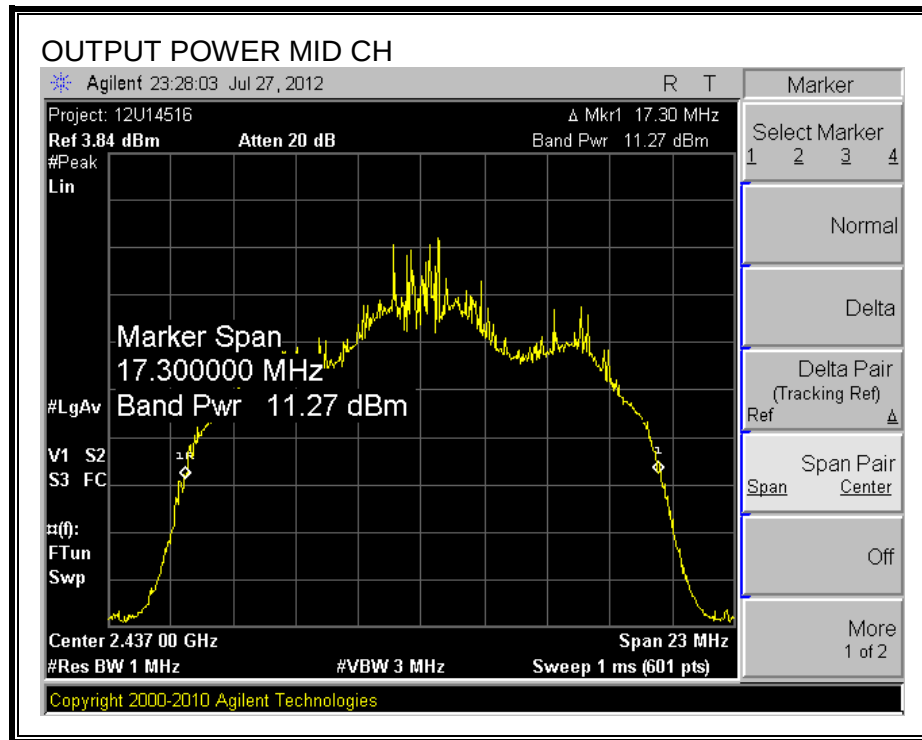
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

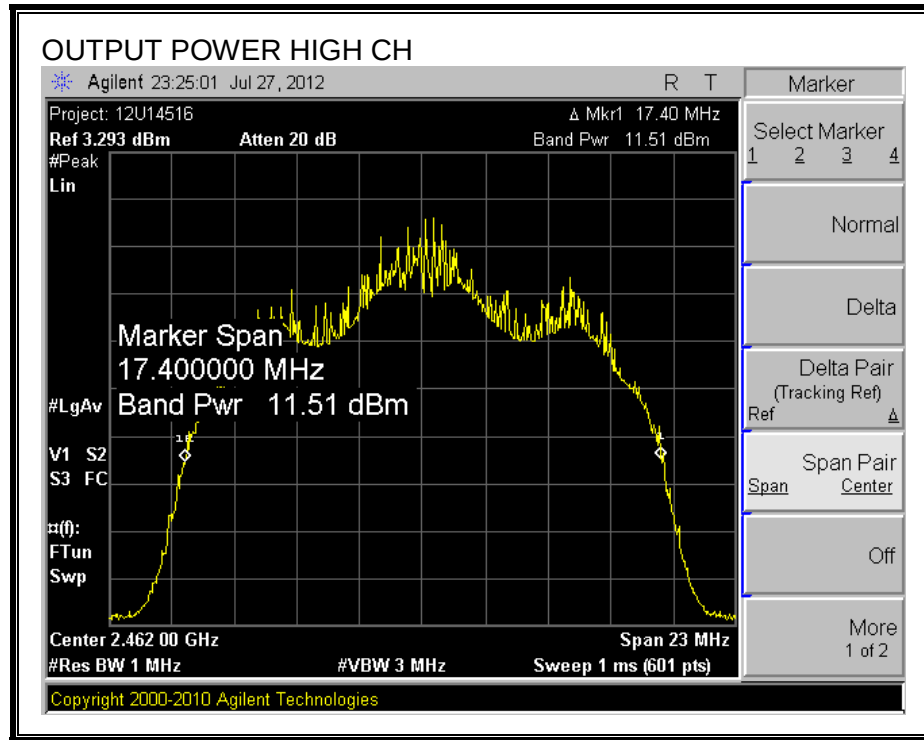
RESULTS

Channel	Frequency (MHz)	Measured Reading (dBm)	Offset (dB)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	10.42	10	20.42	30	-9.58
Middle	2437	11.27	10	21.27	30	-8.73
High	2462	11.51	10	21.51	30	-8.49

OUTPUT POWER







7.3.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10 dB (including 10 dB pad and 0 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	12.70
Middle	2437	13.40
High	2462	13.90

7.3.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

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.

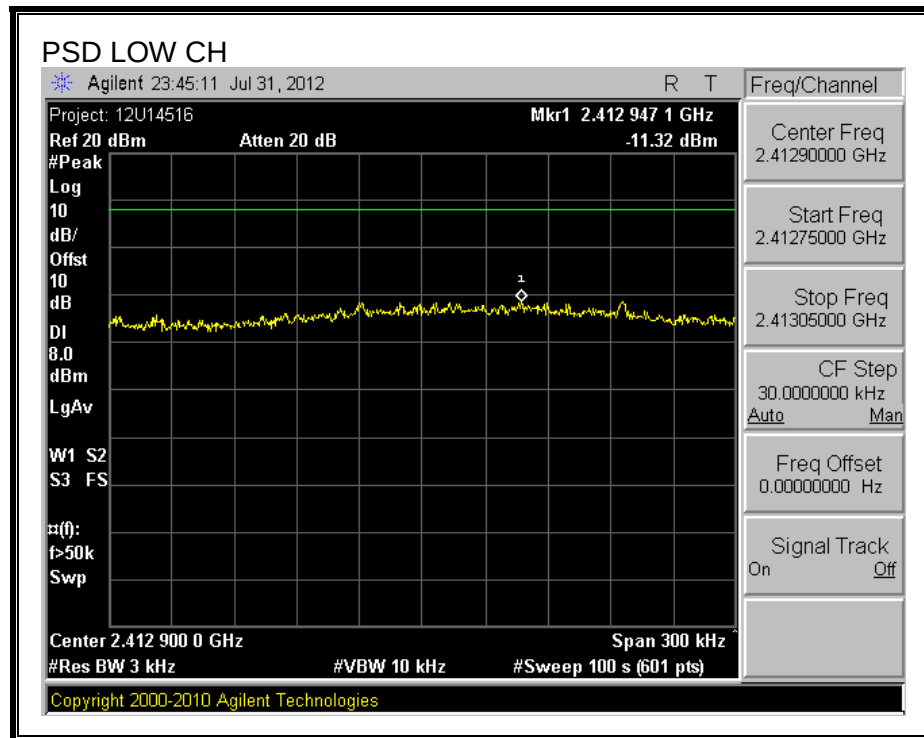
TEST PROCEDURE

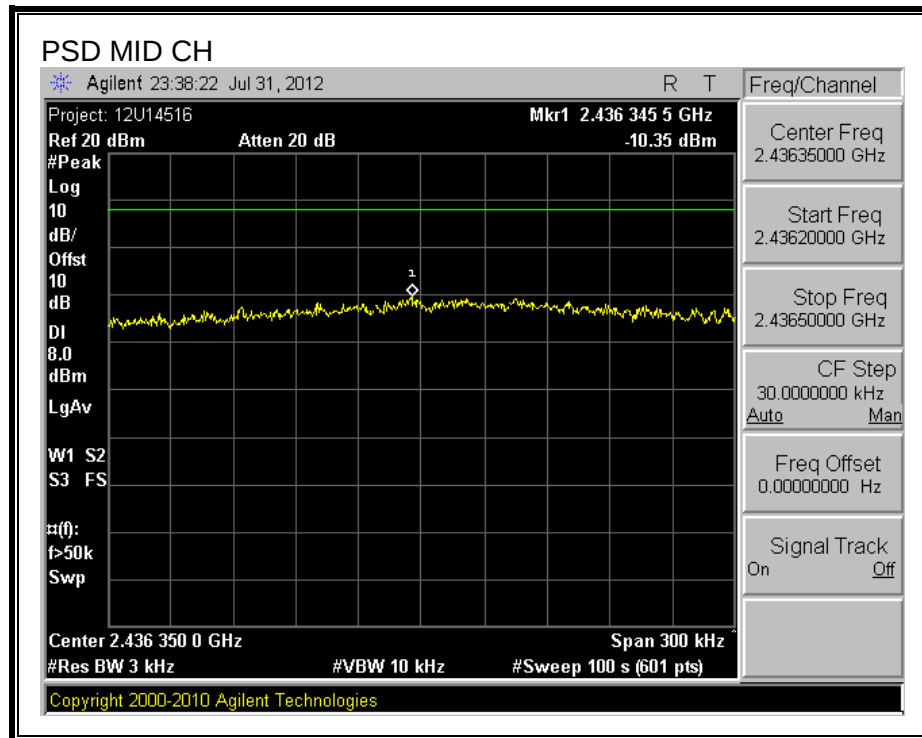
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

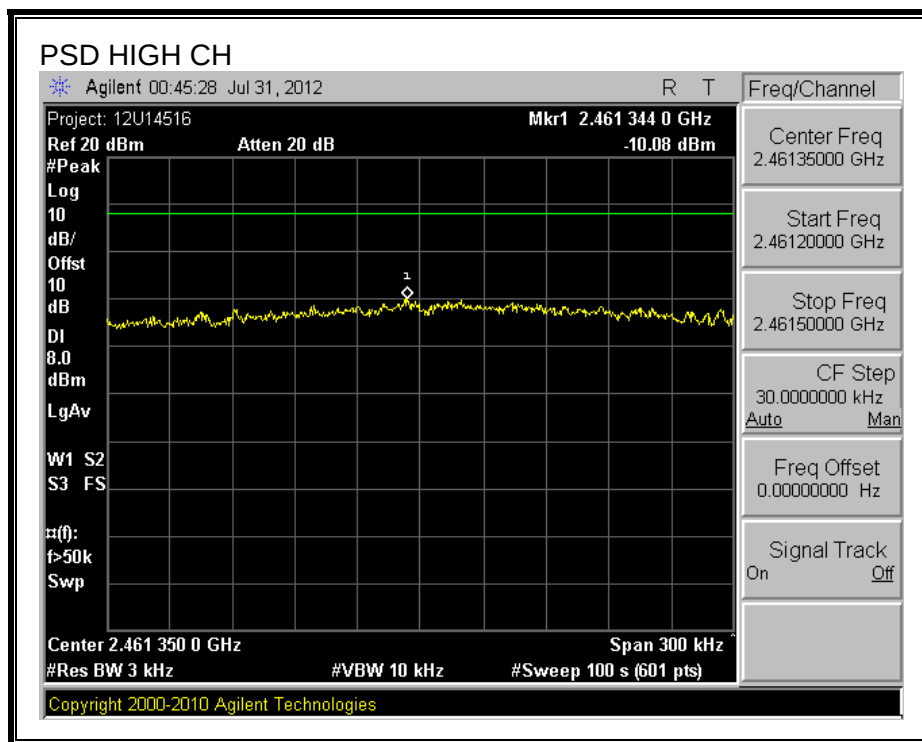
RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-11.32	8	-19.32
Middle	2437	-10.35	8	-18.35
High	2462	-10.08	8	-18.08

POWER SPECTRAL DENSITY







7.3.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

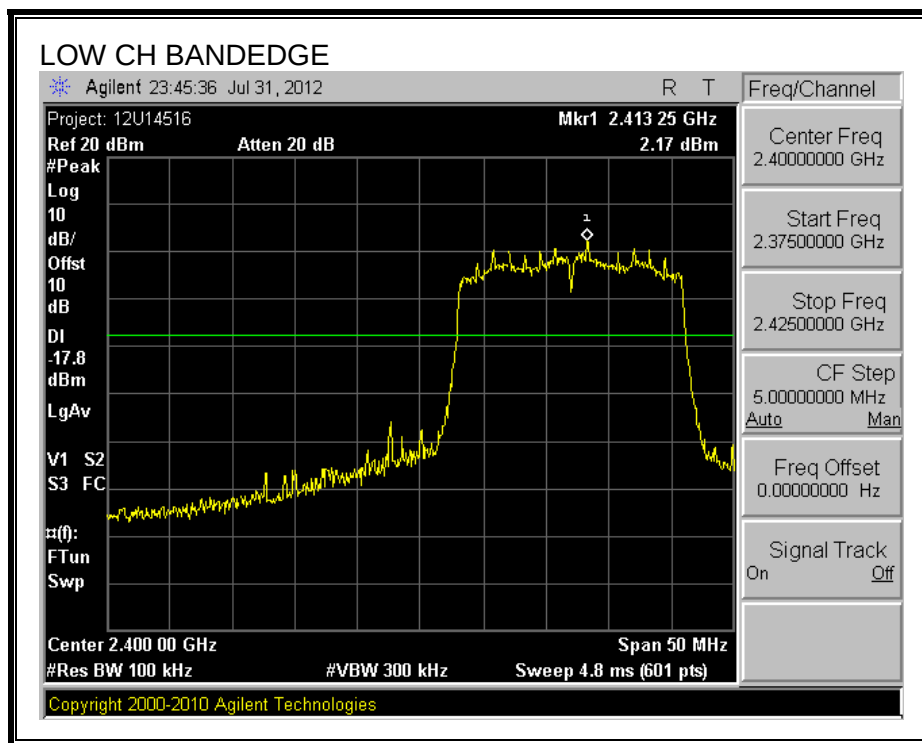
TEST PROCEDURE

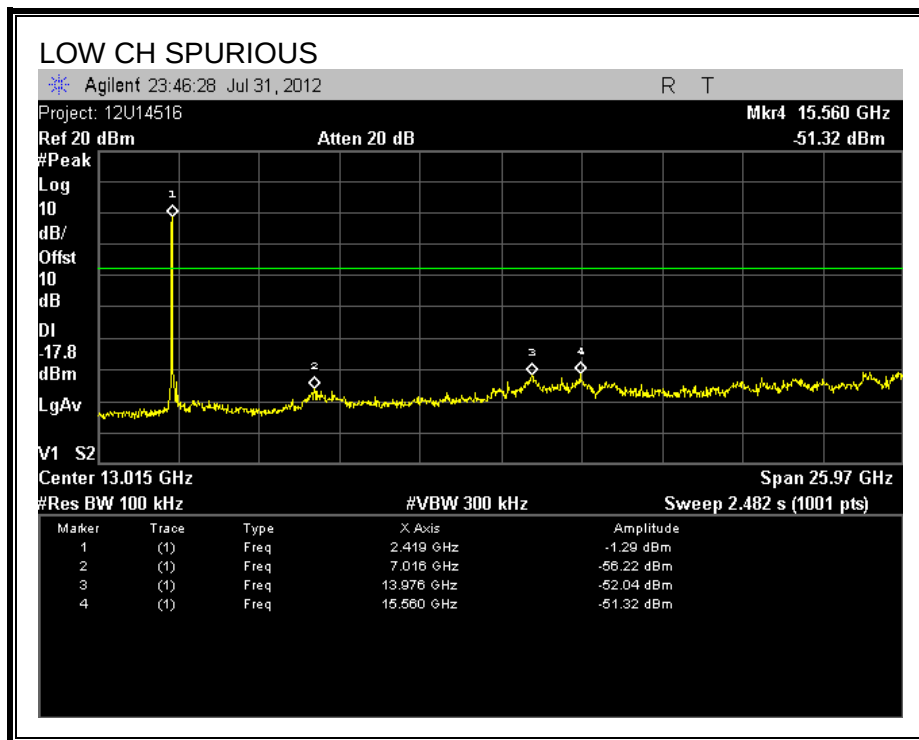
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

