FCC 47 CFR PART 15 SUBPART E
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

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Revision History

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1. ATTESTATION OF TEST RESULTS

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

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 11, 2013

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E	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.

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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, FCC 06-96, FCC KDB 789033, ANSI C63.10-2009, RSS-GEN Issue 3, FCC KDB 644545 D01, FCC KDB644545 D02 (802.11ac alternative guide V01) 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 Dual Band phone that also supports BLUETOOTH, WLAN 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)
5170-5250	802.11a	11.88	15.42
5170-5250	802.11n HT20	10.75	11.89
5170-5250	802.11n HT40	9.84	9.64
5170-5250	802.11ac HT20	10.86	12.19
5170-5250	802.11ac HT40	9.52	8.95
5170-5250	802.11ac HT80	8.39	6.90
5250-5330	802.11a	13.3	21.38
5250-5330	802.11n HT20	12.49	17.74
5250-5330	802.11n HT40	11.07	12.79
5250-5330	802.11ac HT20	12.31	17.02
5250-5330	802.11ac HT40	10.75	11.89
5250-5330	802.11ac HT80	10.4	10.96
5490-5730	802.11a	13.24	21.09
5490-5730	802.11n HT20	12.26	16.83
5490-5730	802.11n HT40	11.54	14.26
5490-5730	802.11ac HT20	12.19	16.56
5490-5730	802.11ac HT40	11.22	13.24
5490-5730	802.11ac HT80	13.63	23.07
5735-5835	802.11a	16.63	46.03
5735-5835	802.11n HT20	15.71	37.24
5735-5835	802.11n HT40	15.29	33.81
5735-5835	802.11ac HT20	13.76	23.77
5735-5835	802.11ac HT40	13.15	20.65
5735-5815	802.11ac HT80	14.83	30.41

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -3.26 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 the X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the X orientation.

Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0

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

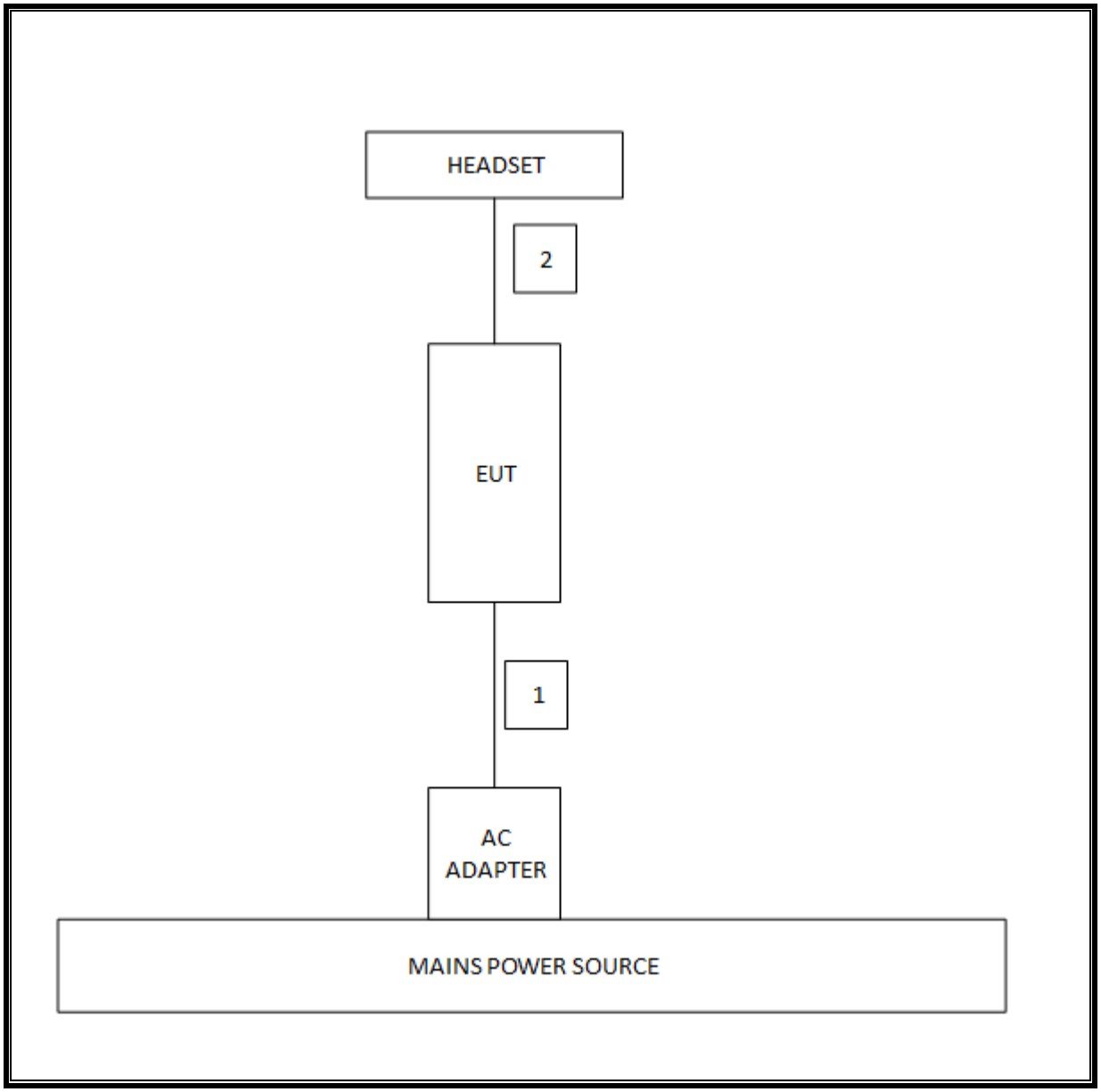
I/O CABLES

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	1.0m	N/A

TEST SETUP

The EUT is setup as 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:

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	4/1/2014
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	2/26/2014
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	8/8/2013
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	1/28/2014
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	10/22/2013
Preamplifier, 40 GHz	Miteq	NSP4000-SP2	C00990	8/2/2013
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	N/A	3/6/2014
Antenna, Horn, 18 GHz	ETS	3117	C01022	2/21/2014
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	12/17/2013
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/2013
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/2013
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/14
Reject Filter, 5.725-5.825 GHz	Micro-Tronics	BRC13192	N02676	CNR

7. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

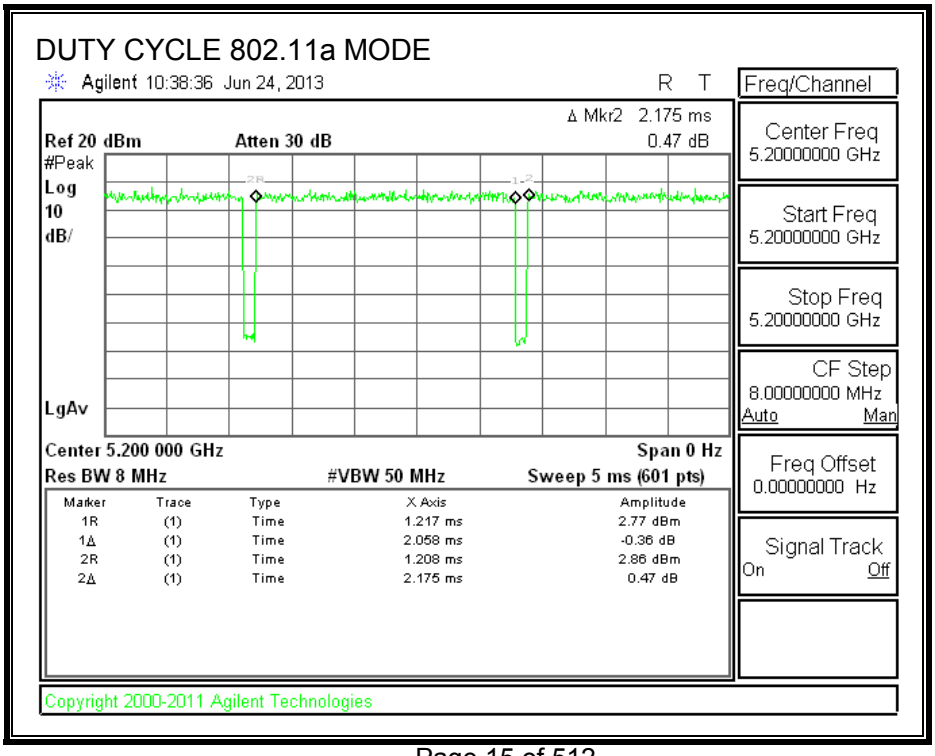
PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

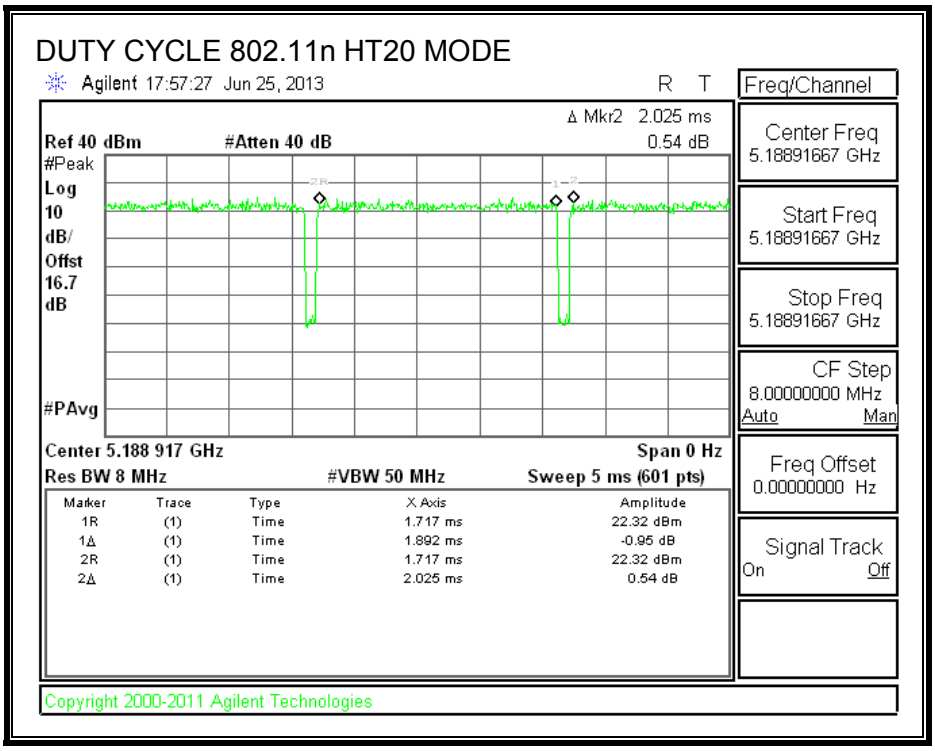
7.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.05	2.17	0.946	94.6%	0.24	0.488
802.11ac HT20	1.93	2	0.951	95.1%	0.22	0.517
802.11ac HT40	0.94	1	0.886	88.6%	0.52	1.070
802.11ac HT80	0.46	1	0.811	81.1%	0.91	2.193
802.11n HT20	1.91	2	0.948	94.8%	0.23	0.524
802.11n HT40	0.94	1	0.900	90.0%	0.46	1.064

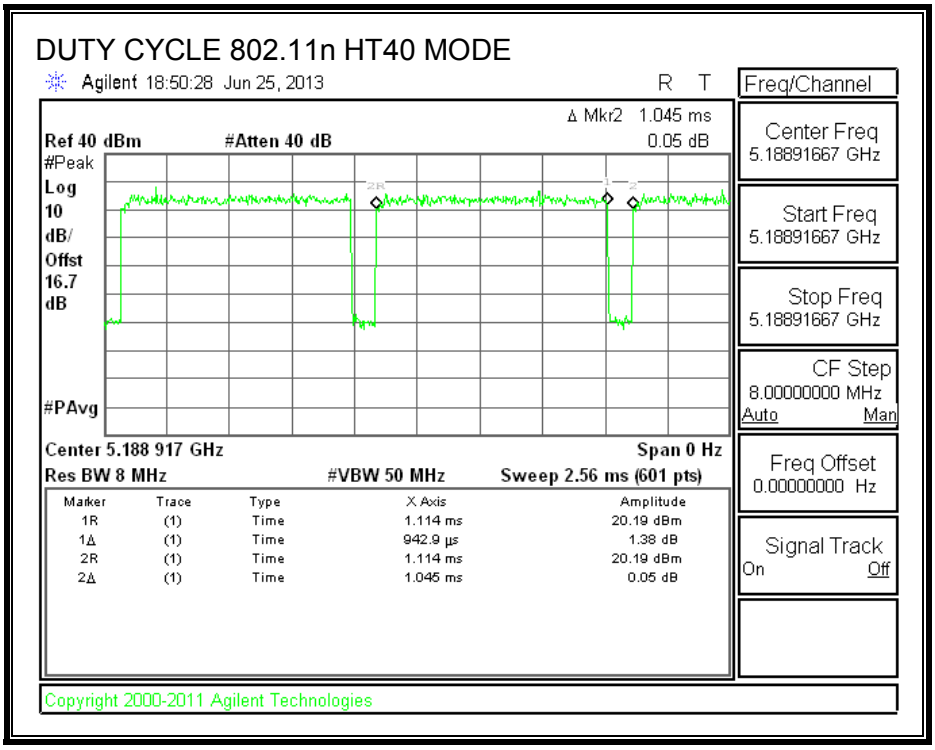
7.2. DUTY CYCLE PLOTS



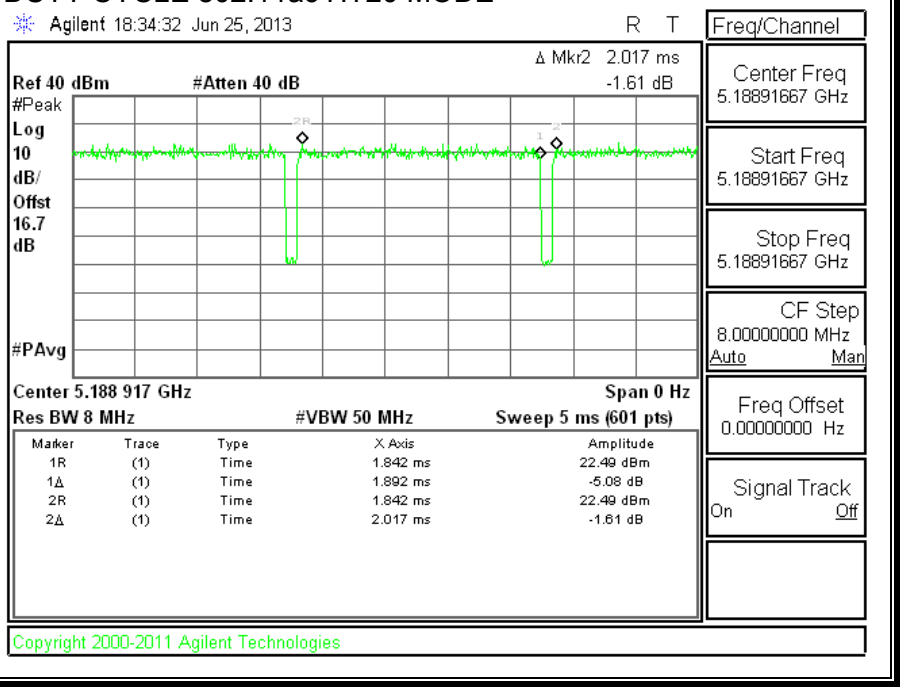
DUTY CYCLE 802.11n HT20 MODE



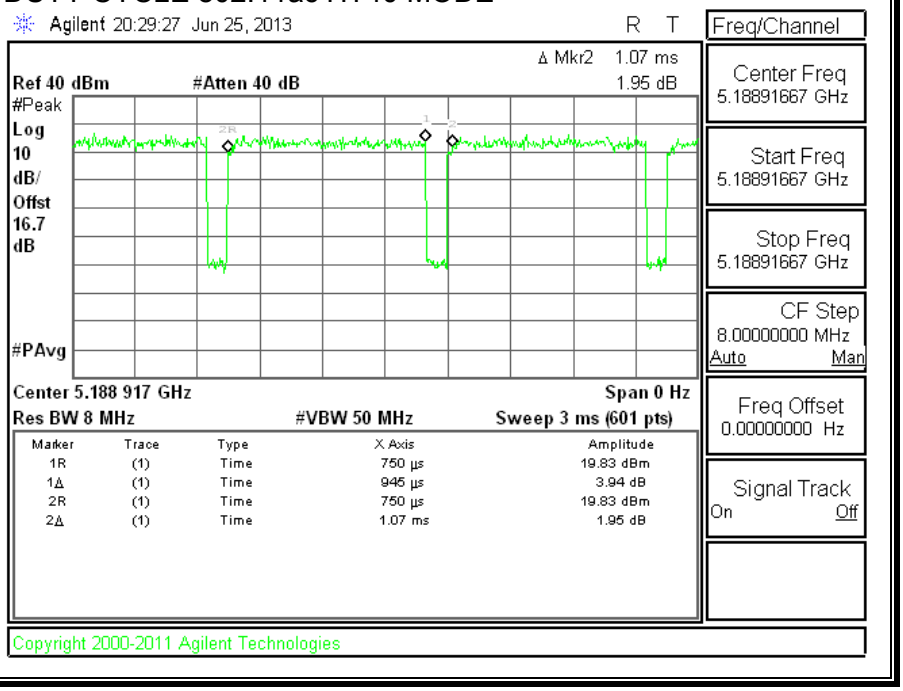
DUTY CYCLE 802.11n HT40 MODE



DUTY CYCLE 802.11ac HT20 MODE



DUTY CYCLE 802.11ac HT40 MODE



8. MEASUREMENT METHOD

The Duty Cycle is less than 98% and consistent therefore KDB 789033 Method SA-2 is used for .power and PPSD

The Duty Cycle is less than 98% and consistent, KDB 789033 Method AD with Power RMS Averaging and duty cycle correction is used.

9. ANTENNA PORT TEST RESULTS

9.1. 802.11a MODE IN THE 5.2 GHz BAND

9.1.1. 26 dB BANDWIDTH

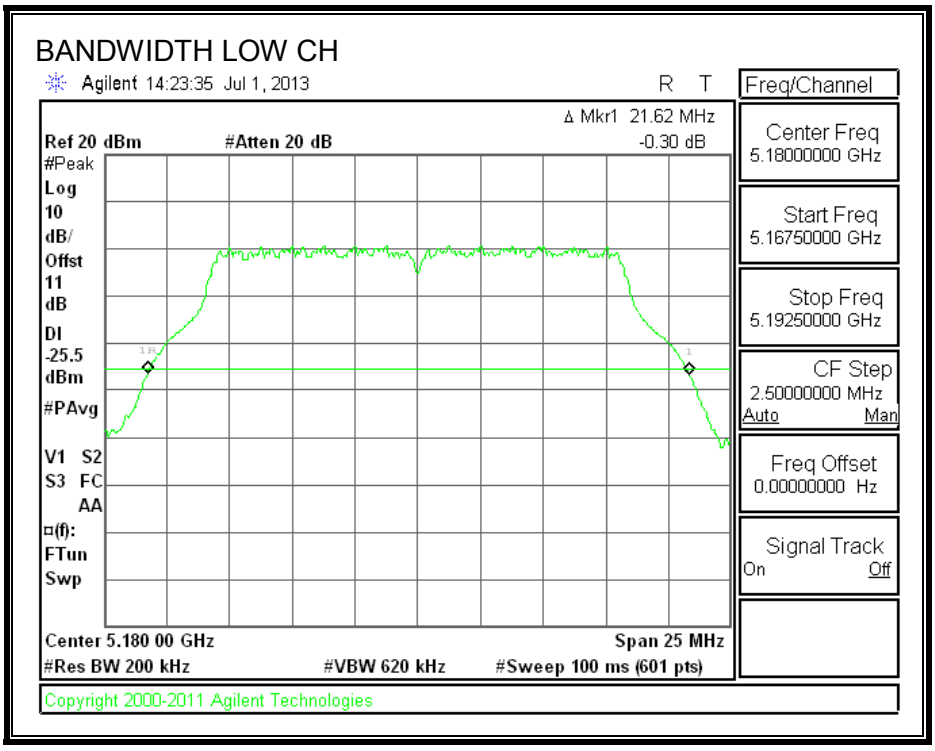
LIMITS

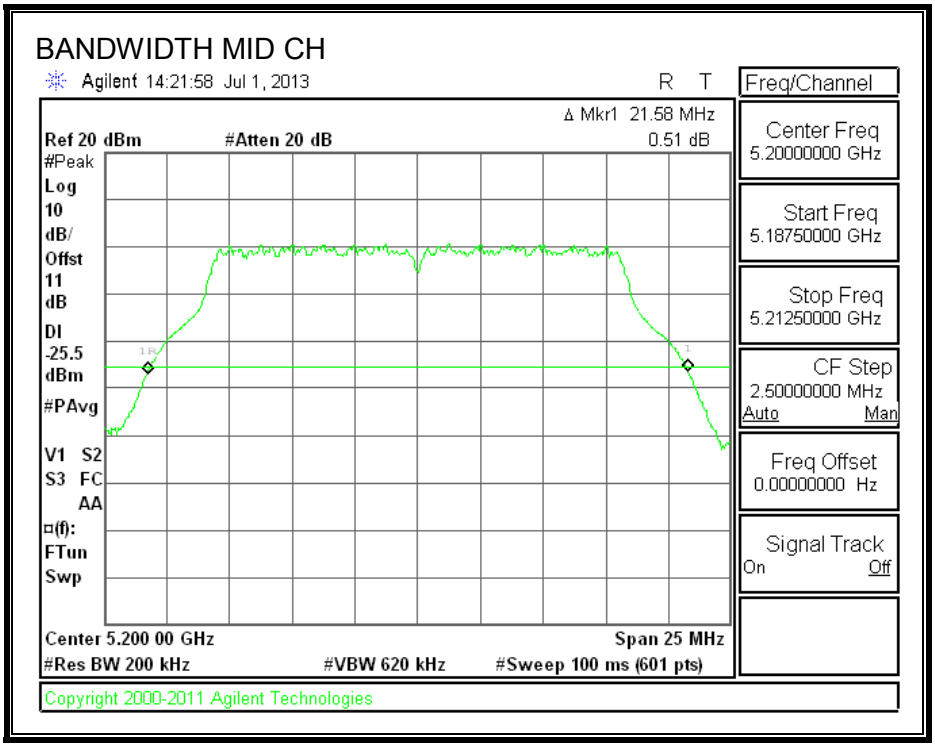
None; for reporting purposes only.

RESULTS

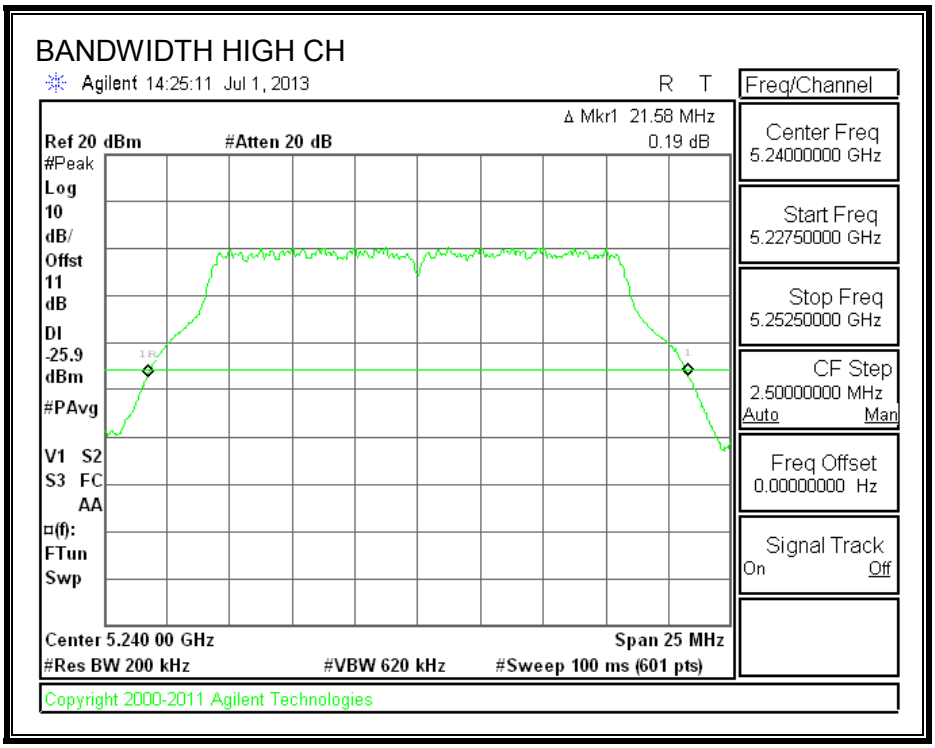
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	21.620
Mid	5200	21.580
High	5240	21.580

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.1.2. 99% BANDWIDTH

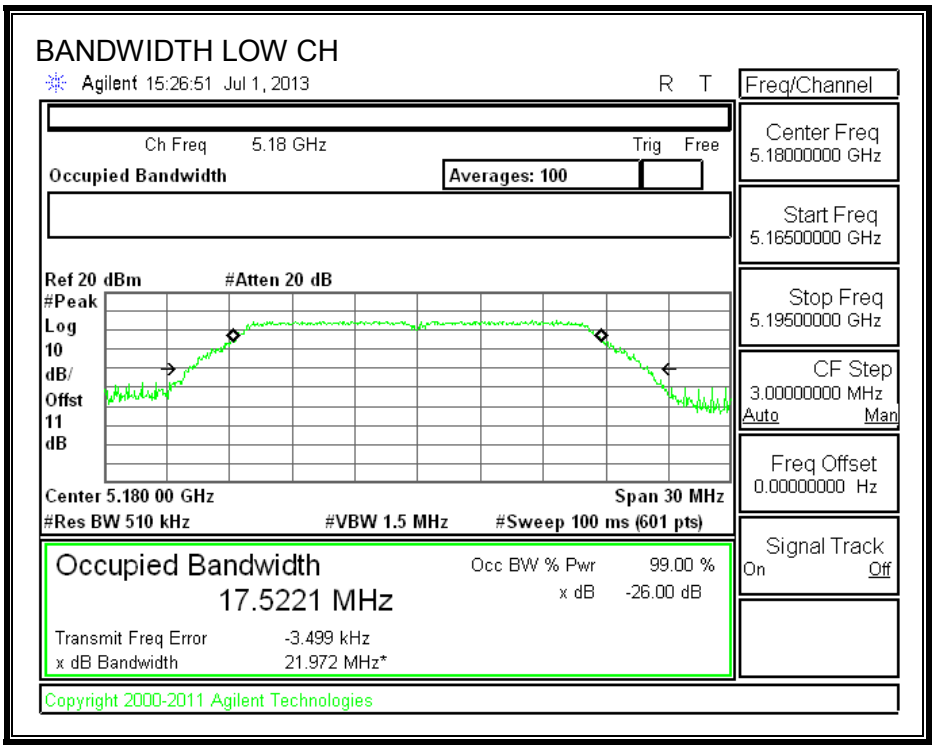
LIMITS

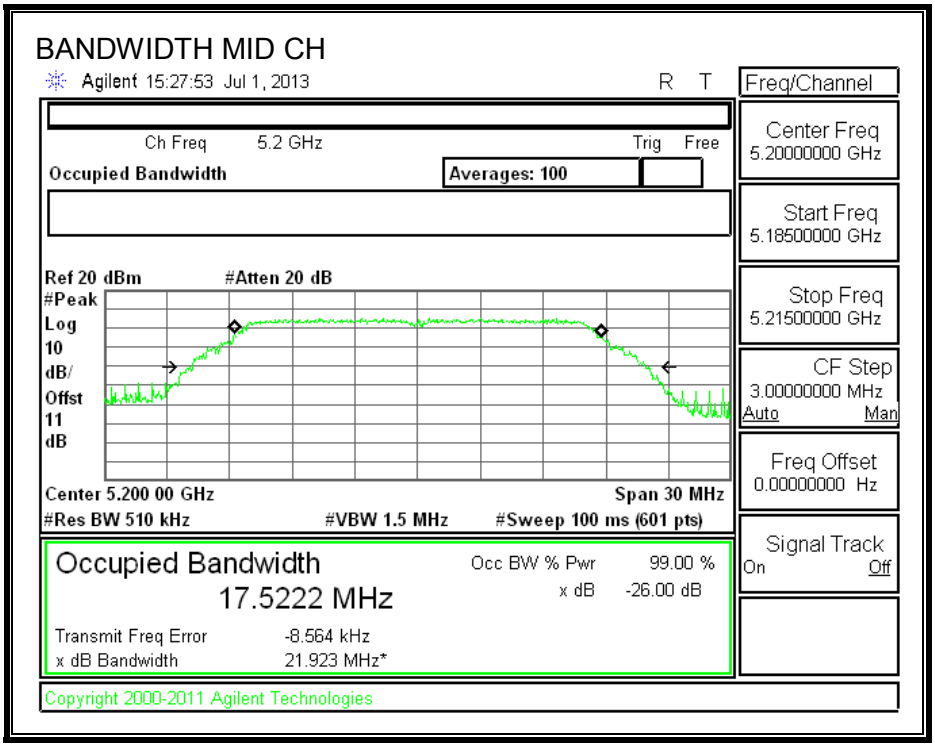
None; for reporting purposes only.