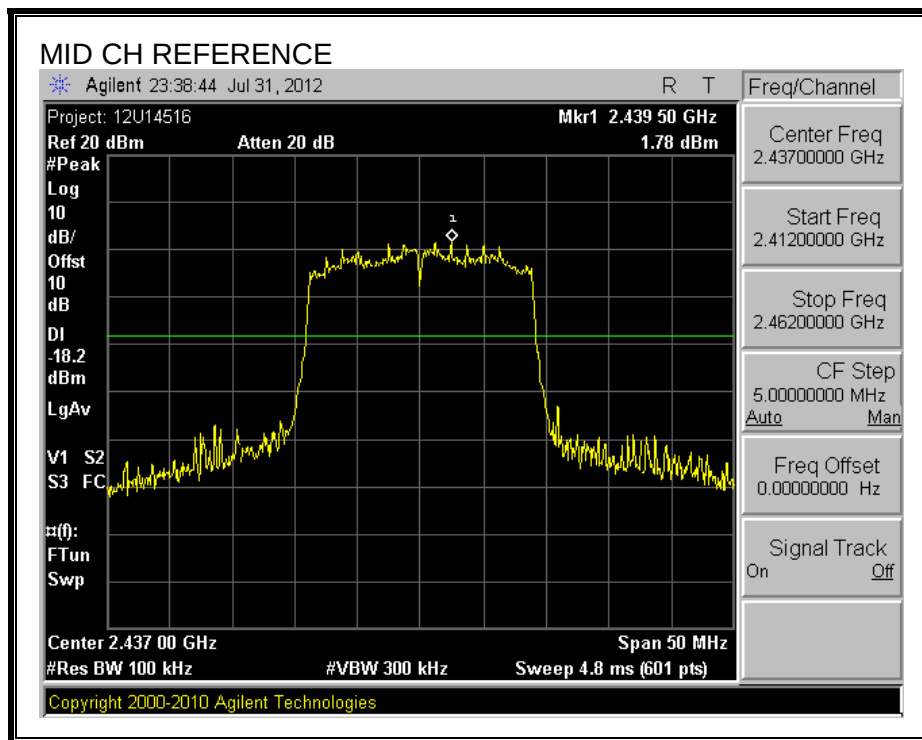
RESULTS

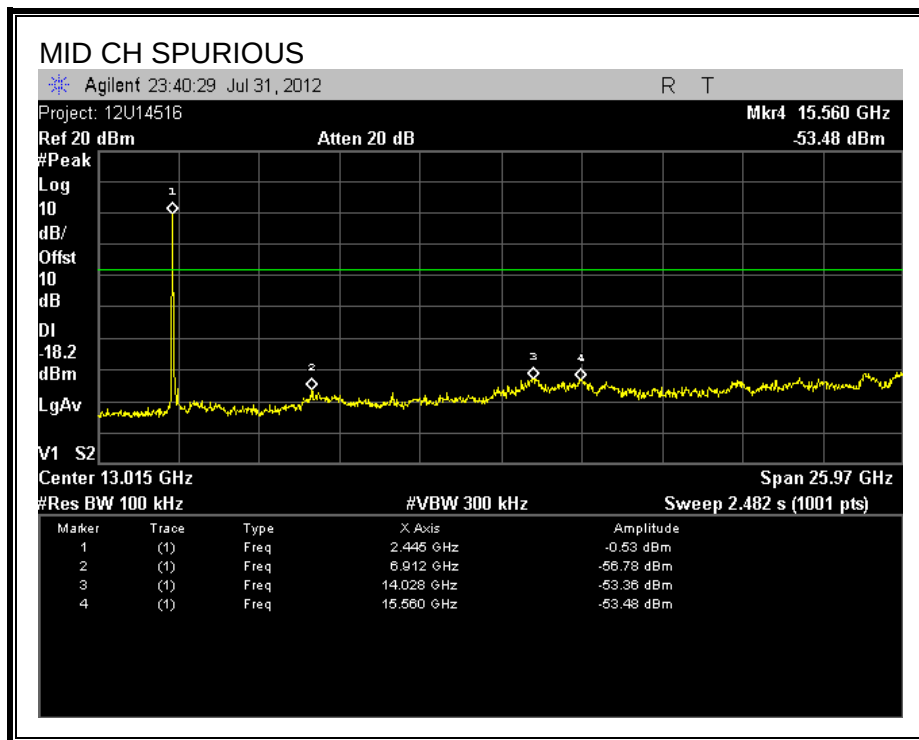
SPURIOUS EMISSIONS, LOW CHANNEL



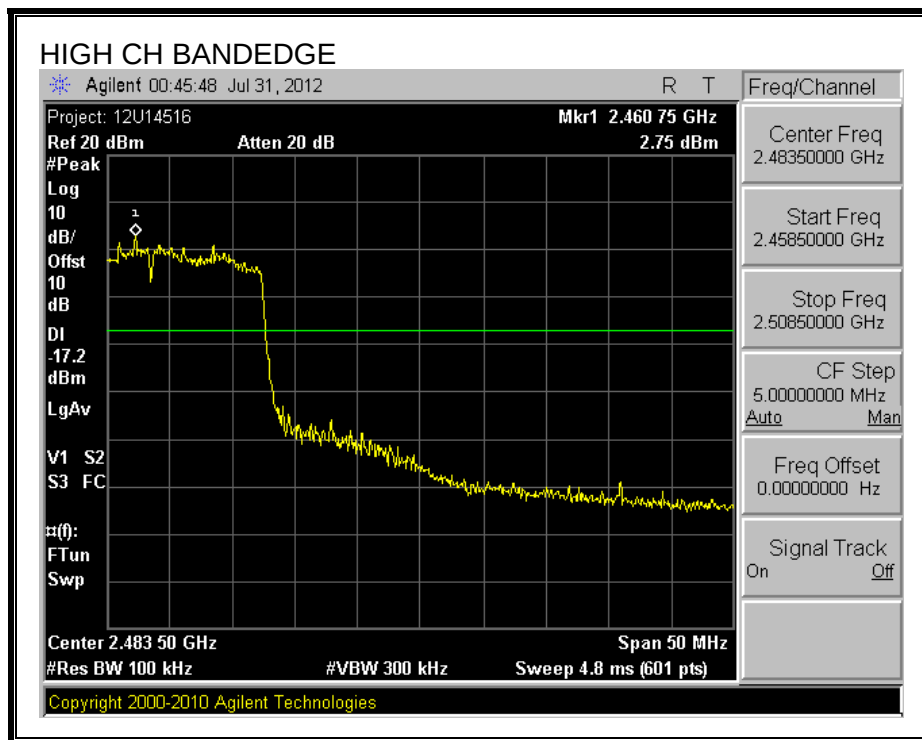


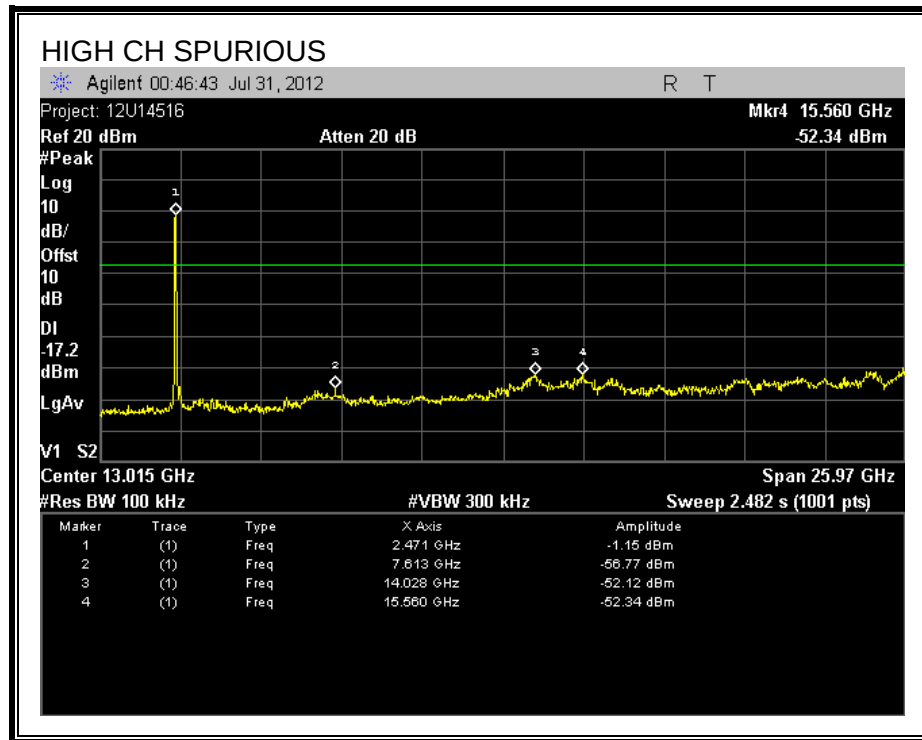
SPURIOUS EMISSIONS, MID CHANNEL





SPURIOUS EMISSIONS, HIGH CHANNEL





7.4. 802.11a MODE IN THE 5.8 GHz BAND

7.4.1. 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.

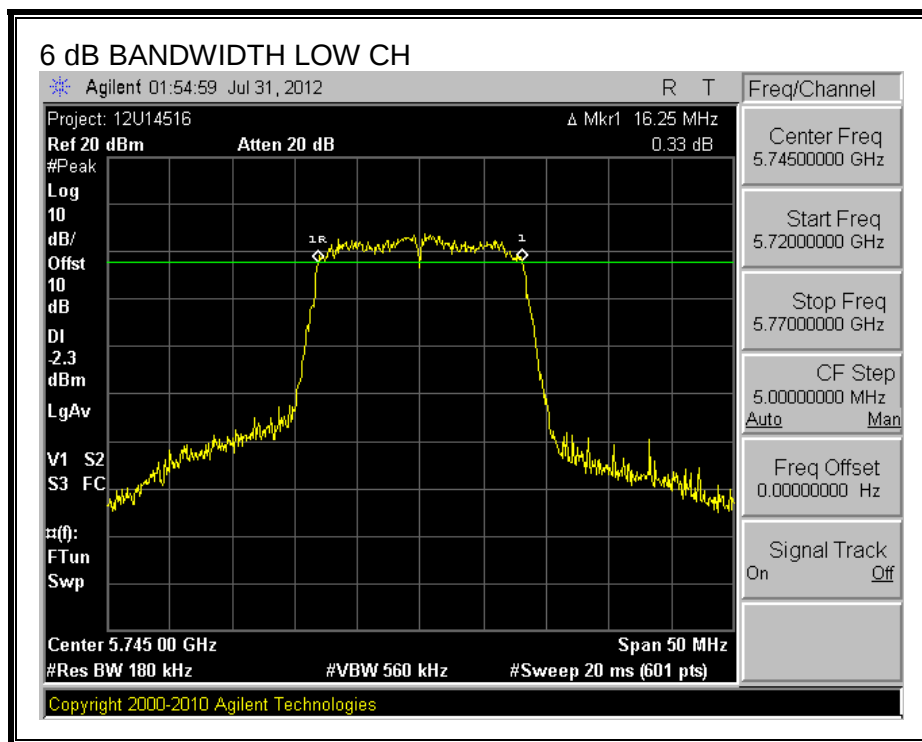
TEST PROCEDURE

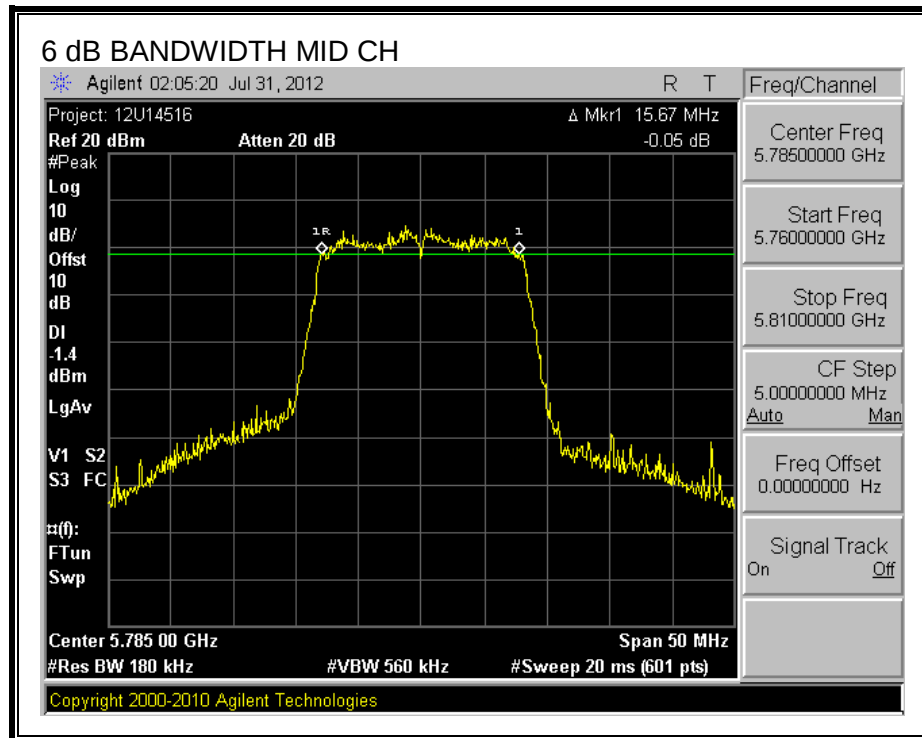
The transmitter output is connected to a spectrum analyzer. The RBW is set to 1-5% of the 6dB BW and the VBW is set to ≥ 3 times the RBW. The sweep time is coupled.

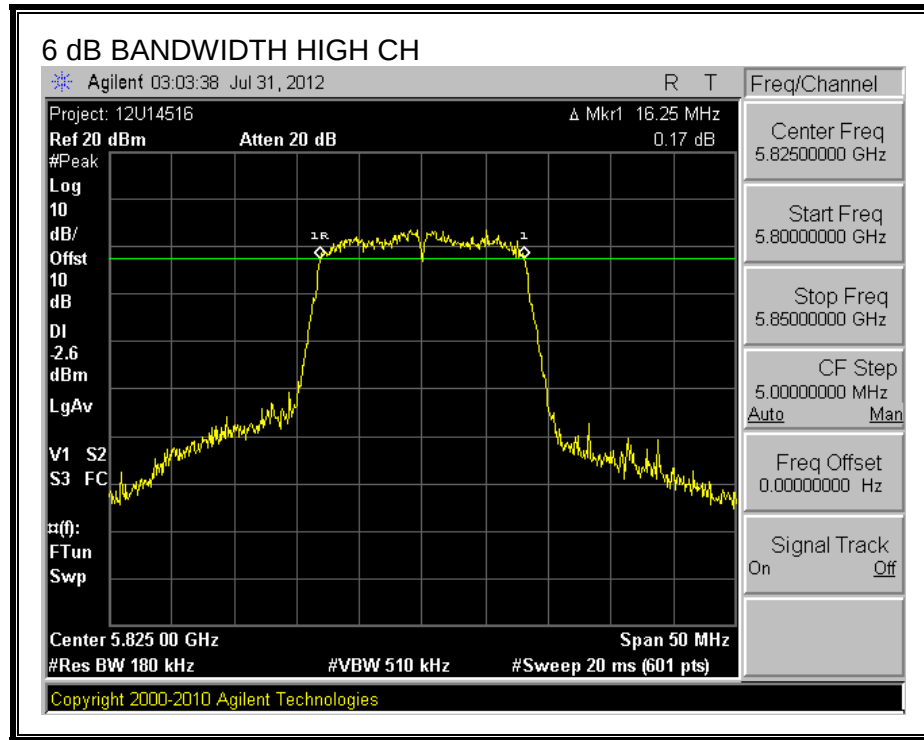
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.25	0.5
Middle	5785	15.67	0.5
High	5825	16.25	0.5

6 dB BANDWIDTH







7.4.2. 99% BANDWIDTH

LIMITS

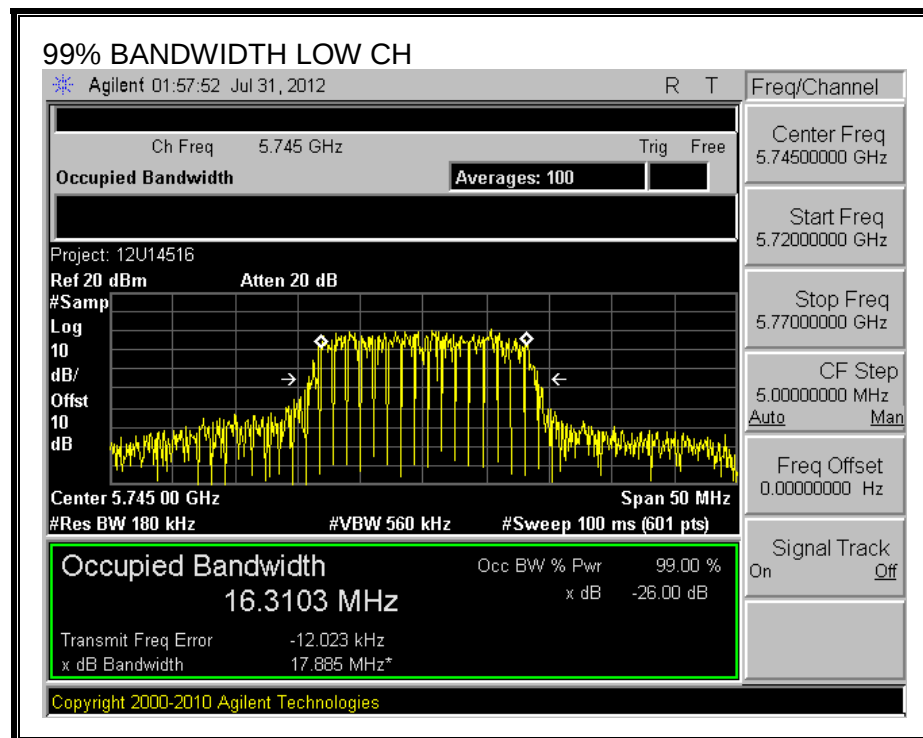
None; for reporting purposes only.

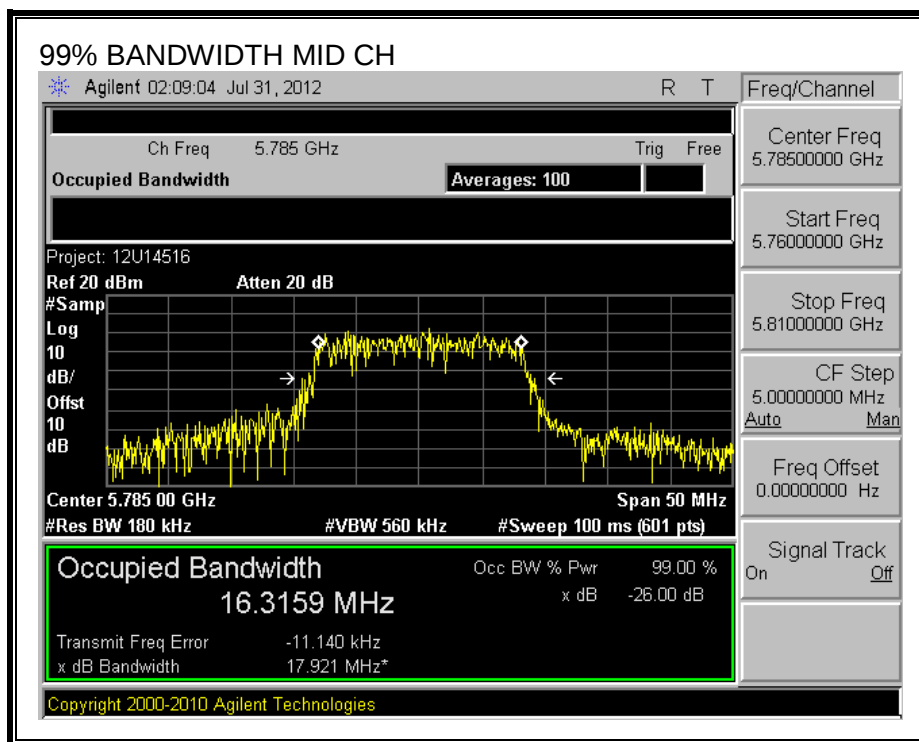
TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.3103
Middle	5785	16.3159
High	5825	16.3034







7.4.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

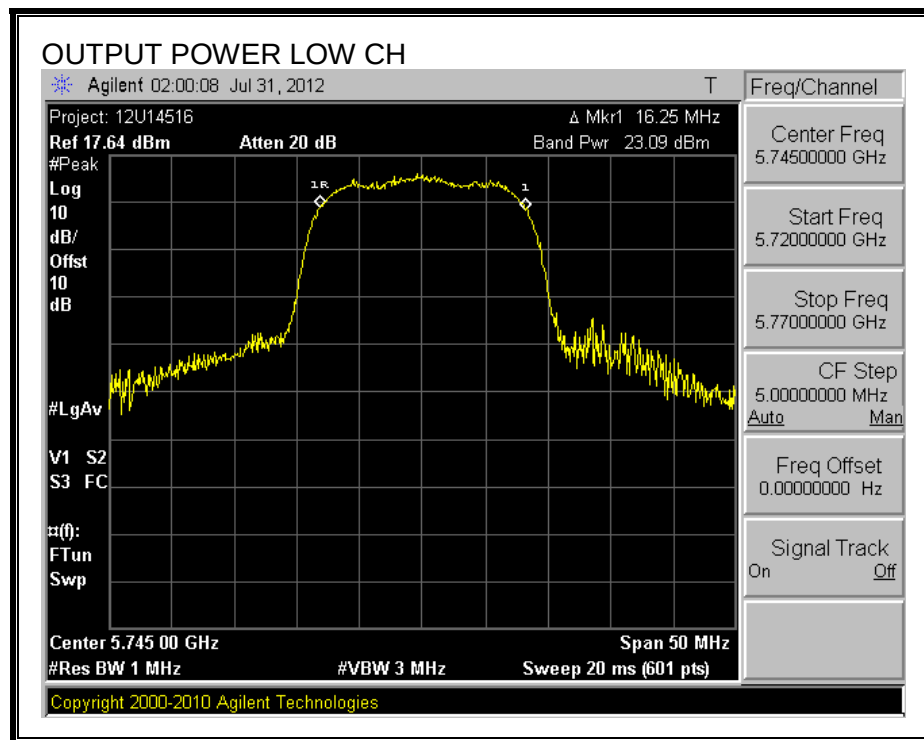
TEST PROCEDURE

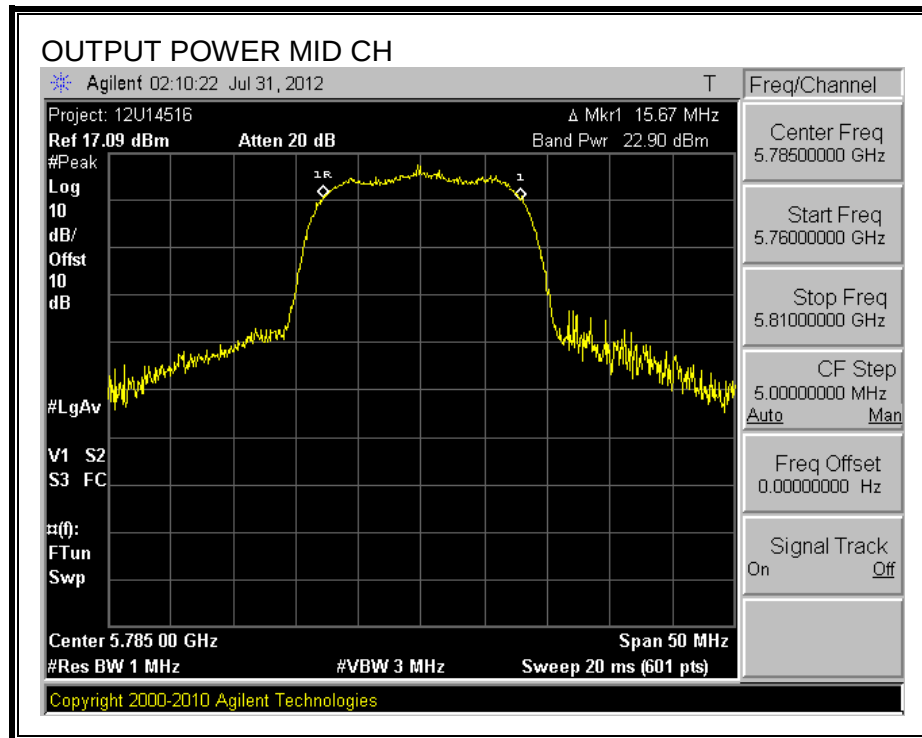
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

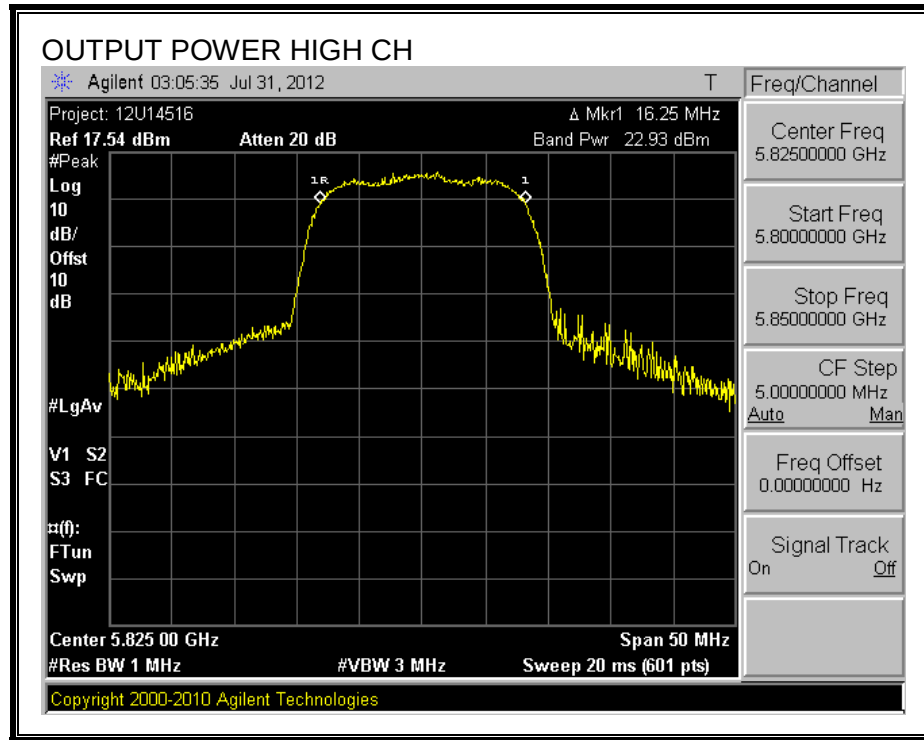
RESULTS

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	5745	23.09	30	-6.91
Middle	5785	22.90	30	-7.10
High	5825	22.93	30	-7.07

OUTPUT POWER







7.4.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10 dB (including 10 dB pad and 0 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	5745	14.00
Middle	5785	13.90
High	5825	13.80

7.4.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

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.