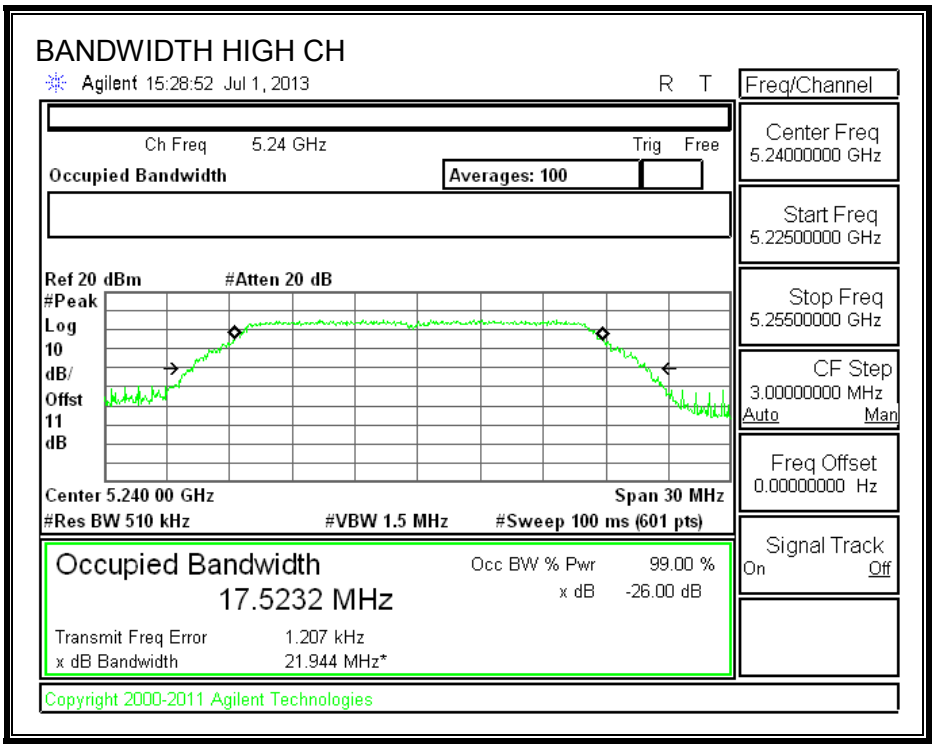
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.522
Mid	5200	17.522
High	5240	17.523

99% BANDWIDTH







9.1.3. 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 11 dB (including 10 dB pad and 1 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	5180	10.5
Mid	5200	10.6
High	5240	10.9

9.1.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	21.580	17.522	-6.40
Mid	5200	21.580	17.522	-6.40
High	5240	21.580	17.522	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	17.00	22.44	28.84	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.44	28.84	17.00	4.00	10.00	4.00
High	5240	17.00	22.44	28.84	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

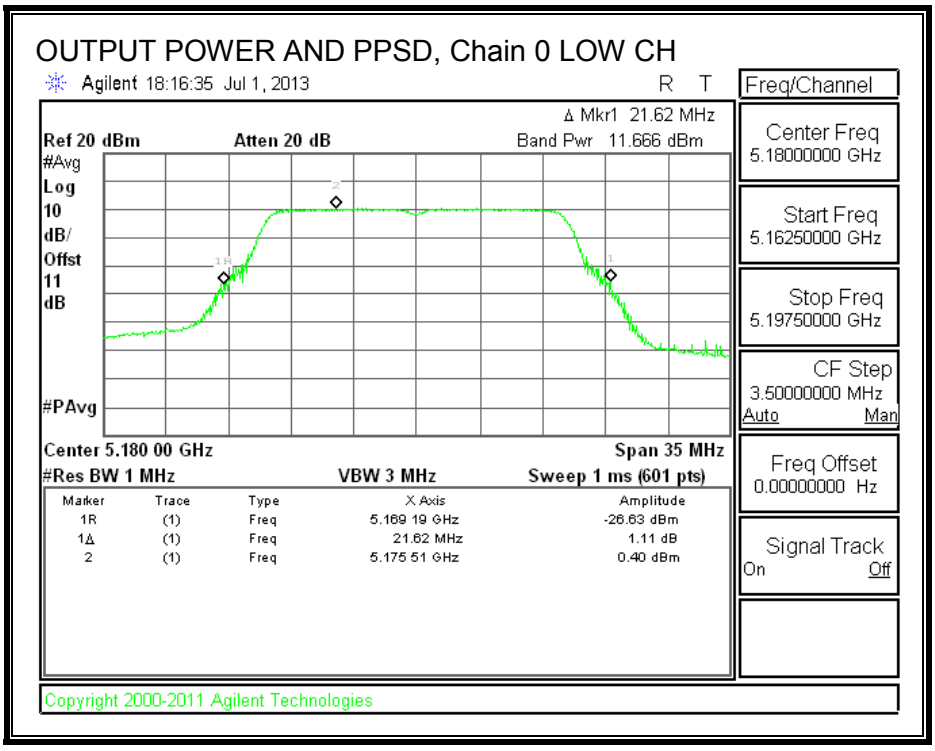
Output Power Results

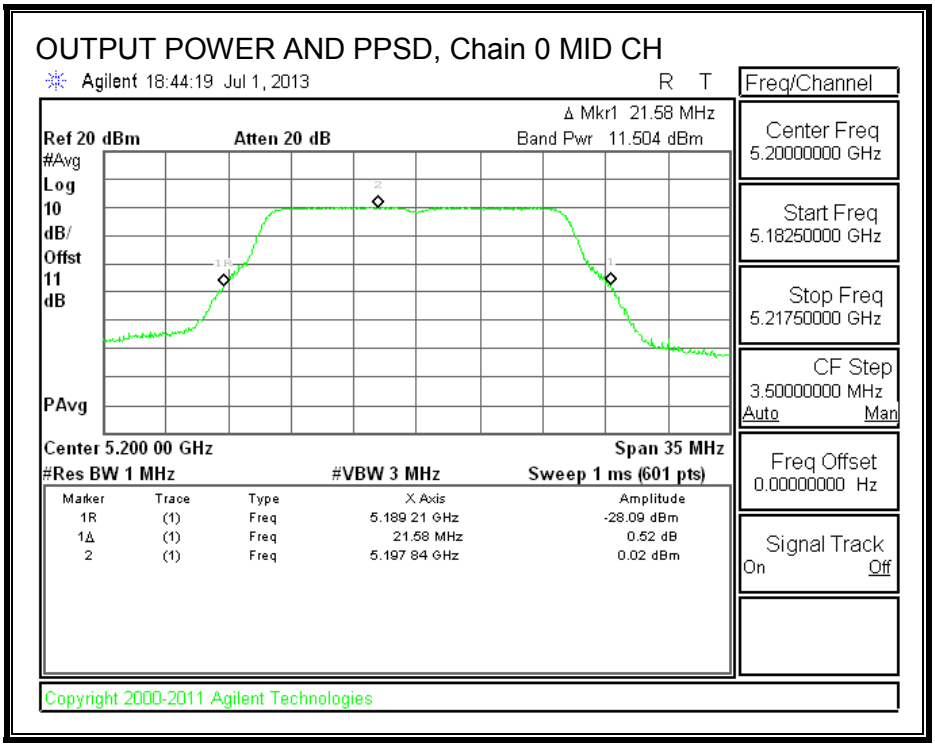
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	11.666	11.88	17.00	-5.12
Mid	5200	11.504	11.71	17.00	-5.29
High	5240	11.618	11.83	17.00	-5.17

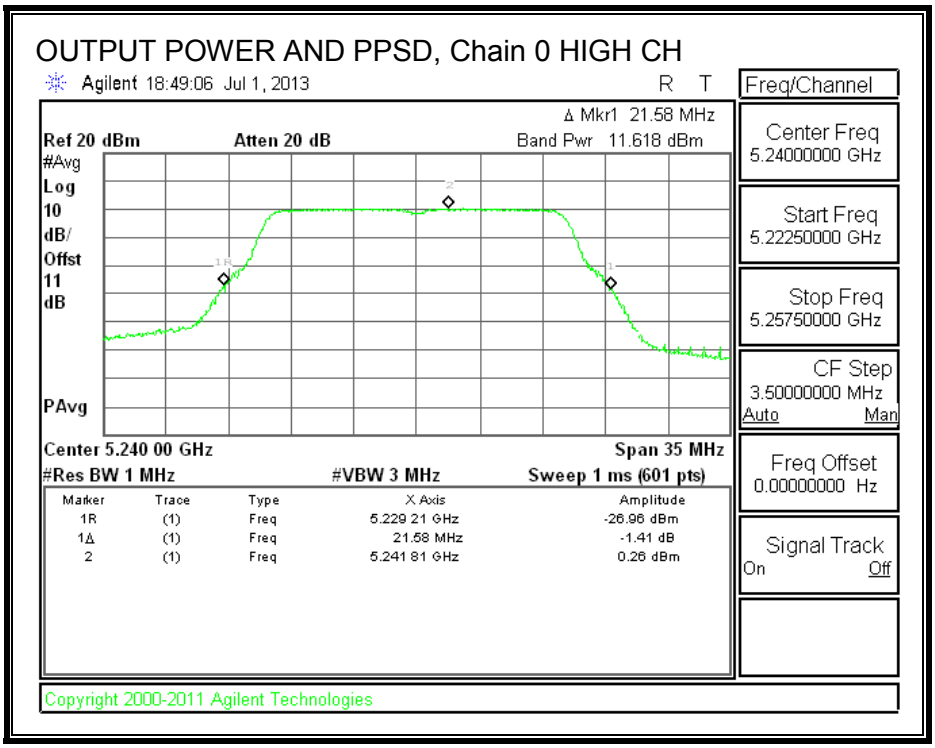
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.400	0.61	4.00	-3.39
Mid	5200	0.020	0.23	4.00	-3.77
High	5240	0.260	0.47	4.00	-3.53

OUTPUT POWER AND PPSD, Chain 0







9.1.5. PEAK EXCURSION

LIMITS

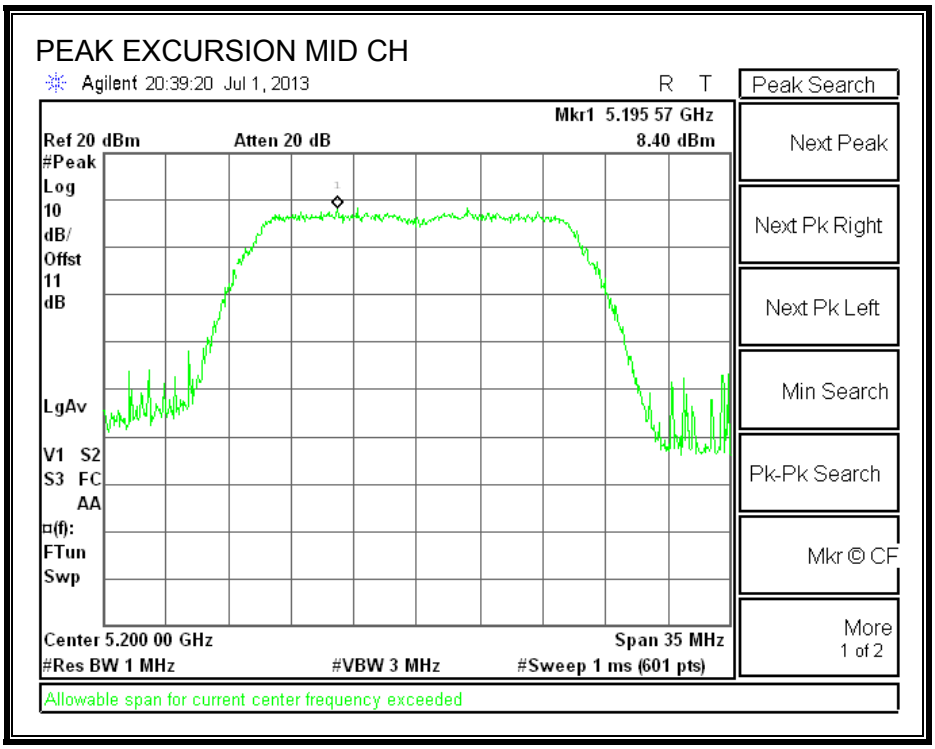
FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	8.400	0.23	0.22	7.95	13	-5.05

PEAK EXCURSION



9.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

9.2.1. 26 dB BANDWIDTH

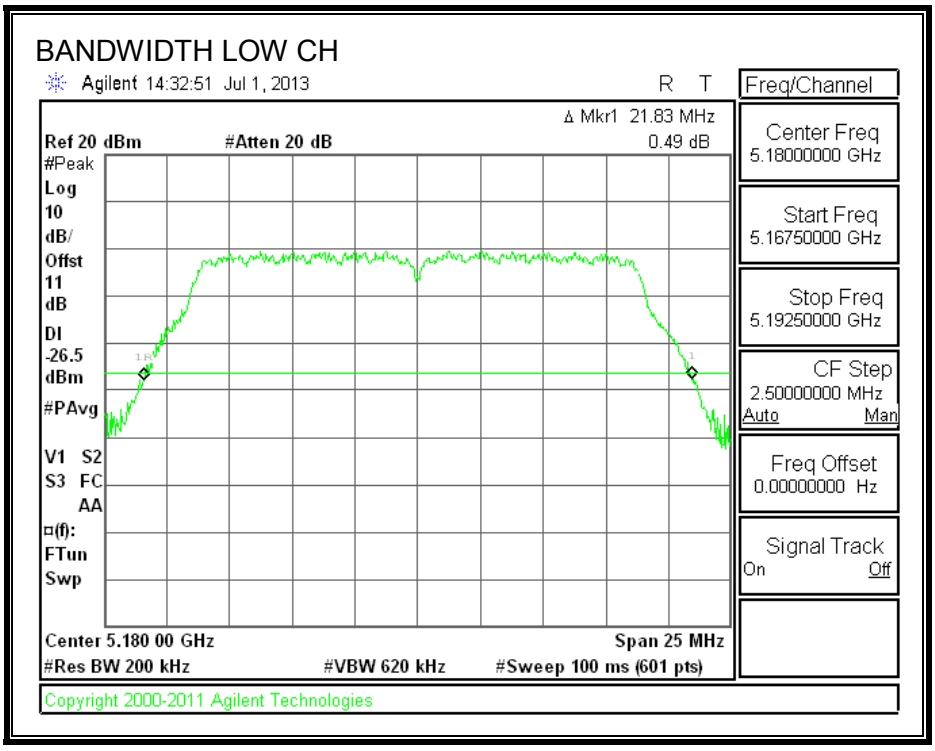
LIMITS

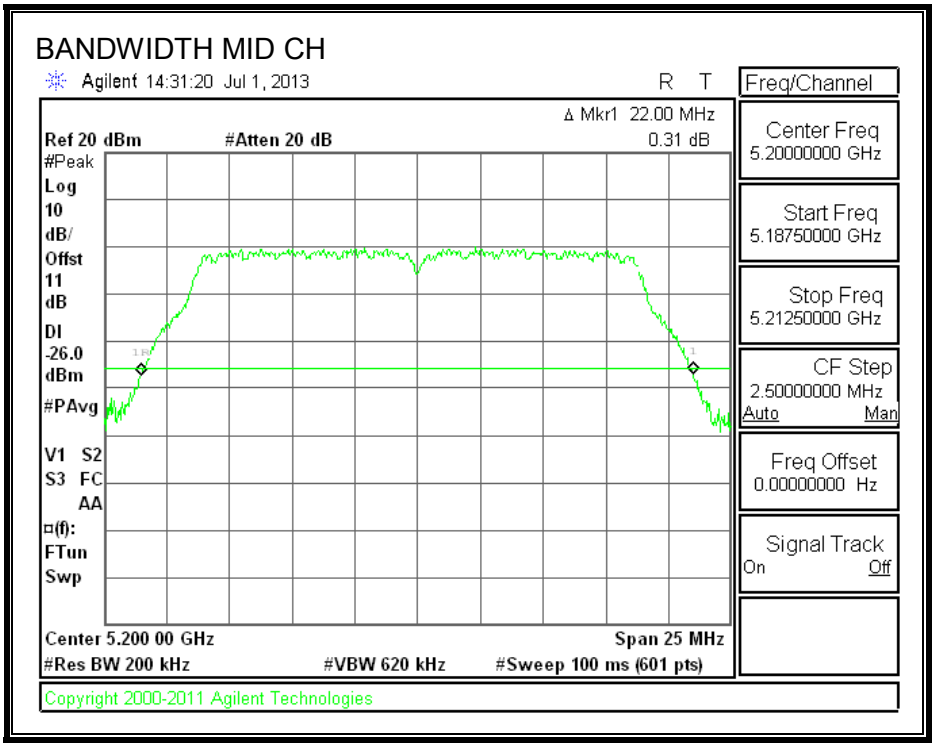
None; for reporting purposes only.

RESULTS

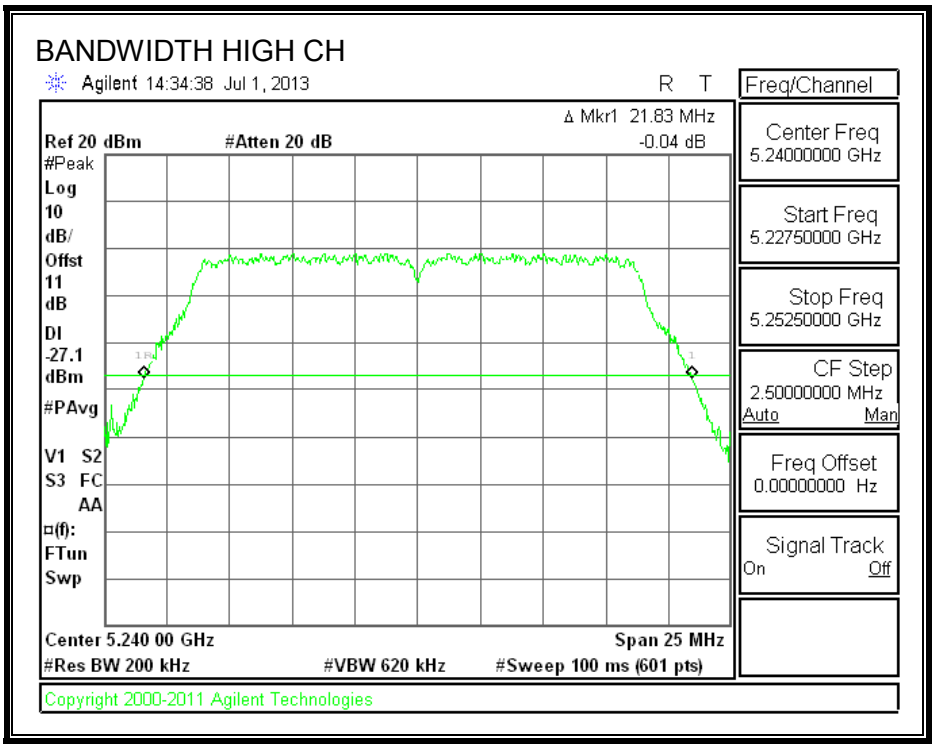
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	21.83
Mid	5200	22.00
High	5240	21.83

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.2.2. 99% BANDWIDTH

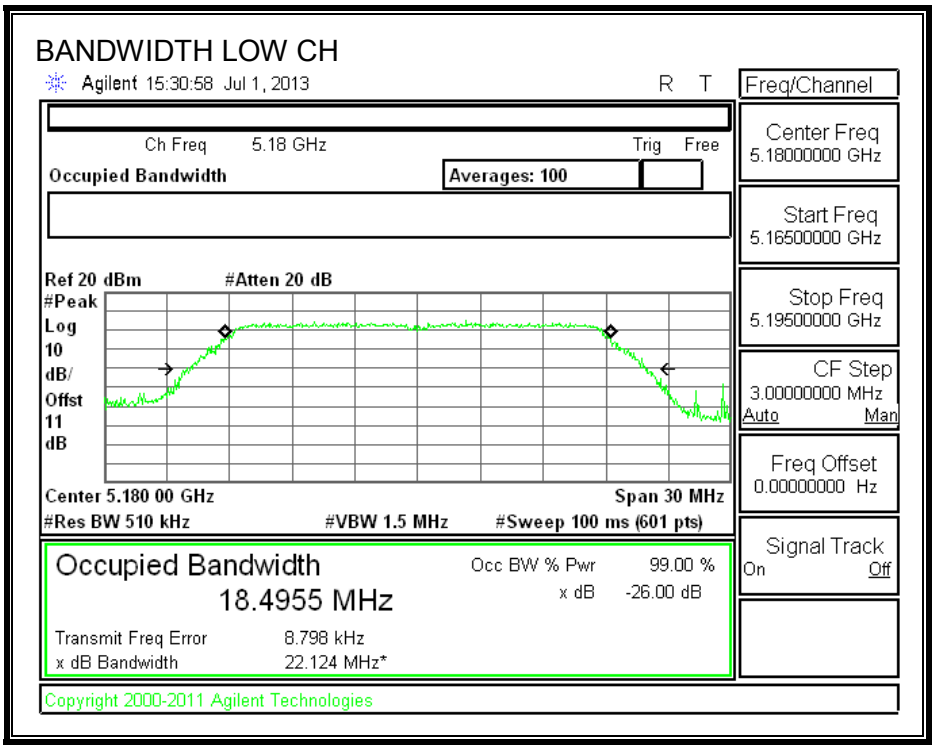
LIMITS

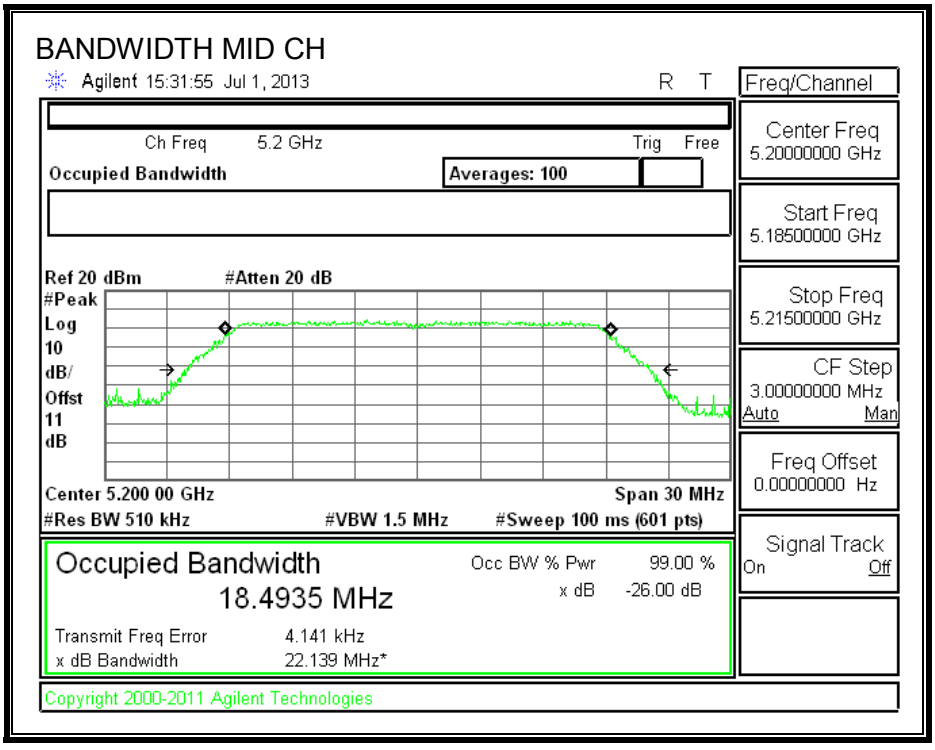
None; for reporting purposes only.

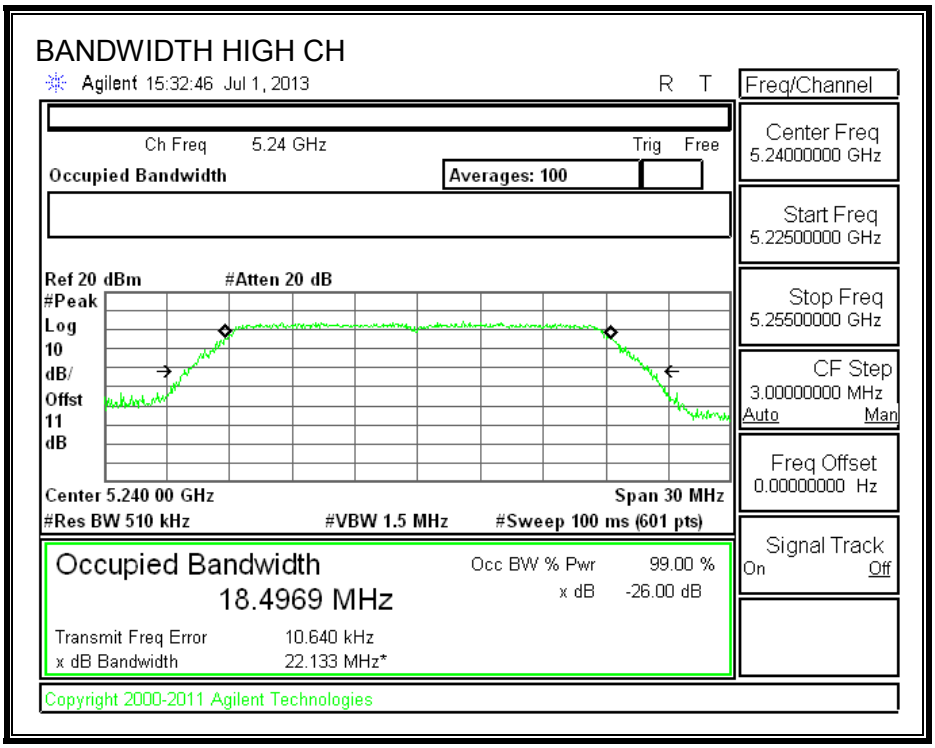
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	18.496
Mid	5200	18.494
High	5240	18.497

99% BANDWIDTH







9.2.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 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	5180	9.7
Mid	5200	9.9
High	5240	10.0

9.2.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	21.83	18.494	-6.40
Mid	5200	21.83	18.494	-6.40
High	5240	21.83	18.494	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	17.00	22.67	29.07	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.67	29.07	17.00	4.00	10.00	4.00
High	5240	17.00	22.67	29.07	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PPSD

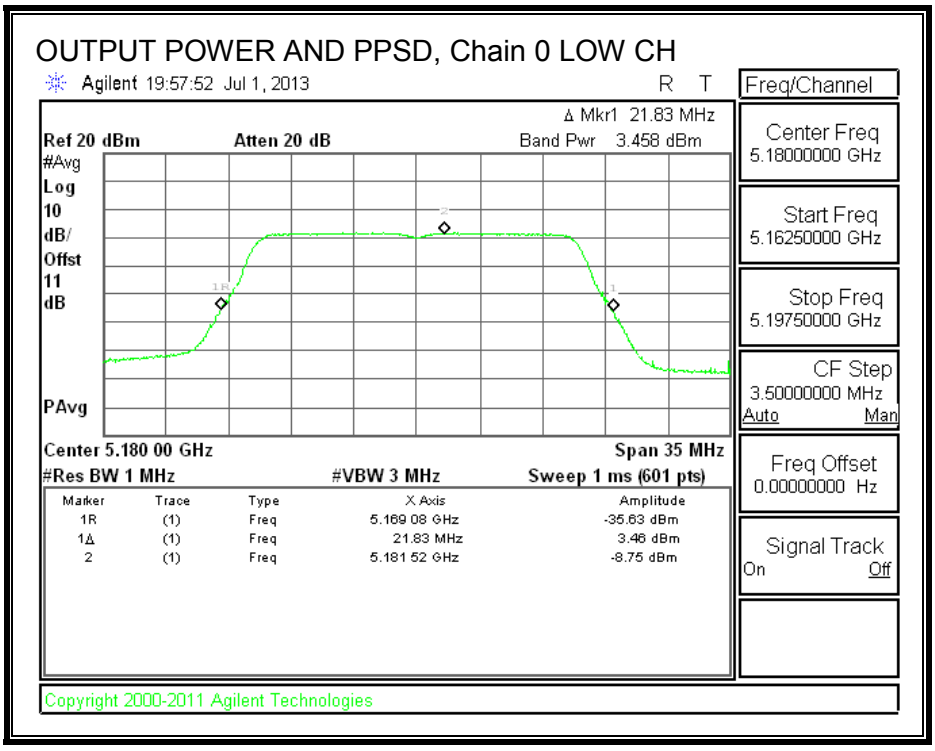
Output Power Results

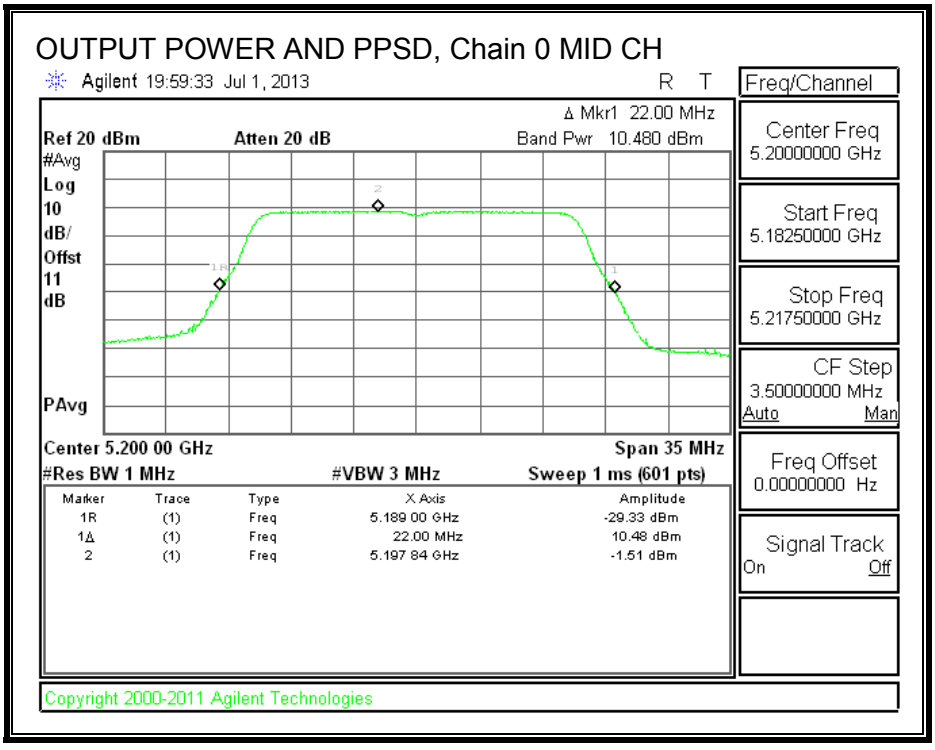
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	3.458	3.68	17.00	-13.32
Mid	5200	10.480	10.70	17.00	-6.30
High	5240	10.534	10.75	17.00	-6.25

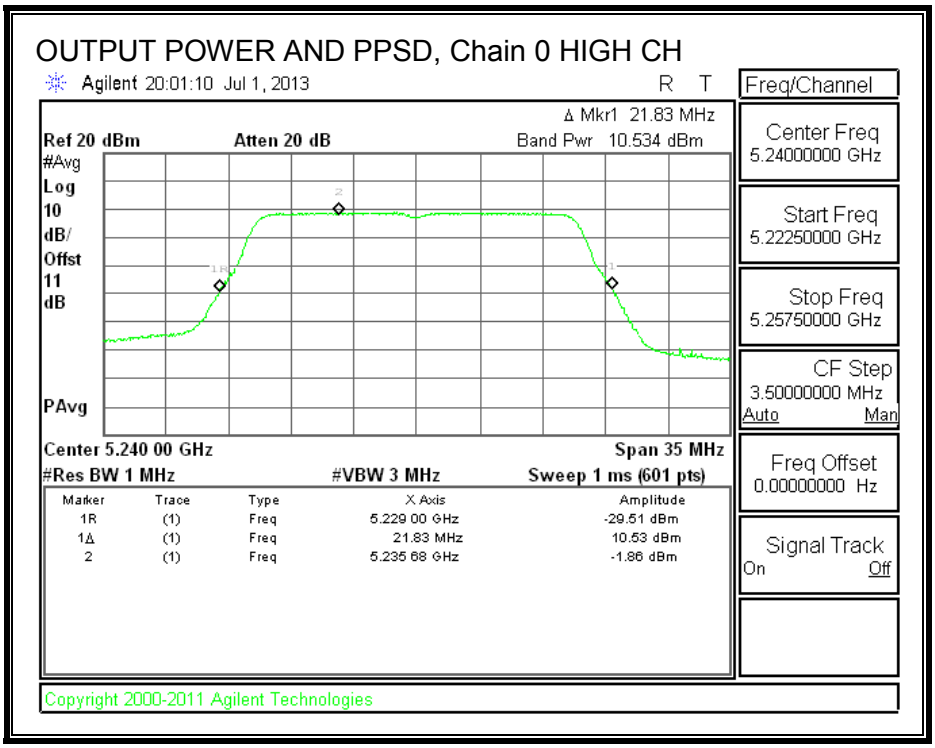
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-8.750	-8.53	4.00	-12.53
Mid	5200	-1.510	-1.29	4.00	-5.29
High	5240	-1.860	-1.64	4.00	-5.64

OUTPUT POWER AND PPSD, Chain 0







9.2.5. PEAK EXCURSION

LIMITS

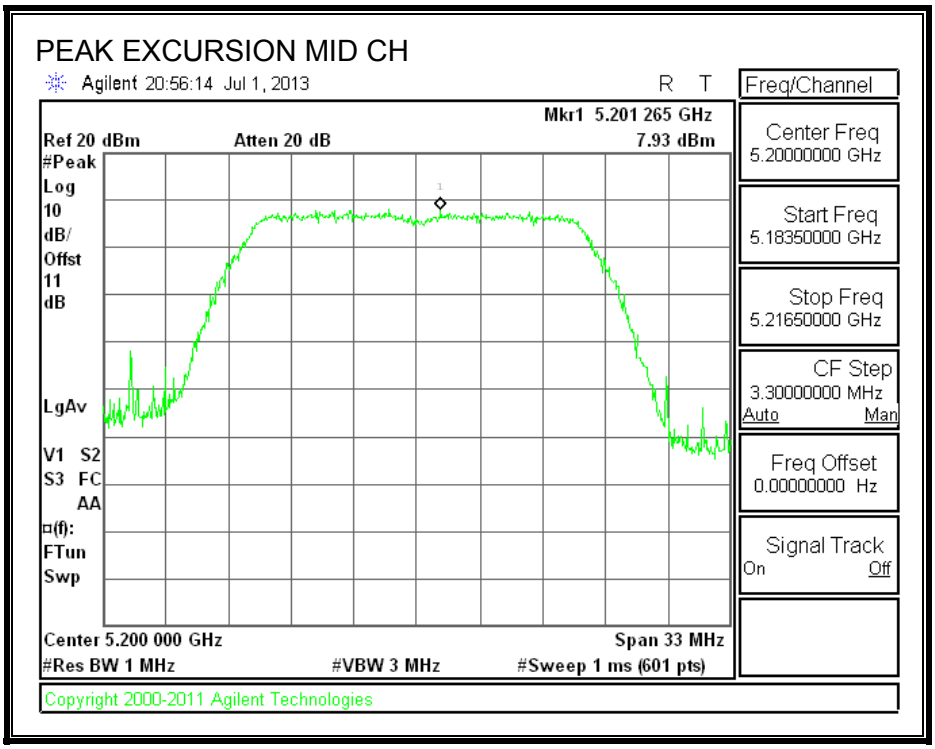
FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	7.930	-1.29	0.22	9.00	13	-4.00