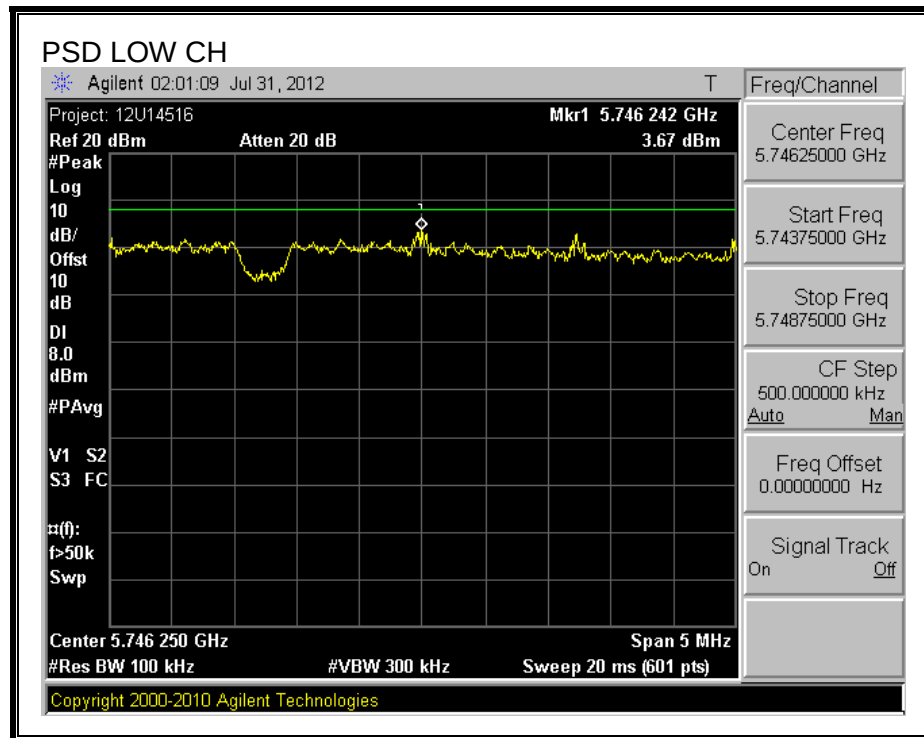
TEST PROCEDURE

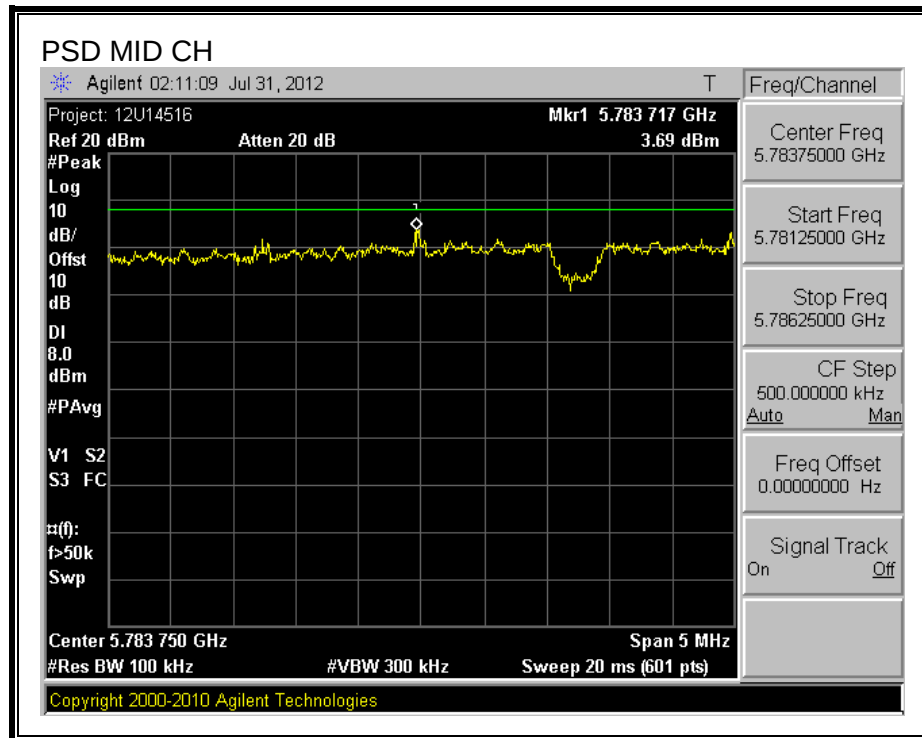
KDB 558074 dated 01/18/12.

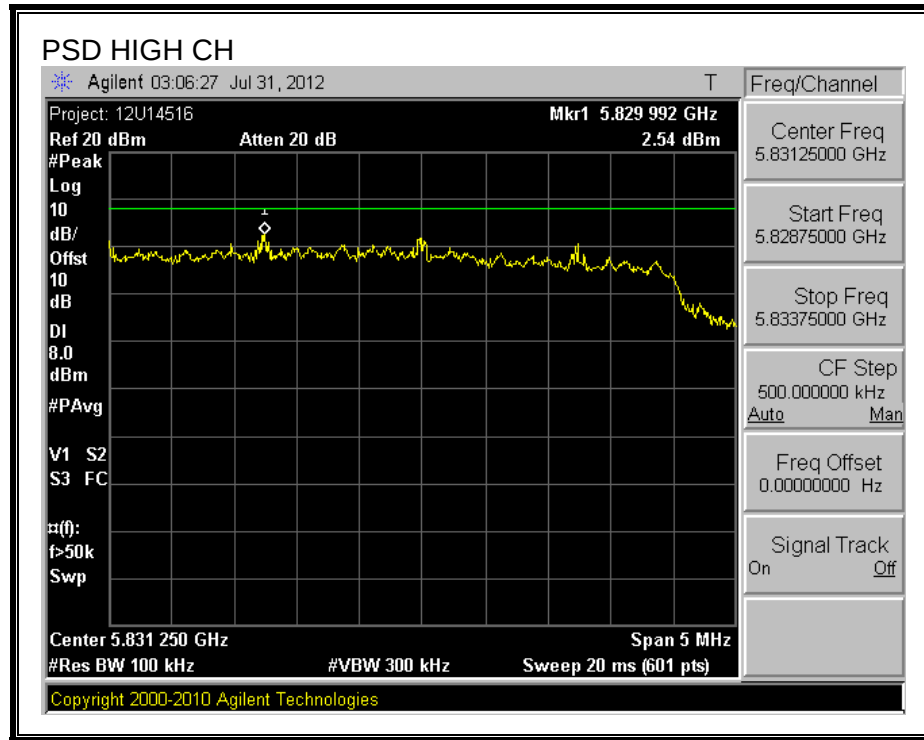
RESULTS

Channel	Frequency (MHz)	Marker Reading	10 log(3kHz/100kHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	5745	3.67	15.2	-11.53	8	-19.53
Middle	5785	3.69	15.2	-11.51	8	-19.51
High	5825	2.54	15.2	-12.66	8	-20.66

POWER SPECTRAL DENSITY







7.4.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

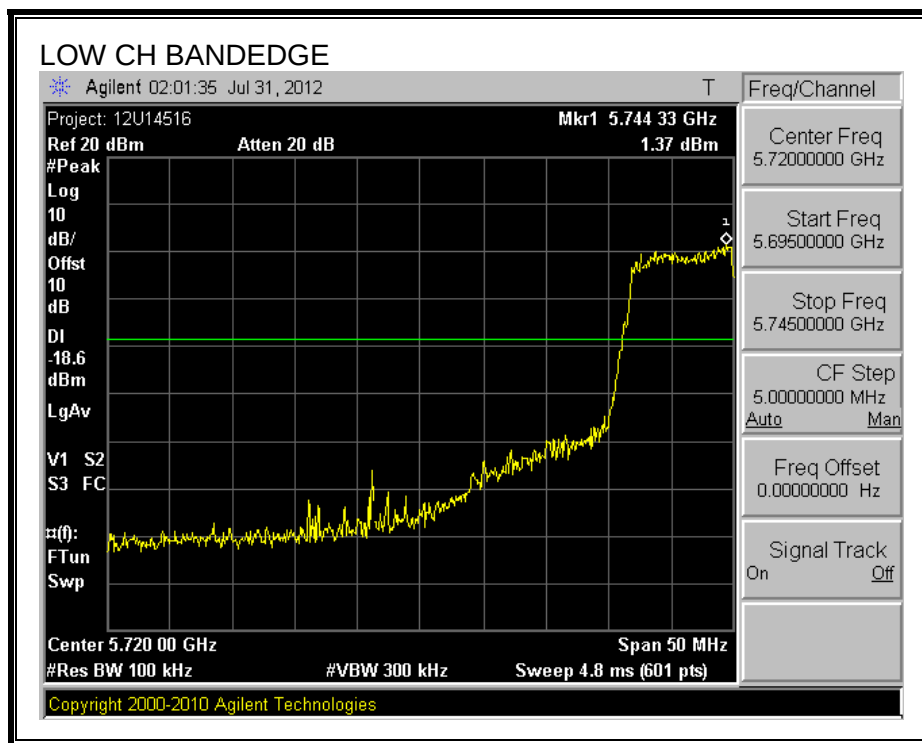
TEST PROCEDURE

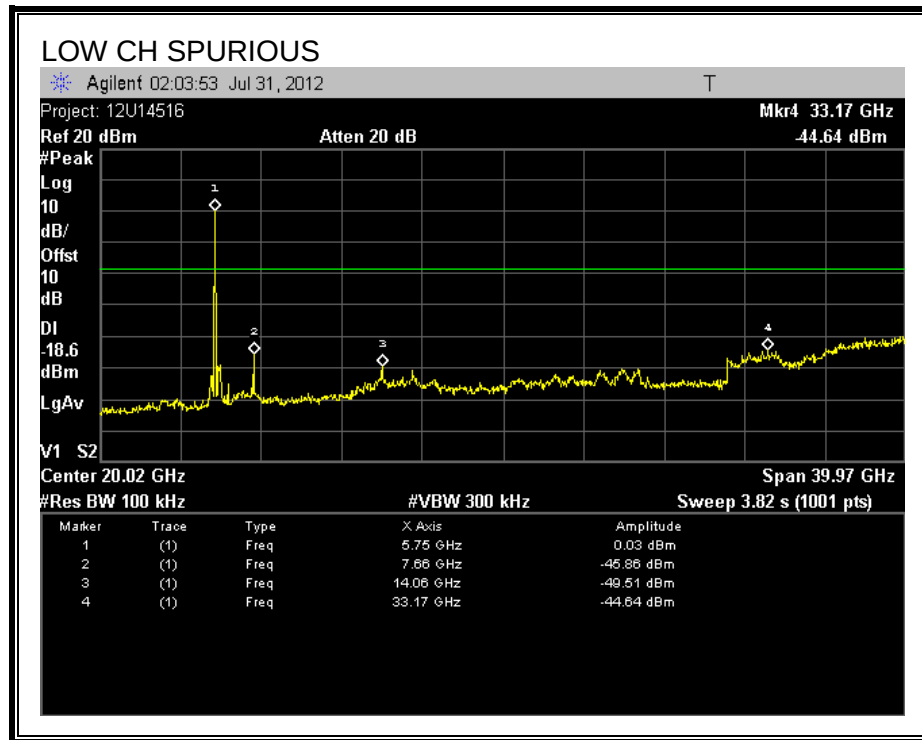
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

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

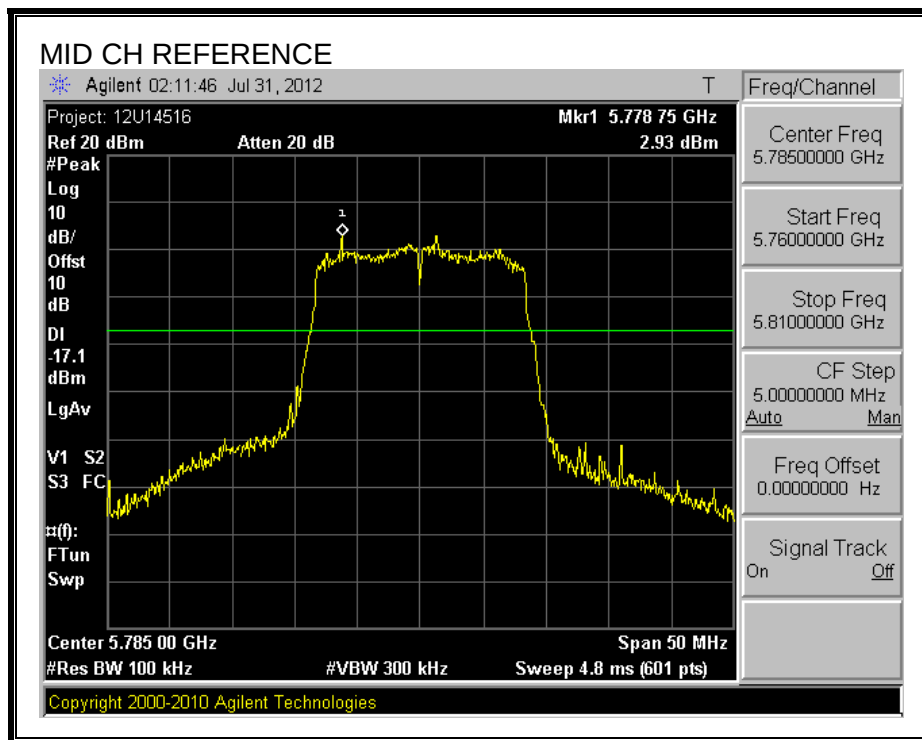
RESULTS

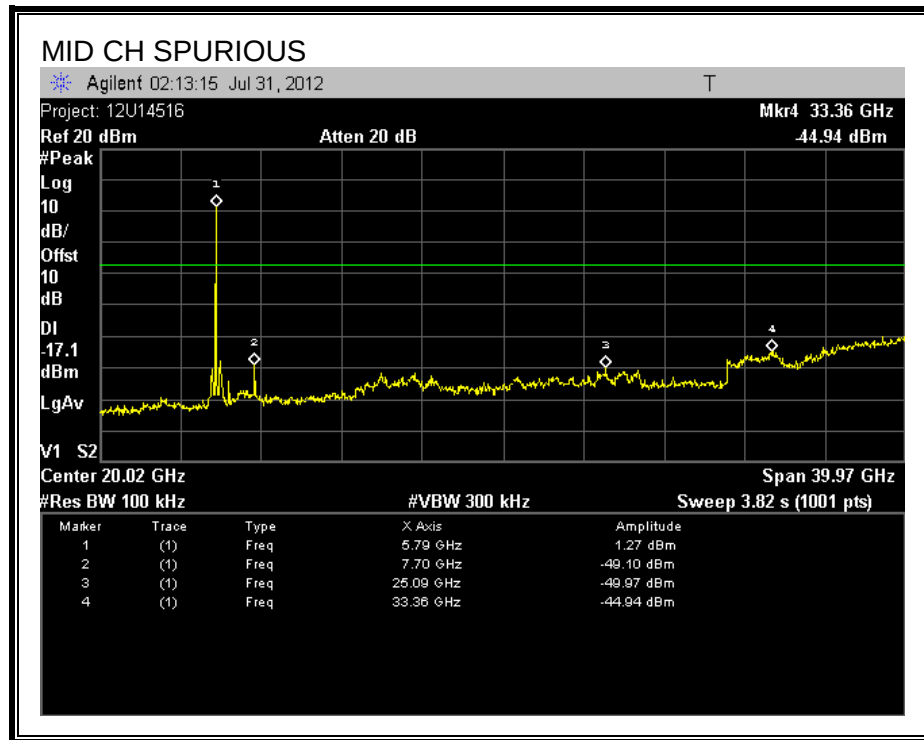
SPURIOUS EMISSIONS, LOW CHANNEL



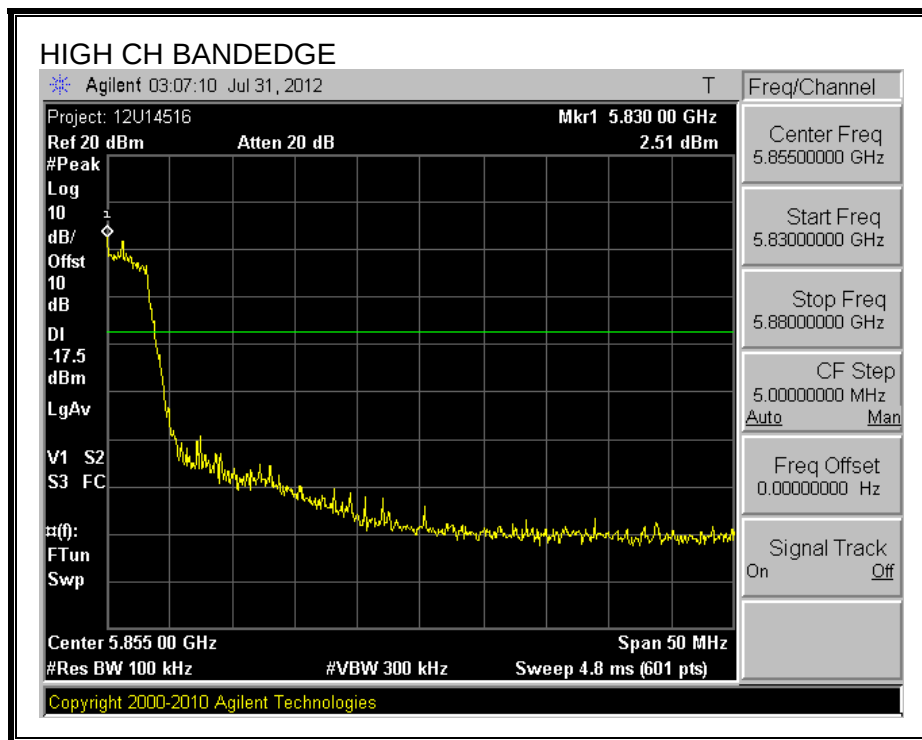


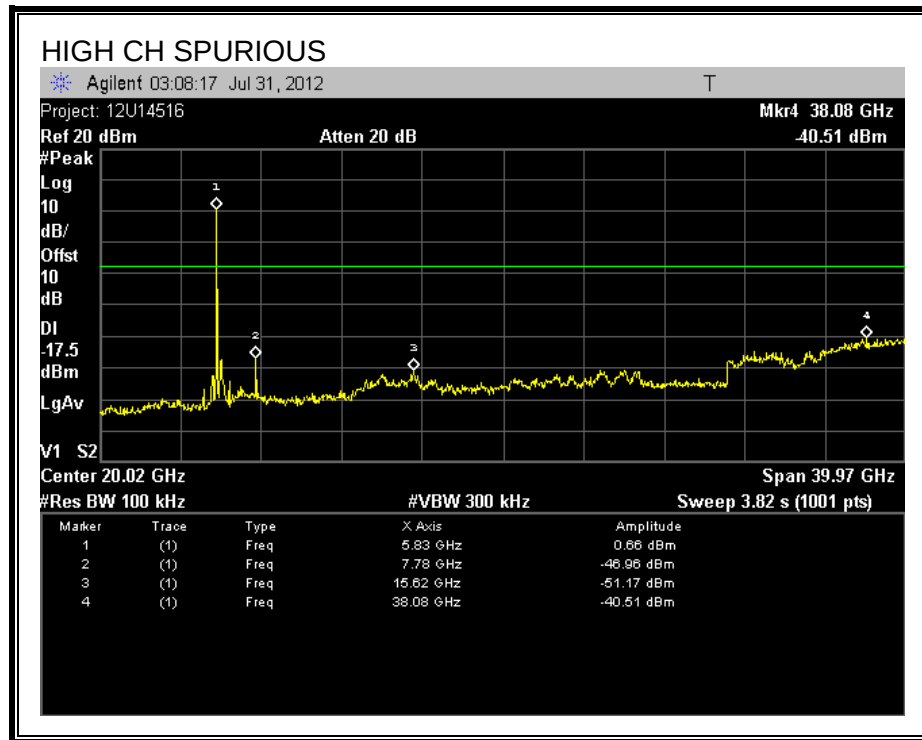
SPURIOUS EMISSIONS, MID CHANNEL





SPURIOUS EMISSIONS, HIGH CHANNEL





7.5. 802.11n HT20 MODE IN THE 5.8 GHz BAND

7.5.1. 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.

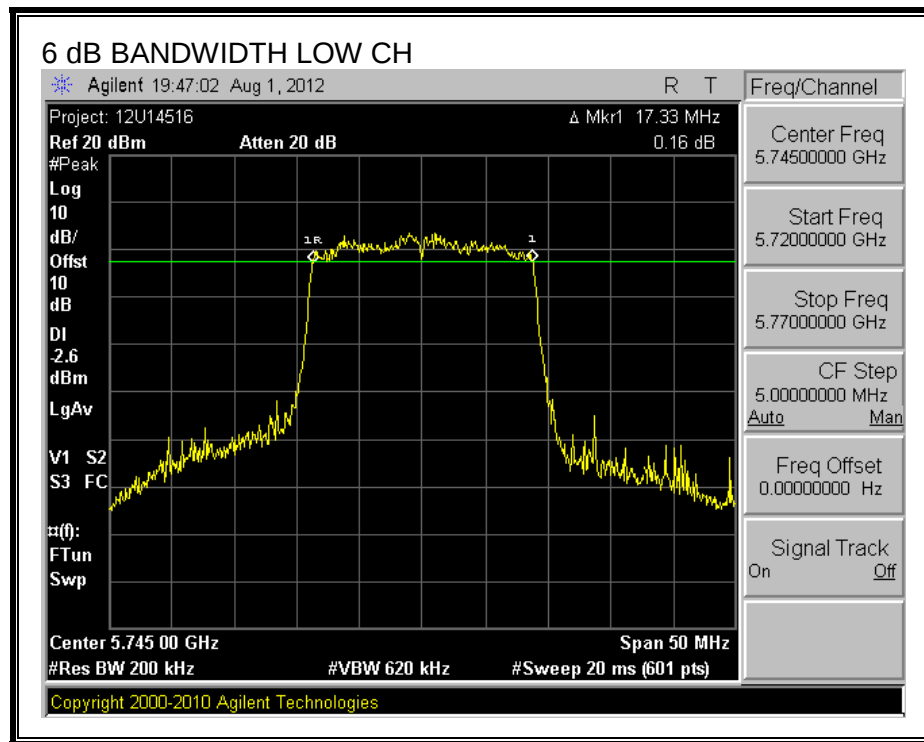
TEST PROCEDURE

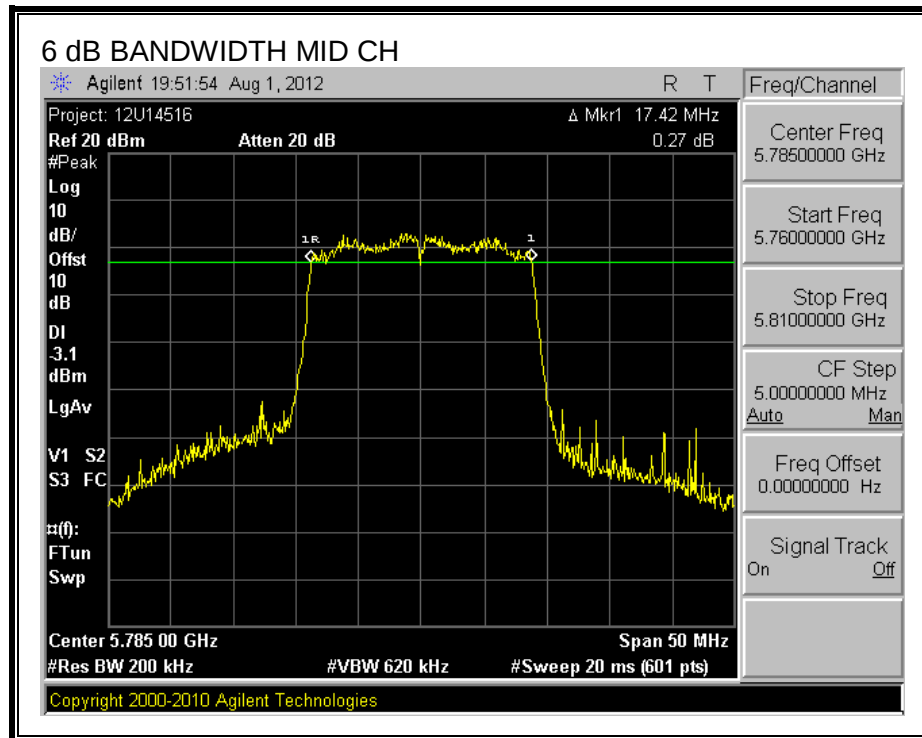
The transmitter output is connected to a spectrum analyzer. The RBW is set to 1-5% of the 6dB BW and the VBW is set to ≥ 3 times the RBW. The sweep time is coupled.

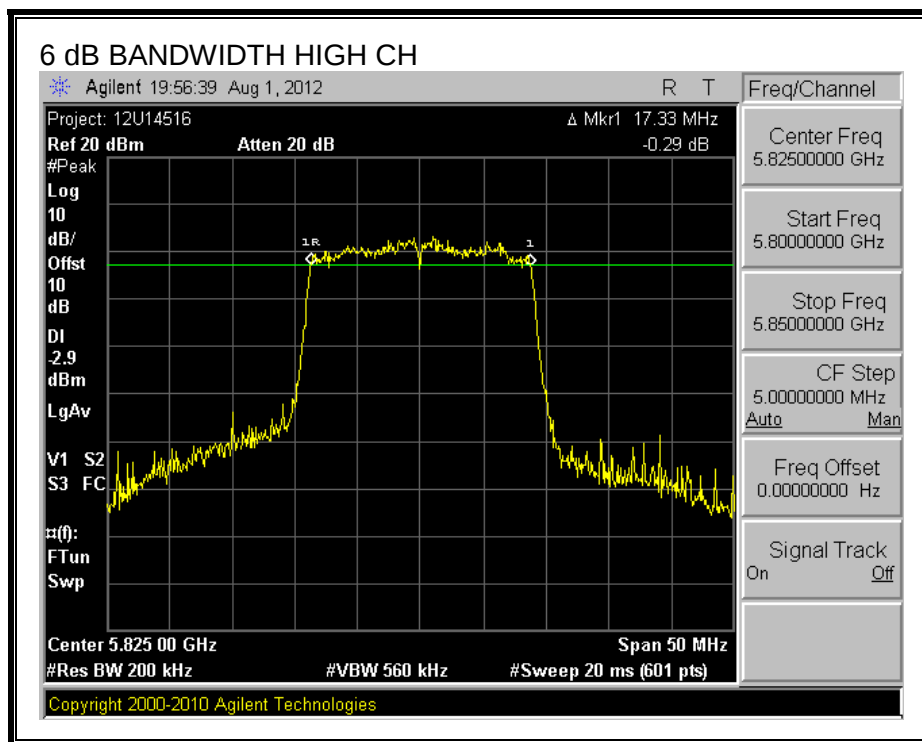
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.33	0.5
Middle	5785	17.42	0.5
High	5825	17.33	0.5

6 dB BANDWIDTH







7.5.2. 99% BANDWIDTH

LIMITS

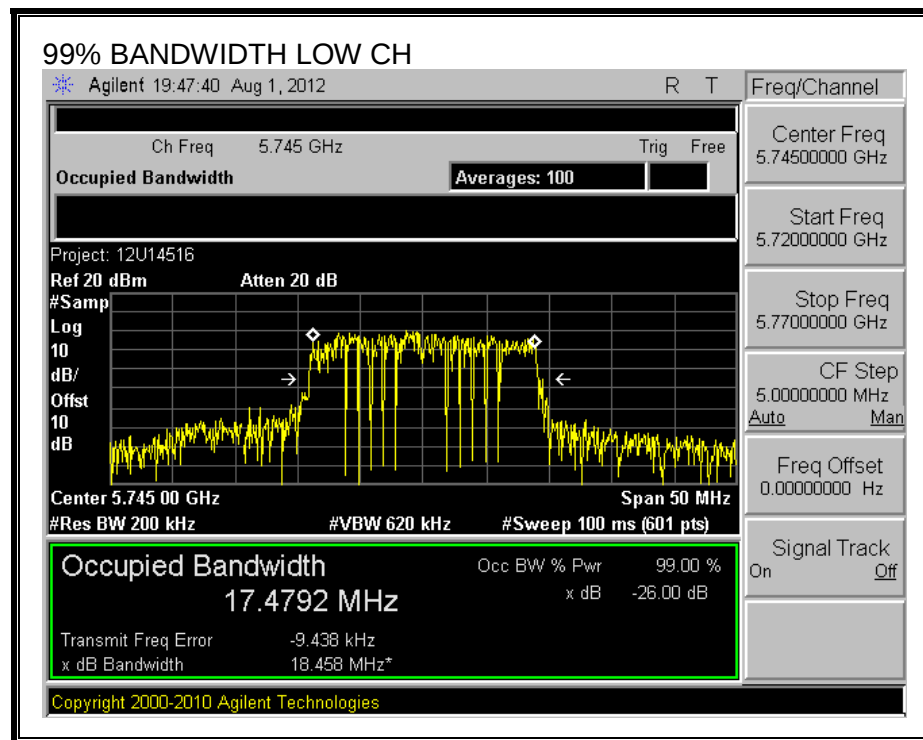
None; for reporting purposes only.

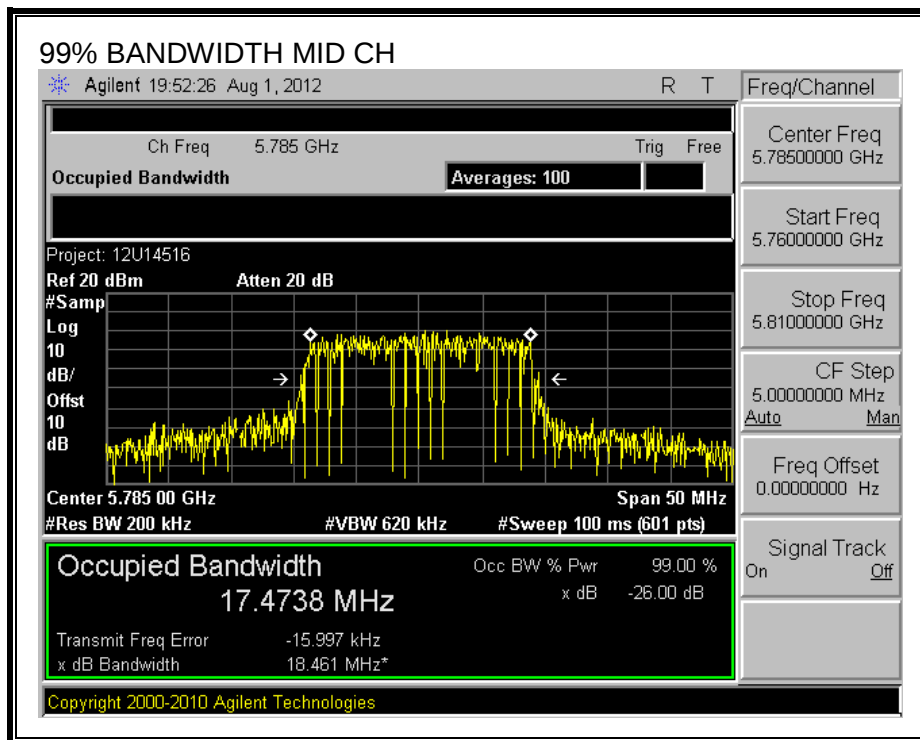
TEST PROCEDURE

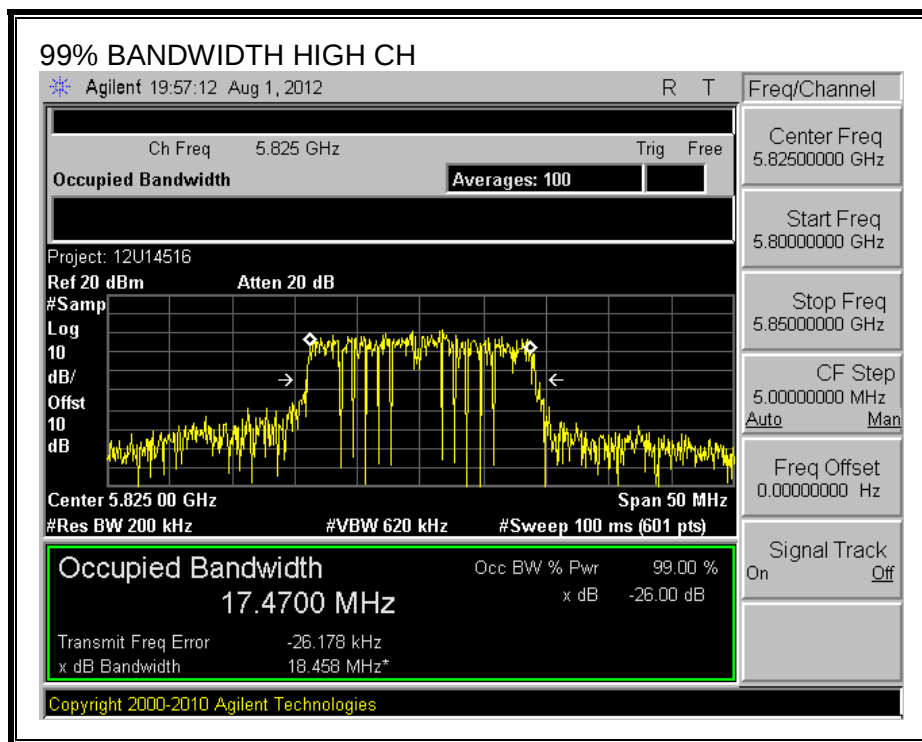
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.4792
Middle	5785	17.4738
High	5825	17.47







7.5.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

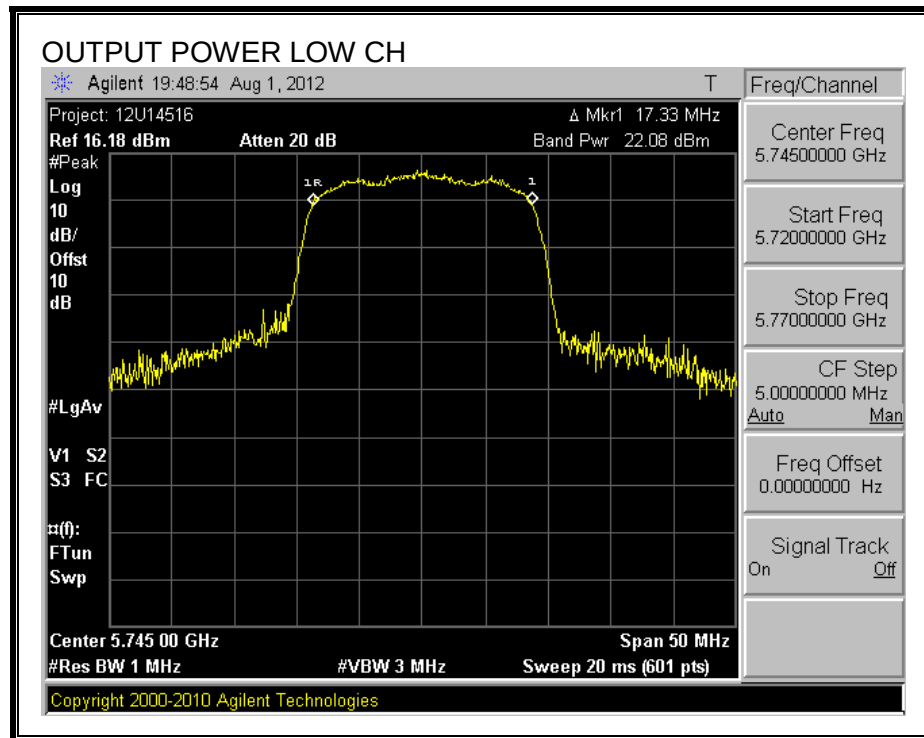
TEST PROCEDURE

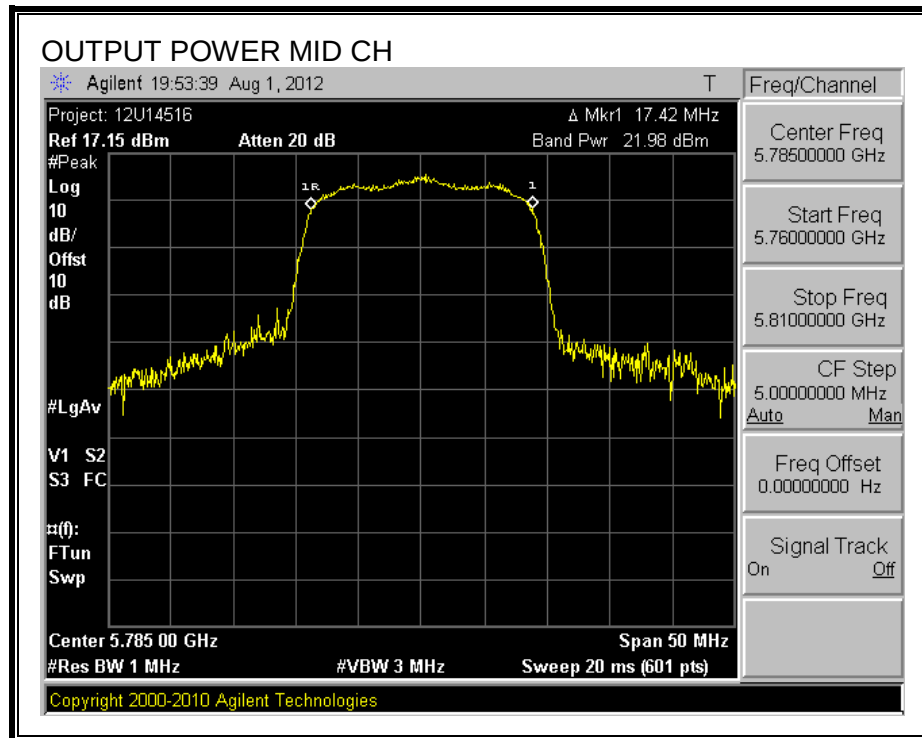
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

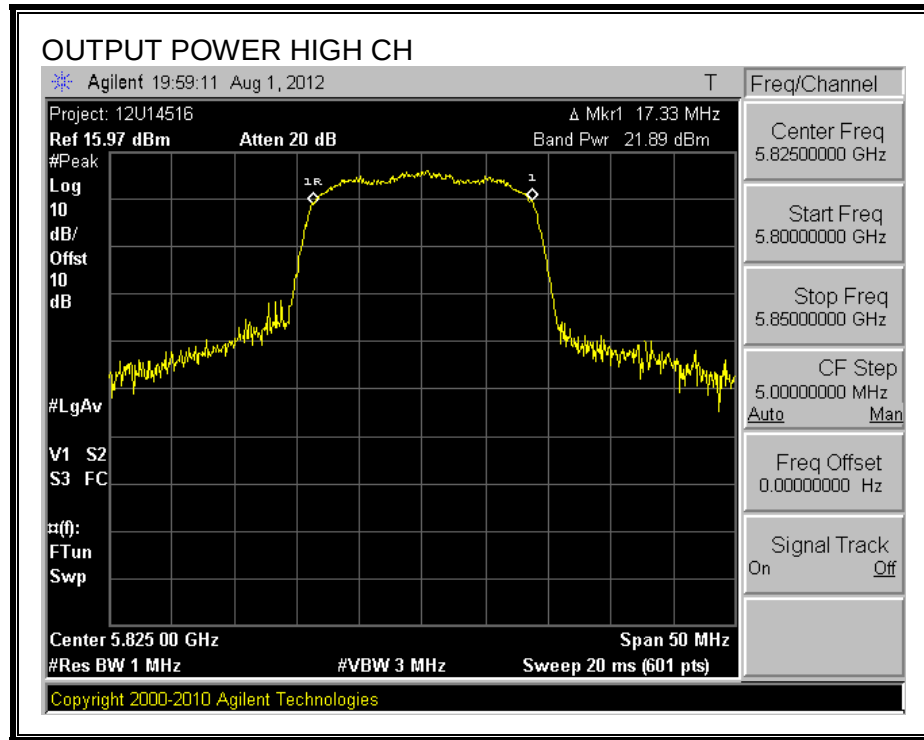
RESULTS

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	5745	22.08	30	-7.92
Middle	5785	21.98	30	-8.02
High	5825	21.89	30	-8.11

OUTPUT POWER







7.5.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10 dB (including 10 dB pad and 0 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	5745	13.00
Middle	5785	12.90
High	5825	12.80

7.5.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

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.