PEAK EXCURSION



9.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

9.3.1. 26 dB BANDWIDTH

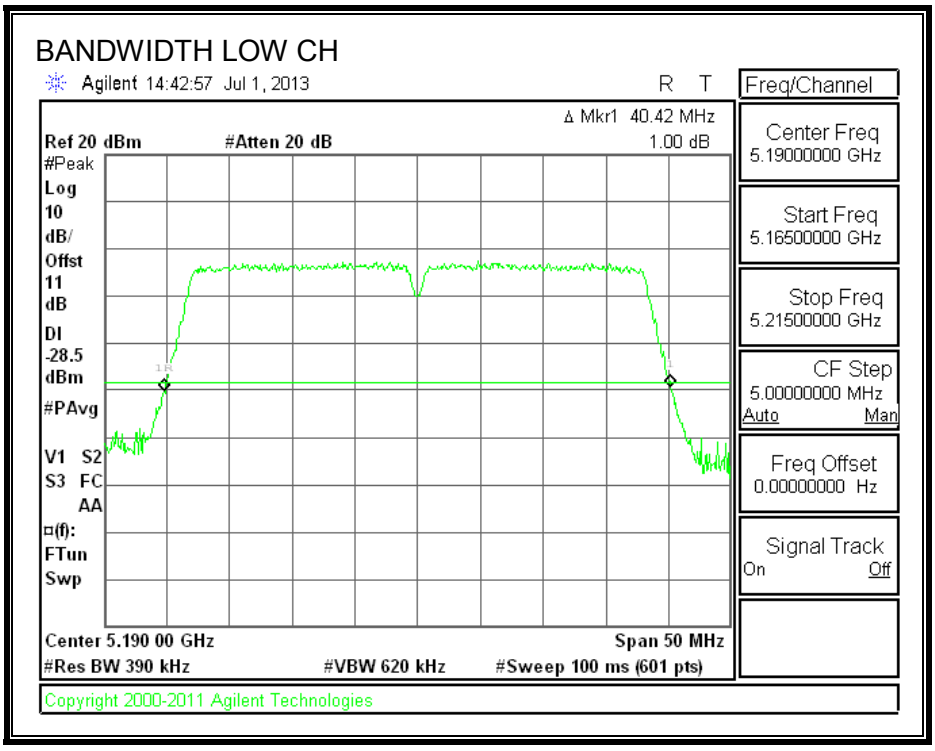
LIMITS

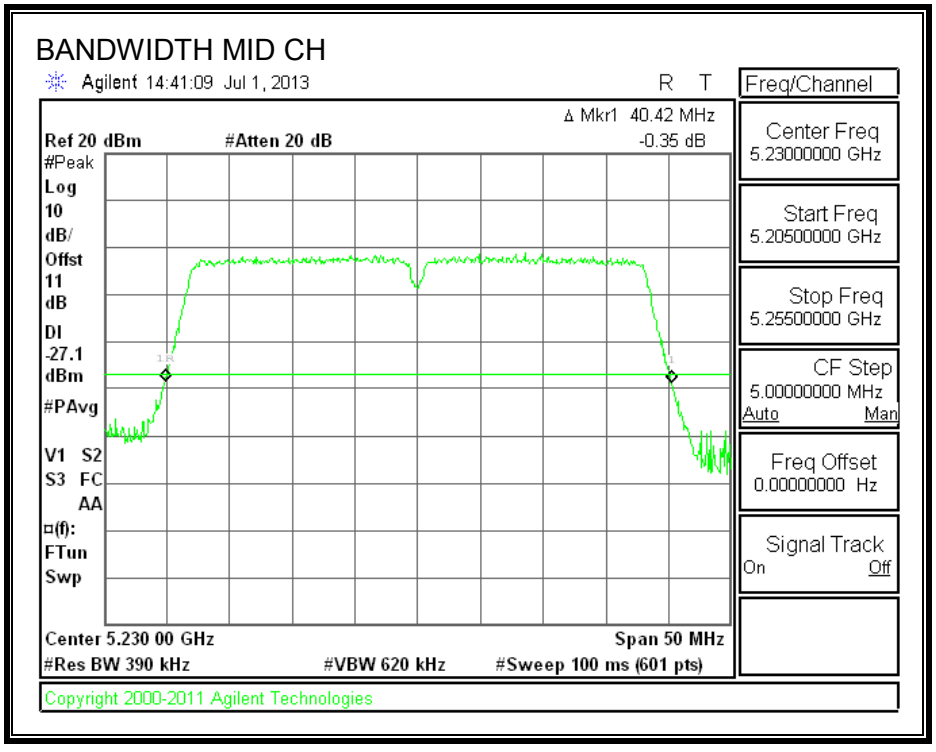
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5190	40.4
Mid	5230	40.4

26 dB BANDWIDTH





9.3.2. 99% BANDWIDTH

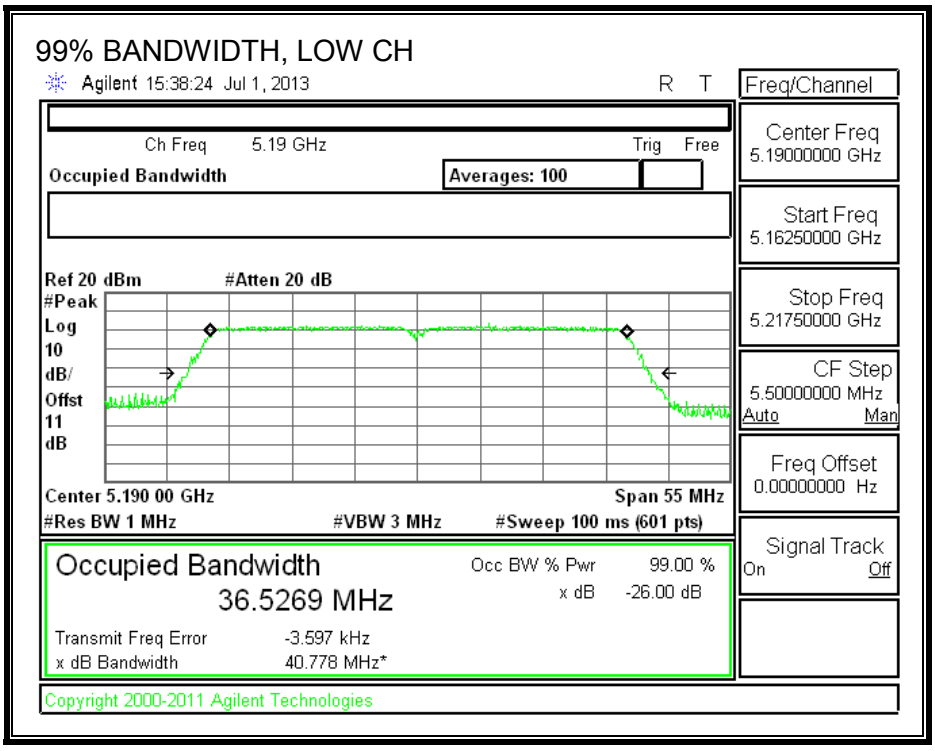
LIMITS

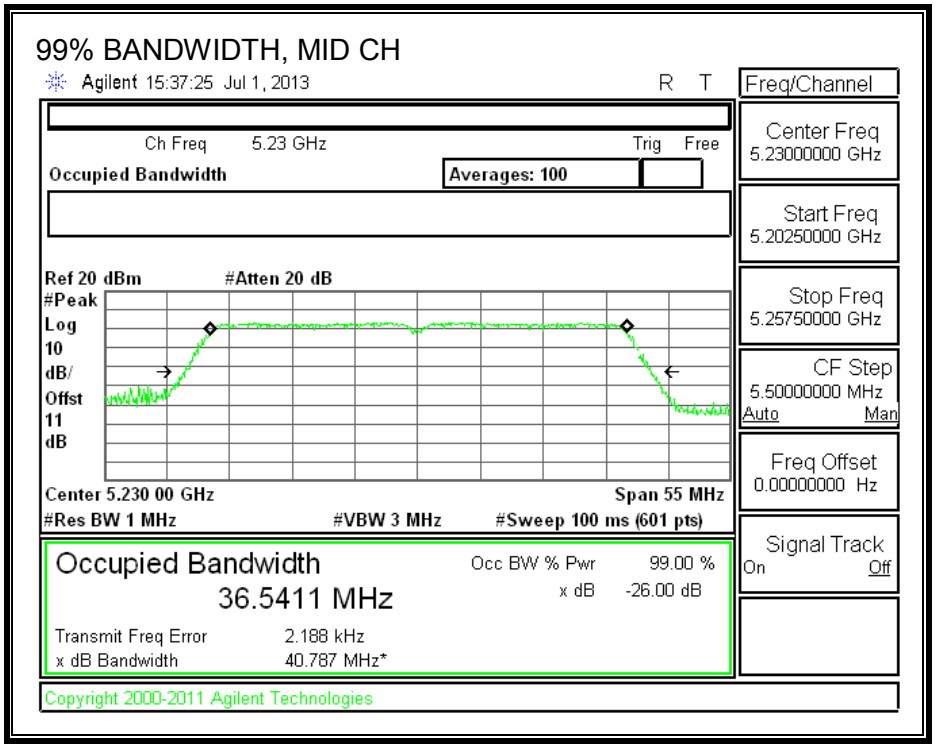
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.527
Mid	5230	36.541

99% BANDWIDTH





9.3.3. 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 11 dB (including 10 dB pad and 1 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	5190	7.8
Mid	5230	9.0

9.3.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	40.3	36.523	-6.40
Mid	5230	40.3	36.523	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5190	17.00	23.00	29.40	17.00	4.00	10.00	4.00
Mid	5230	17.00	23.00	29.40	17.00	4.00	10.00	4.00
Duty Cycle CF (dB)		0.49	Included in Calculations of Corr'd Power & PPSD					

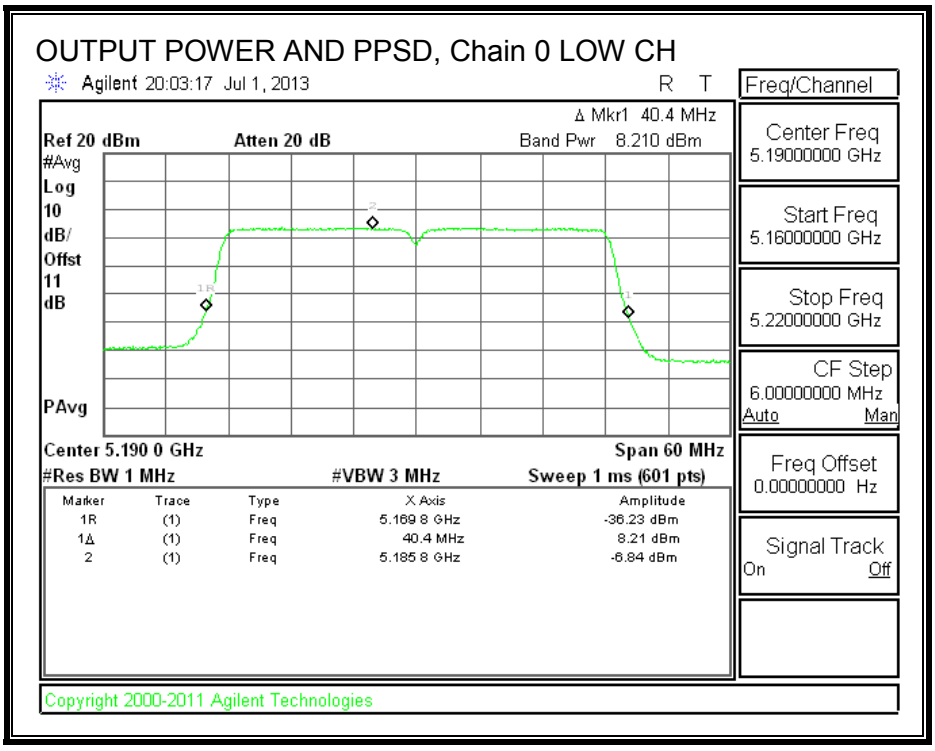
Output Power Results

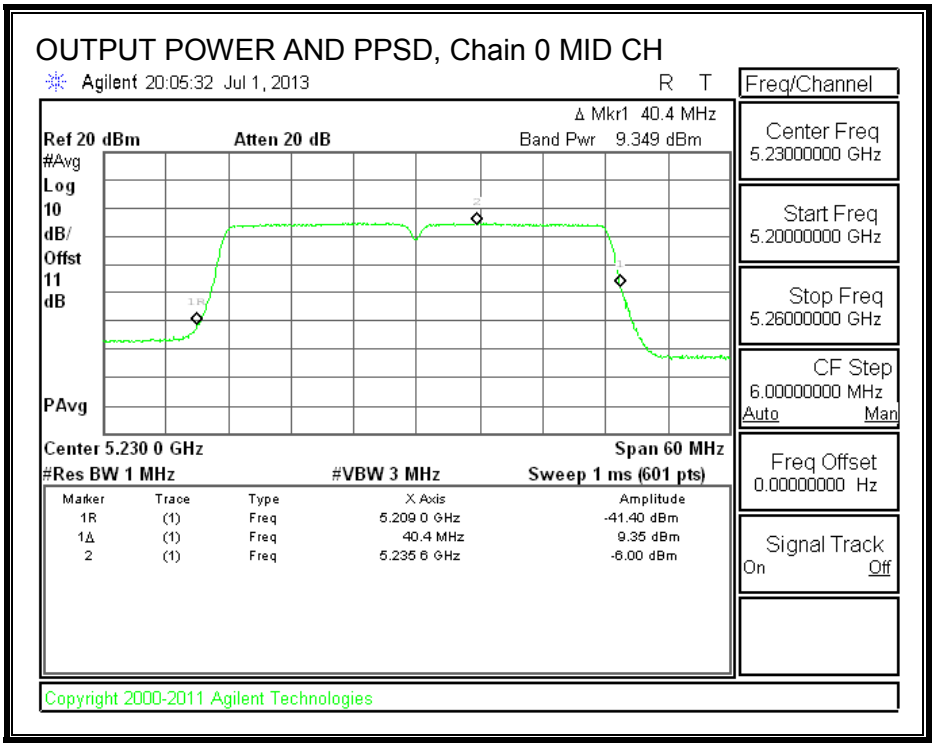
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	8.210	8.70	17.00	-8.30
Mid	5230	9.349	9.84	17.00	-7.16

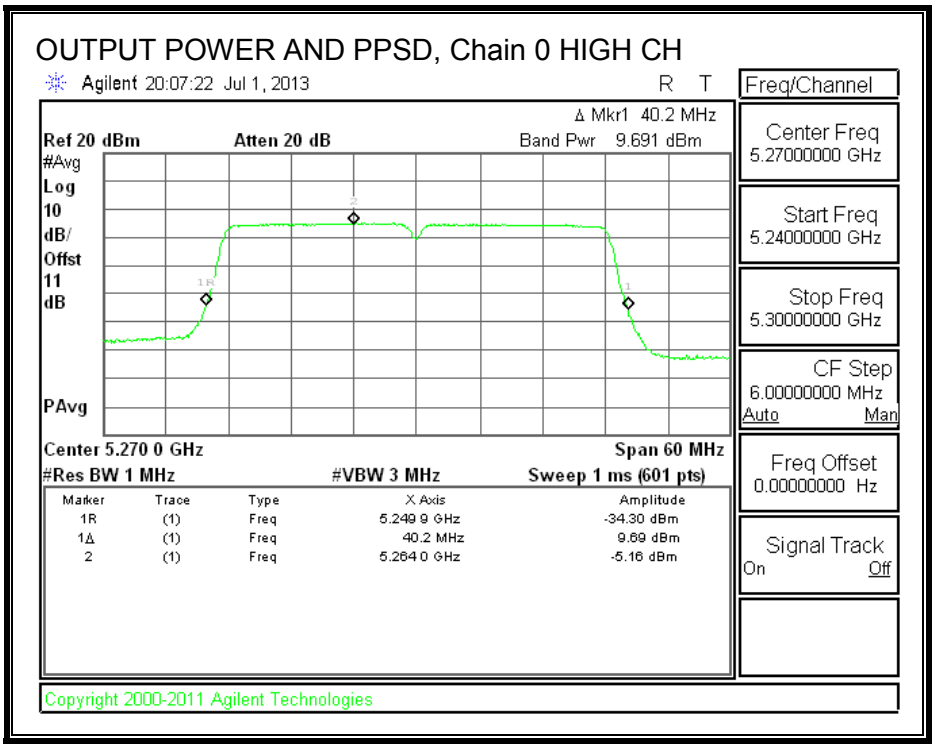
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-6.840	-6.35	4.00	-10.35
Mid	5230	-6.000	-5.51	4.00	-9.51

OUTPUT POWER AND PPSD, Chain 0







9.3.5. PEAK EXCURSION

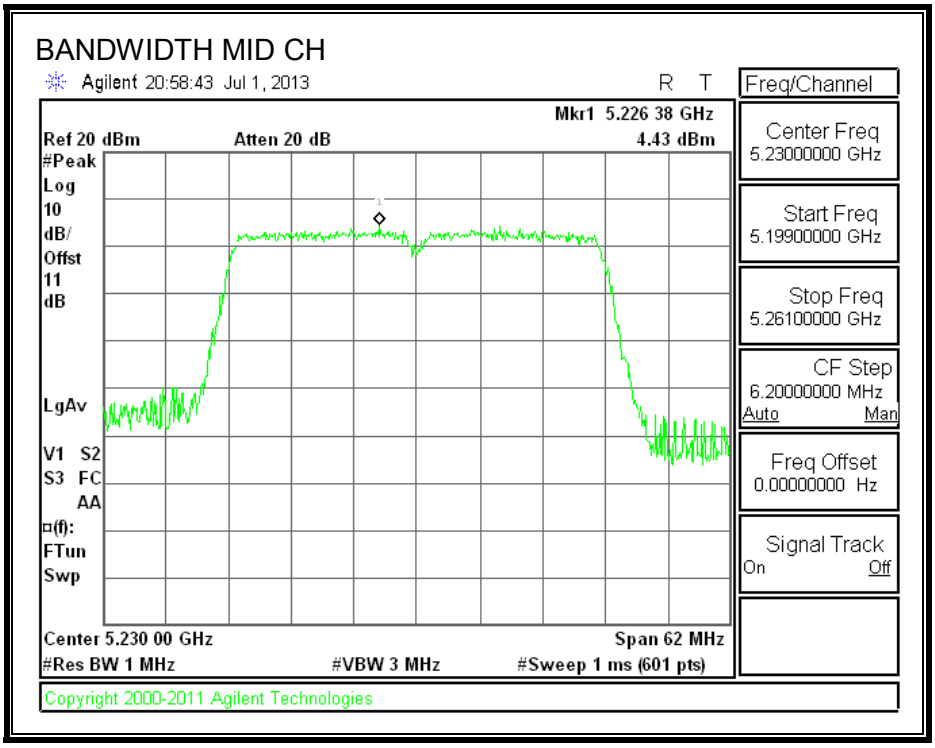
LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5230	4.430	-5.51	0.22	9.72	13	-3.28



9.4. 802.11ac HT20 MODE IN THE 5.2 GHz BAND

9.4.1. 26 dB BANDWIDTH

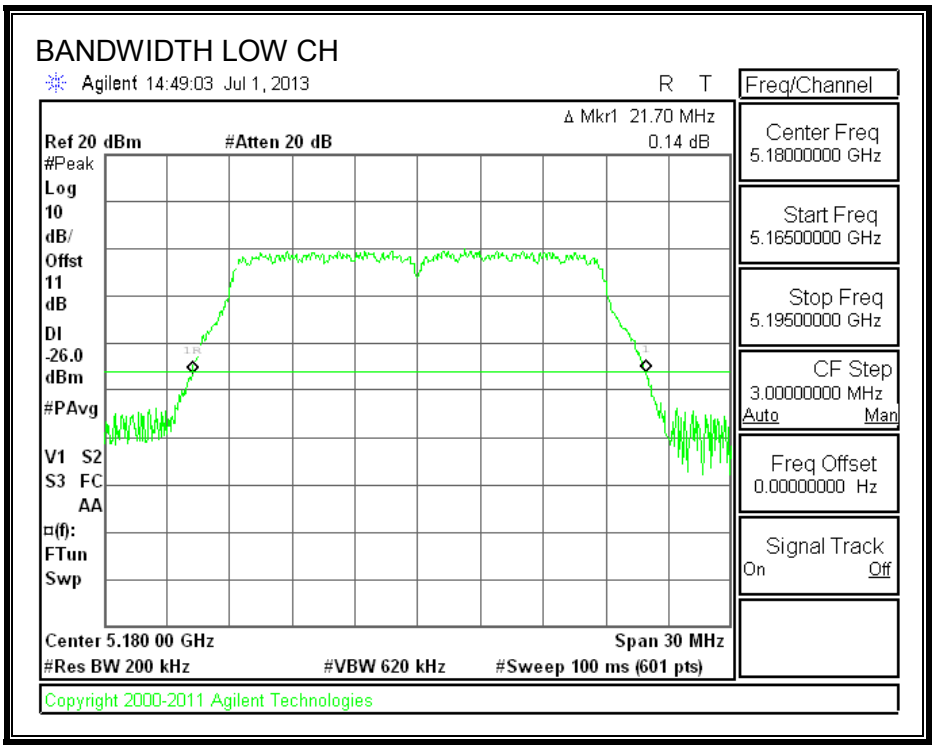
LIMITS

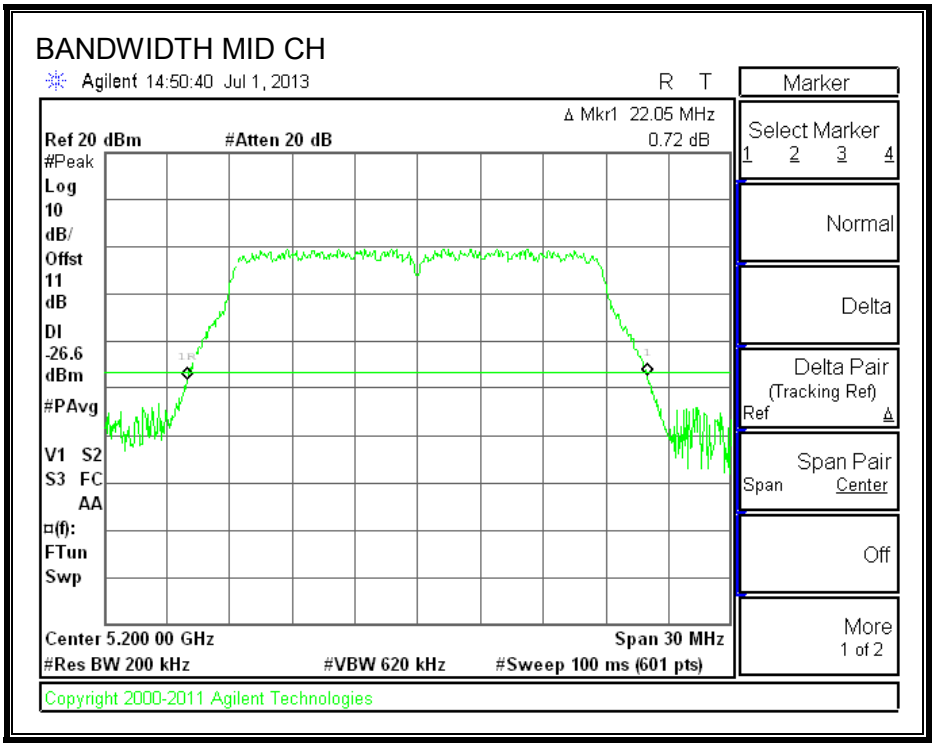
None; for reporting purposes only.

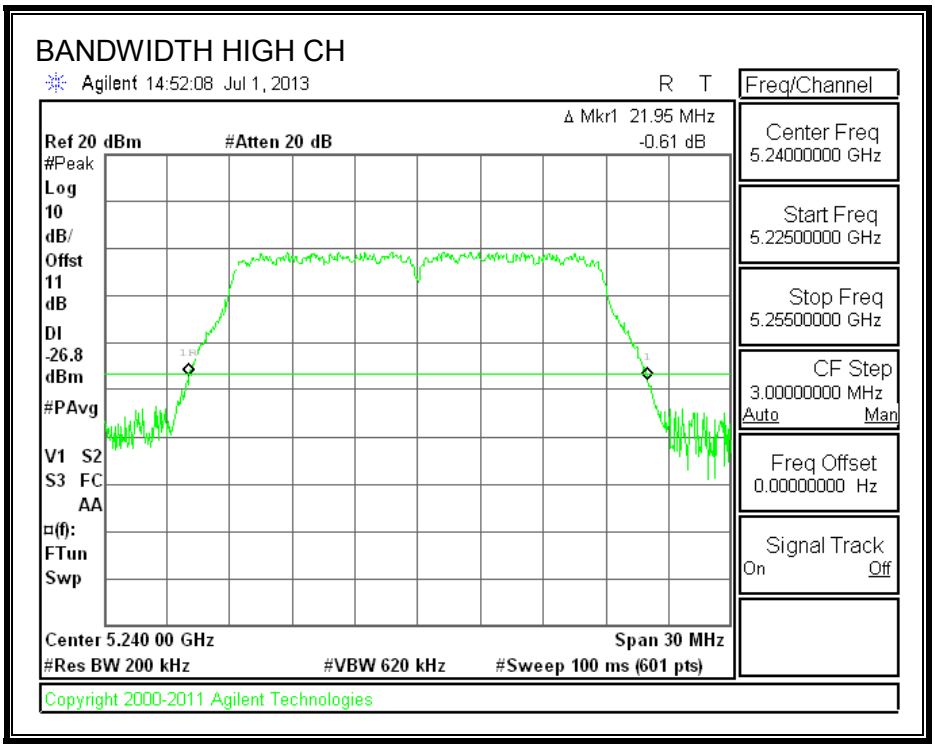
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	21.700
Mid	5200	22.050
High	5240	21.950

26 dB BANDWIDTH







9.4.2. 99% BANDWIDTH

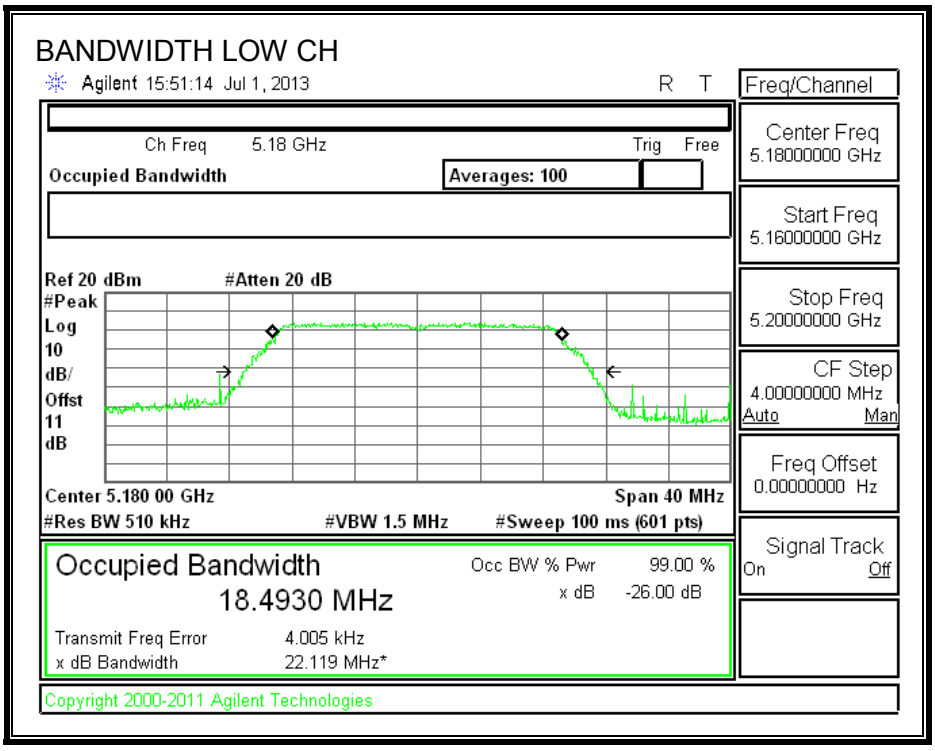
LIMITS

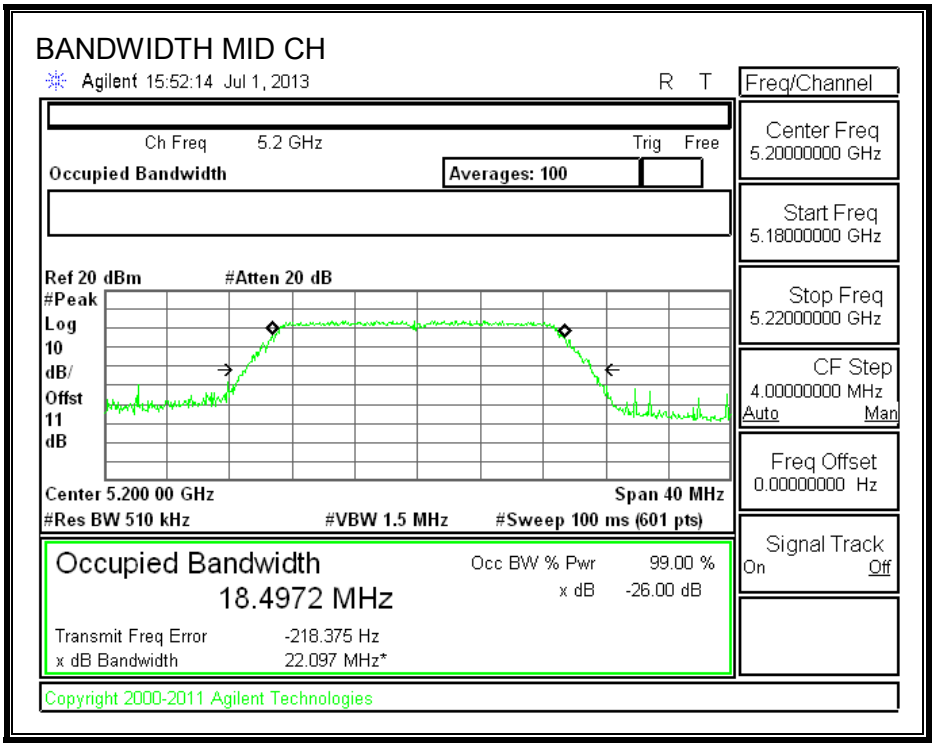
None; for reporting purposes only.