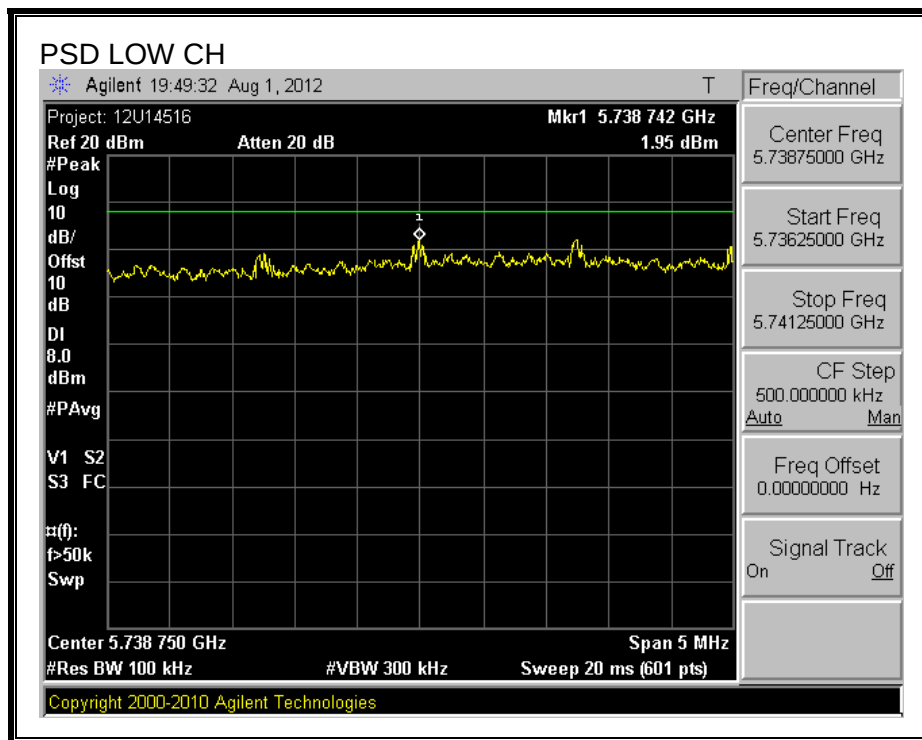
TEST PROCEDURE

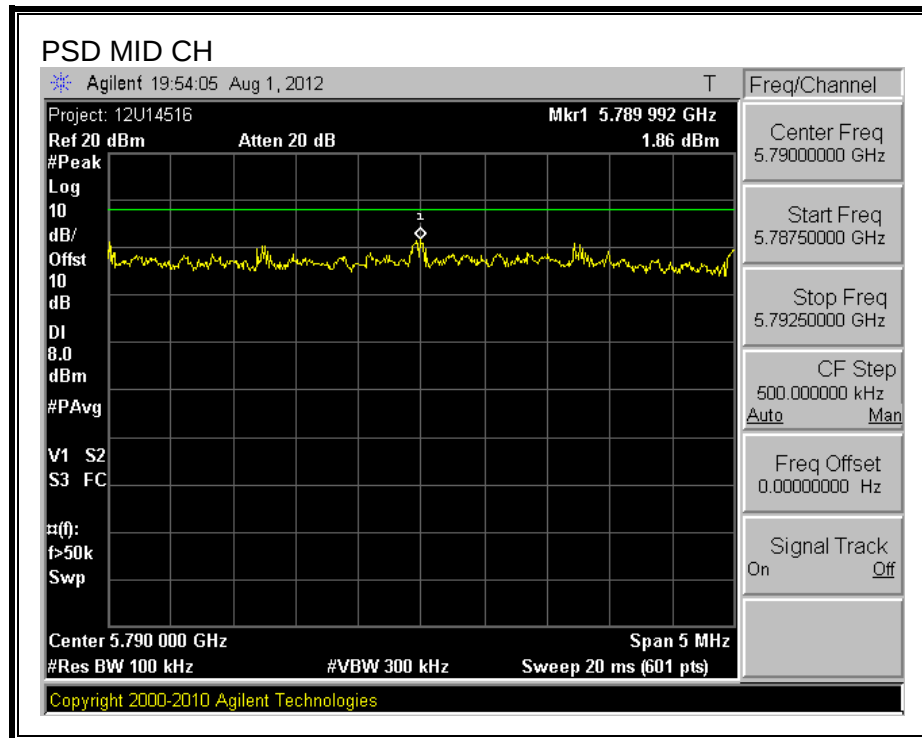
KDB 558074 dated 01/18/12.

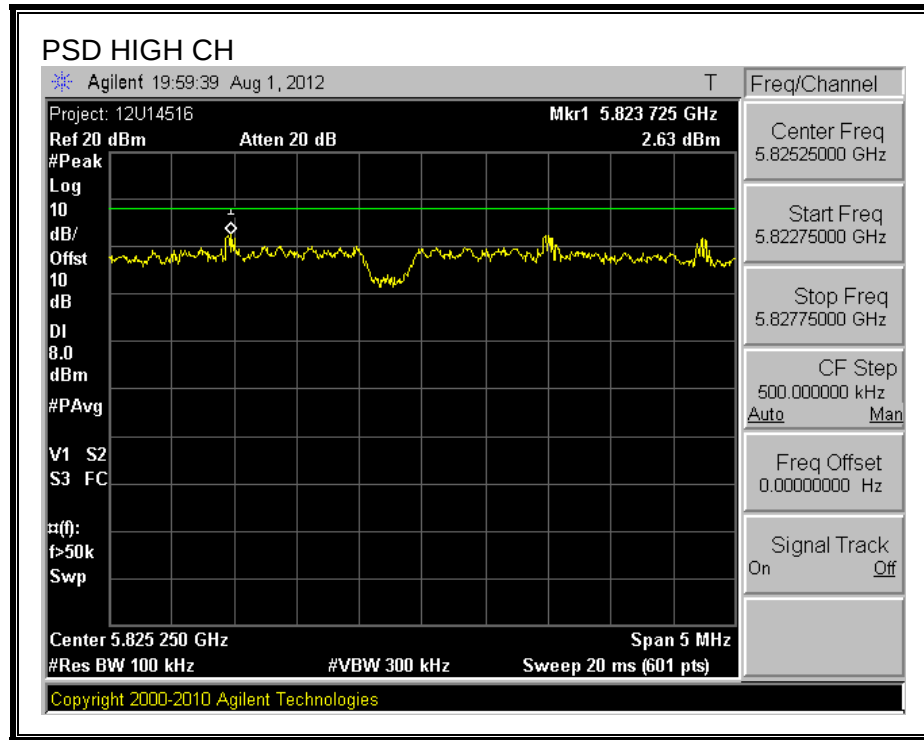
RESULTS

Channel	Frequency (MHz)	Marker Reading	10 log(3kHz/100kHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	5745	1.95	15.2	-13.25	8	-21.25
Middle	5785	1.86	15.2	-13.34	8	-21.34
High	5825	2.63	15.2	-12.57	8	-20.57

POWER SPECTRAL DENSITY







7.5.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

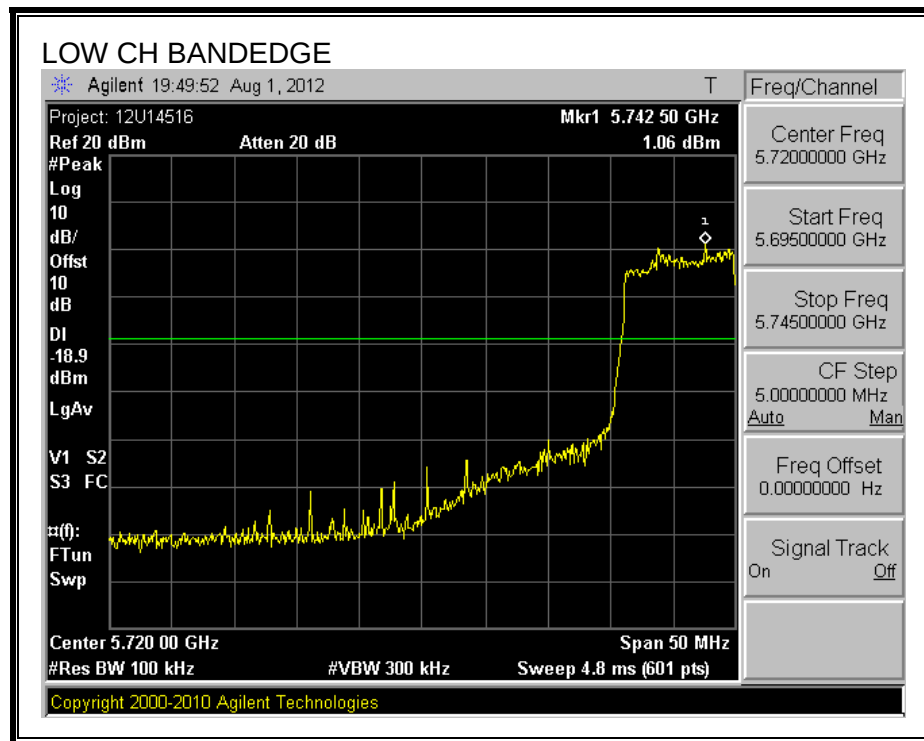
TEST PROCEDURE

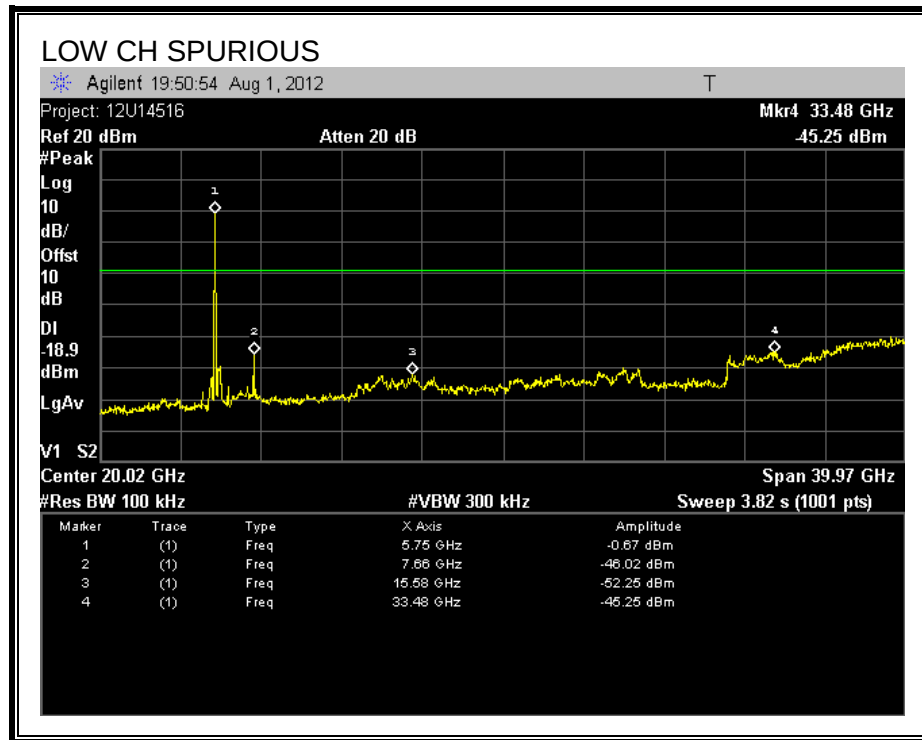
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

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

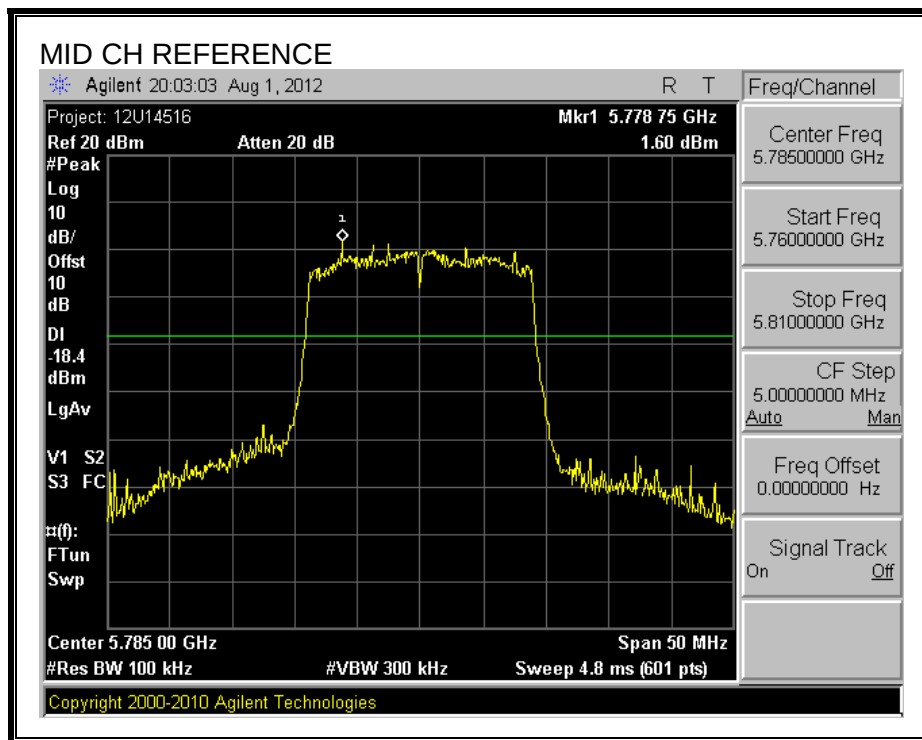
RESULTS

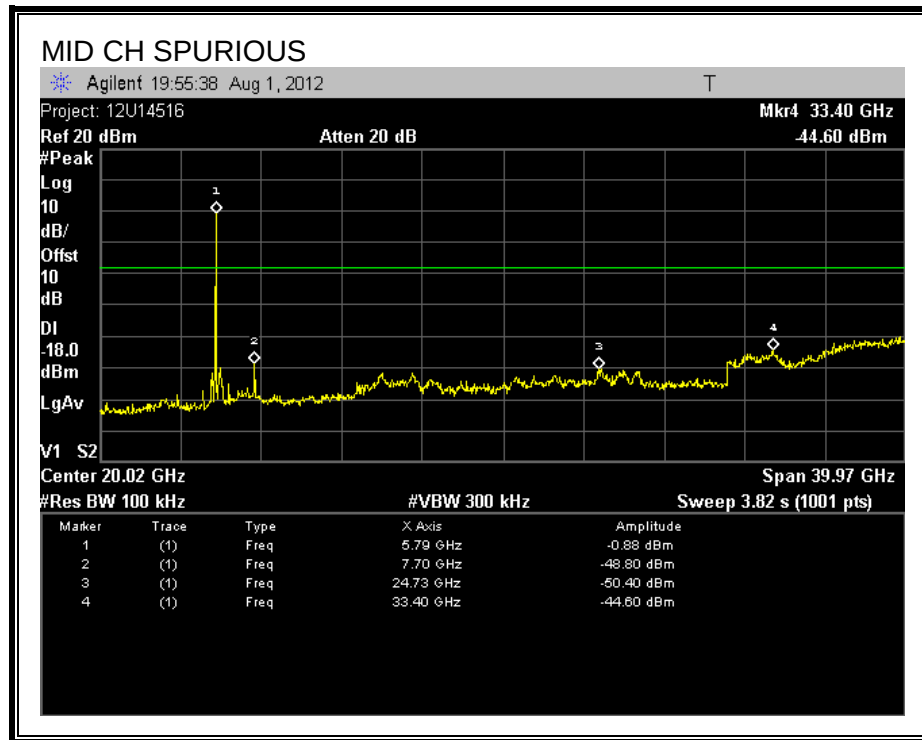
SPURIOUS EMISSIONS, LOW CHANNEL



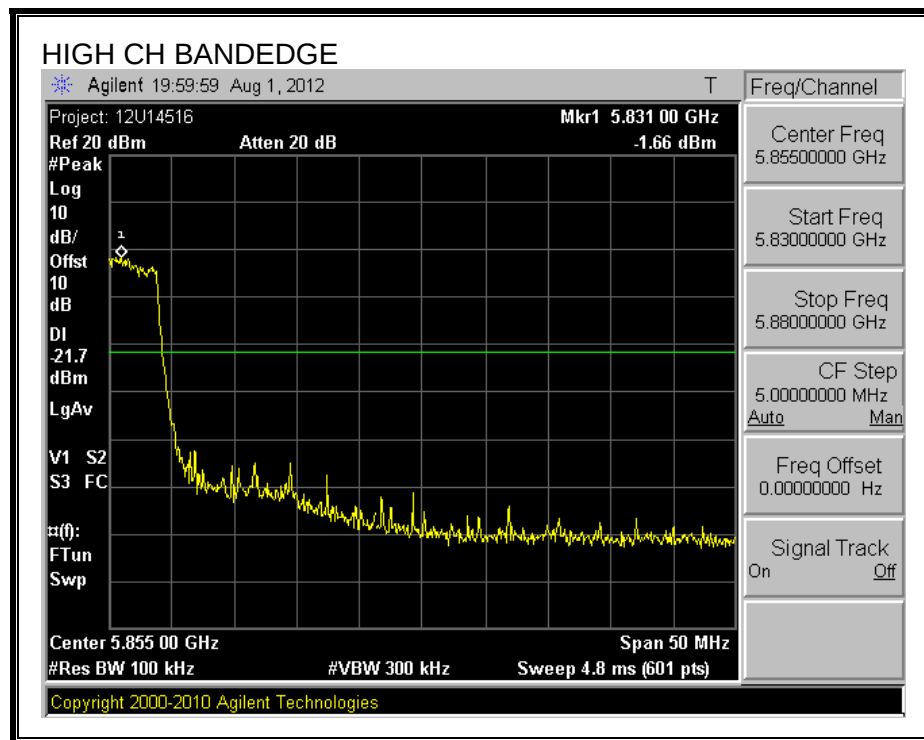


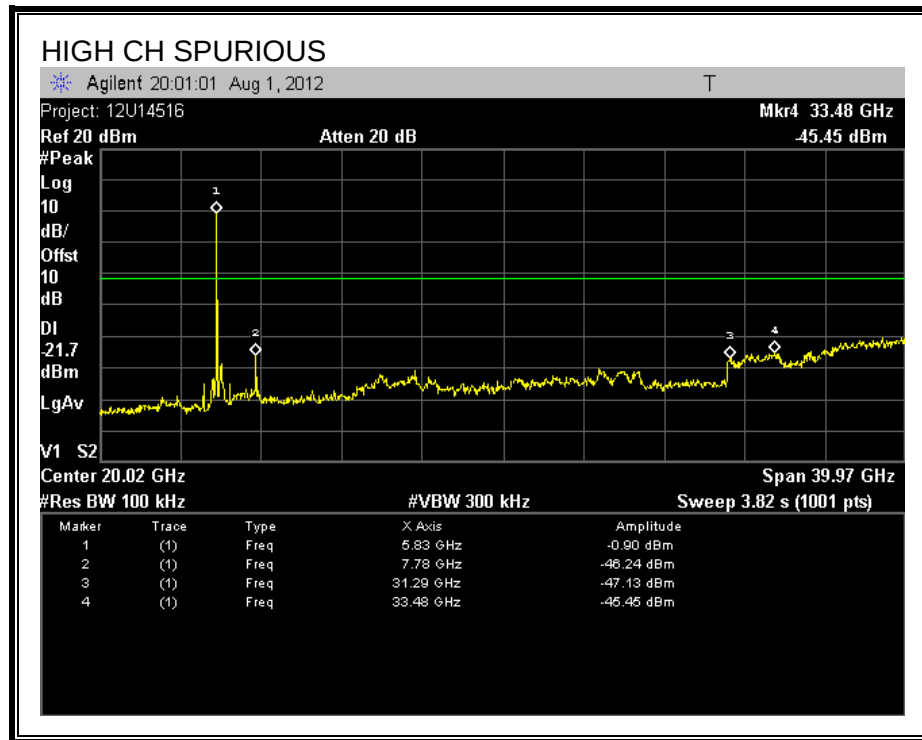
SPURIOUS EMISSIONS, MID CHANNEL





SPURIOUS EMISSIONS, HIGH CHANNEL





8. RADIATED TEST RESULTS

8.1. 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. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

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, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

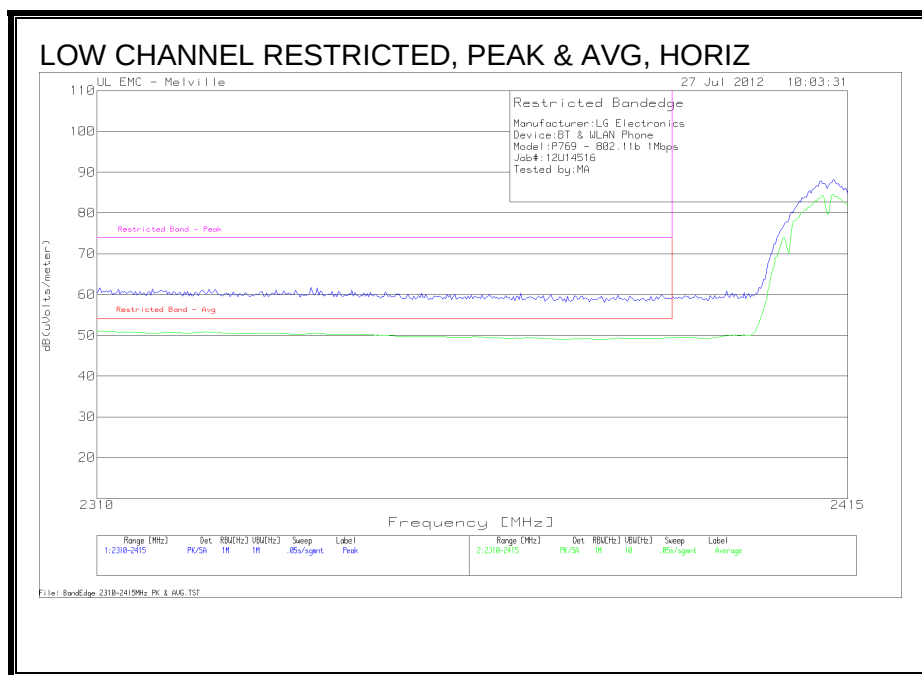
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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.

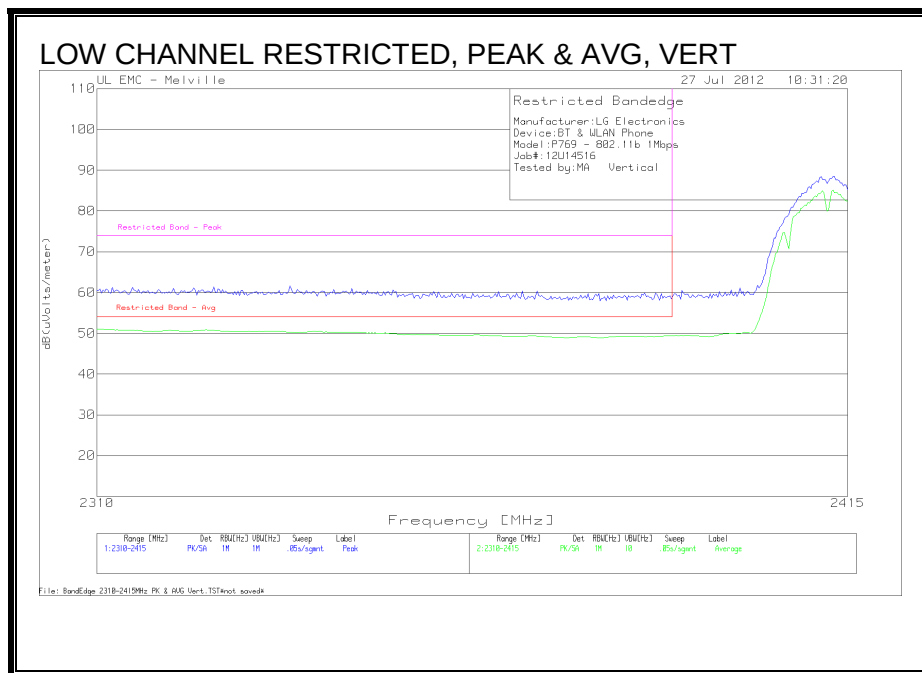
8.2. TRANSMITTER ABOVE 1 GHz

8.2.1. TX ABOVE 1 GHz FOR 802.11b 1TX MODE IN THE 2.4 GHz BAND

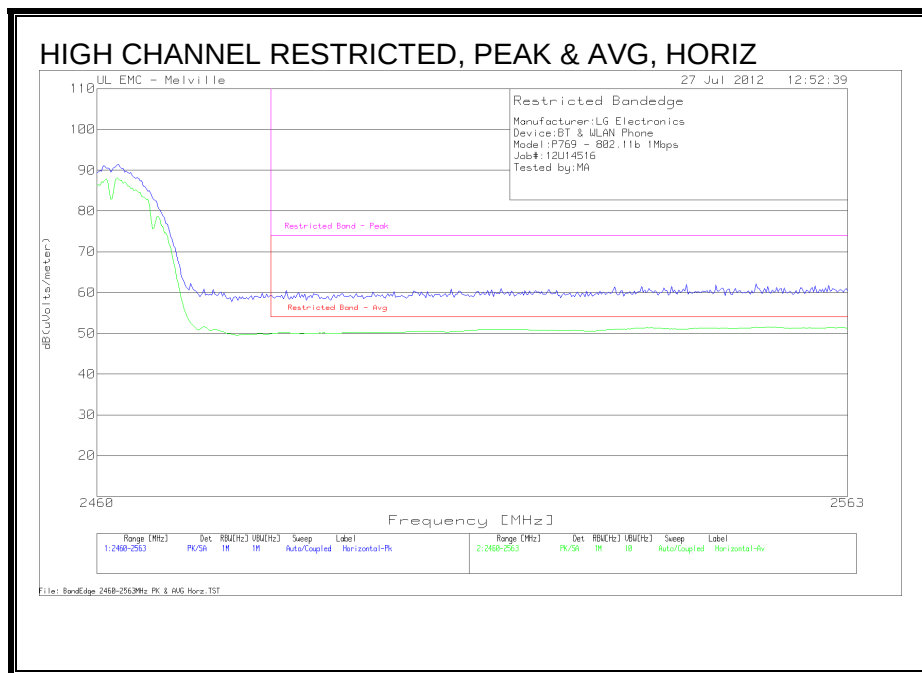
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



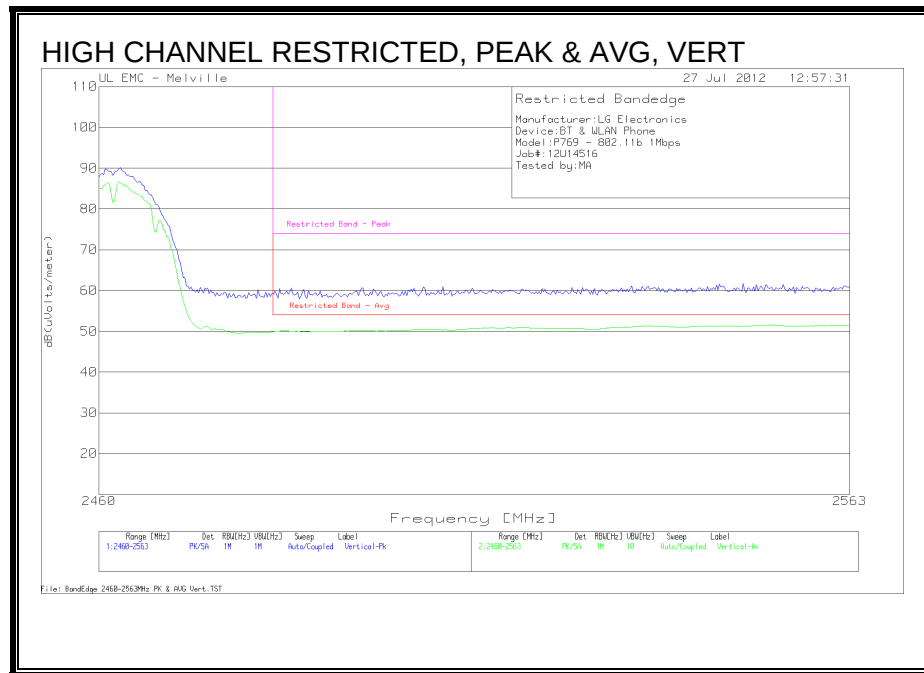
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANEDGE (HIGH CHANNEL, VERTICAL)



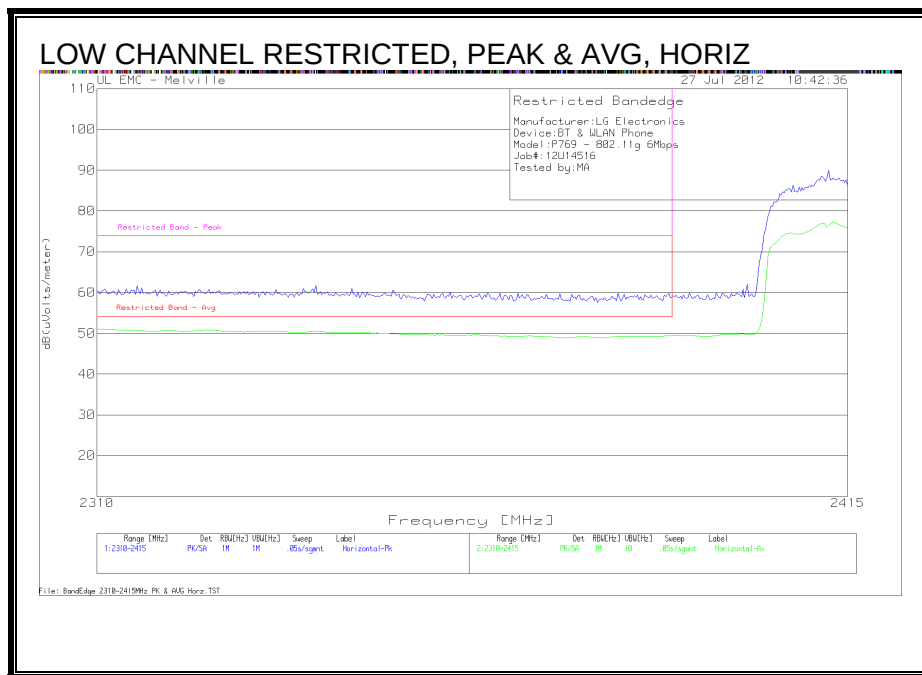
HARMONICS AND SPURIOUS EMISSIONS

Manufacturer: LG Electronics												
Device: BT & WLAN Phone												
Model: P769 - 802.11b 1Mbps												
Job#: 12U14516												
Tested by: DC												
Low Channel - 2412MHz												
Test Frequency	Meter Reading	Detector	AF-48106 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4823.9422	69.78	PK	27.1	-52.45	44.43	54	-9.57	74	-29.57	28	174	Horz
4823.9422	65.08	Av	27.1	-52.45	39.73	54	-14.27	74	-34.27	28	174	Horz
4823.9583	72.31	PK	27.1	-52.45	46.96	54	-7.04	74	-27.04	138	291	Vert
4823.9583	68.38	Av	27.1	-52.45	43.03	54	-10.97	74	-30.97	138	291	Vert
Mid Channel - 2437MHz												
Test Frequency	Meter Reading	Detector	AF-48106 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4873.978	68.28	PK	27.2	-52.61	42.87	54	-11.13	74	-31.13	39	136	Horz
4873.978	62.15	Av	27.2	-52.61	36.74	54	-17.26	74	-37.26	39	136	Horz
4873.978	70.17	PK	27.2	-52.61	44.76	54	-9.24	74	-29.24	131	289	Vert
4873.978	65.06	Av	27.2	-52.61	39.65	54	-14.35	74	-34.35	131	289	Vert
High Channel - 2462MHz												
Test Frequency	Meter Reading	Detector	AF-48106 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4923.9689	68.95	PK	27.2	-52.52	43.63	54	-10.37	74	-30.37	9	196	Horz
4923.9689	63.39	Av	27.2	-52.52	38.07	54	-15.93	74	-35.93	9	196	Horz
4923.9689	70.26	PK	27.2	-52.52	44.94	54	-9.06	74	-29.06	134	241	Vert
4923.9689	65.5	Av	27.2	-52.52	40.18	54	-13.82	74	-33.82	134	241	Vert
PK - Peak detector												
Av - Average detector												

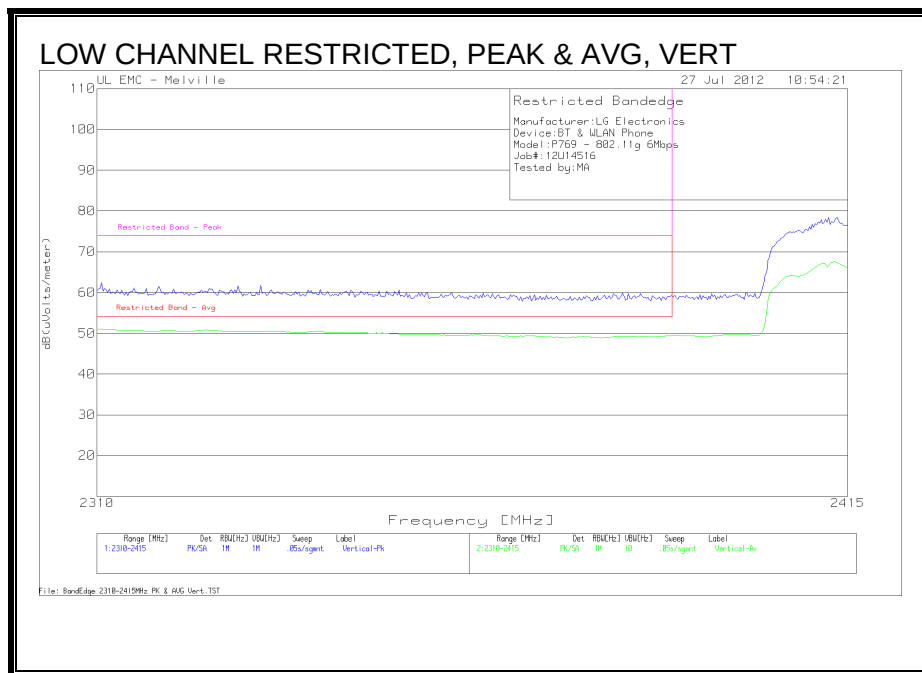
Note: No other emissions were detected above the system noise floor.

8.2.2. TX ABOVE 1 GHz FOR 802.11g 1TX MODE IN THE 2.4 GHz BAND

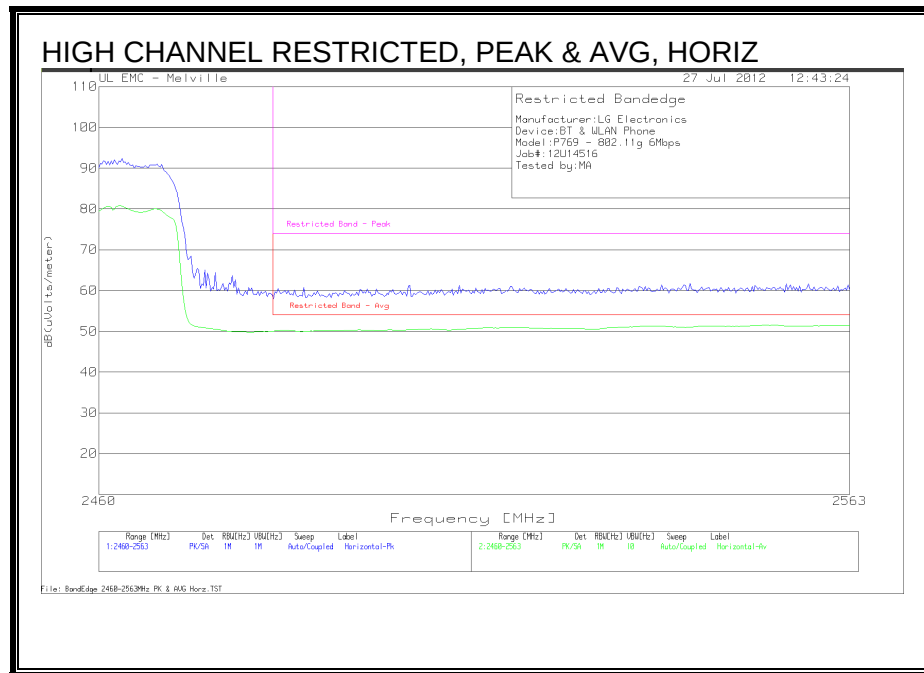
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



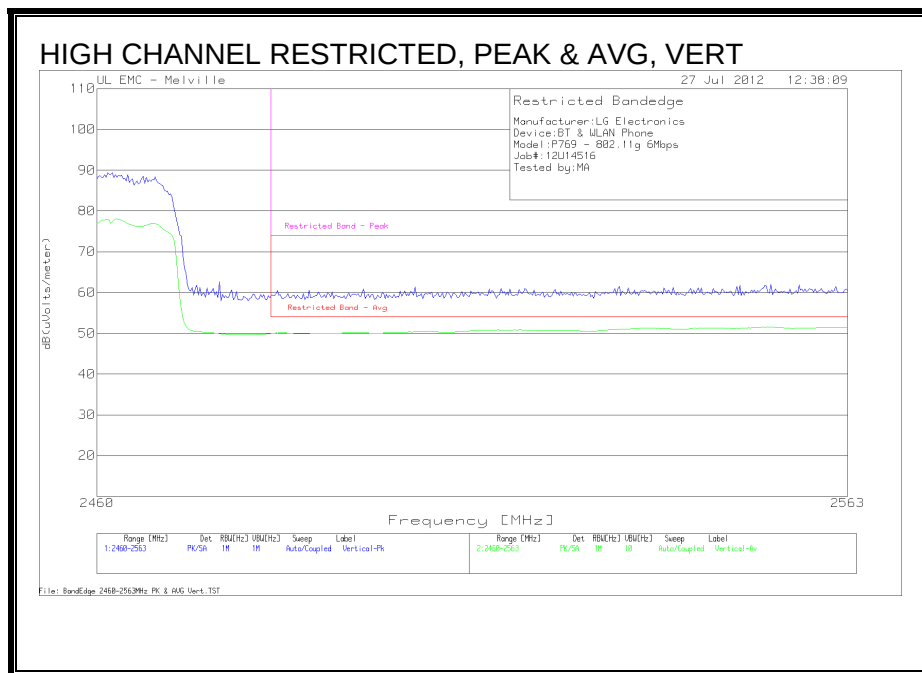
RESTRICTED BANEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANEDGE (HIGH CHANNEL, VERTICAL)

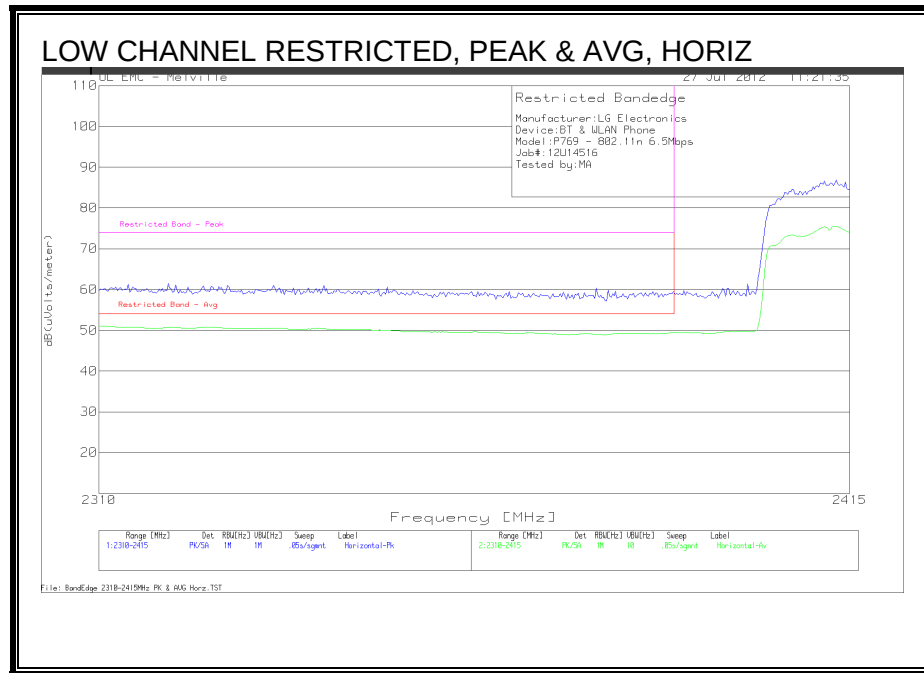


HARMONICS AND SPURIOUS EMISSIONS

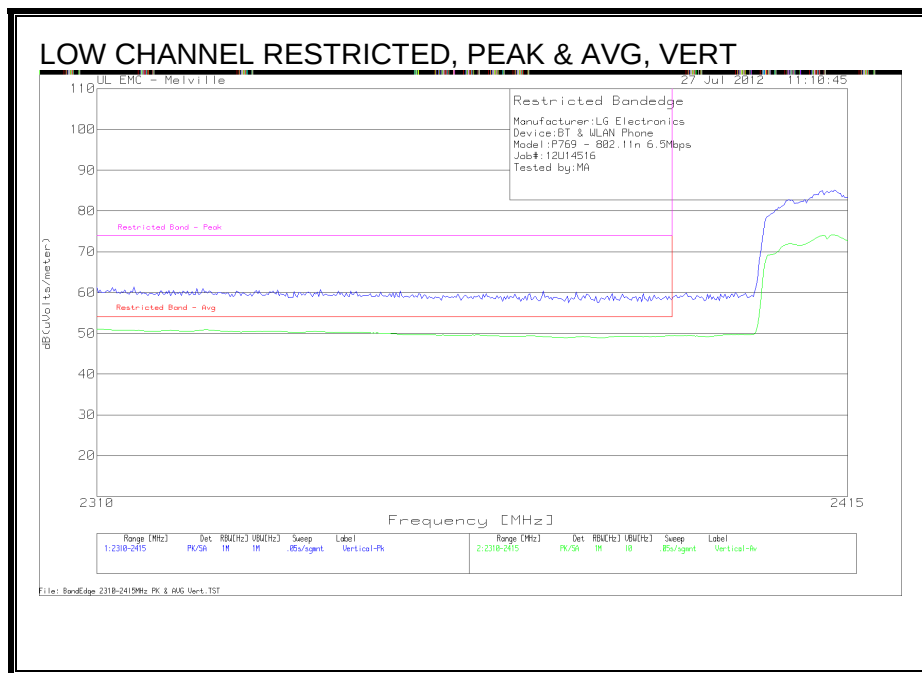
Manufacturer: LG Electronics												
Device: BT & WLAN Phone												
Model: P769 - 802.11g 6Mbps												
Job#: 12U14516												
Tested by: MA												
Low Channel - 2412MHz												
Test Frequency	Meter Reading	Detector	AF-48106 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4823.2926	53.51	Av	27.1	-52.53	28.08	54	-25.92	74	-45.92	106	375	Horz
4823.2926	66.48	PK	27.1	-52.53	41.05	54	-12.95	74	-32.95	106	375	Horz
4823.2926	68.93	PK	27.1	-52.53	43.5	54	-10.5	74	-30.5	106	375	Horz
4823.2926	69.44	PK	27.1	-52.53	44.01	54	-9.99	74	-29.99	34	305	Vert
4823.2926	53.34	Av	27.1	-52.53	27.91	54	-26.09	74	-46.09	34	305	Vert
Mid Channel - 2437MHz												
Test Frequency	Meter Reading	Detector	AF-48106 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4875.1924	68.72	PK	27.2	-52.65	43.27	54	-10.73	74	-30.73	39	140	Horz
4875.1924	53	Av	27.2	-52.65	27.55	54	-26.45	74	-46.45	39	140	Horz
4875.1924	70.27	PK	27.2	-52.65	44.82	54	-9.18	74	-29.18	129	290	Vert
4875.1924	54.61	Av	27.2	-52.65	29.16	54	-24.84	74	-44.84	129	290	Vert
High Channel - 2462MHz												
Test Frequency	Meter Reading	Detector	AF-48106 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4925.002	67.9	PK	27.3	-52.57	42.63	54	-11.37	74	-31.37	41	139	Horz
4925.002	52.35	Av	27.3	-52.57	27.08	54	-26.92	74	-46.92	41	139	Horz
4925.002	70.4	PK	27.3	-52.57	45.13	54	-8.87	74	-28.87	130	282	Vert
4925.002	54.49	Av	27.3	-52.57	29.22	54	-24.78	74	-44.78	130	282	Vert
PK - Peak detector												
Av - Average detector												
Note: Not other emissions were detected above the system noise floor.												