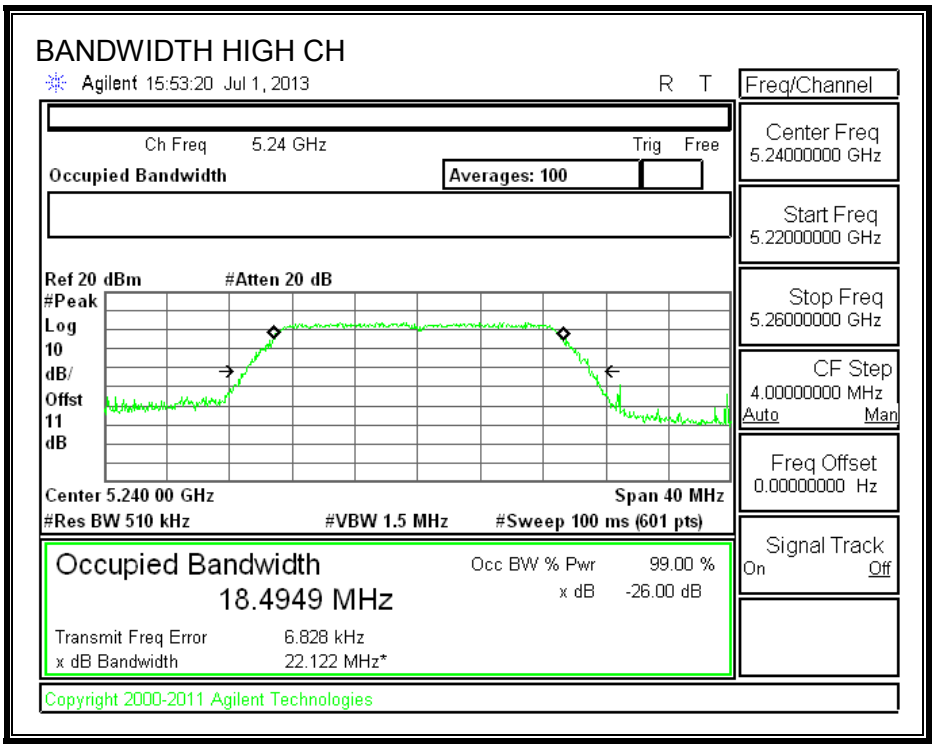
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	18.493
Mid	5200	18.497
High	5240	18.495

99% BANDWIDTH







9.4.3. 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 11 dB (including 10 dB pad and 1 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	5180	9.90
Mid	5200	9.60
High	5240	9.80

9.4.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	21.700	18.493	-6.40
Mid	5200	21.700	18.493	-6.40
High	5240	21.700	18.493	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	17.00	22.67	29.07	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.67	29.07	17.00	4.00	10.00	4.00
High	5240	17.00	22.67	29.07	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

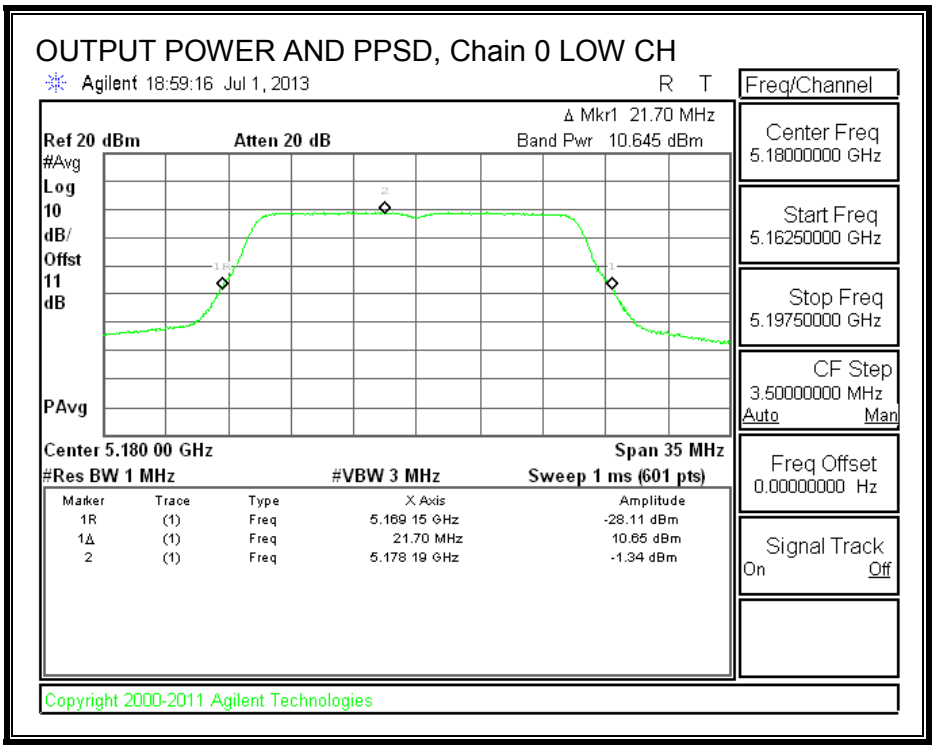
Output Power Results

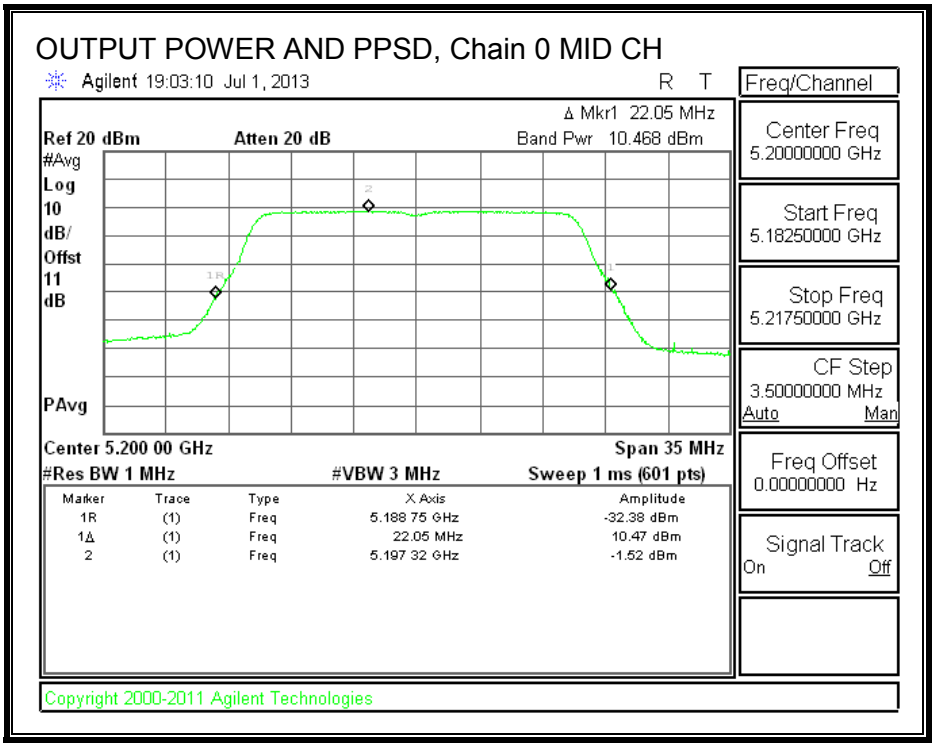
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	10.645	10.86	17.00	-6.15
Mid	5200	10.468	10.68	17.00	-6.32
High	5240	10.465	10.68	17.00	-6.33

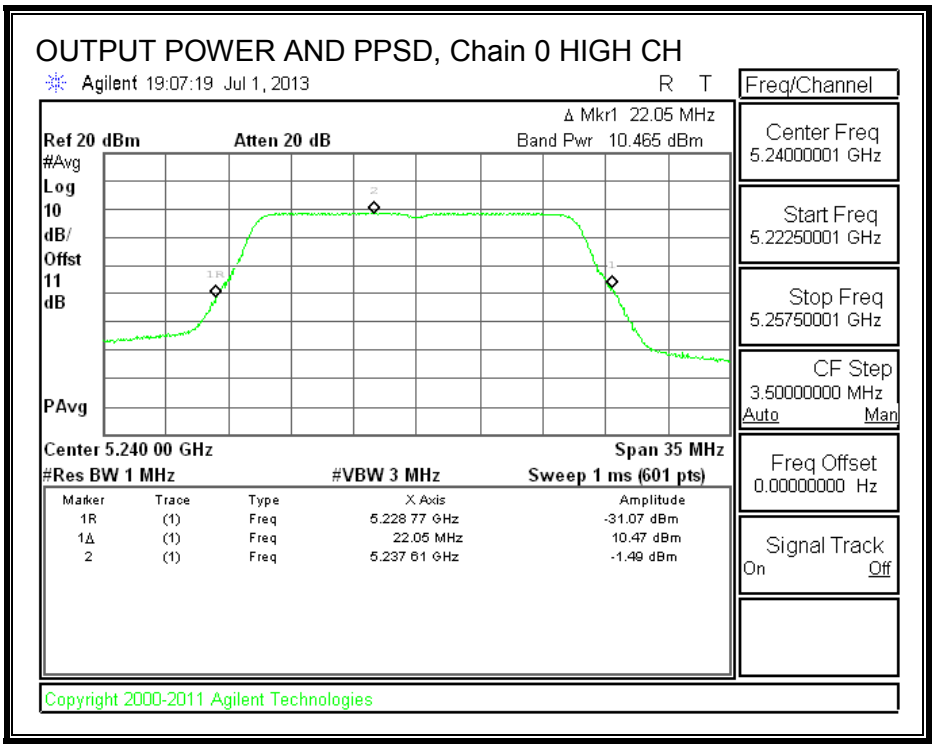
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-1.340	-1.13	4.00	-5.13
Mid	5200	-1.520	-1.31	4.00	-5.31
High	5240	-1.490	-1.28	4.00	-5.28

OUTPUT POWER AND PPSD, Chain 0







9.5. 802.11ac HT40 MODE IN THE 5.2 GHz BAND

9.5.1. 26 dB BANDWIDTH

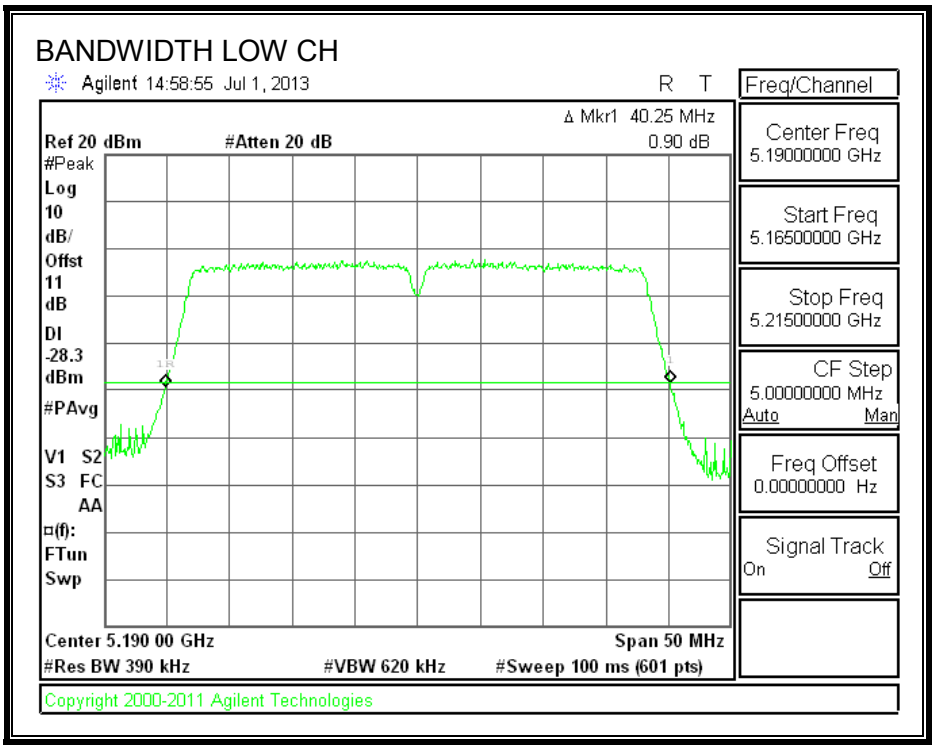
LIMITS

None; for reporting purposes only.

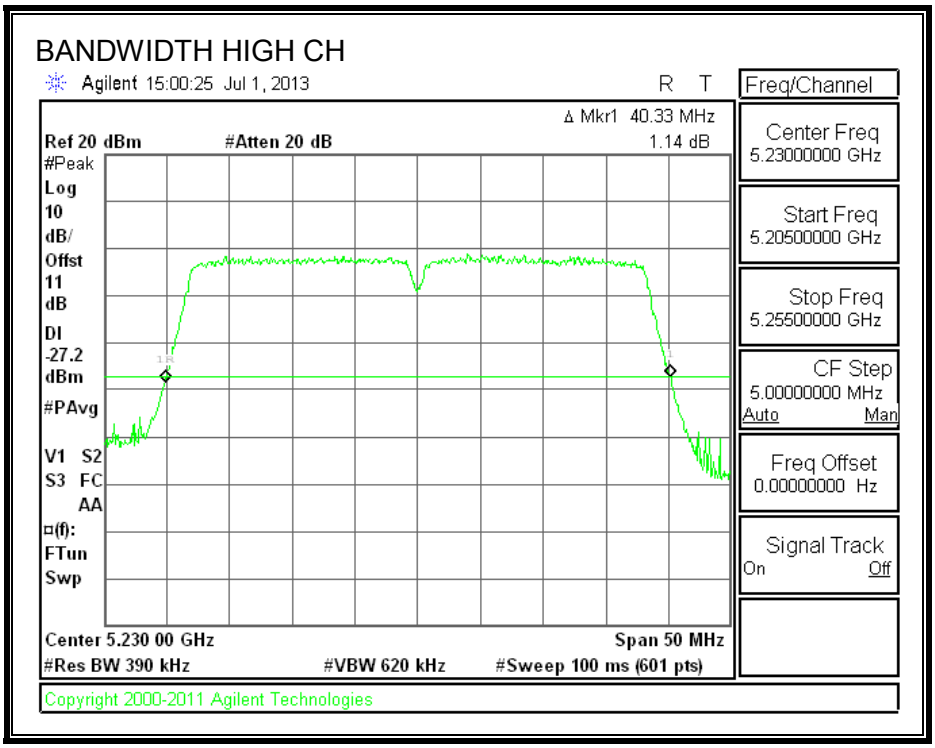
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5190	40.250
Mid	5230	40.330

26 dB BANDWIDTH



BANDWIDTH HIGH CH



9.5.2. 99% BANDWIDTH

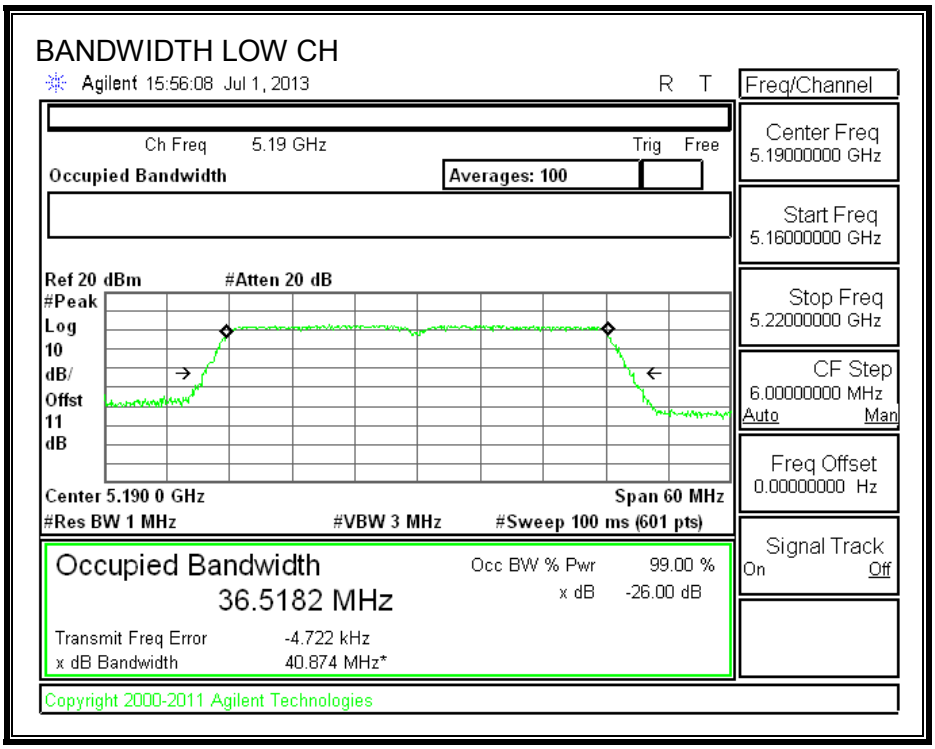
LIMITS

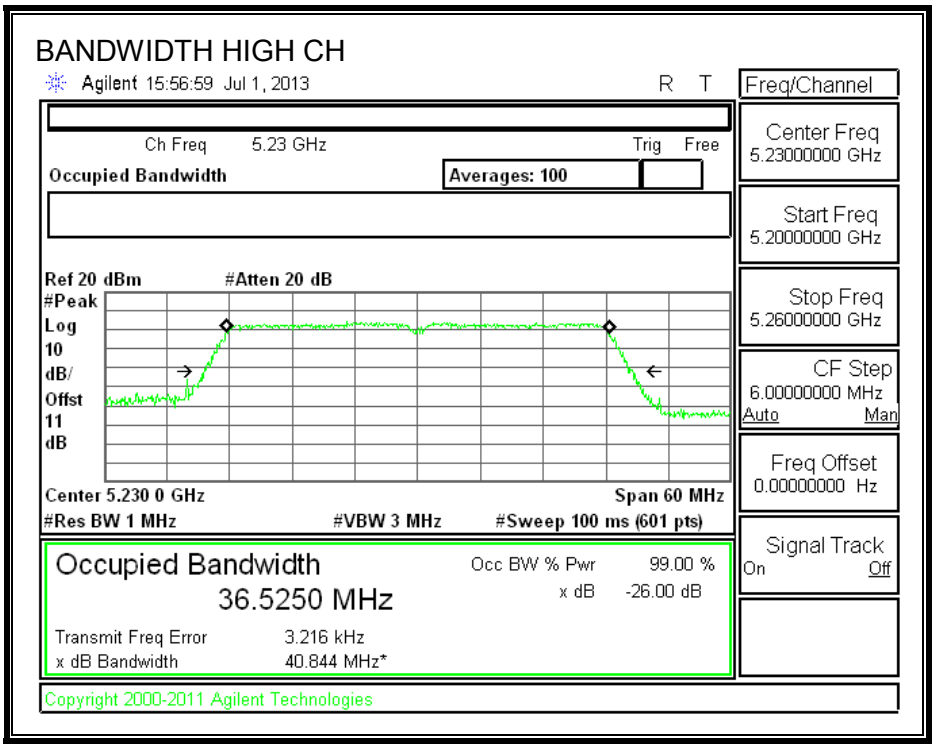
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.518
Mid	5230	36.525

99% BANDWIDTH





9.5.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 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	5190	7.9
Mid	5230	9.0

9.5.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	40.250	36.518	-6.40
Mid	5230	40.330	36.525	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5190	17.00	23.00	29.40	17.00	4.00	10.00	4.00
Mid	5230	17.00	23.00	29.40	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

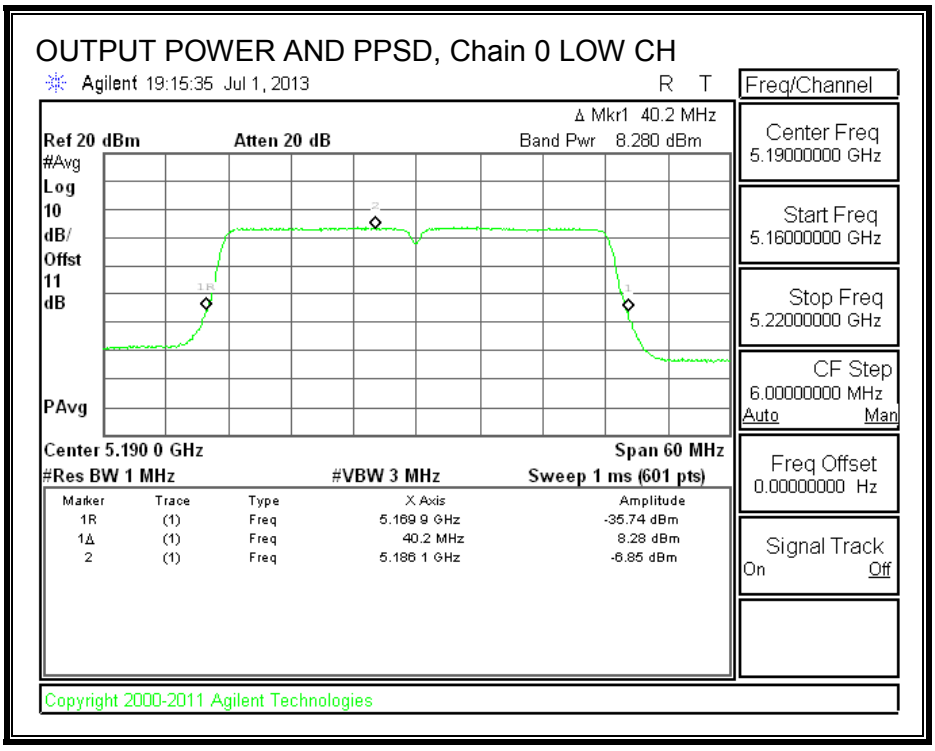
Output Power Results

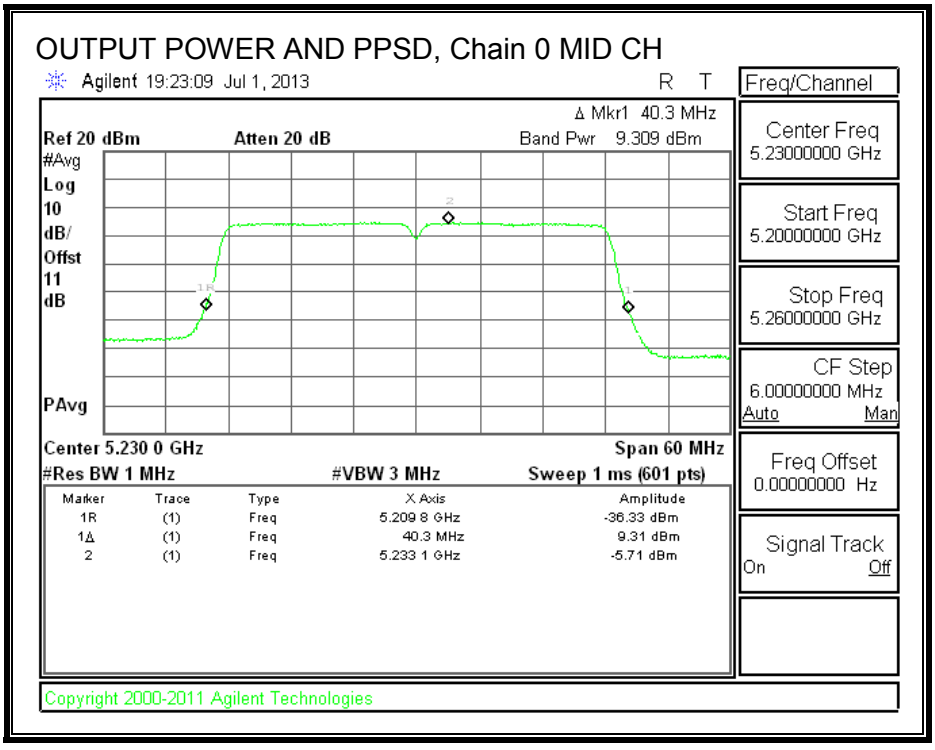
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	8.280	8.49	17.00	-8.51
Mid	5230	9.309	9.52	17.00	-7.48

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-6.850	-6.64	4.00	-10.64
Mid	5230	-5.710	-5.50	4.00	-9.50

OUTPUT POWER AND PPSD, Chain 0





9.6. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

9.6.1. 26 dB BANDWIDTH

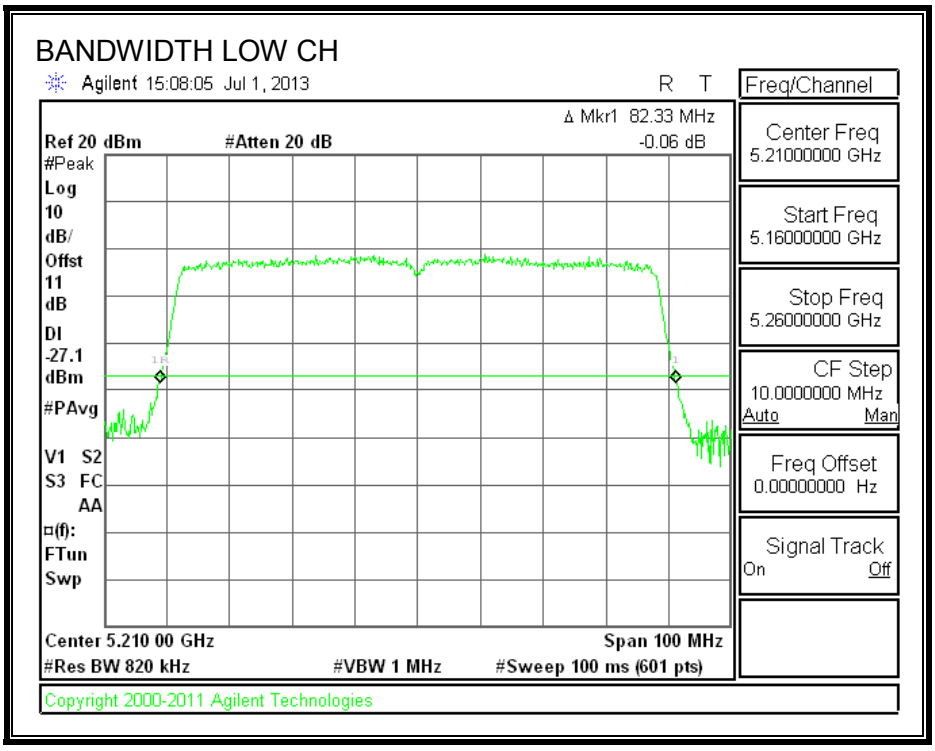
LIMITS

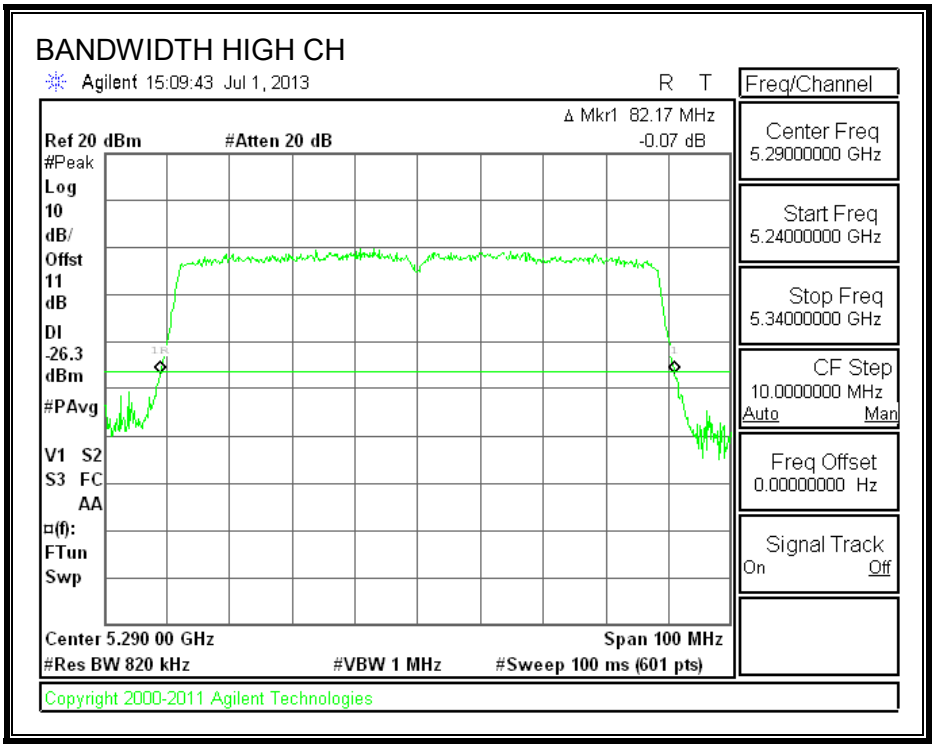
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5210	82.330

26 dB BANDWIDTH





9.6.2. 99% BANDWIDTH

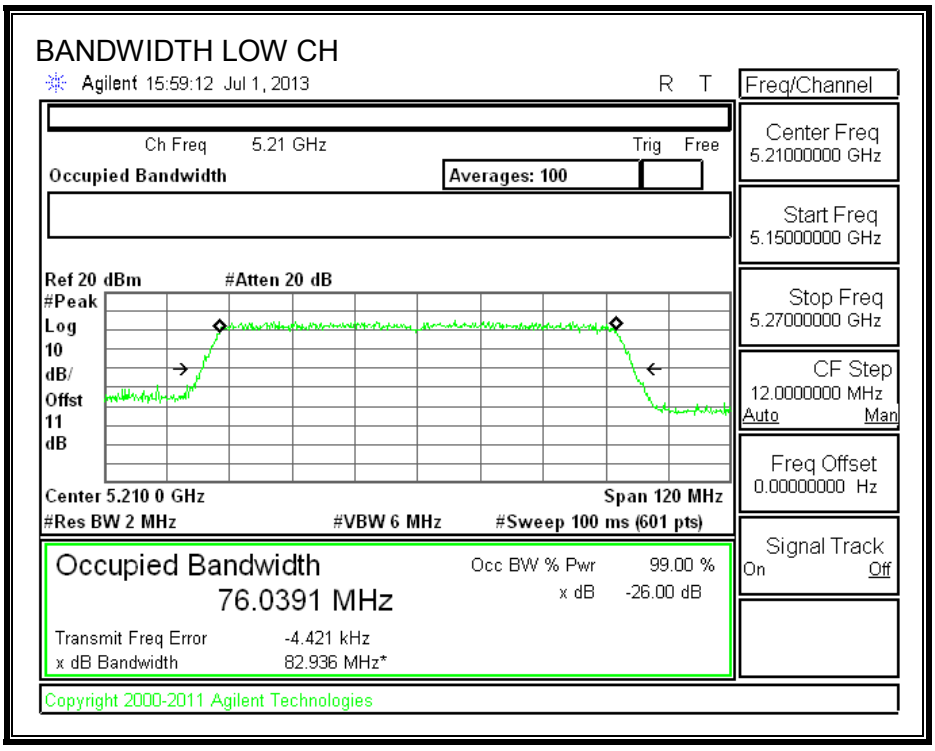
LIMITS

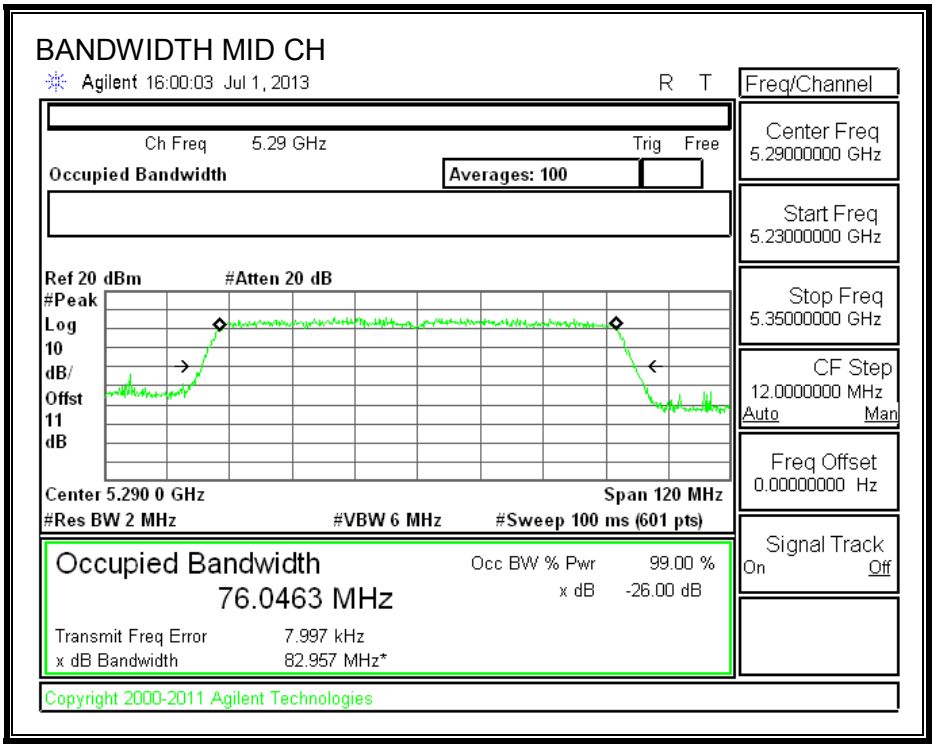
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5210	76.039

99% BANDWIDTH





9.6.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 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	5210	8.00

9.6.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5210	82.170	76.039	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5210	17.00	23.00	29.40	17.00	4.00	10.00	4.00
Duty Cycle CF (dB)		0.21	Included in Calculations of Corr'd Power & PPSD					

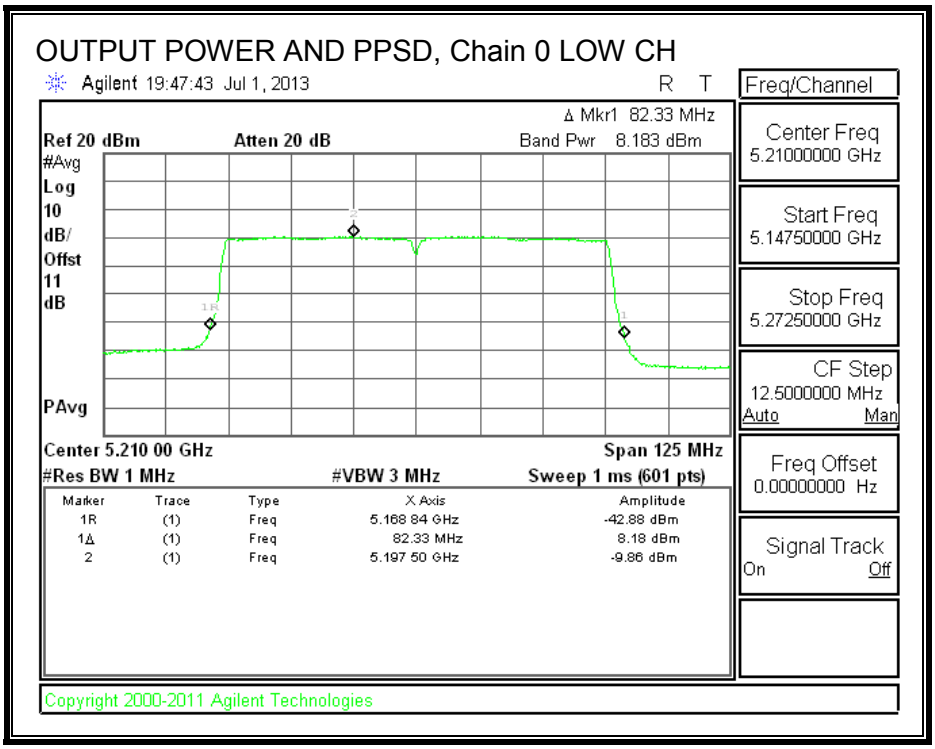
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5210	8.183	8.39	17.00	-8.61

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5210	-9.860	-9.65	4.00	-13.65

OUTPUT POWER AND PPSD, Chain 0



9.7. 802.11a MODE IN THE 5.3 GHz BAND

9.7.1. 26 dB BANDWIDTH

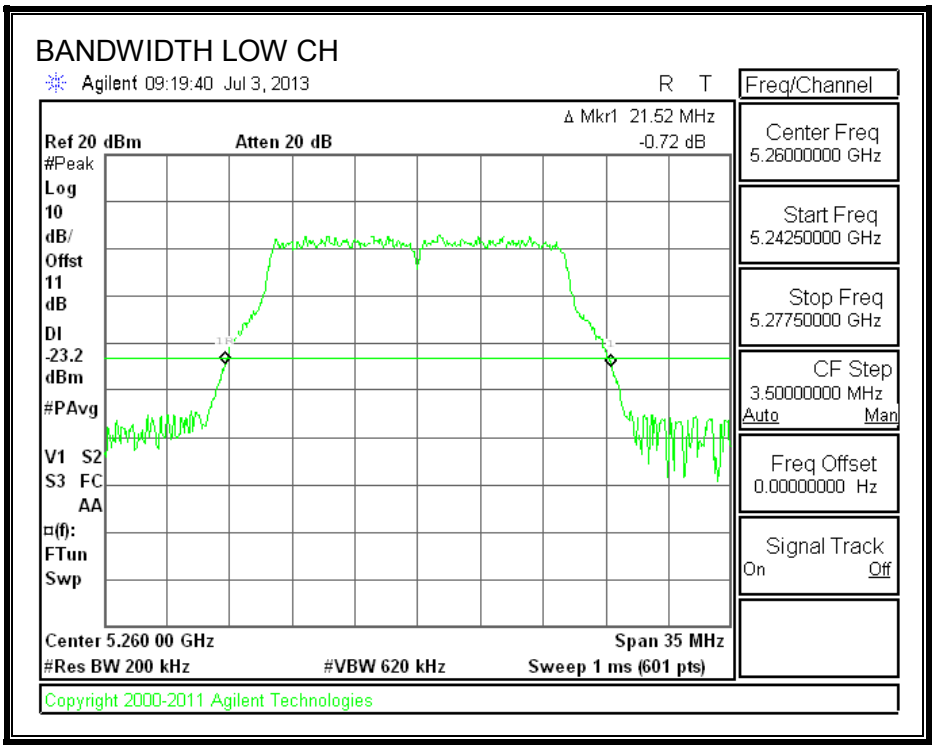
LIMITS

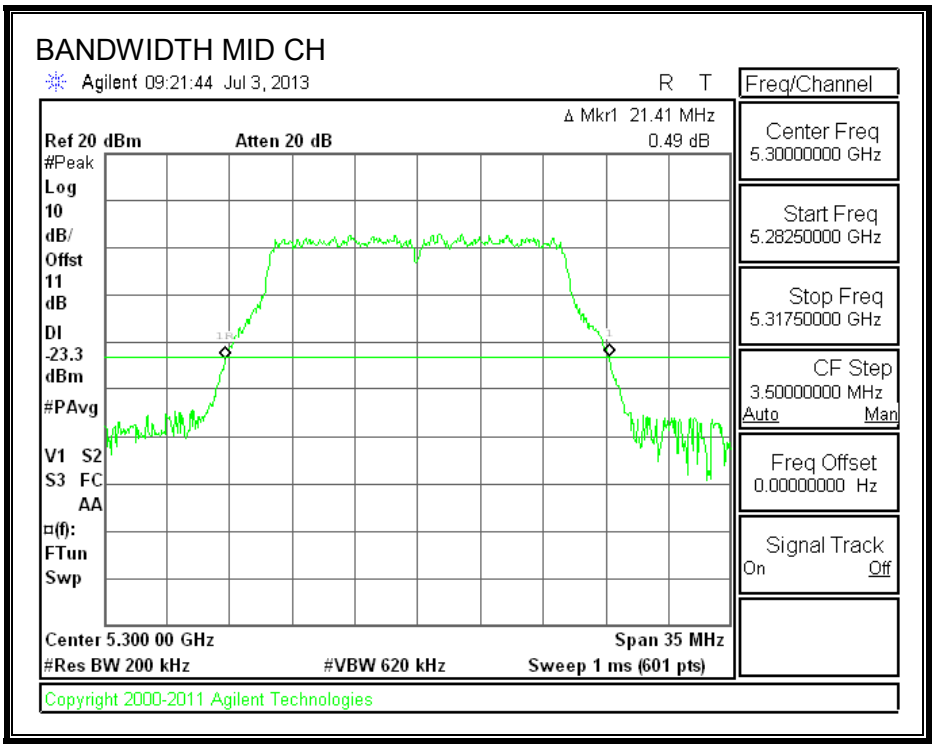
None; for reporting purposes only.

RESULTS

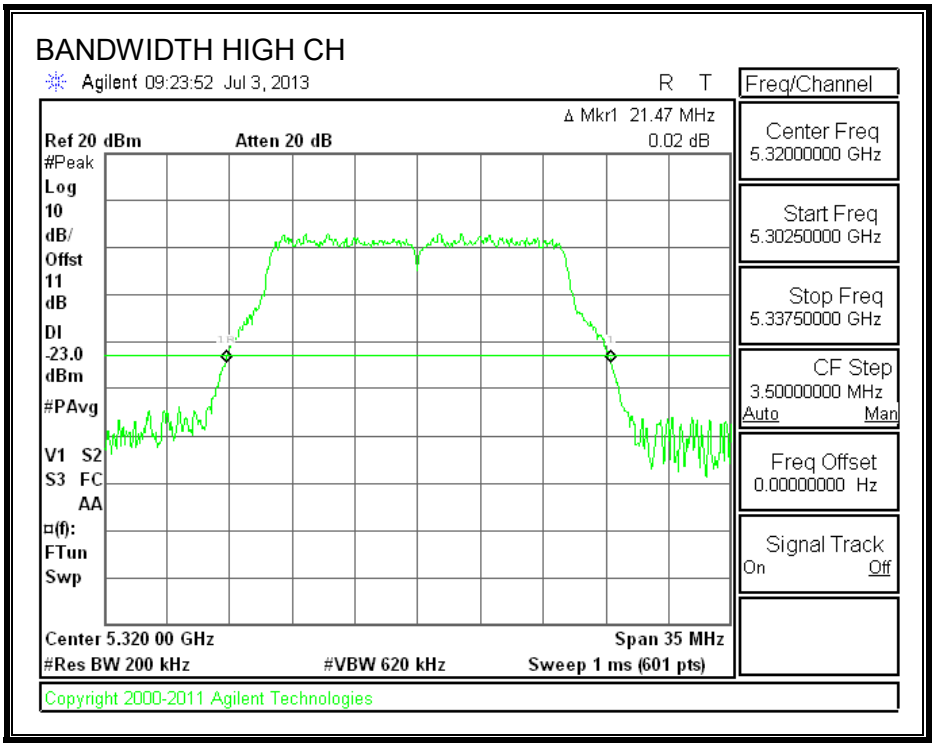
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.52
Mid	5300	21.41
High	5320	21.47

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.7.2. 99% BANDWIDTH

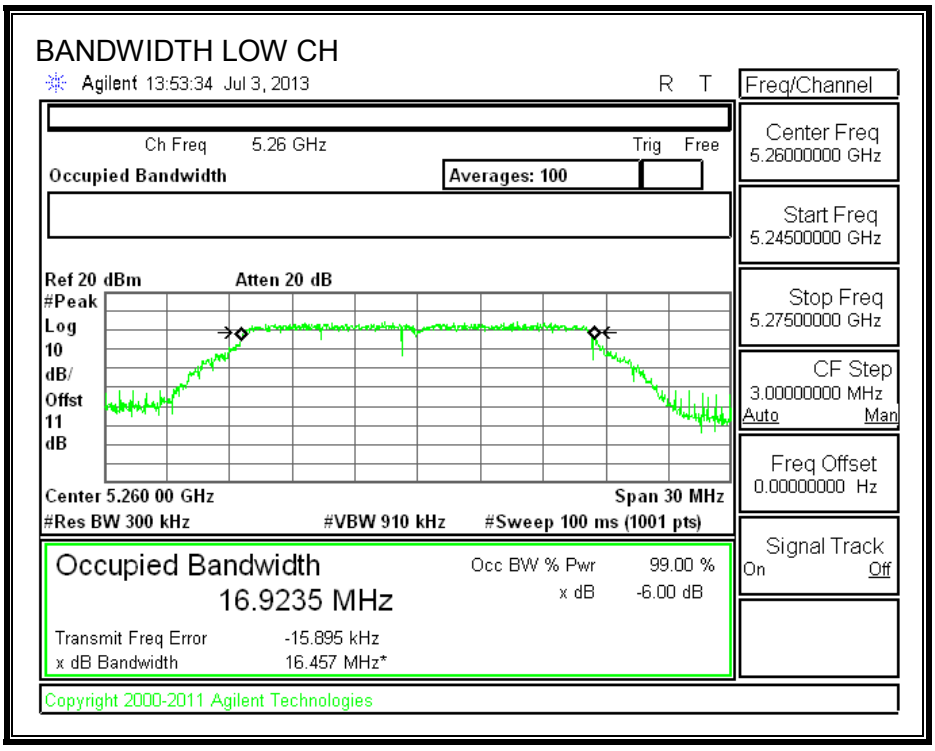
LIMITS

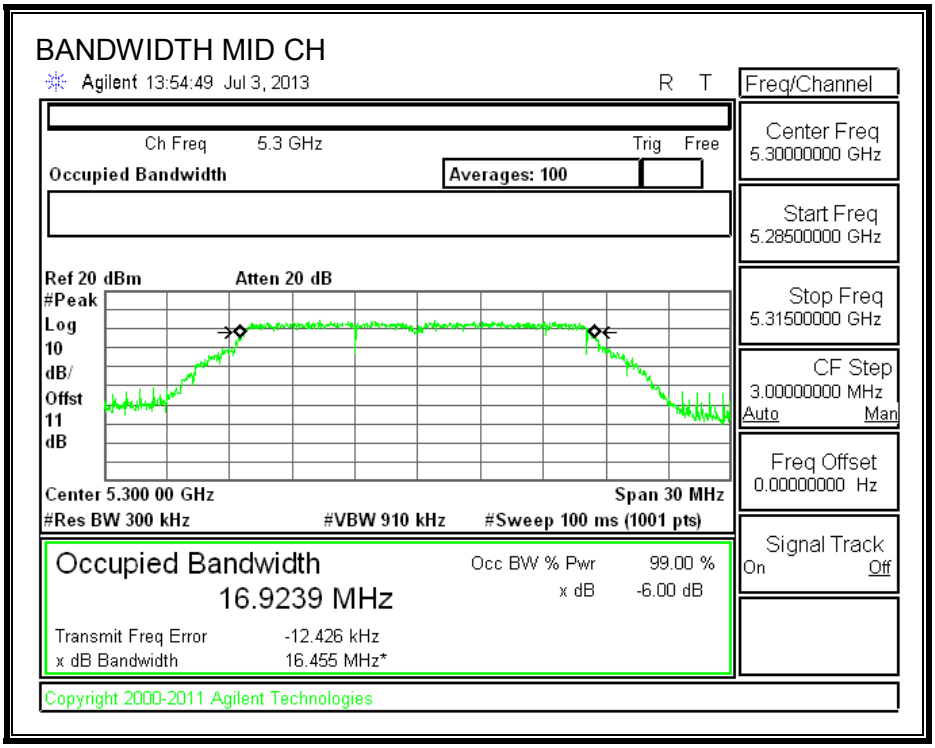
None; for reporting purposes only.

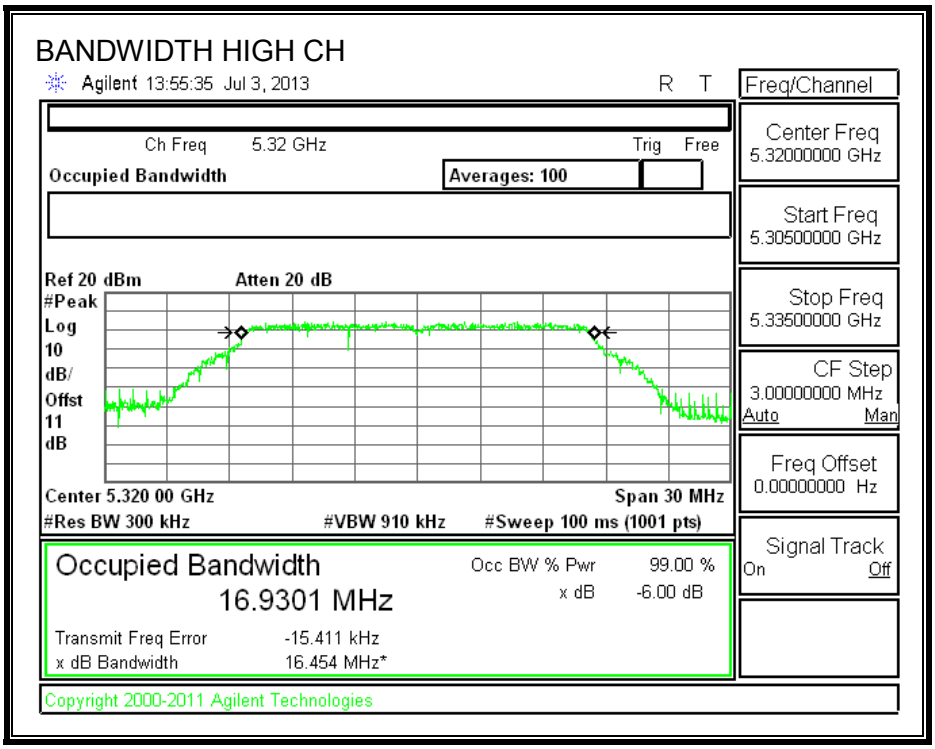
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.924
Mid	5300	16.924
High	5320	16.930

99% BANDWIDTH







9.7.3. 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 11 dB (including 10 dB pad and 1 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	5260	11.40
Mid	5300	11.40
High	5320	11.60

9.7.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	21.41	16.924	-6.40
Mid	5300	21.41	16.924	-6.40
High	5320	21.41	16.924	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.29	29.29	23.29	11.00	11.00	11.00
Mid	5300	24.00	23.29	29.29	23.29	11.00	11.00	11.00
High	5320	24.00	23.29	29.29	23.29	11.00	11.00	11.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

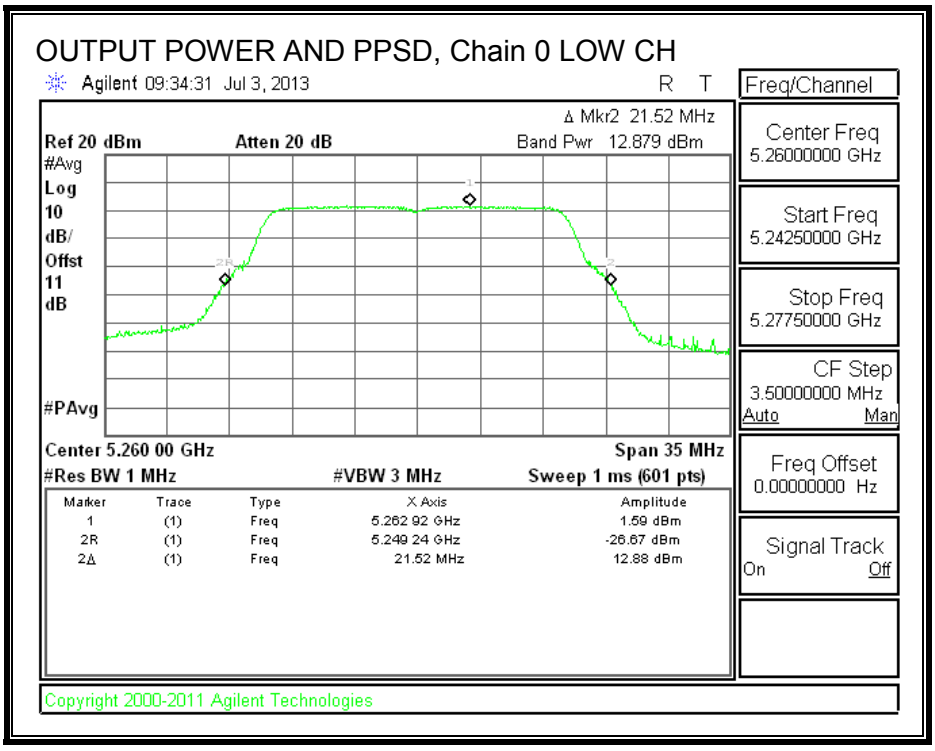
Output Power Results

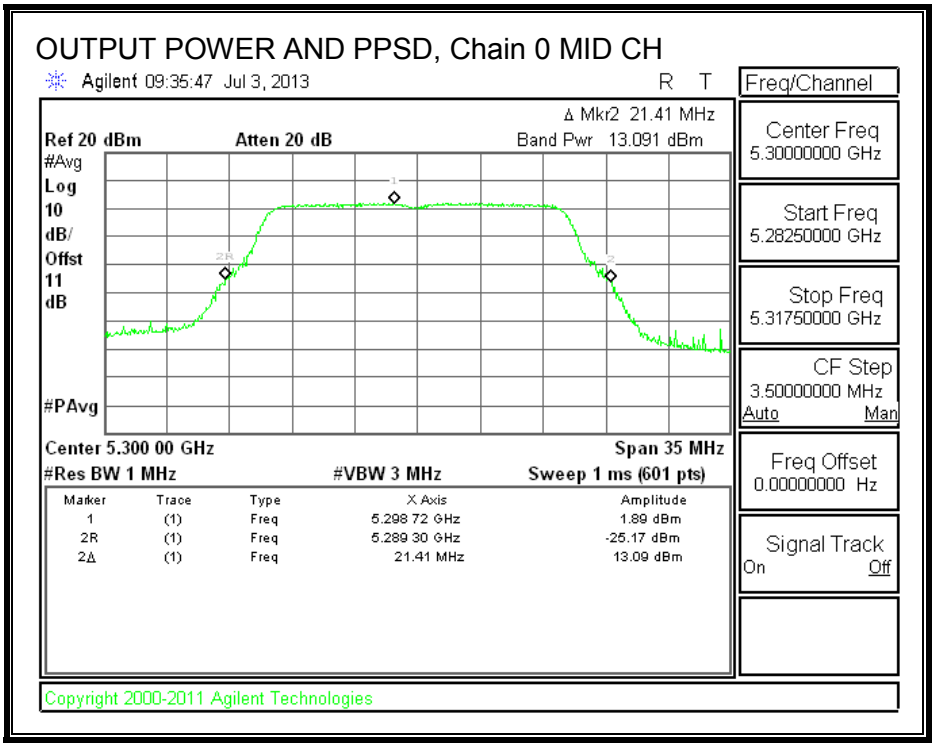
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.879	13.09	23.29	-10.20
Mid	5300	13.091	13.30	23.29	-9.98
High	5320	13.037	13.25	23.29	-10.04

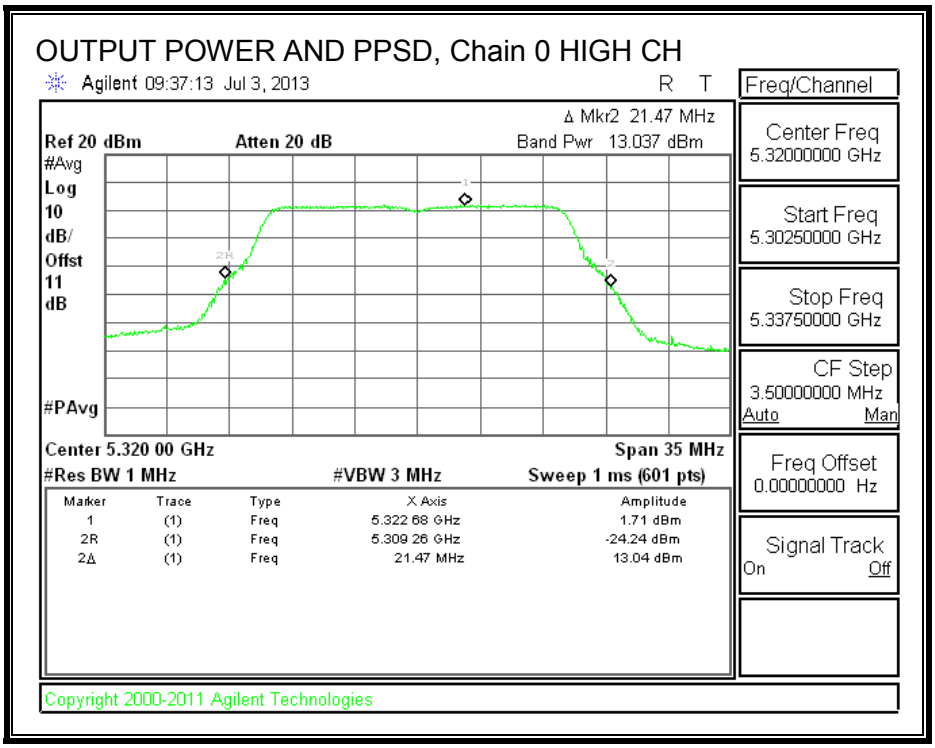
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	1.500	1.71	11.00	-9.29
Mid	5300	1.890	2.10	11.00	-8.90
High	5320	1.710	1.92	11.00	-9.08

OUTPUT POWER AND PPSD, Chain 0







9.8. 802.11n HT20 MODE IN THE 5.3 GHz BAND

9.8.1. 26 dB BANDWIDTH

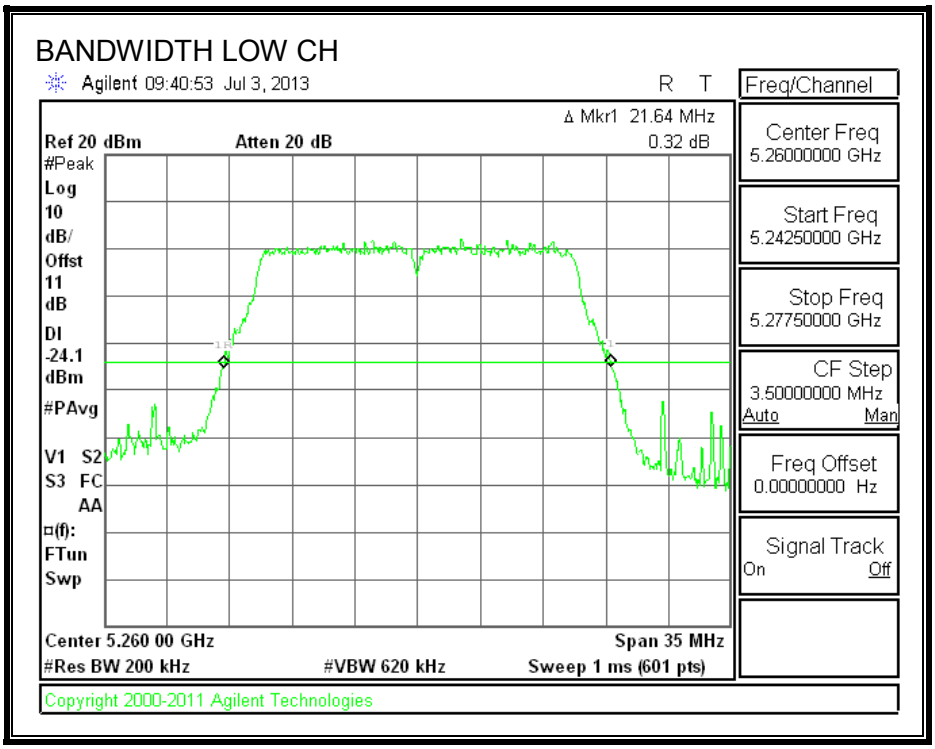
LIMITS

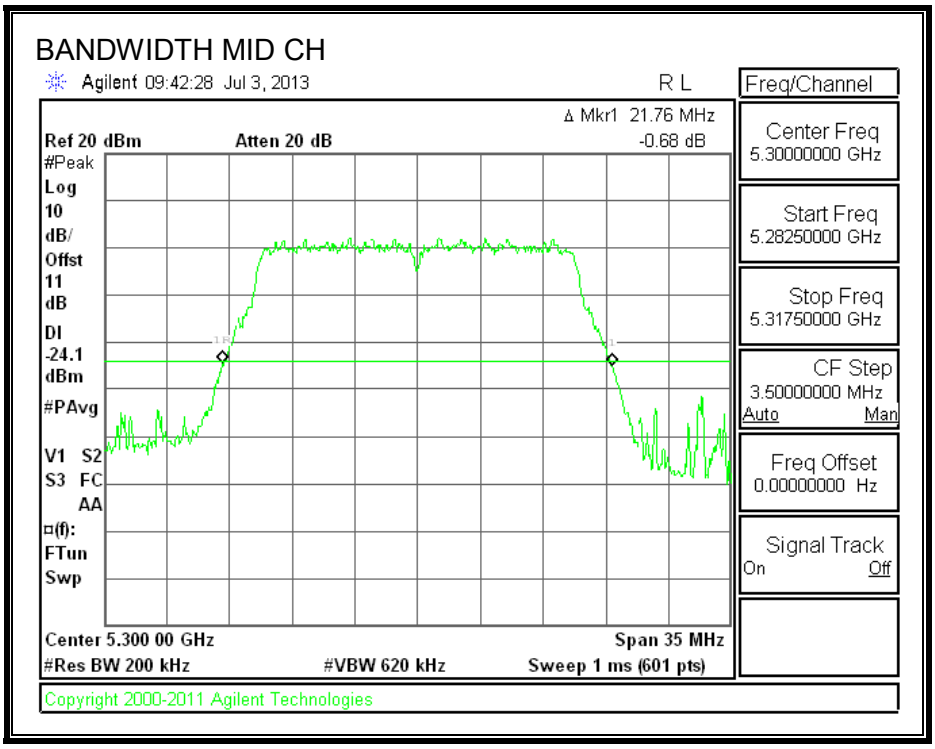
None; for reporting purposes only.

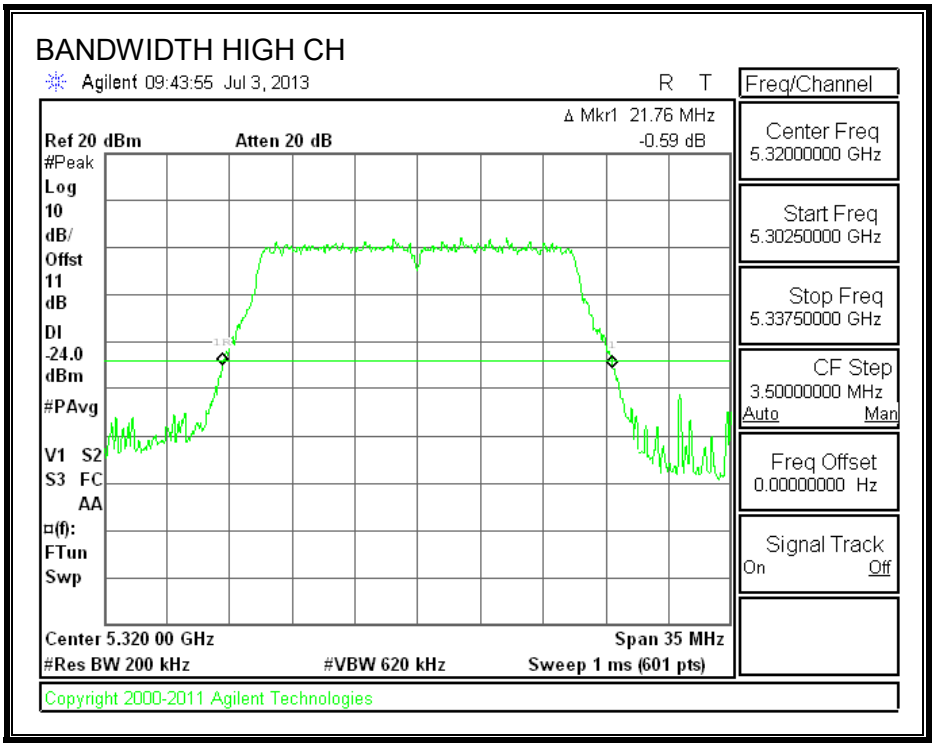
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.64
Mid	5300	21.76
High	5320	21.76

26 dB BANDWIDTH







9.8.2. 99% BANDWIDTH

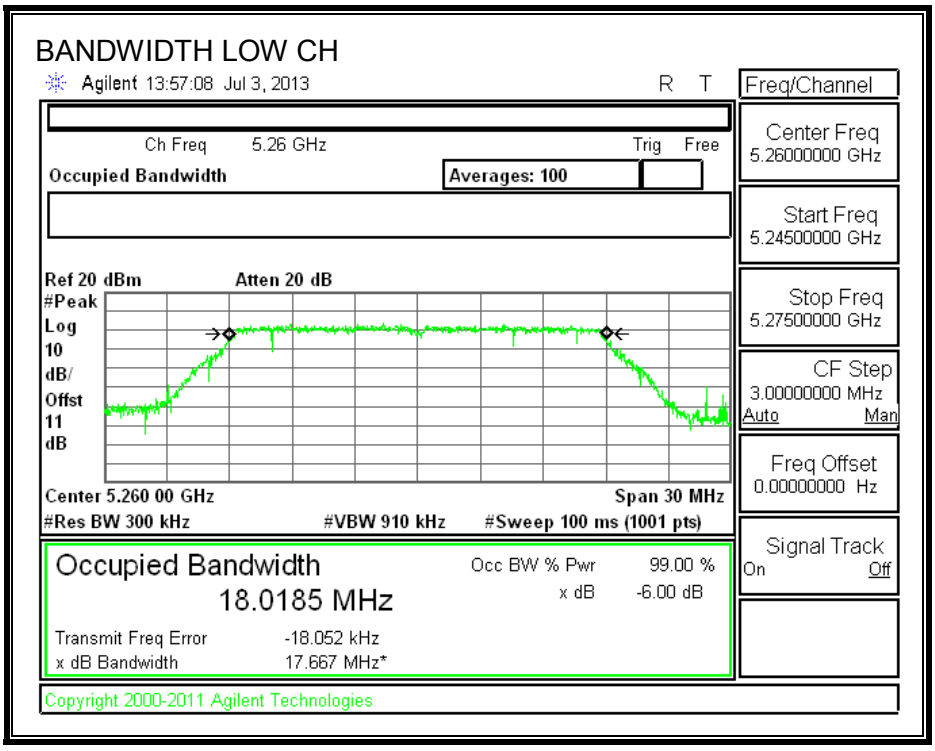
LIMITS

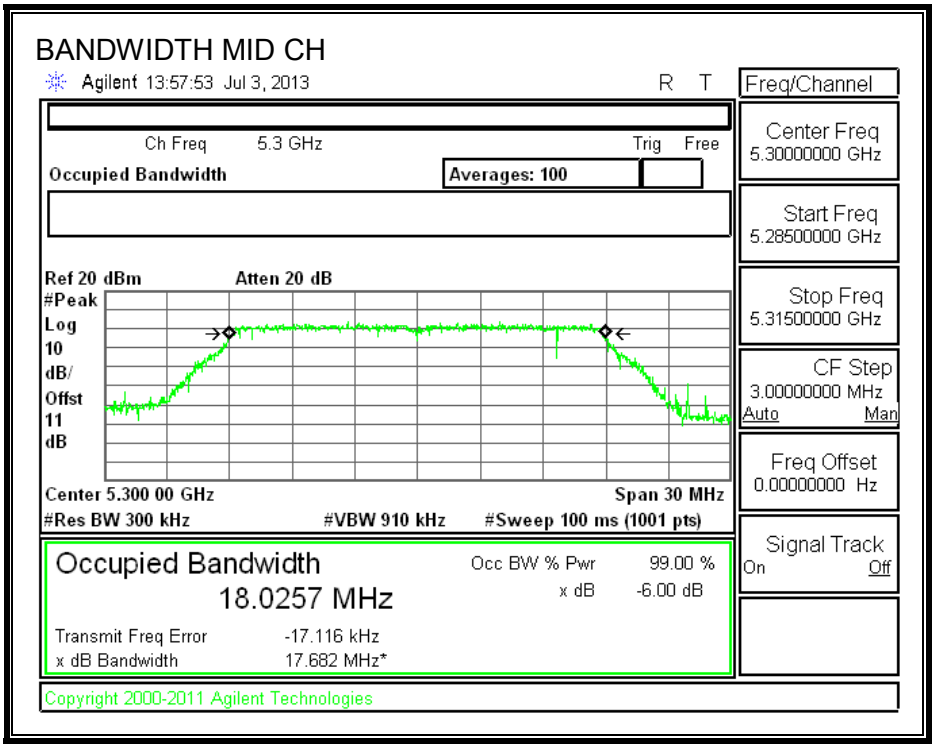
None; for reporting purposes only.