8.2.3. TX ABOVE 1 GHz FOR 802.11n HT20 1TX MODE IN THE 2.4 GHz BAND

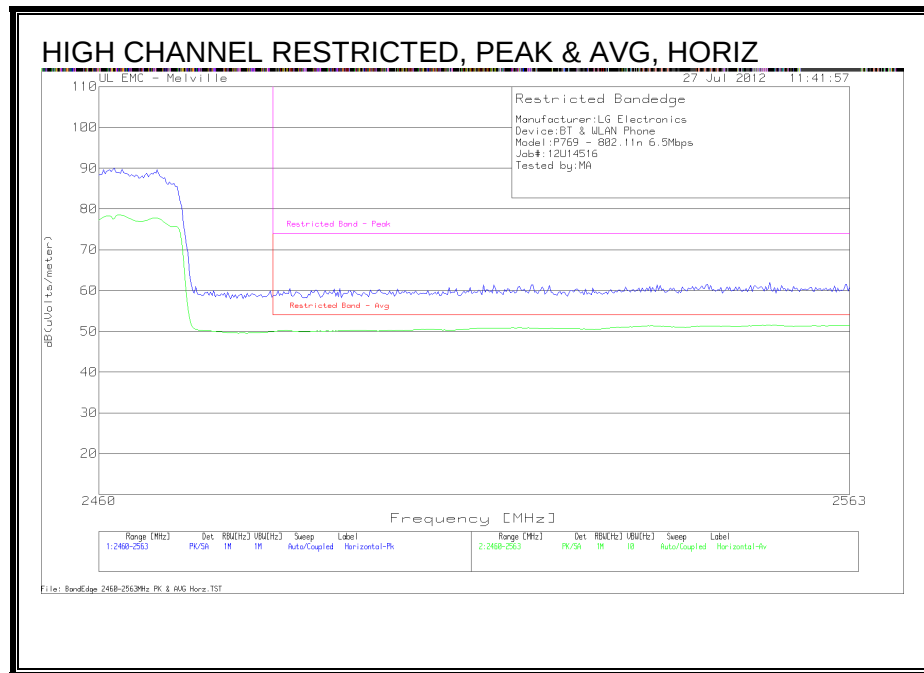
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



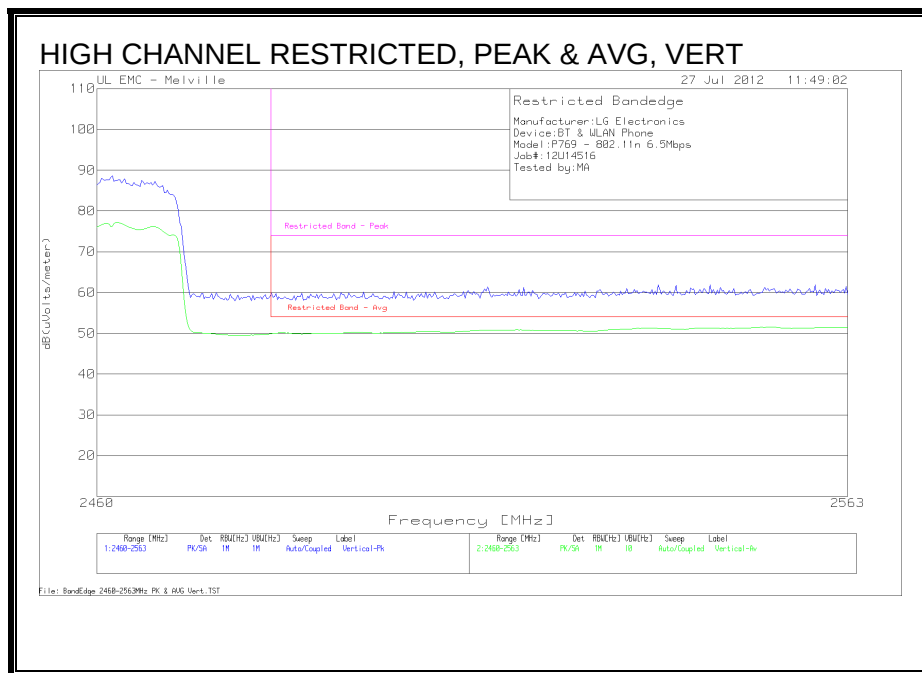
RESTRICTED BANEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS

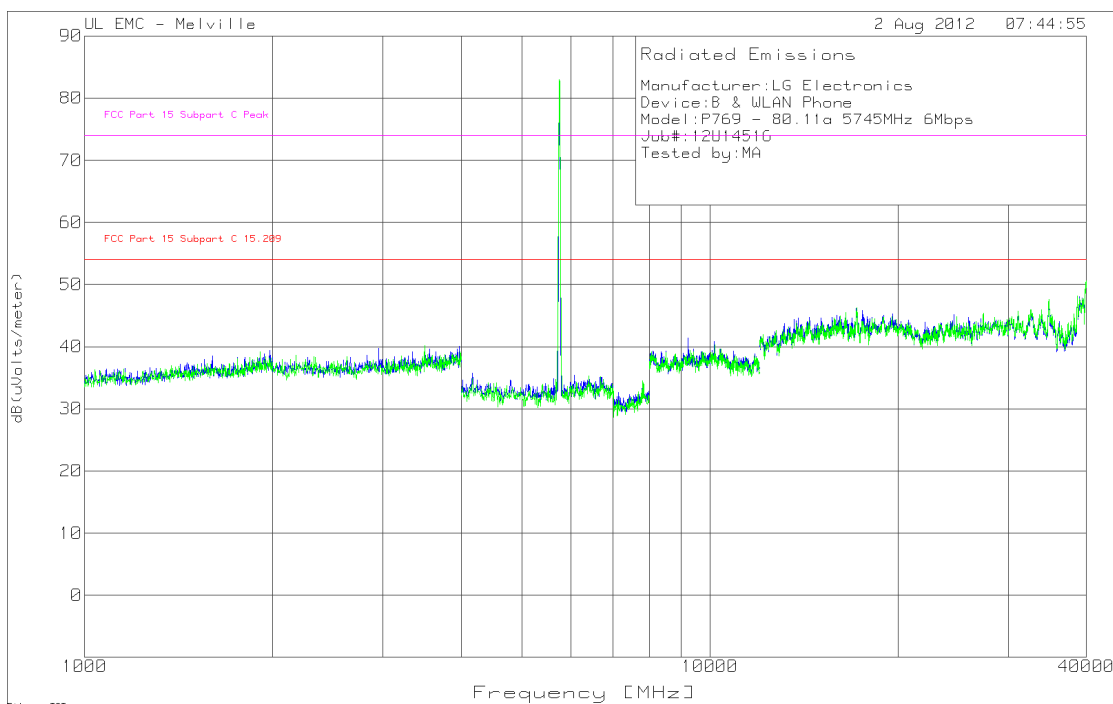
Manufacturer: LG Electronics												
Device: BT & WLAN Phone												
Model: P769 - 802.11n 6.5Mbps												
Job#: 12U14516												
Tested by: DC												
Low Channel - 2412MHz												
Test Frequency	Meter Reading	Detector	AF-8932 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
14476.527	58.85	PK	37.3	-49.16	46.99	54	-7.01	74	-27.01	284	241	Horz
14476.527	44.54	Av	37.3	-49.16	32.68	54	-21.32	74	-41.32	284	241	Horz
14477.451	59.37	PK	37.3	-49.19	47.48	54	-6.52	74	-26.52	282	312	Vert
14477.451	44.54	Av	37.3	-49.19	32.65	54	-21.35	74	-41.35	282	312	Vert
Mid Channel - 2437MHz												
Test Frequency	Meter Reading	Detector	AF-48106 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4874.2605	67.23	PK	27.2	-52.62	41.81	54	-12.19	74	-32.19	37	246	Horz
4874.2605	51.43	Av	27.2	-52.62	26.01	54	-27.99	74	-47.99	37	246	Horz
4874.2605	67.53	PK	27.2	-52.62	42.11	54	-11.89	74	-31.89	132	329	Vert
4874.2605	52.16	Av	27.2	-52.62	26.74	54	-27.26	74	-47.26	132	329	Vert
High Channel - 2462MHz												
Test Frequency	Meter Reading	Detector	AF-48106 [dB]	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	FCC Part 15 Subpart C Peak	Margin	Azimuth [Degs]	Height [cm]	Polarity
4926.1944	65.77	PK	27.3	-52.54	40.53	54	-13.47	74	-33.47	38	211	Horz
4926.1944	50.84	Av	27.3	-52.54	25.6	54	-28.4	74	-48.4	38	211	Horz
4926.1944	68.18	PK	27.3	-52.54	42.94	54	-11.06	74	-31.06	136	246	Vert
4926.1944	51.92	Av	27.3	-52.54	26.68	54	-27.32	74	-47.32	136	246	Vert
PK - Peak detector												
Av - Average detector												

Note: No other emissions were detected above the system noise floor.

8.2.4. TRANSMITTER ABOVE 1 GHz FOR 802.11a MODE IN THE 5.8 GHz BAND

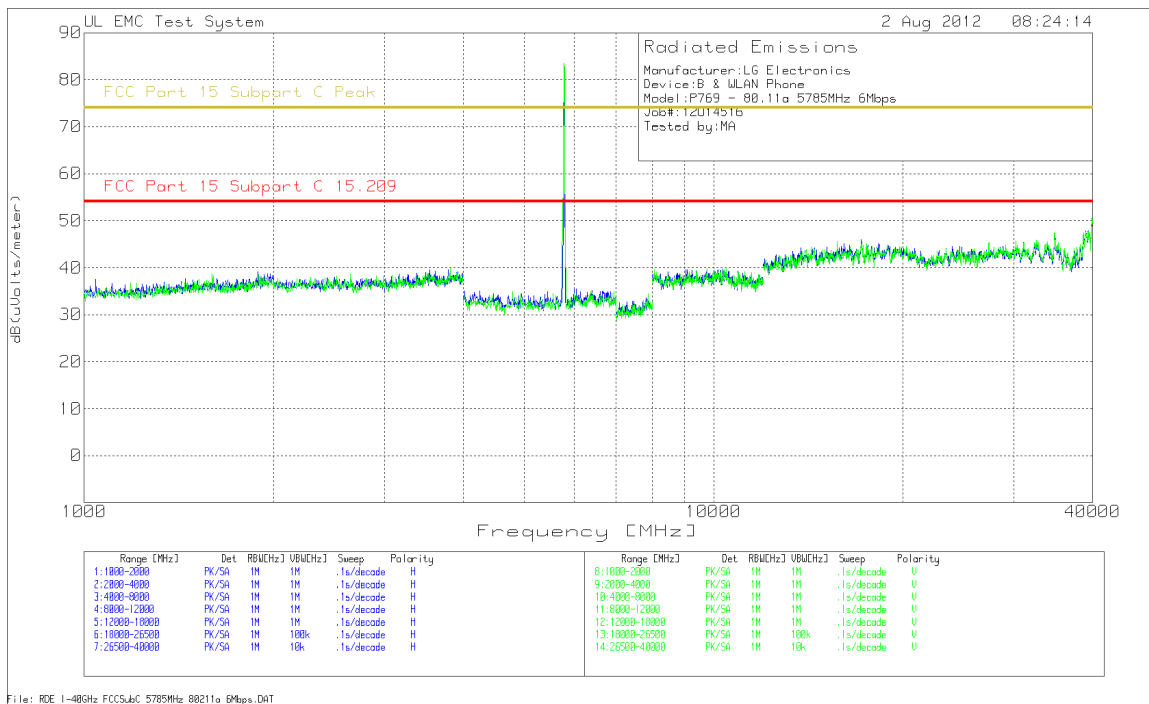
HARMONICS AND SPURIOUS EMISSIONS

Low Channel – 5745MHz



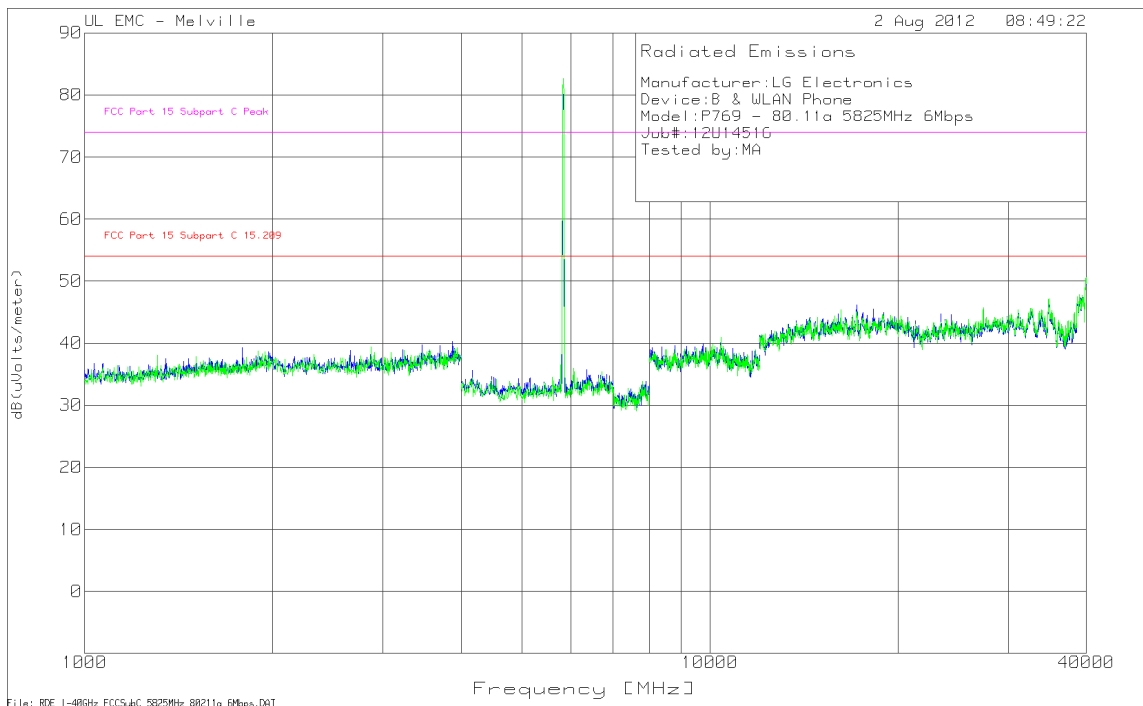
Note: No emissions were detected above the system noise floor.

Mid Channel – 5785MHz



Note: No emissions were detected above the system noise floor.

High Channel – 5825MHz

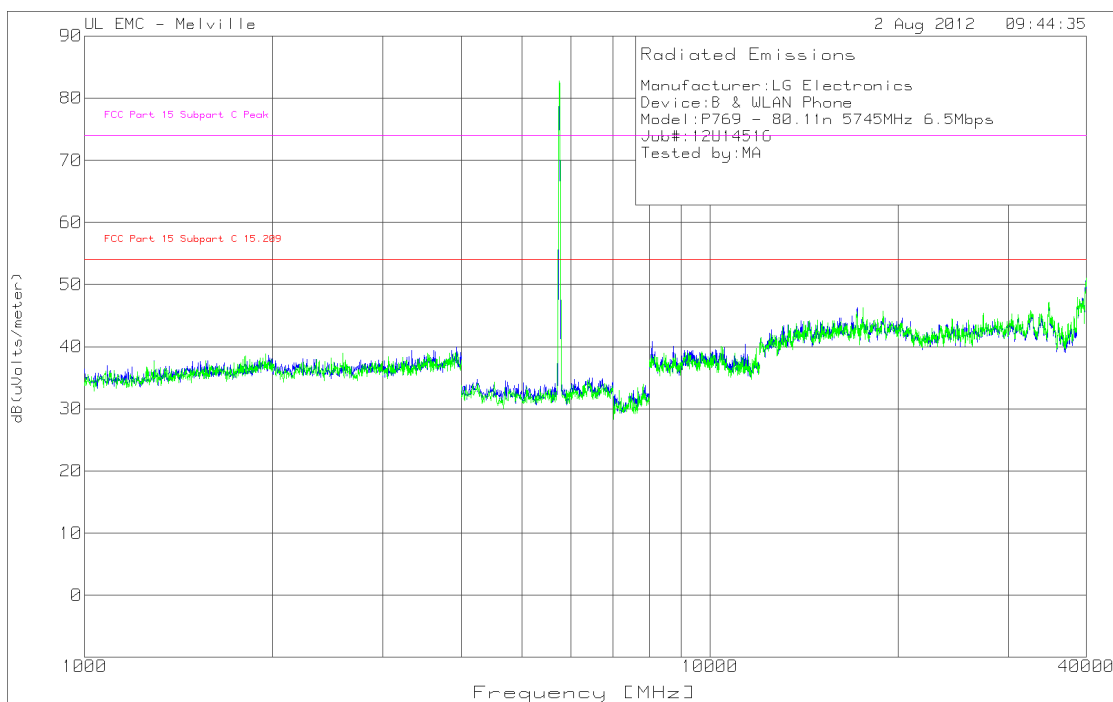


Note: No emissions were detected above the system noise floor.

8.2.5. TRANSMITTER ABOVE 1 GHz FOR 802.11n MODE IN THE 5.8 GHz BAND

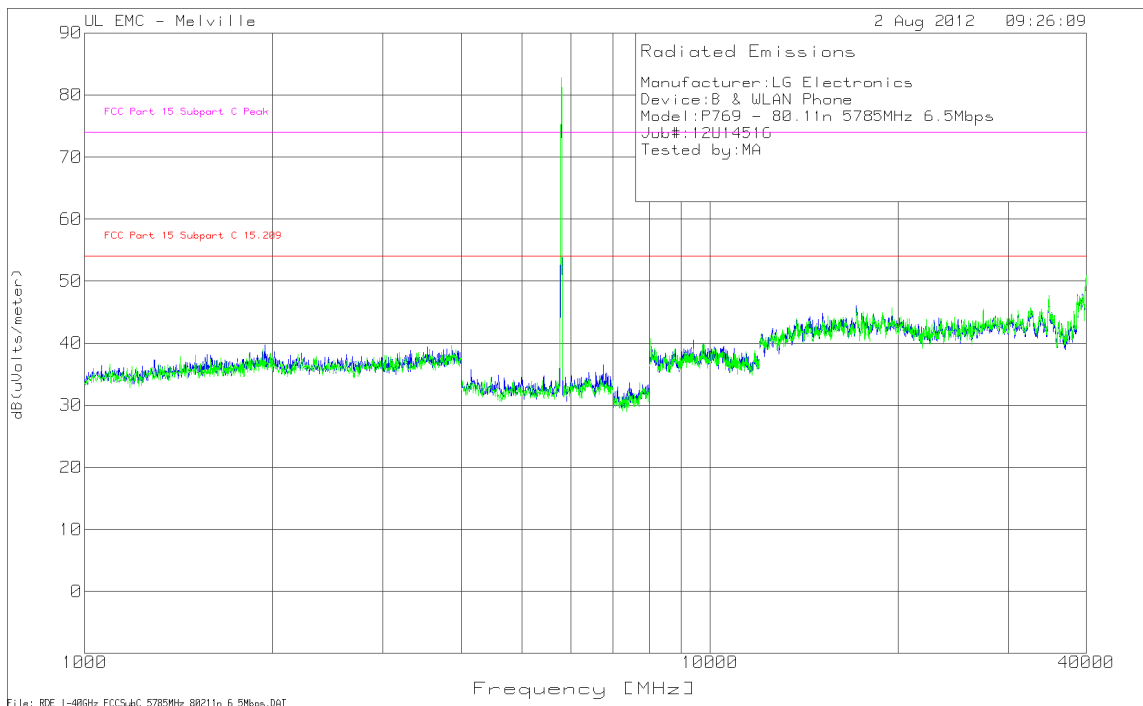
HARMONICS AND SPURIOUS EMISSIONS

Low Channel – 5745MHz



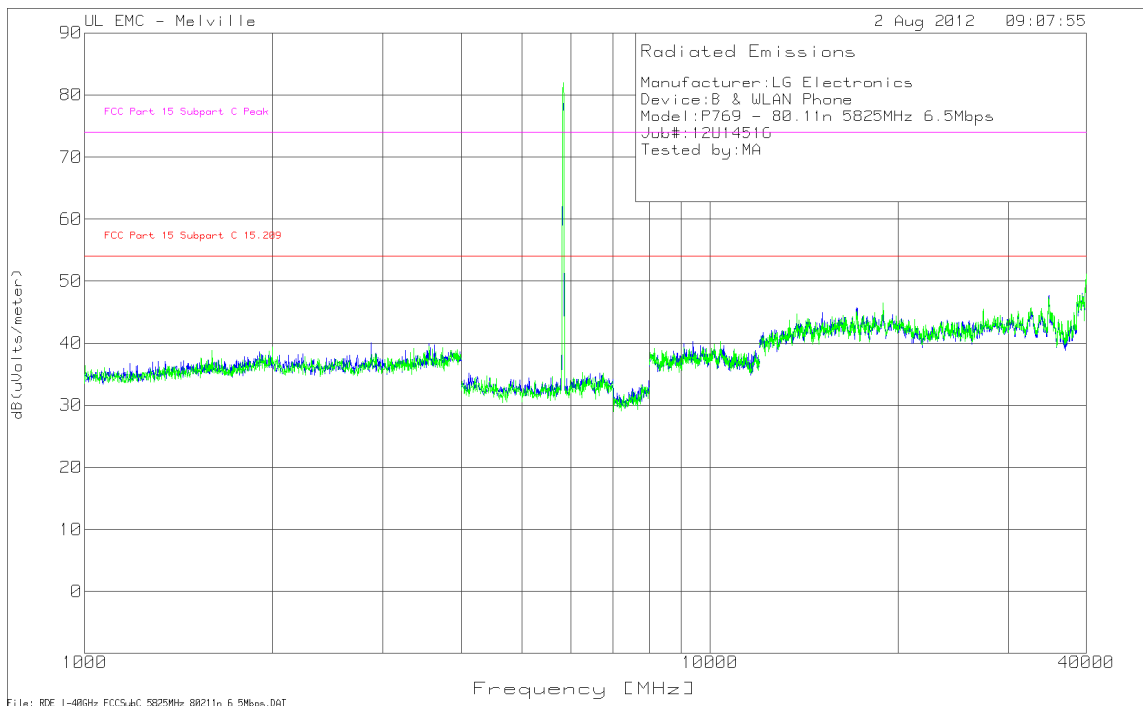
Note: No emissions were detected above the system noise floor.