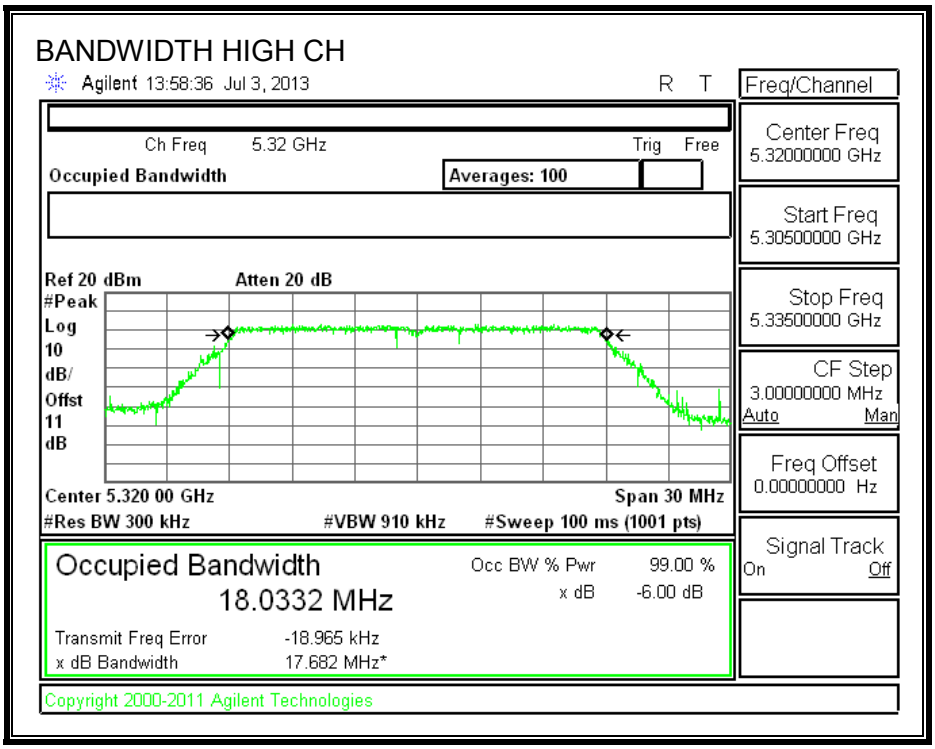
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	18.019
Mid	5300	18.026
High	5320	18.033

99% BANDWIDTH







9.8.3. 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 11 dB (including 10 dB pad and 1 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	5260	10.2
Mid	5300	10.1
High	5320	10.0

9.8.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	21.64	18.019	-6.40
Mid	5300	21.64	18.019	-6.40
High	5320	21.64	18.019	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.56	29.56	23.56	11.00	11.00	11.00
Mid	5300	24.00	23.56	29.56	23.56	11.00	11.00	11.00
High	5320	24.00	23.56	29.56	23.56	11.00	11.00	11.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PPSD

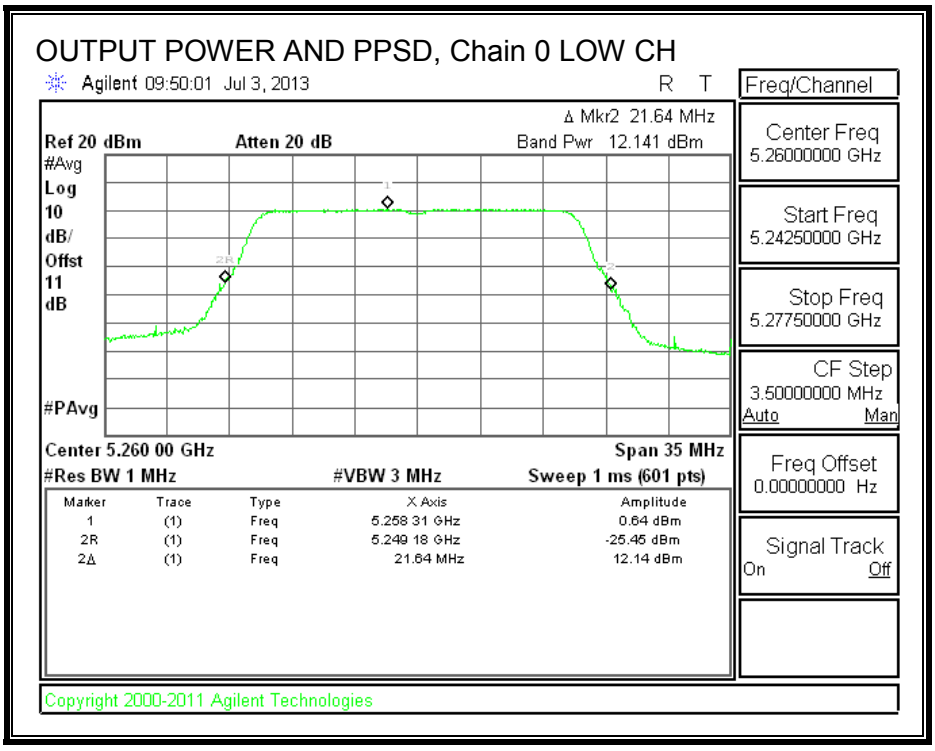
Output Power Results

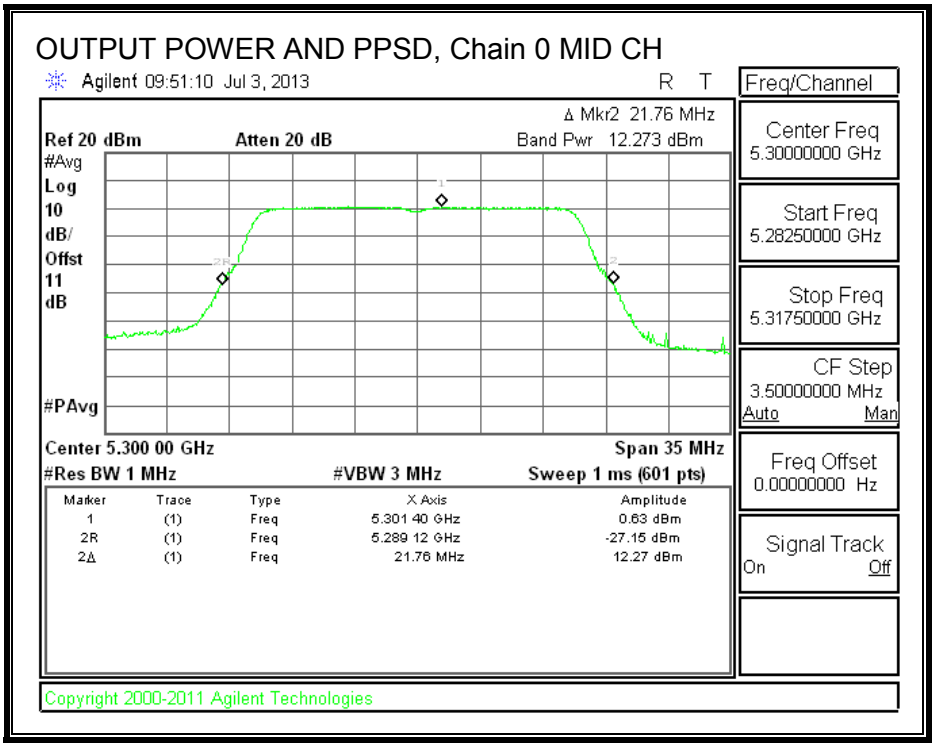
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.141	12.36	23.56	-11.20
Mid	5300	12.273	12.49	23.56	-11.06
High	5320	12.242	12.46	23.56	-11.10

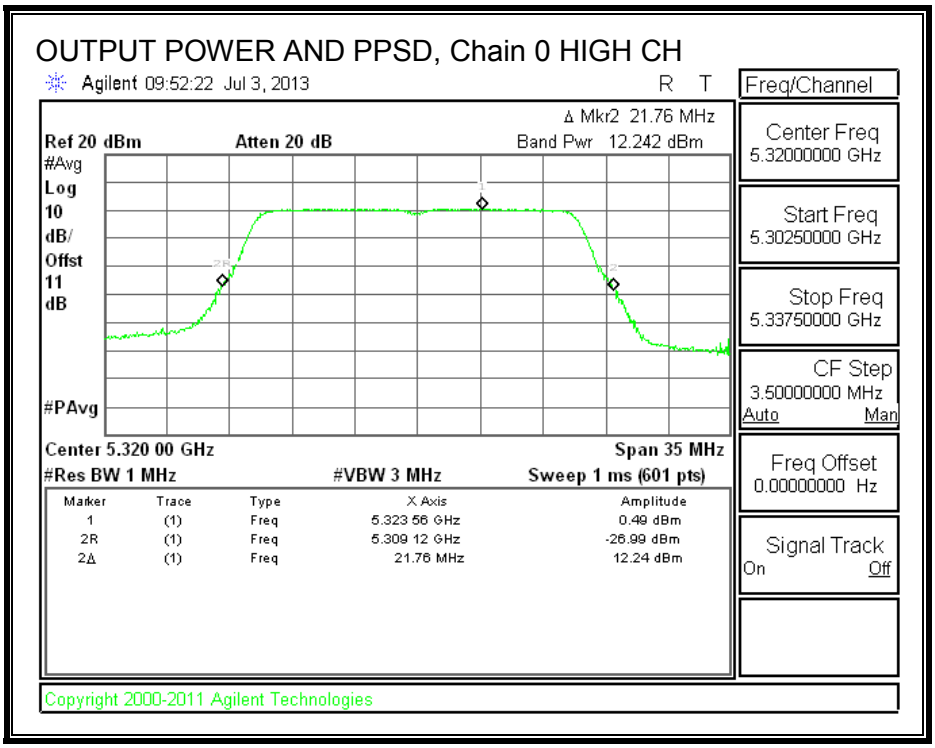
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.540	0.76	11.00	-10.24
Mid	5300	0.530	0.75	11.00	-10.25
High	5320	0.400	0.62	11.00	-10.38

OUTPUT POWER AND PPSD, Chain 0







9.1. 802.11n HT40 MODE IN THE 5.3 GHz BAND

9.1.1. 26 dB BANDWIDTH

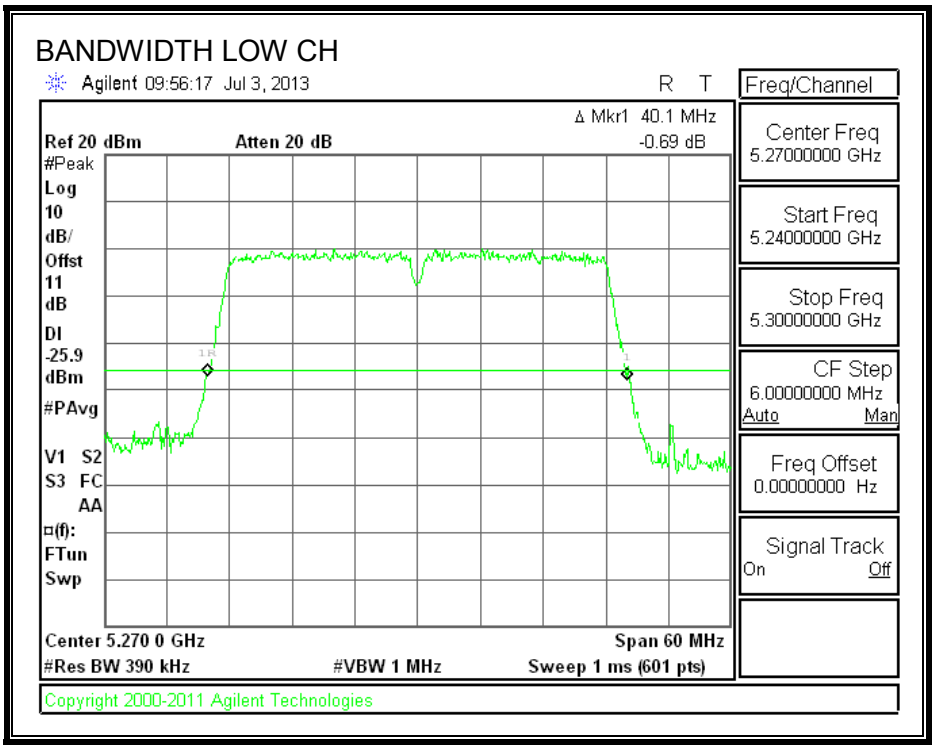
LIMITS

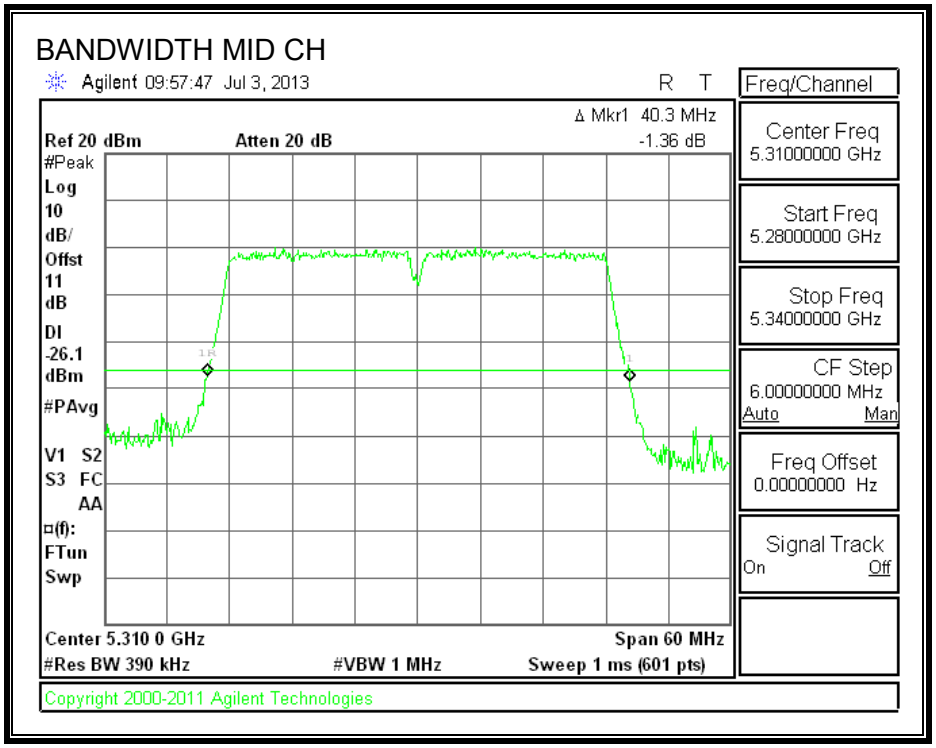
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	40.1
High	5310	40.3

26 dB BANDWIDTH





9.1.2. 99% BANDWIDTH

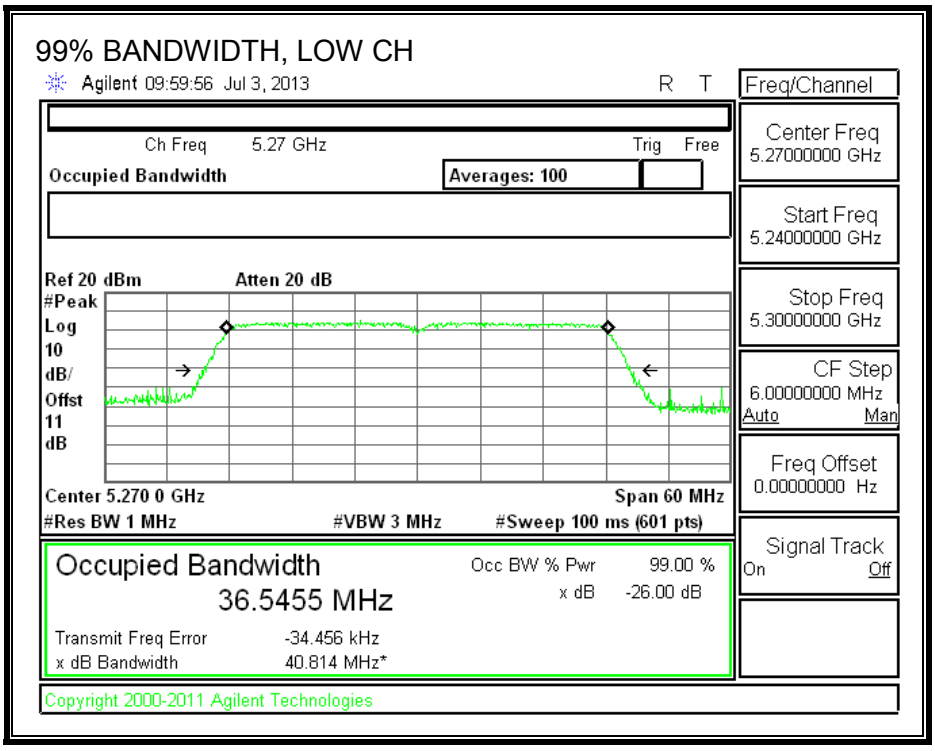
LIMITS

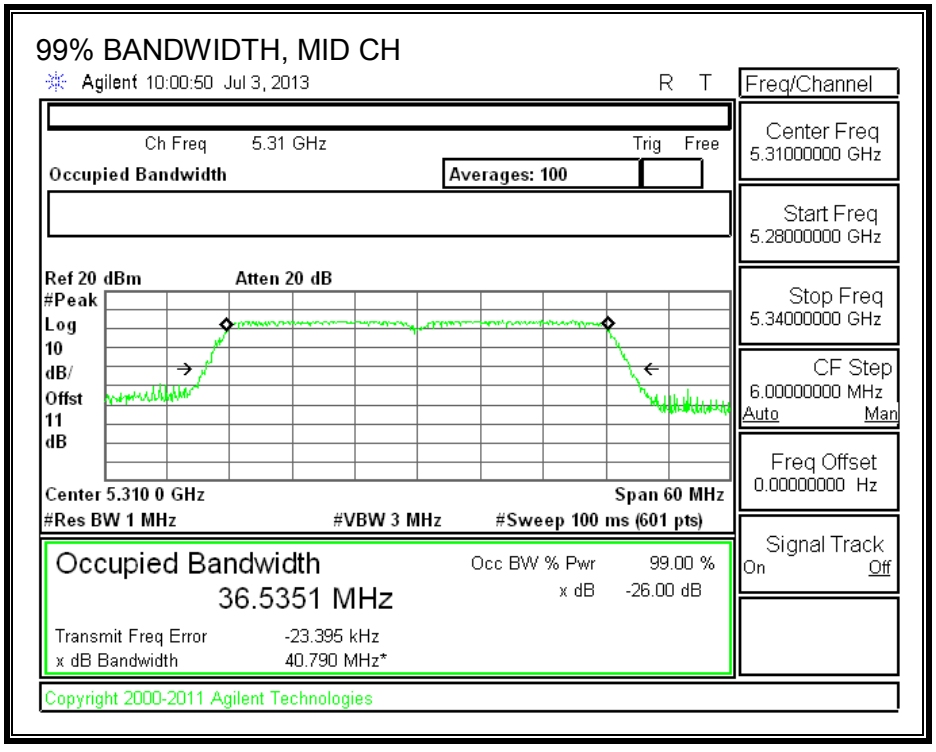
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.546
High	5310	36.535

99% BANDWIDTH





9.1.3. 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 11 dB (including 10 dB pad and 1 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	5270	9.2
High	5310	9.2

9.1.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5270	40.1	36.535	-6.40
High	5310	40.1	36.535	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5270	17.00	23.00	29.40	17.00	4.00	10.00	4.00
High	5310	17.00	23.00	29.40	17.00	4.00	10.00	4.00
Duty Cycle CF (dB)		0.49	Included in Calculations of Corr'd Power & PPSD					

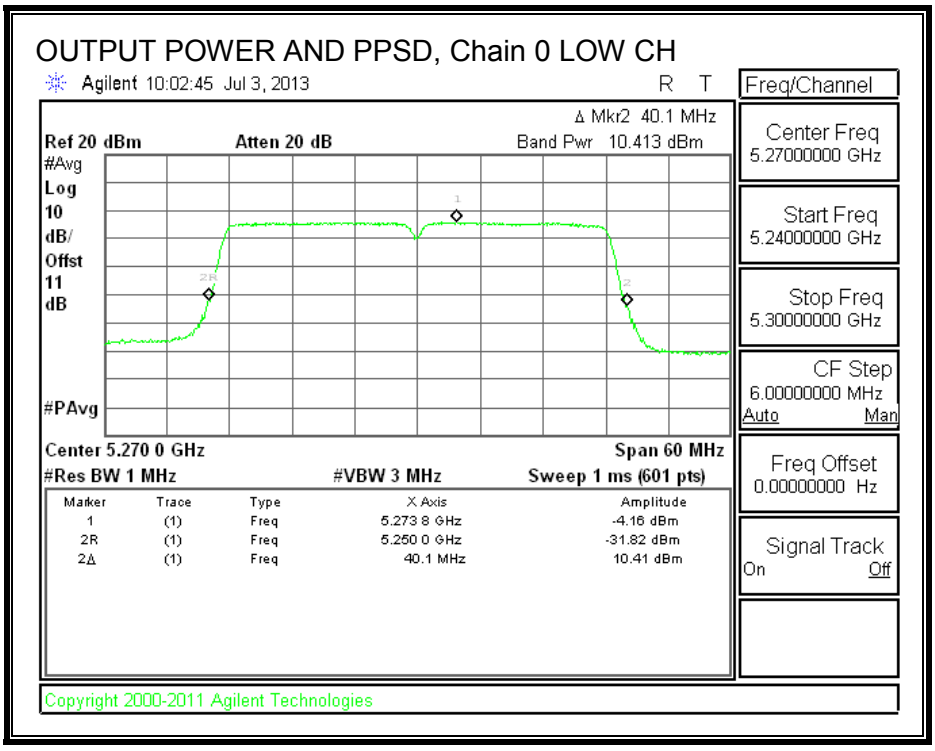
Output Power Results

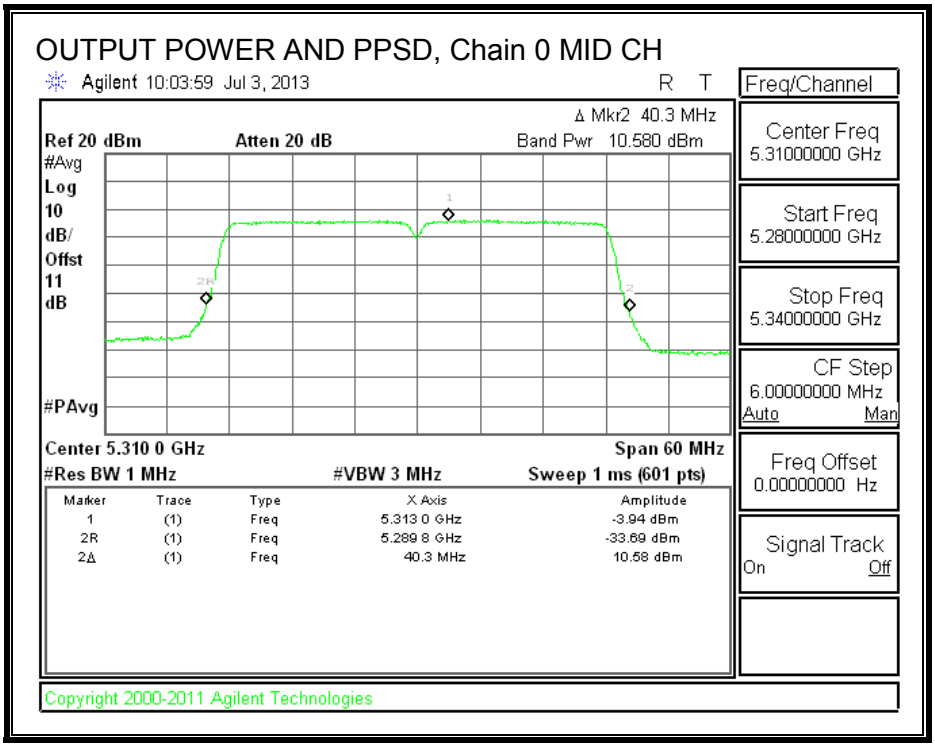
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	10.413	10.90	17.00	-6.10
High	5310	10.580	11.07	17.00	-5.93

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-4.160	-3.67	4.00	-7.67
High	5310	-3.940	-3.45	4.00	-7.45

OUTPUT POWER AND PPSD, Chain 0





9.2. 802.11ac HT20 MODE IN THE 5.3 GHz BAND

9.2.1. 26 dB BANDWIDTH

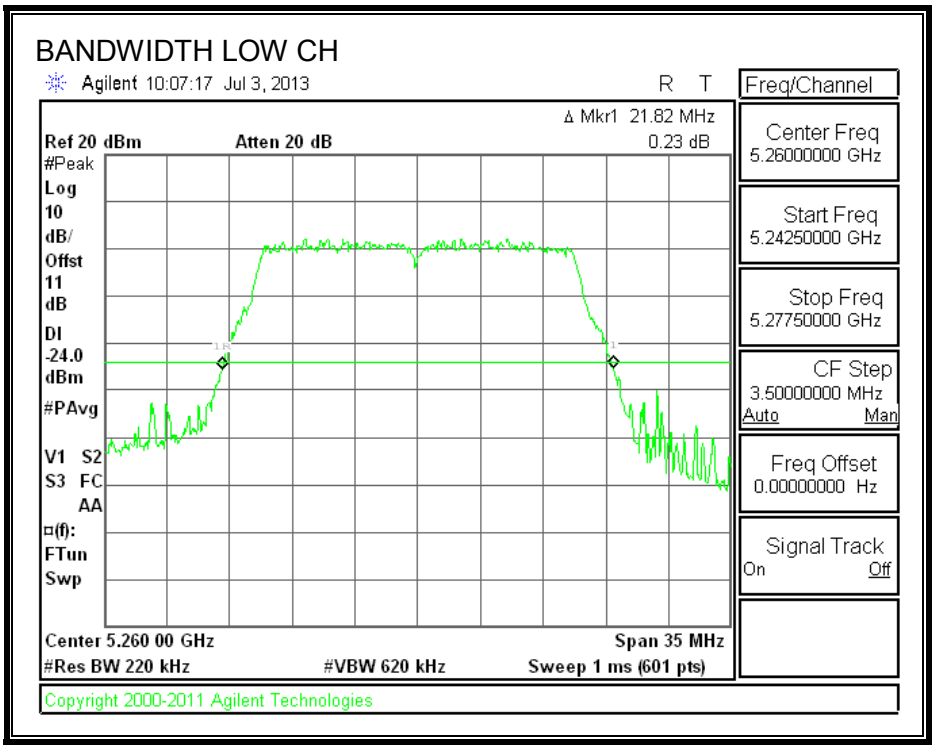
LIMITS

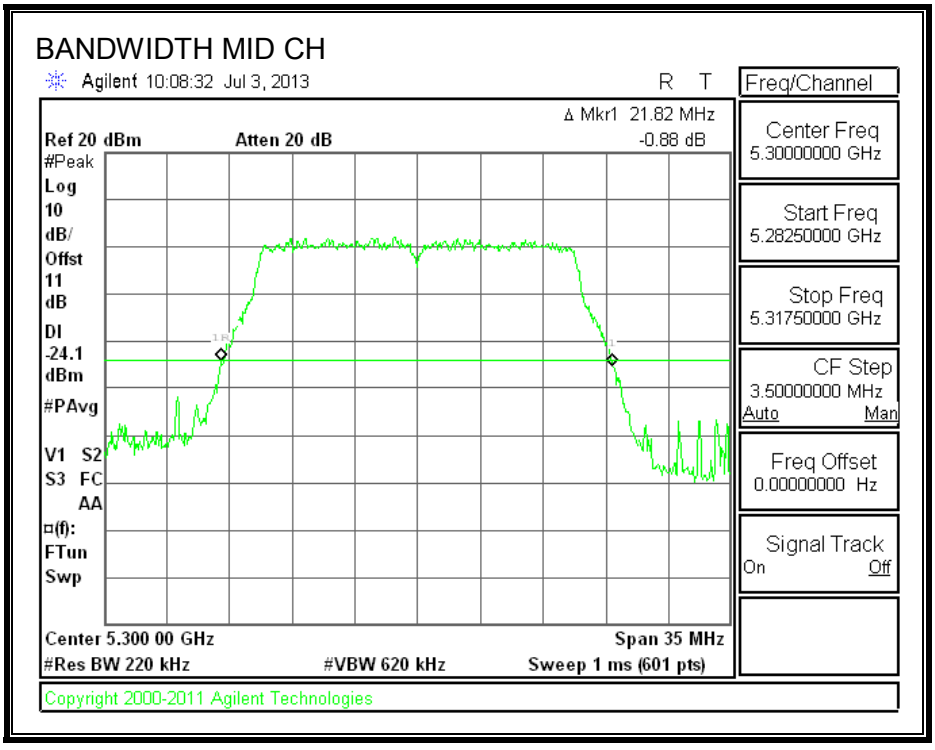
None; for reporting purposes only.

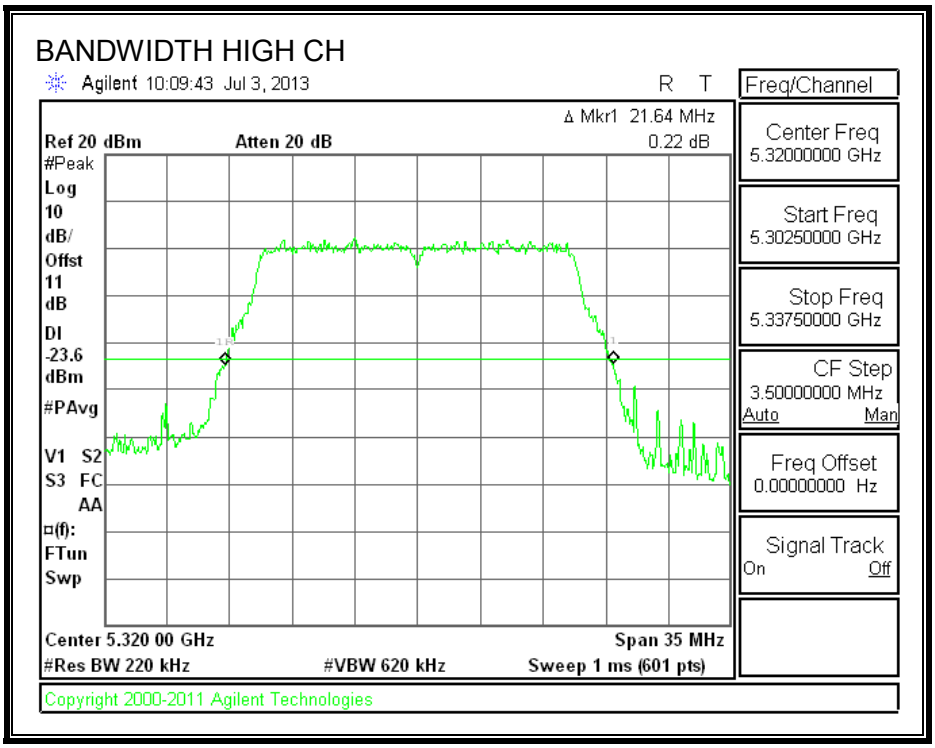
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.820
Mid	5300	21.820
High	5320	21.640

26 dB BANDWIDTH







9.2.2. 99% BANDWIDTH

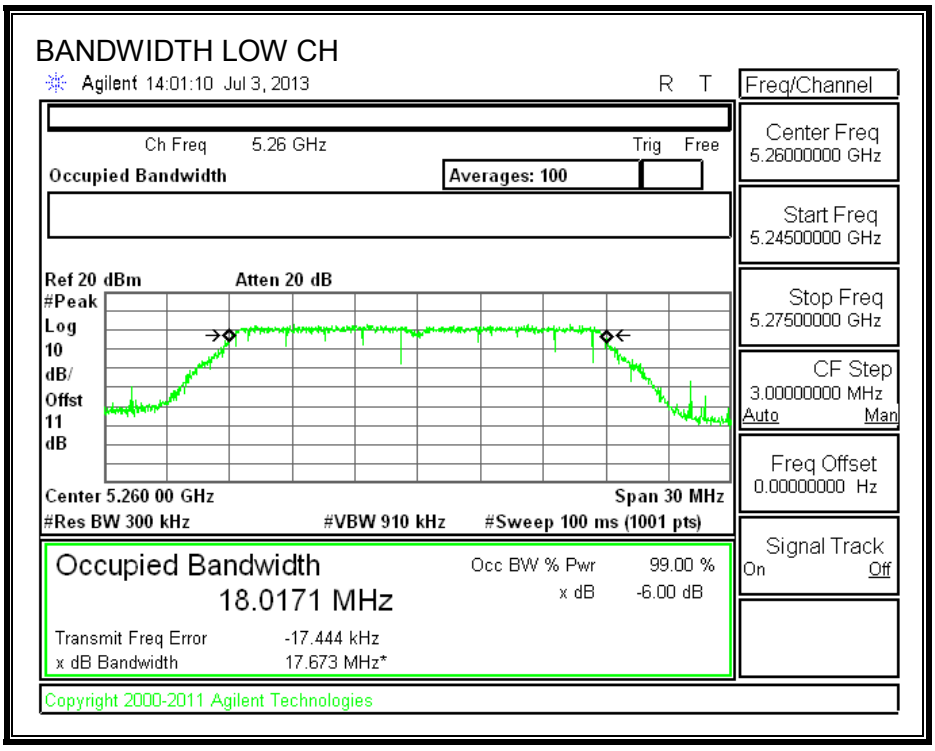
LIMITS

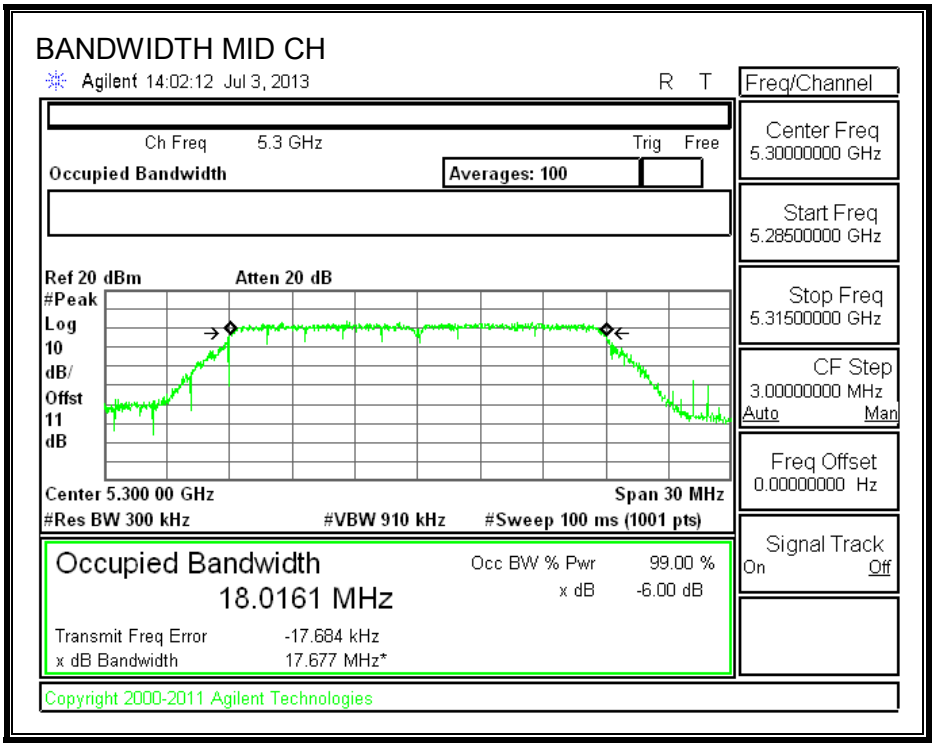
None; for reporting purposes only.

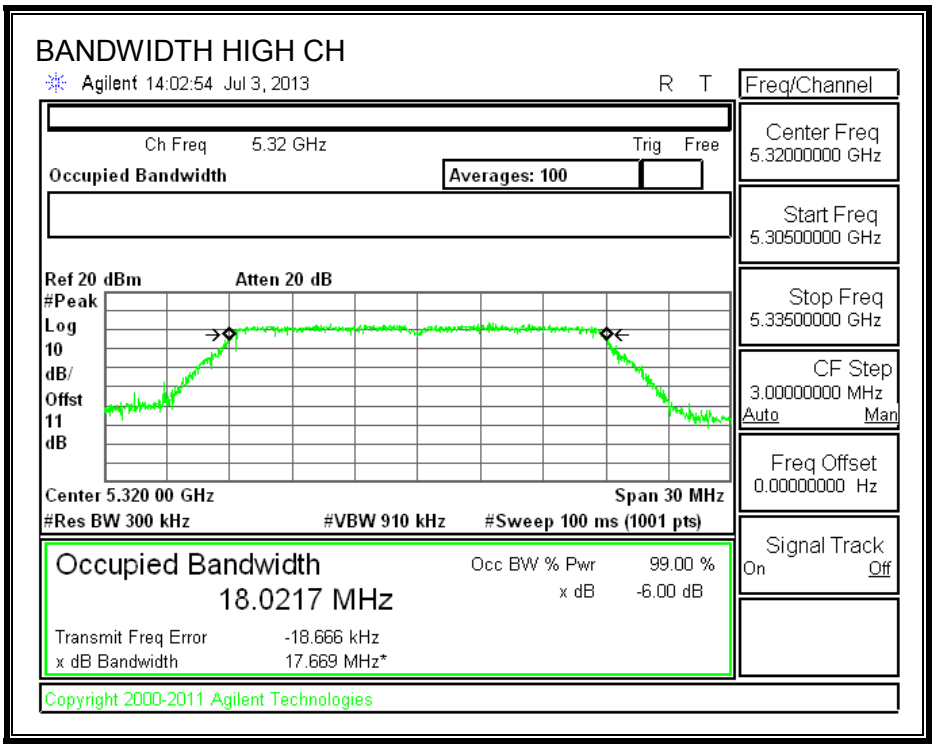
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	18.017
Mid	5300	18.016
High	5320	18.022

99% BANDWIDTH







9.2.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 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	5260	9.20
Mid	5300	10.2
High	5320	10.1

9.2.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	21.640	18.016	-6.40
Mid	5300	21.640	18.016	-6.40
High	5320	21.640	18.016	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	17.00	22.56	28.96	17.00	4.00	10.00	4.00
Mid	5300	17.00	22.56	28.96	17.00	4.00	10.00	4.00
High	5320	17.00	22.56	28.96	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

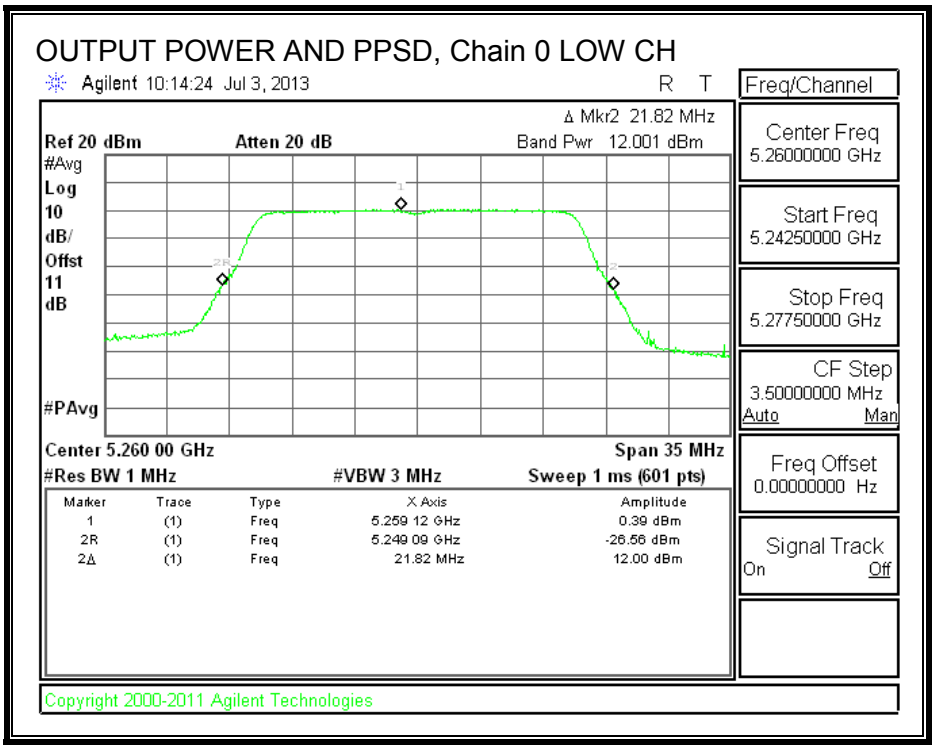
Output Power Results

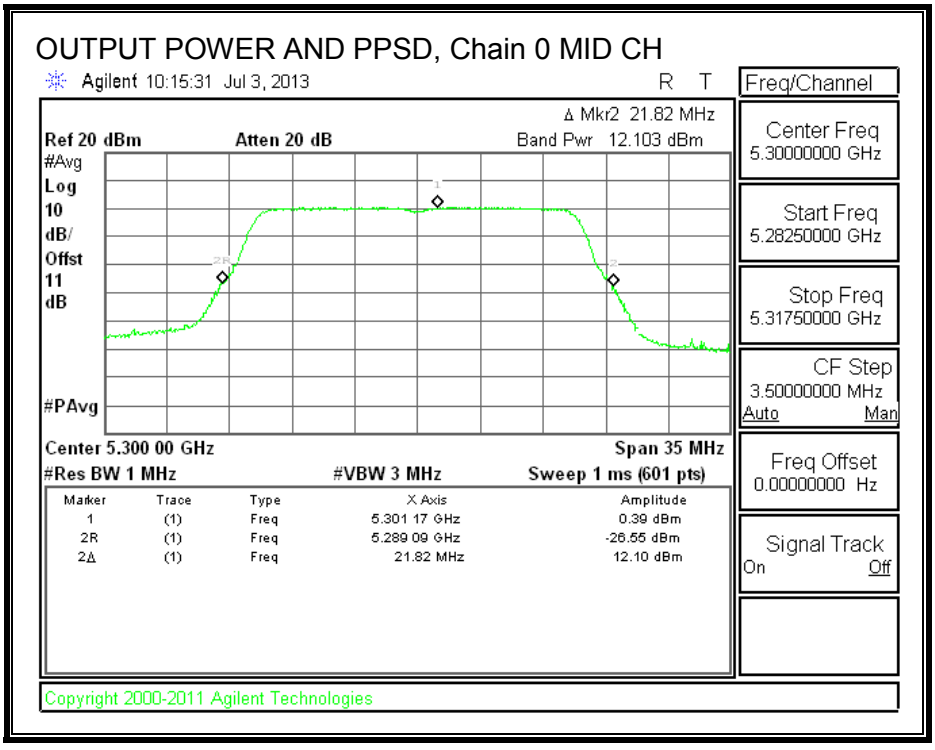
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.001	12.21	17.00	-4.79
Mid	5300	12.103	12.31	17.00	-4.69
High	5320	12.117	12.33	17.00	-4.67

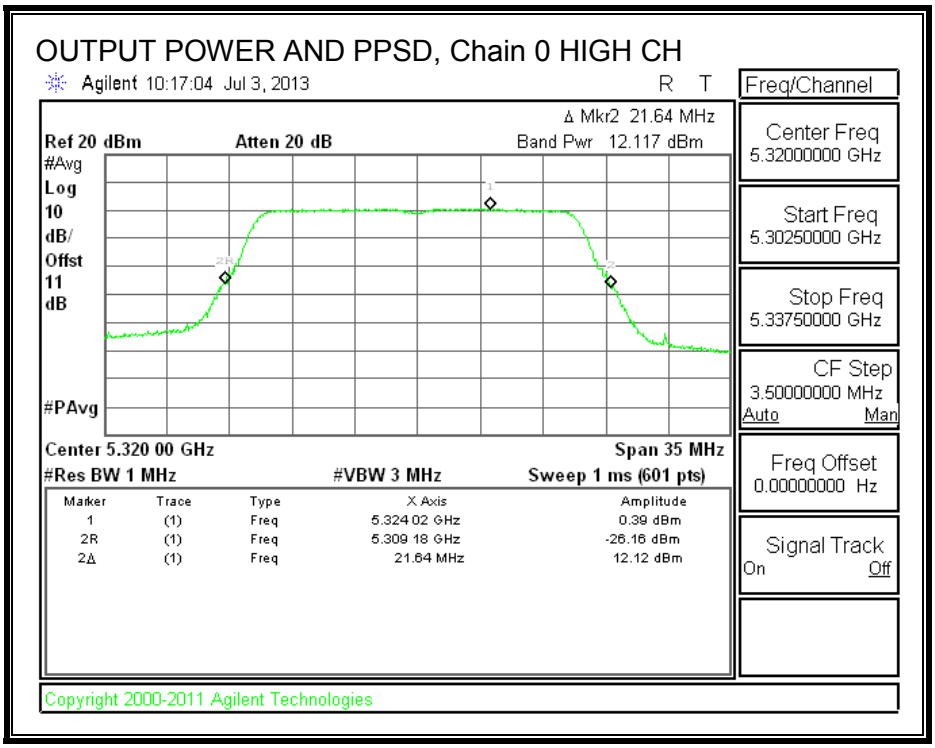
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.390	0.60	4.00	-3.40
Mid	5300	0.390	0.60	4.00	-3.40
High	5320	0.390	0.60	4.00	-3.40

OUTPUT POWER AND PPSD, Chain 0







9.3. 802.11ac HT40 MODE IN THE 5.3 GHz BAND

9.3.1. 26 dB BANDWIDTH

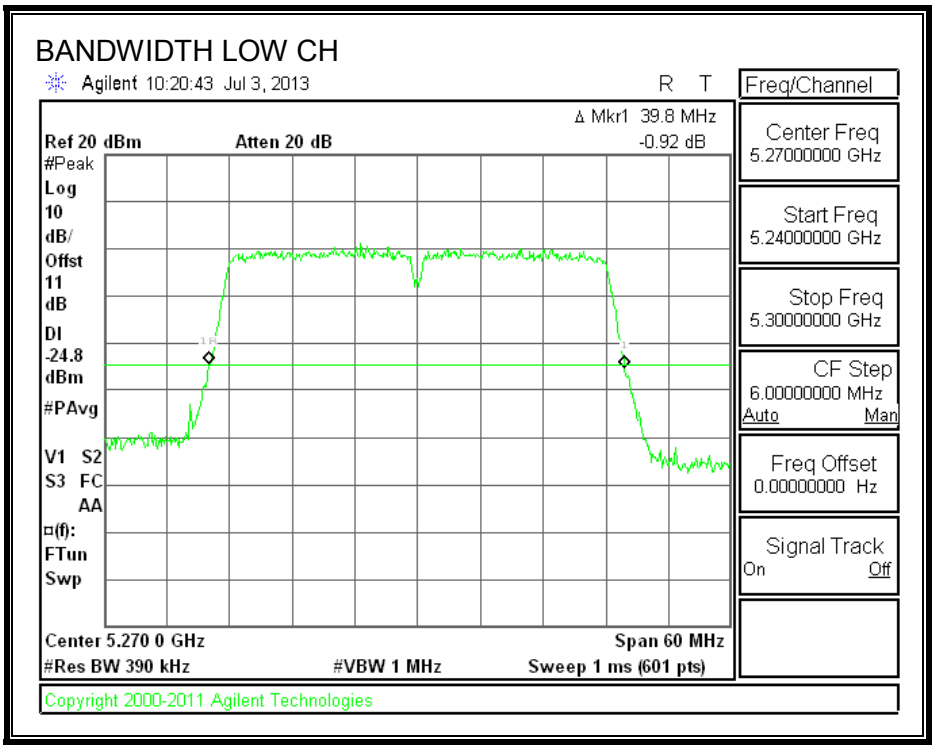
LIMITS

None; for reporting purposes only.

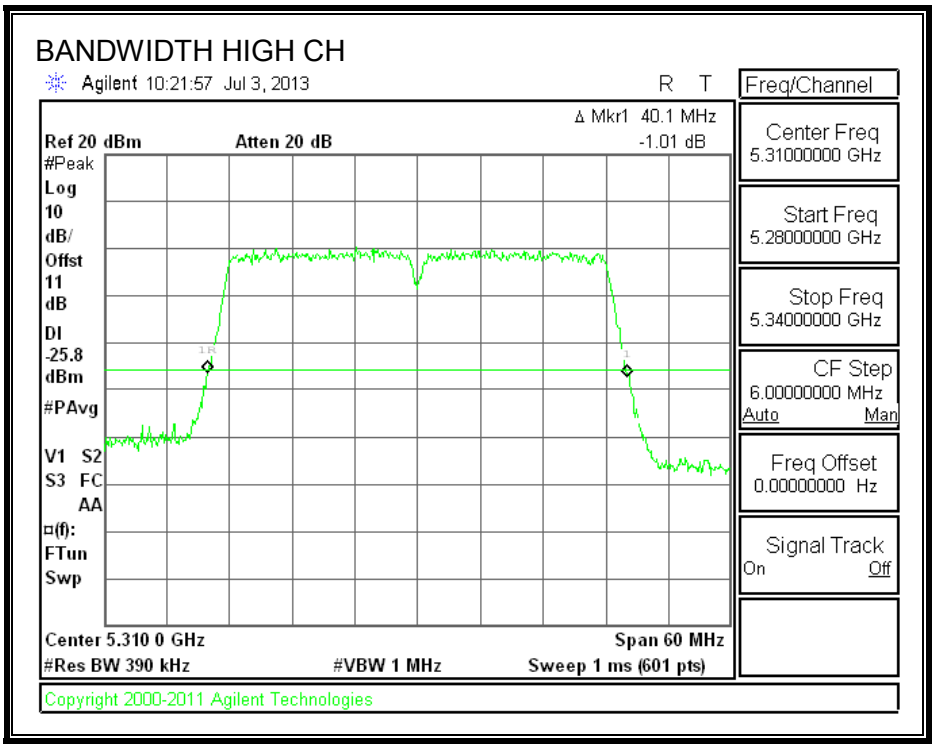
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	39.800
Mid	5310	40.100

26 dB BANDWIDTH



BANDWIDTH HIGH CH



9.3.2. 99% BANDWIDTH

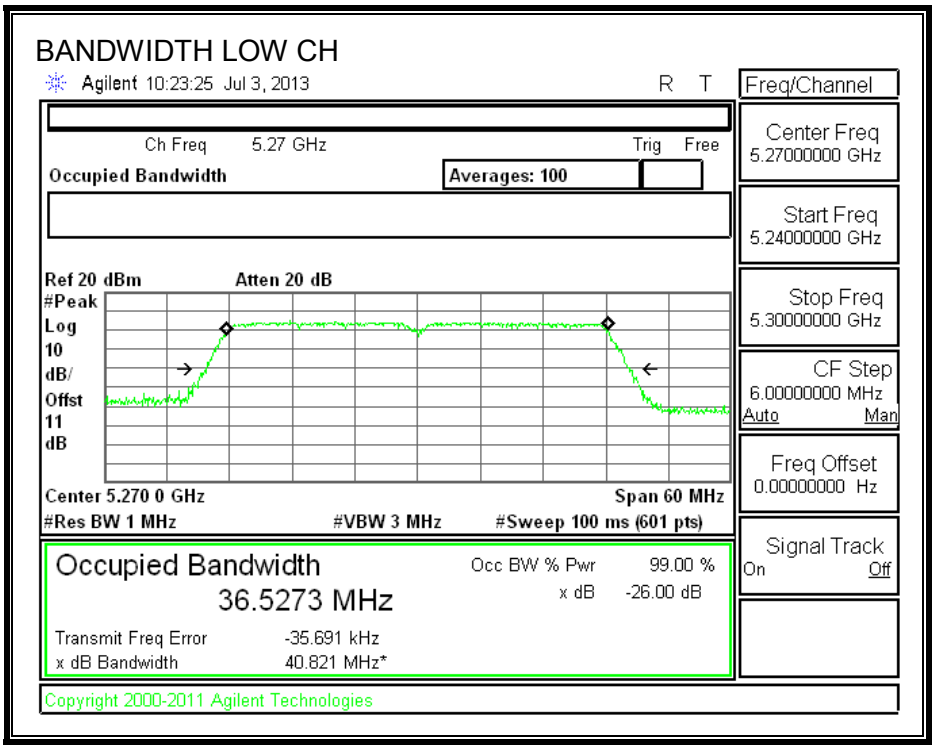
LIMITS

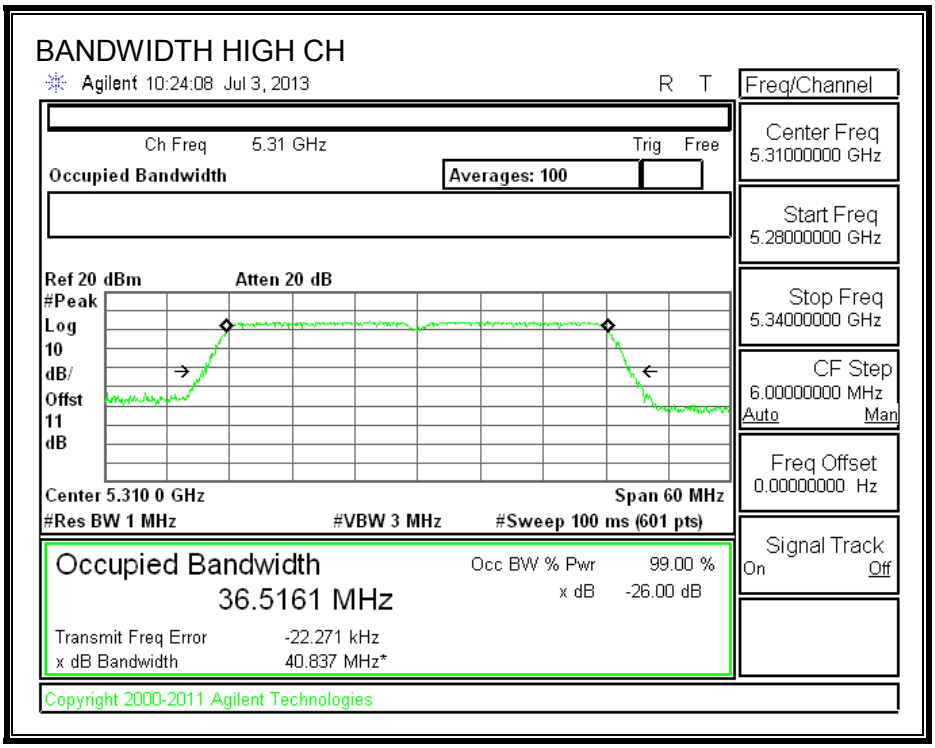
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5270	36.527
High	5310	36.516

99% BANDWIDTH





9.3.3. 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 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Mid	5270	9.4
High	5310	9.2

9.3.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Mid	5270	39.8	36.516	-6.40
High	5310	39.8	36.516	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Mid	5270	17.00	23.00	29.40	17.00	4.00	10.00	4.00
High	5310	17.00	23.00	29.40	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

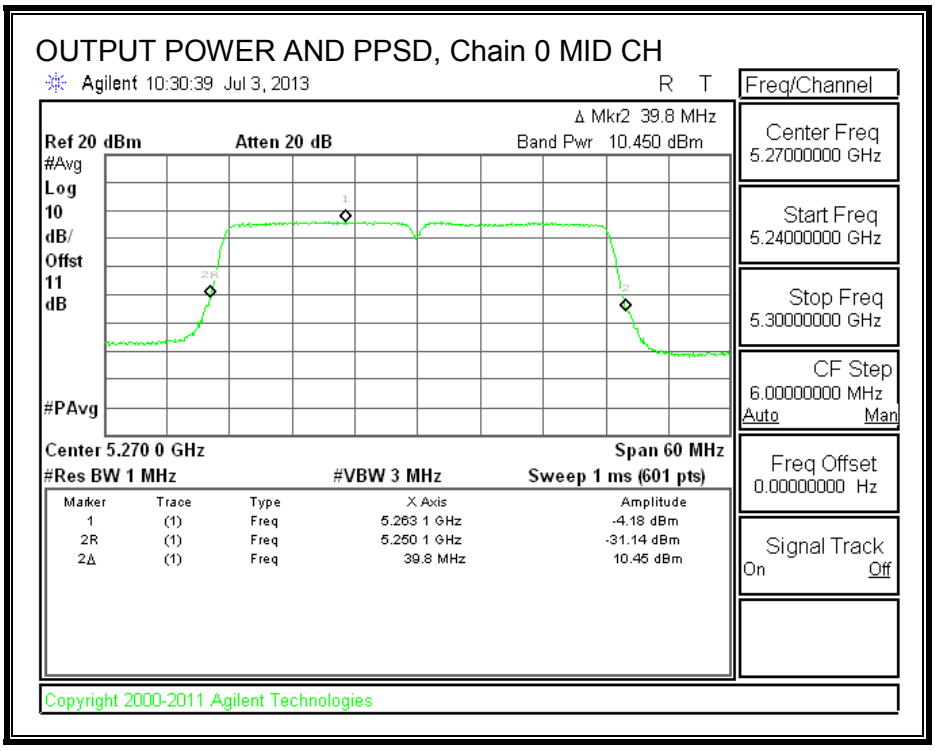
Output Power Results

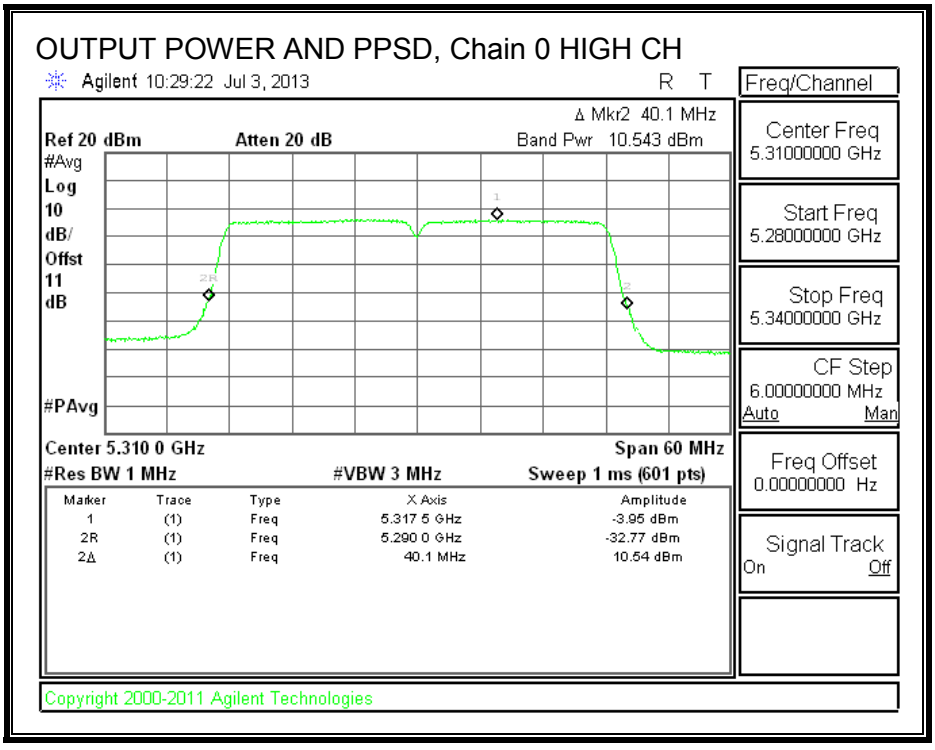
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5270	10.450	10.66	17.00	-6.34
High	5310	10.543	10.75	17.00	-6.25

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Mid	5270	-4.180	-3.97	4.00	-7.97
High	5310	-3.950	-3.74	4.00	-7.74

OUTPUT POWER AND PPSD, Chain 0





9.4. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

9.4.1. 26 dB BANDWIDTH

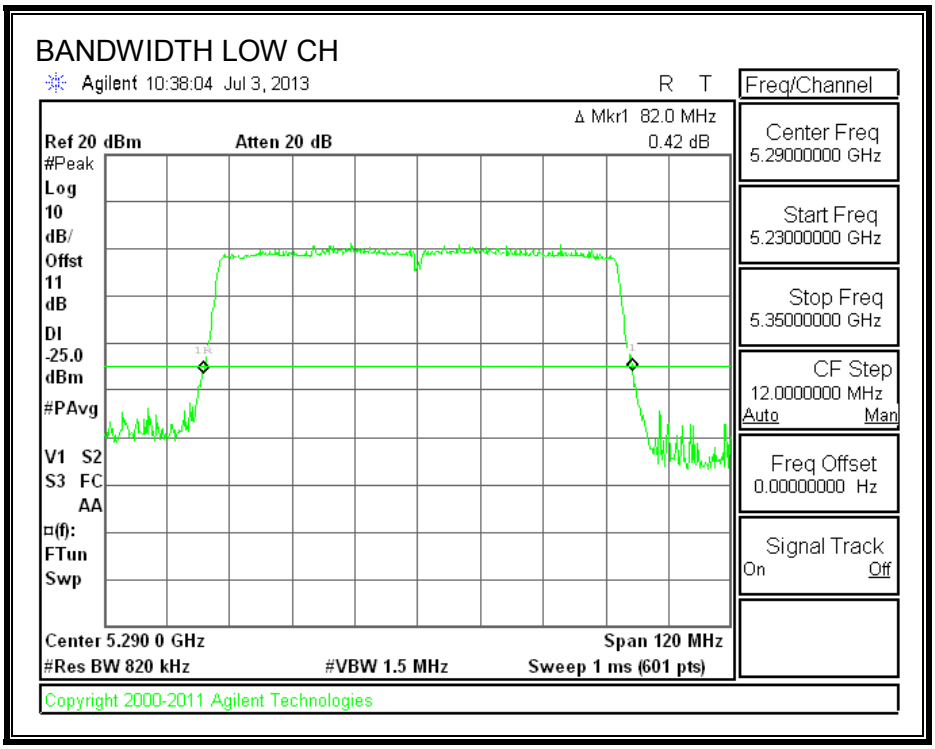
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5290	82.000