Mid Channel – 5785MHz



Note: No emissions were detected above the system noise floor.

High Channel – 5825MHz

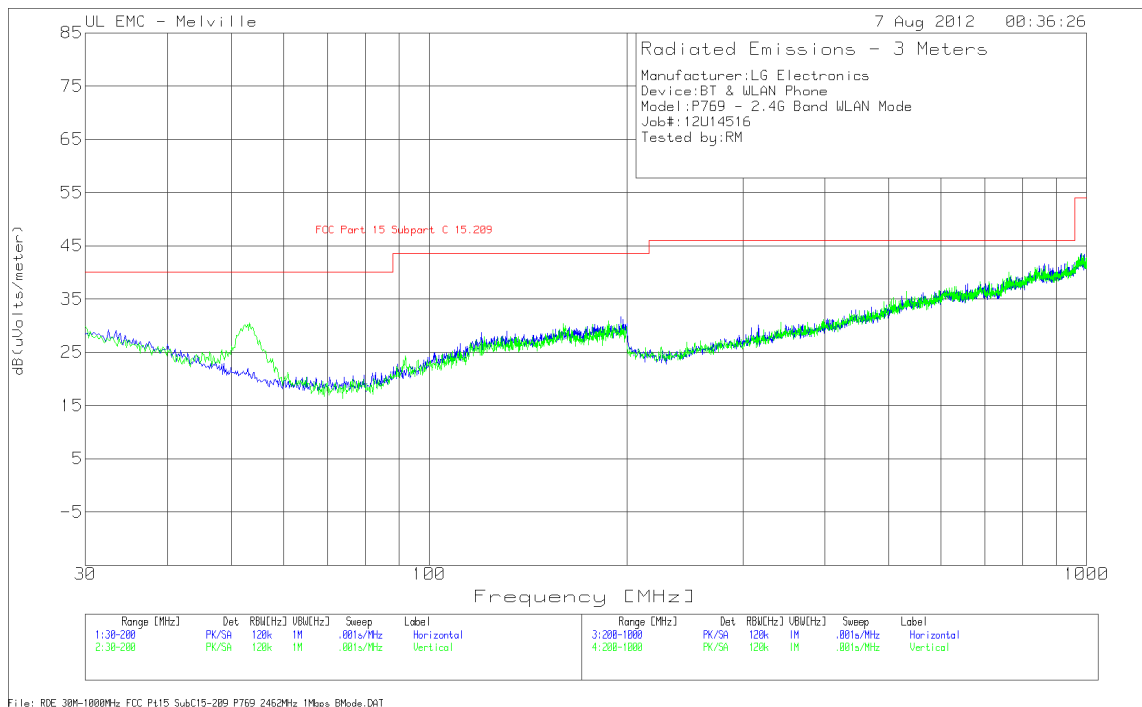


Note: No emissions were detected above the system noise floor.

8.3. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE – 2.4GHz BAND, HORZ & VERT)

HORZ & VERT PLOT

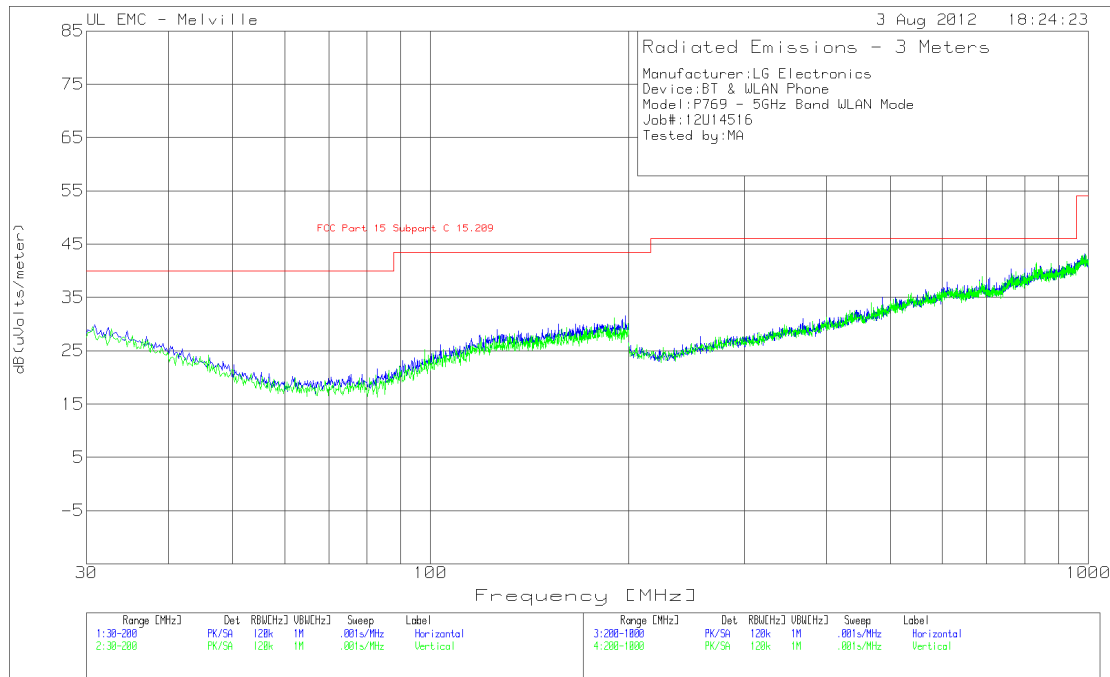


HORZ & VERT DATA

Manufacturer: LG Electronics											
Device: BT & WLAN Phone											
Model: P769 - 2.4G Band WLAN Mode											
Job#: 12U14516											
Tested by: RM											
Horizontal 30 - 200MHz											
Marker No.	Test Frequency	Meter Reading	Detector	AF-54 (dB)	GL-3M (dB)	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
1	33.4034	12.14	PK	16.4	0.6	29.14	40	-10.86	254	200	Horz
2	120.02	14.27	PK	13.4	1.1	28.77	43.5	-14.73	70	100	Horz
3	195.7457	14.69	PK	15.5	1.5	31.69	43.5	-11.81	307	399	Horz
Vertical 30 - 200MHz											
Marker No.	Test Frequency	Meter Reading	Detector	AF-54 (dB)	GL-3M (dB)	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
4	53.3133	21.47	PK	8.4	0.7	30.57	40	-9.43	100	100	Vert
Horizontal 200 - 1000MHz											
Marker No.	Test Frequency	Meter Reading	Detector	AF-44067 (dB)	GL-3M (dB)	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
5	564.1821	14.35	PK	19.2	2.7	36.25	46	-9.75	358	200	Horz
6	659.0295	14.93	PK	20	2.9	37.83	46	-8.17	170	100	Horz
Vertical 200 - 1000MHz											
Marker No.	Test Frequency	Meter Reading	Detector	AF-44067 (dB)	GL-3M (dB)	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Degs]	Height [cm]	Polarity
7	532.5663	15.03	PK	18.8	2.6	36.43	46	-9.57	92	100	Vert
8	987.5938	14.86	PK	24.4	3.7	42.96	54	-11.04	207	400	Vert
PK - Peak detector											

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE – 5GHz BAND, HORZ & VERT)

HORZ & VERT PLOT



File: RDE_30-1000M_FCC15C_5GHz_Band.DAT

HORZ & VERT DATA

Manufacturer: LG Electronics											
Device: BT & WLAN Phone											
Model: P769 - 5GHz Band WLAN Mode											
Job#: 12U14516											
Tested by: MA											
Horizontal 30 - 200MHz											
Marker No.	Test Frequency	Meter Reading	Detector	AF-54 (dB)	GL-3M (dB)	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Dega]	Height [cm]	Polarity
1	126.3163	14.03	PK	13.8	1.2	29.03	43.5	-14.47	2	400	Horz
2	195.2352	13.66	PK	15.5	1.5	30.66	43.5	-12.84	8	200	Horz
Horizontal 200 - 1000MHz											
Marker No.	Test Frequency	Meter Reading	Detector	AF-44067 (dB)	GL-3M (dB)	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Dega]	Height [cm]	Polarity
3	486.1431	15.3	PK	17.4	2.4	35.1	46	-10.9	335	300	Horz
4	612.2061	13.21	PK	20.2	2.8	36.21	46	-9.79	357	200	Horz
5	707.8539	15.5	PK	20.2	3	38.7	46	-7.3	301	100	Horz
Vertical 200 - 1000MHz											
Marker No.	Test Frequency	Meter Reading	Detector	AF-44067 (dB)	GL-3M (dB)	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin	Azimuth [Dega]	Height [cm]	Polarity
6	980.7904	14.37	PK	24.8	3.7	42.87	54	-11.13	272	400	Vert
PK - Peak detector											

9. 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.

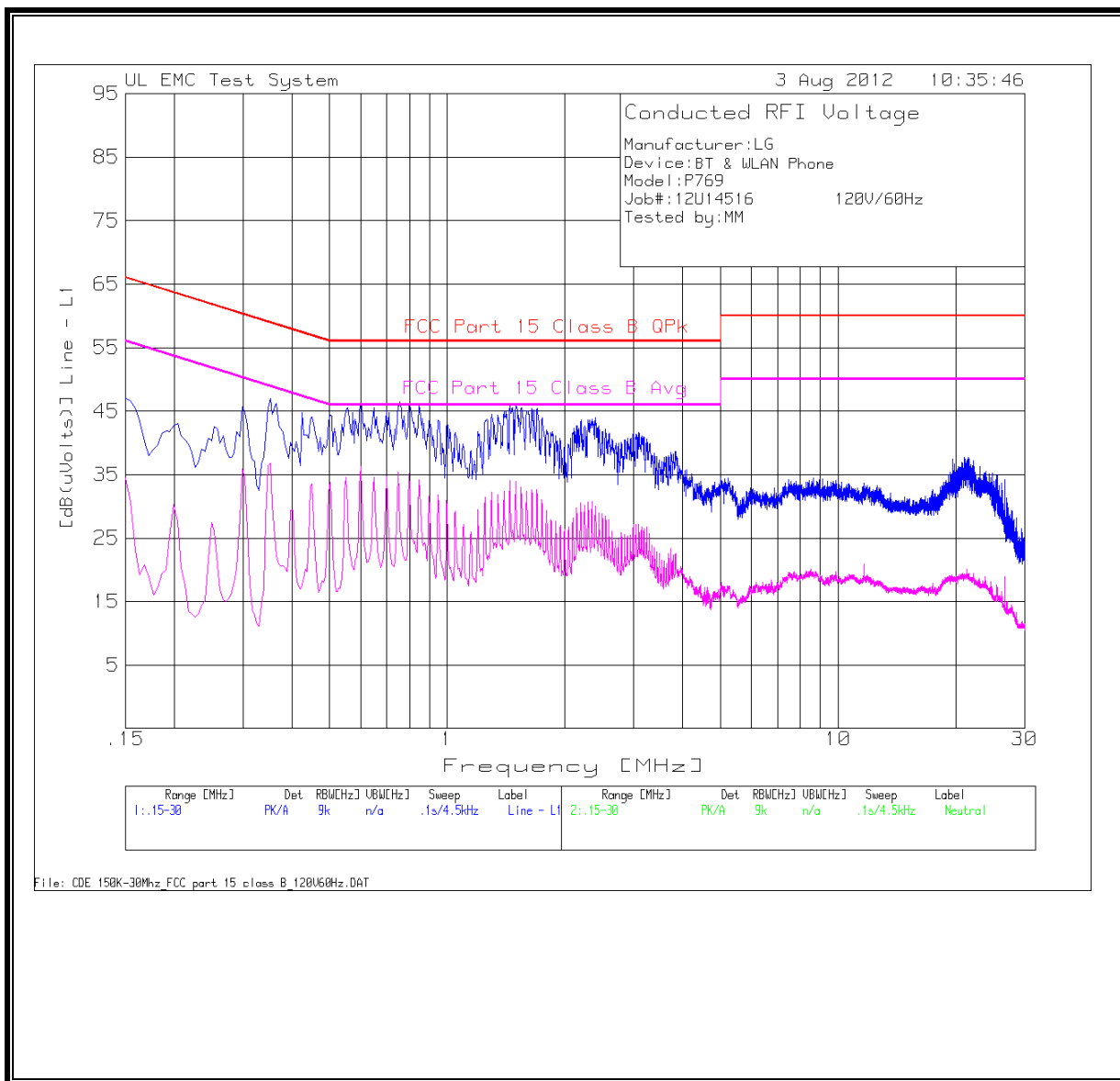
TEST PROCEDURE

ANSI C63.4

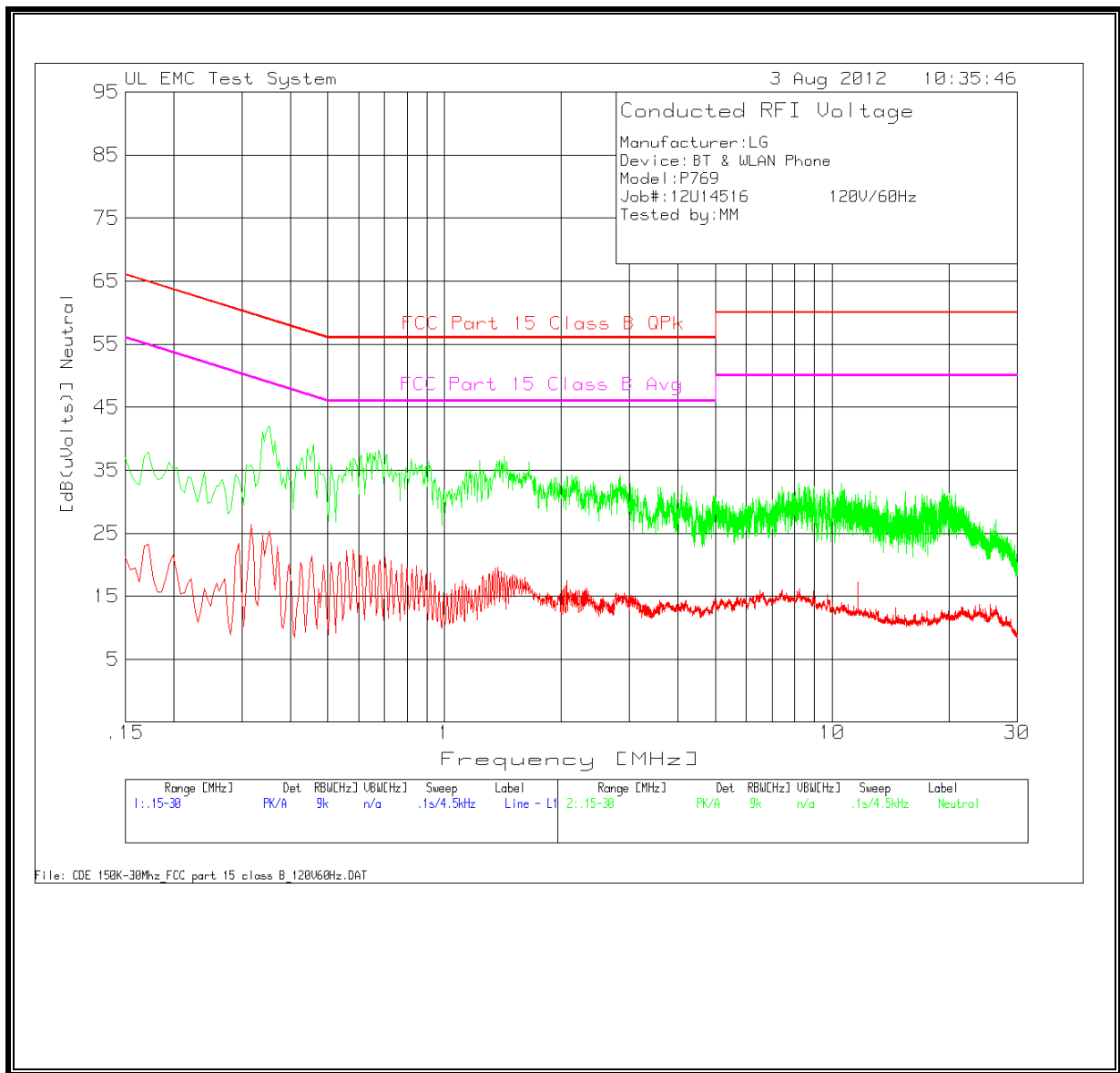
RESULTS

6 WORST EMISSIONS

LINE 1 RESULTS



LINE 2 RESULTS



NUMERICAL RESULTS

Manufacturer:LG								
Device: Phone with BT & WLAN								
Model:P769								
Job#:12U14516 120V/60Hz								
Tested by:MM								
Line - L1 .15 - 30MHz								
Test Frequency	Meter Reading	Detector	LISN 5A636 L1 [dB]	[dB(uVolts)]	FCC Part 15 Class B QPk	Margin	FCC Part 15 Class B Avg	Margin
0.2985	35.65	PK	10	45.65	60.3	-14.65	50.3	-4.65
0.2985	25.88	Av	10	35.88	60.3	-24.42	50.3	-14.42
0.3525	36.95	PK	10	46.95	58.9	-11.95	48.9	-1.95
0.3525	26.81	Av	10	36.81	58.9	-22.09	48.9	-12.09
0.555	35.5	PK	10.1	45.6	56	-10.4	46	-0.4
0.555	19.87	Av	10.1	29.97	56	-26.03	46	-16.03
0.6495	35.51	PK	10.1	45.61	56	-10.39	46	-0.39
0.6495	24.51	Av	10.1	34.61	56	-21.39	46	-11.39
0.7575	36.3	PK	10.1	46.4	56	-9.6	46	0.4
0.7575	16.4	Av	10.1	26.5	56	-29.5	46	-19.5
0.8475	35.78	PK	10.1	45.88	56	-10.12	46	-0.12
0.8475	24.14	Av	10.1	34.24	56	-21.76	46	-11.76
1.446	35.8	PK	10.1	45.9	56	-10.1	46	-0.1
1.446	23.97	Av	10.1	34.07	56	-21.93	46	-11.93
1.698	35.35	PK	10.1	45.45	56	-10.55	46	-0.55
1.698	21.3	Av	10.1	31.4	56	-24.6	46	-14.6
Neutral .15 - 30MHz								
Test Frequency	Meter Reading	Detector	LISN 5A636 L2 [dB]	[dB(uVolts)]	FCC Part 15 Class B QPk	Margin	FCC Part 15 Class B Avg	Margin
0.3525	32.07	PK	10	42.07	58.9	-16.83	48.9	-6.83
0.3525	15.32	Av	10	25.32	58.9	-33.58	48.9	-23.58
0.4605	29.06	PK	10.1	39.16	56.7	-17.54	46.7	-7.54
0.4605	7.54	Av	10.1	17.64	56.7	-39.06	46.7	-29.06
0.6765	28.2	PK	10.1	38.3	56	-17.7	46	-7.7
0.6765	9.72	Av	10.1	19.82	56	-36.18	46	-26.18
0.8205	26.7	PK	10.1	36.8	56	-19.2	46	-9.2
0.8205	7.85	Av	10.1	17.95	56	-38.05	46	-28.05
1.167	24.77	PK	10.1	34.87	56	-21.13	46	-11.13
1.167	2.8	Av	10.1	12.9	56	-43.1	46	-33.1
1.4235	27.06	PK	10.1	37.16	56	-18.84	46	-8.84
1.4235	8.55	Av	10.1	18.65	56	-37.35	46	-27.35
PK - Peak detector								
Av - Average detector								