26 dB BANDWIDTH



9.4.2. 99% BANDWIDTH

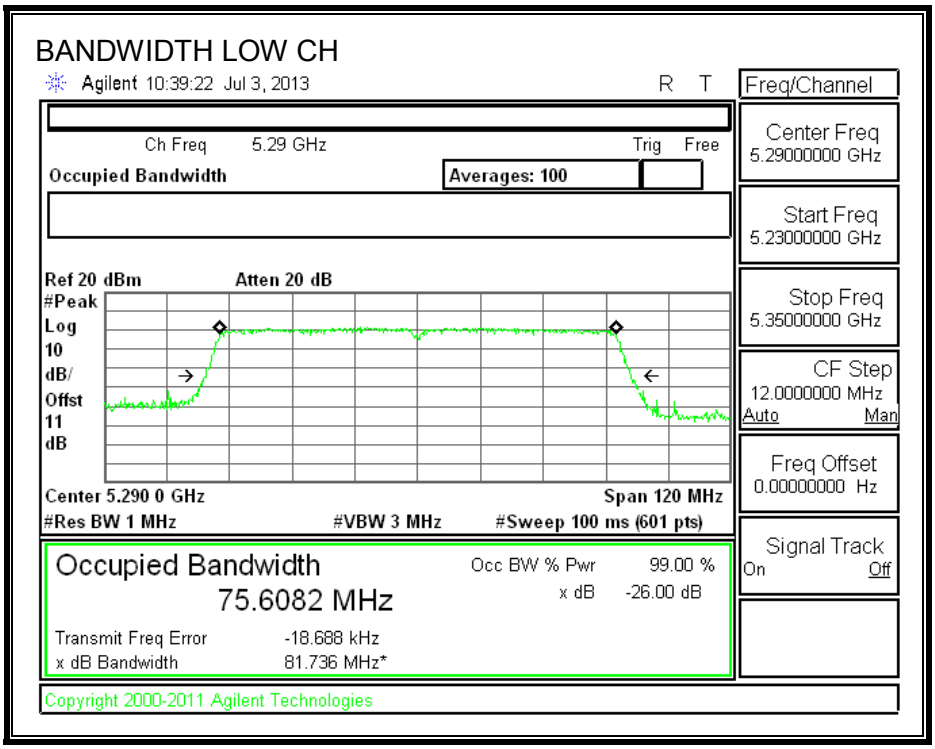
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5290	75.608

99% BANDWIDTH



9.4.3. 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 11 dB (including 10 dB pad and 1 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	5290	9.2

9.4.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5290	82	75.6082	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5290	17.00	23.00	29.40	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

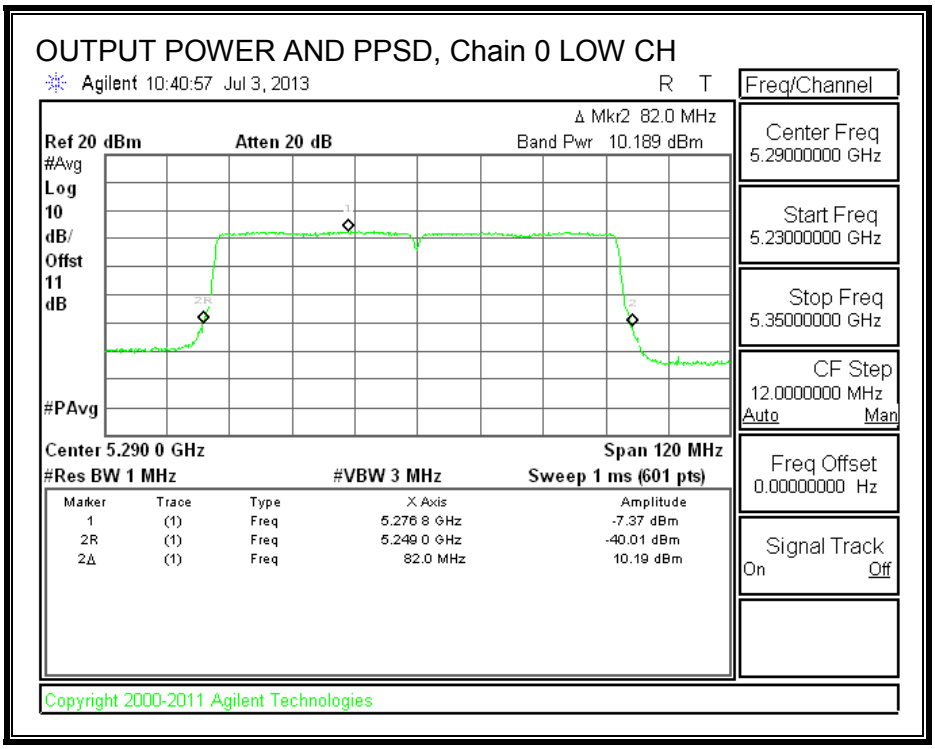
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5290	10.189	10.40	17.00	-6.60

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5290	-7.370	-7.16	4.00	-11.16

OUTPUT POWER AND PPSD, Chain 0



9.5. 802.11a MODE IN THE 5.6 GHz BAND

9.5.1. 26 dB BANDWIDTH

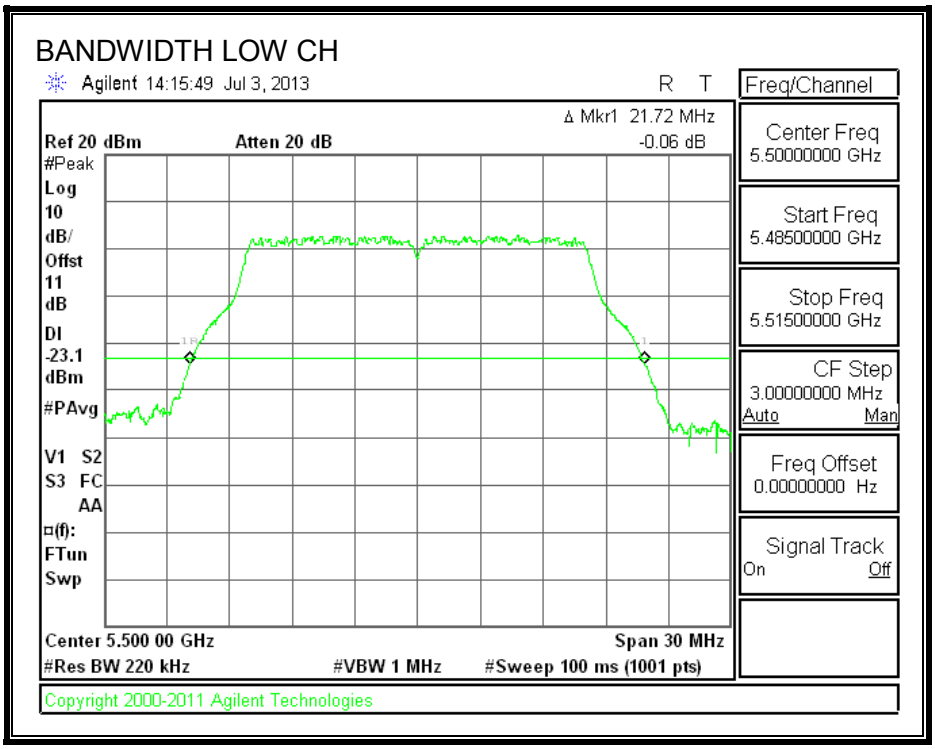
LIMITS

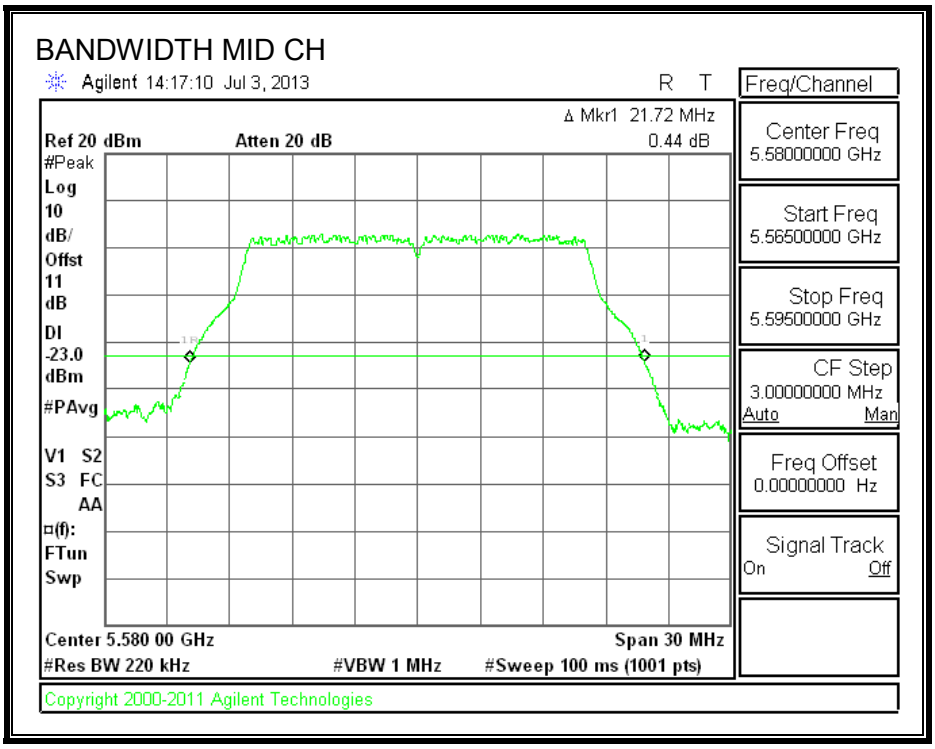
None; for reporting purposes only.

RESULTS

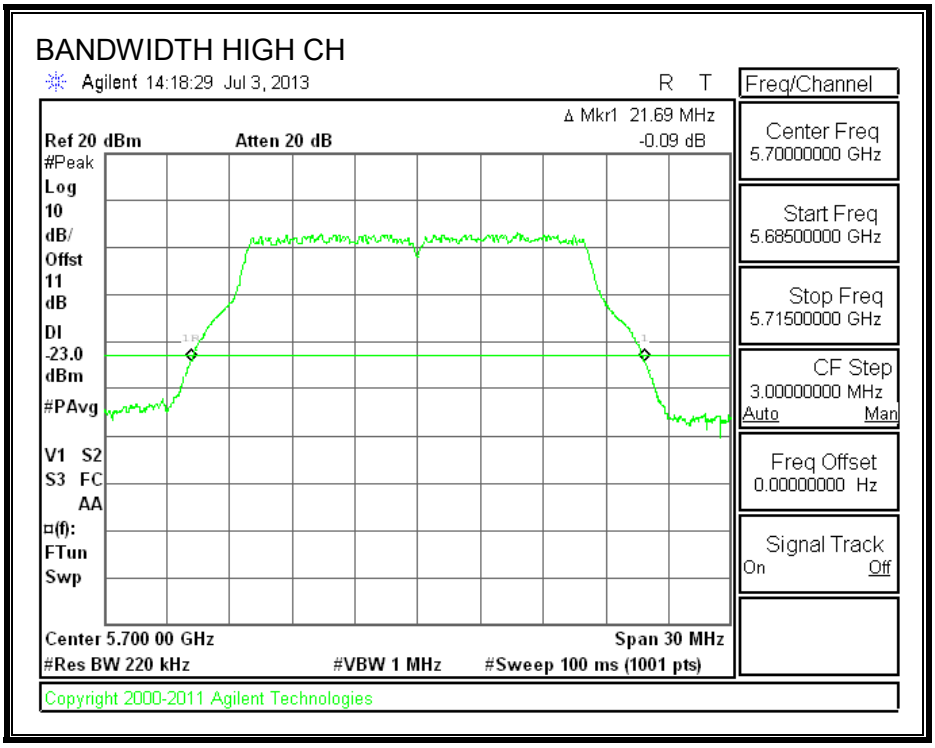
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	21.72
Mid	5580	21.72
High	5700	21.69

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.5.2. 99% BANDWIDTH

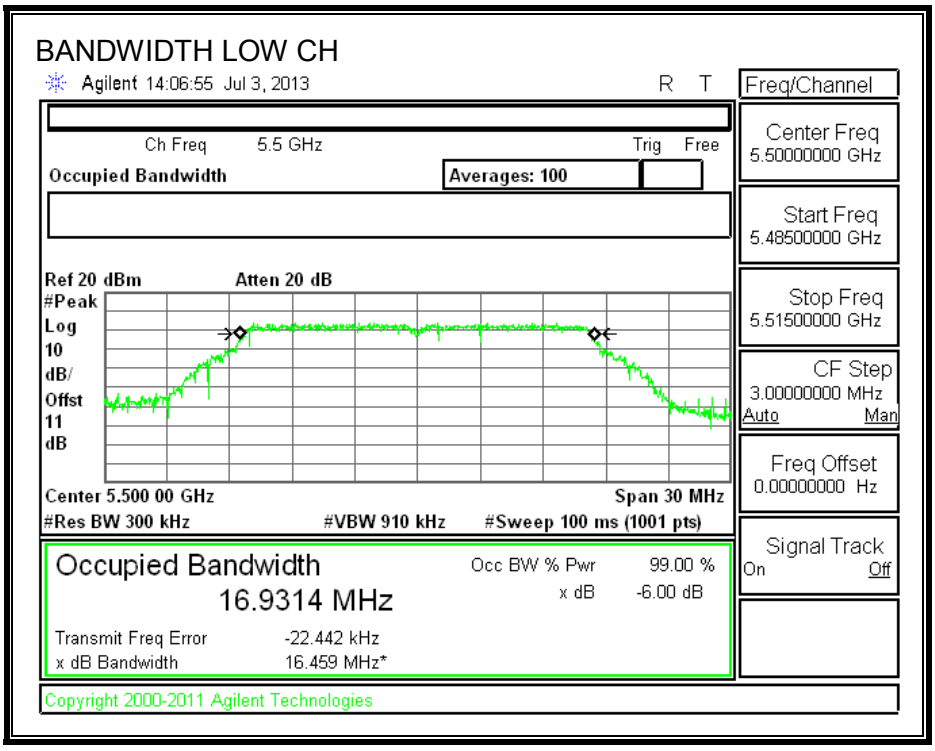
LIMITS

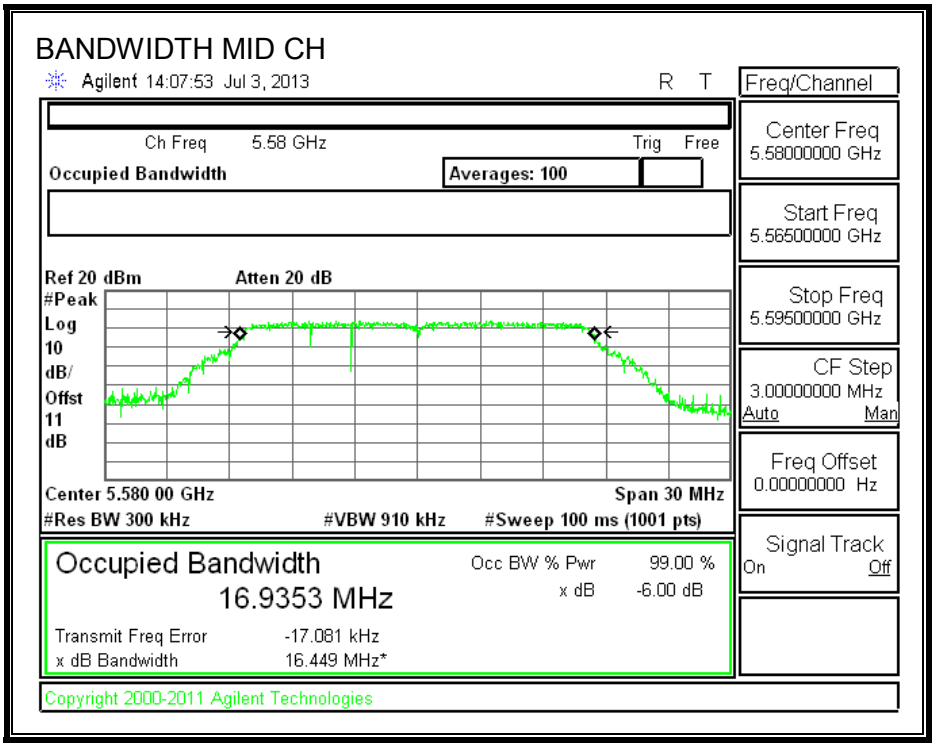
None; for reporting purposes only.

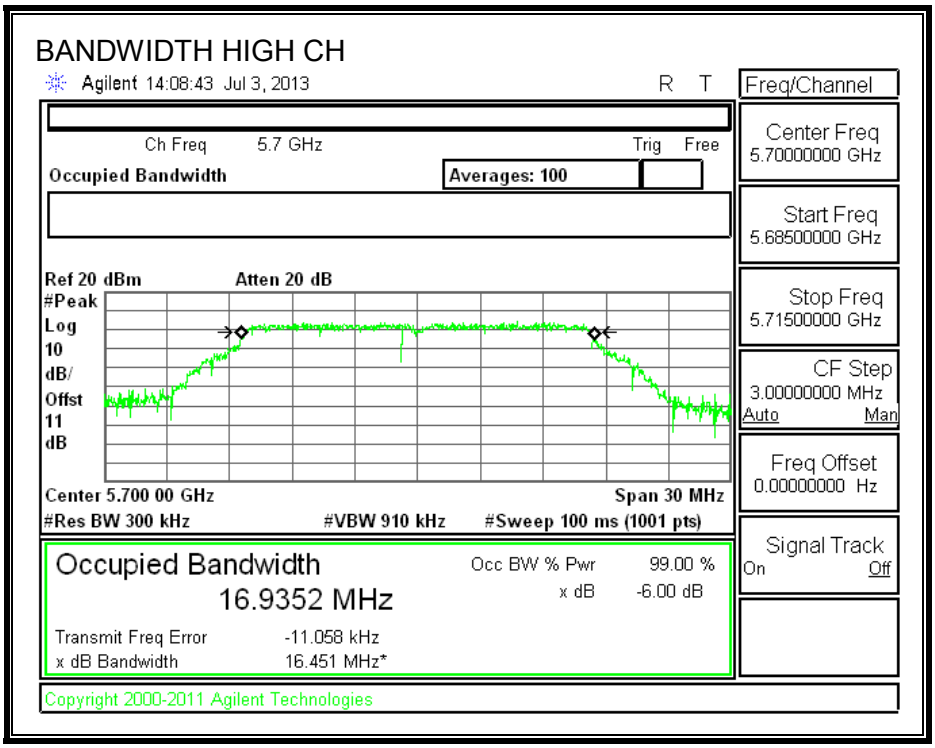
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.931
Mid	5580	16.935
High	5700	16.935

99% BANDWIDTH







9.5.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 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	5500	10.70
Mid	5580	10.70
High	5700	10.60

9.5.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	21.69	16.931	-6.40
Mid	5580	21.69	16.931	-6.40
High	5700	21.69	16.931	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.29	29.29	23.29	11.00	11.00	11.00
Mid	5580	24.00	23.29	29.29	23.29	11.00	11.00	11.00
High	5700	24.00	23.29	29.29	23.29	11.00	11.00	11.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

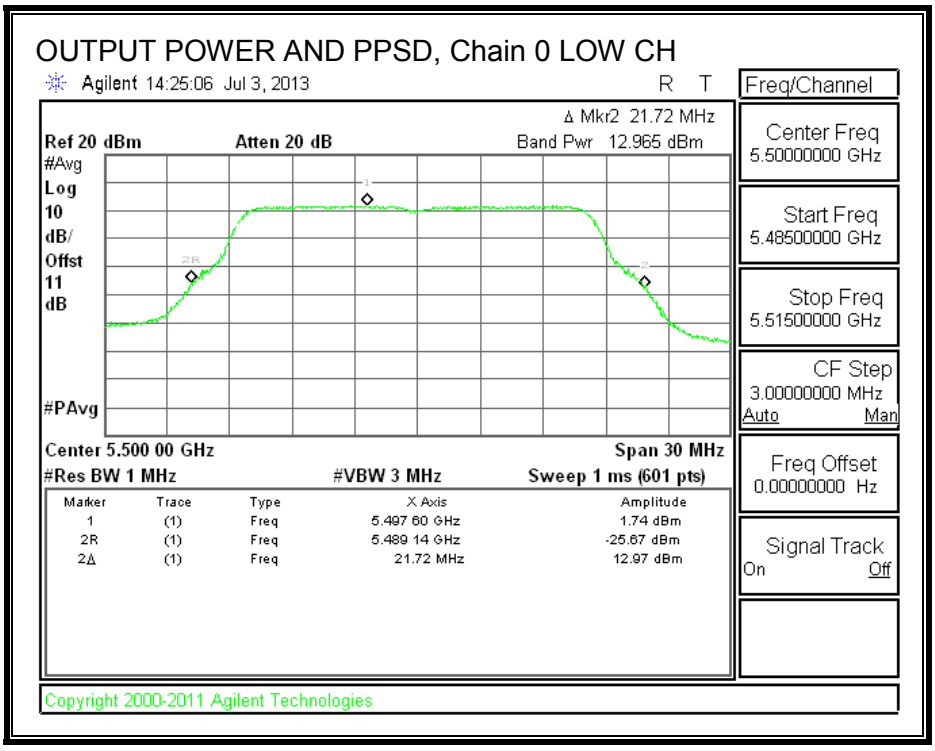
Output Power Results

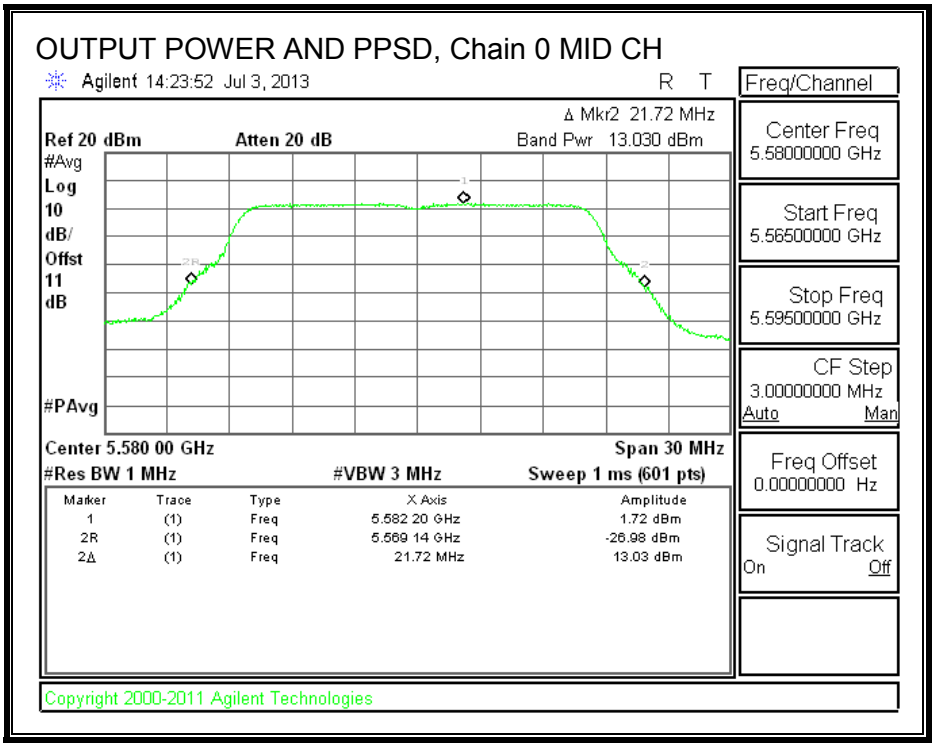
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	12.965	13.18	23.29	-10.11
Mid	5580	13.030	13.24	23.29	-10.05
High	5700	12.940	13.15	23.29	-10.14

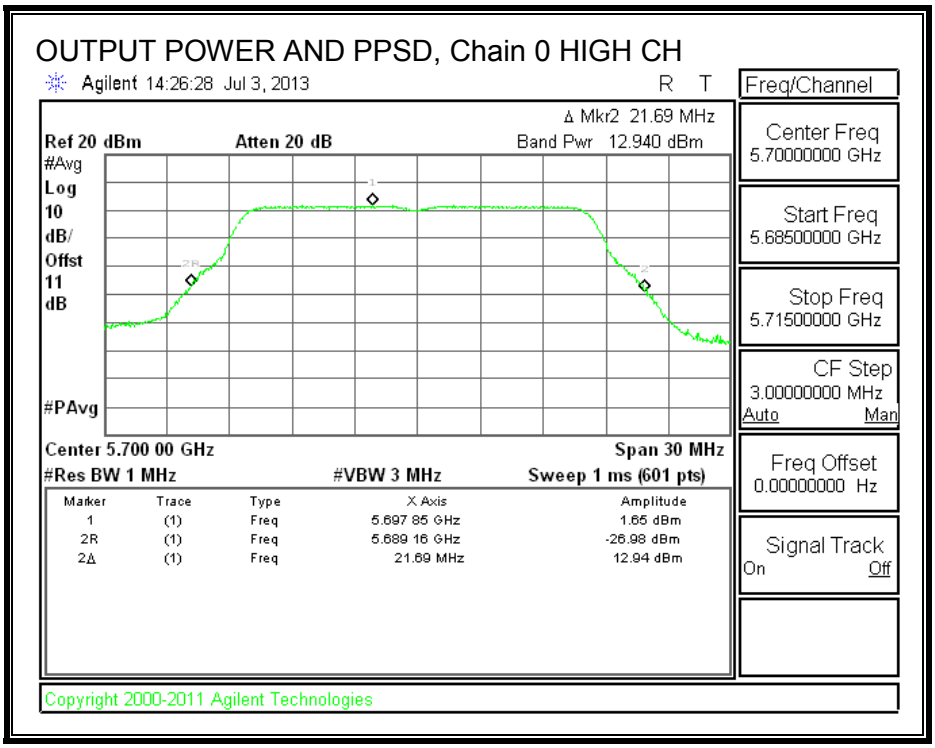
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	1.740	1.95	11.00	-9.05
Mid	5580	1.720	1.93	11.00	-9.07
High	5700	1.550	1.76	11.00	-9.24

OUTPUT POWER AND PPSD, Chain 0







9.6. 802.11n HT20 MODE IN THE 5.6 GHz BAND

9.6.1. 26 dB BANDWIDTH

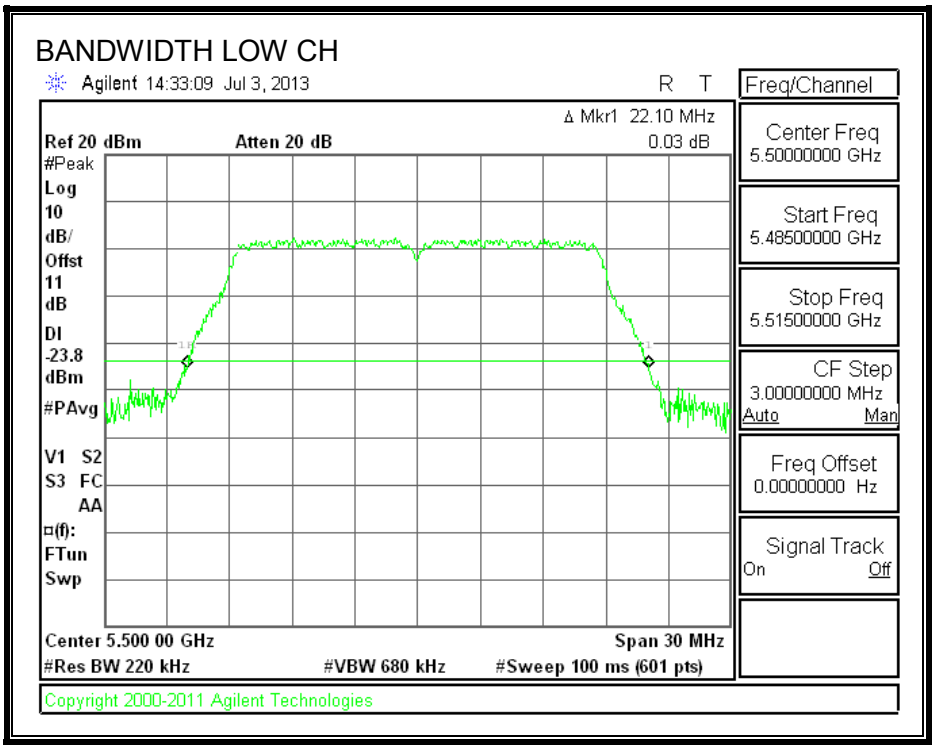
LIMITS

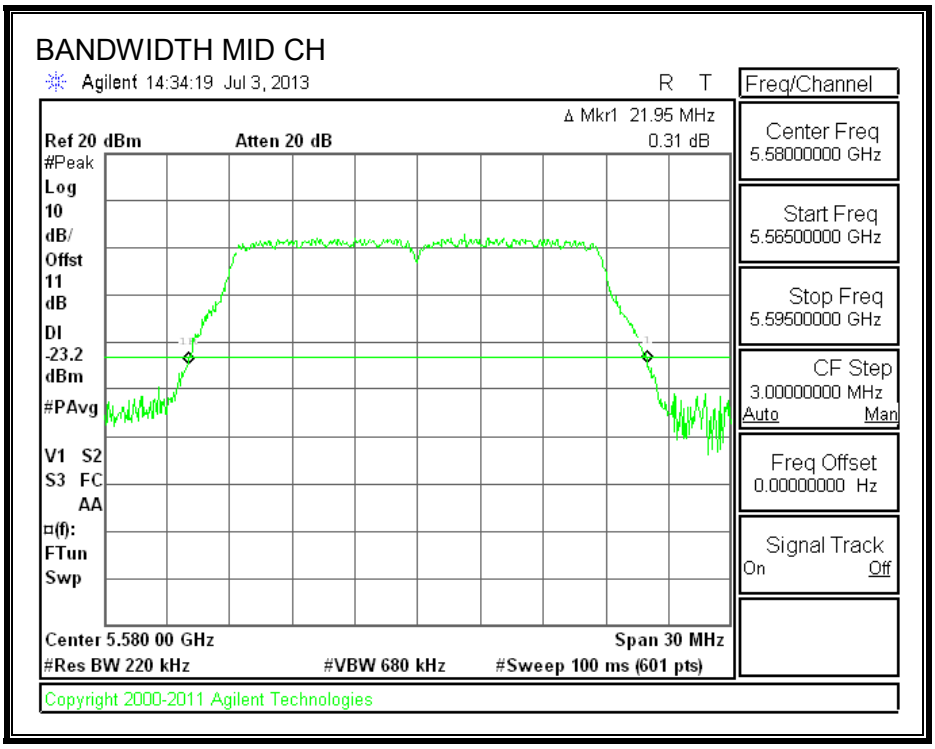
None; for reporting purposes only.

RESULTS

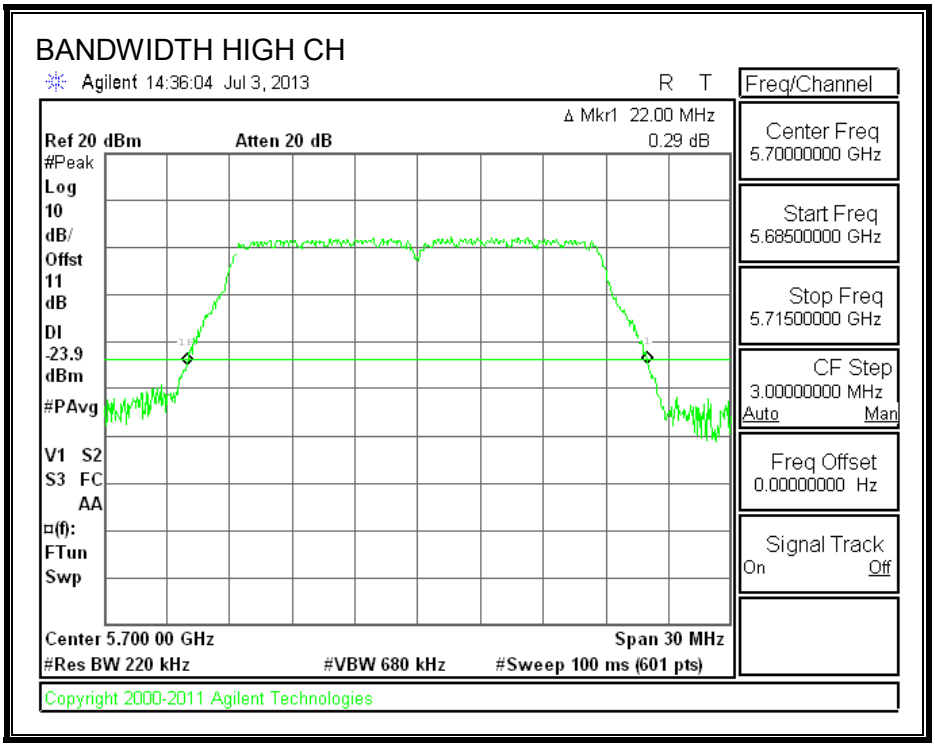
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.10
Mid	5580	21.95
High	5700	22.00

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.6.2. 99% BANDWIDTH

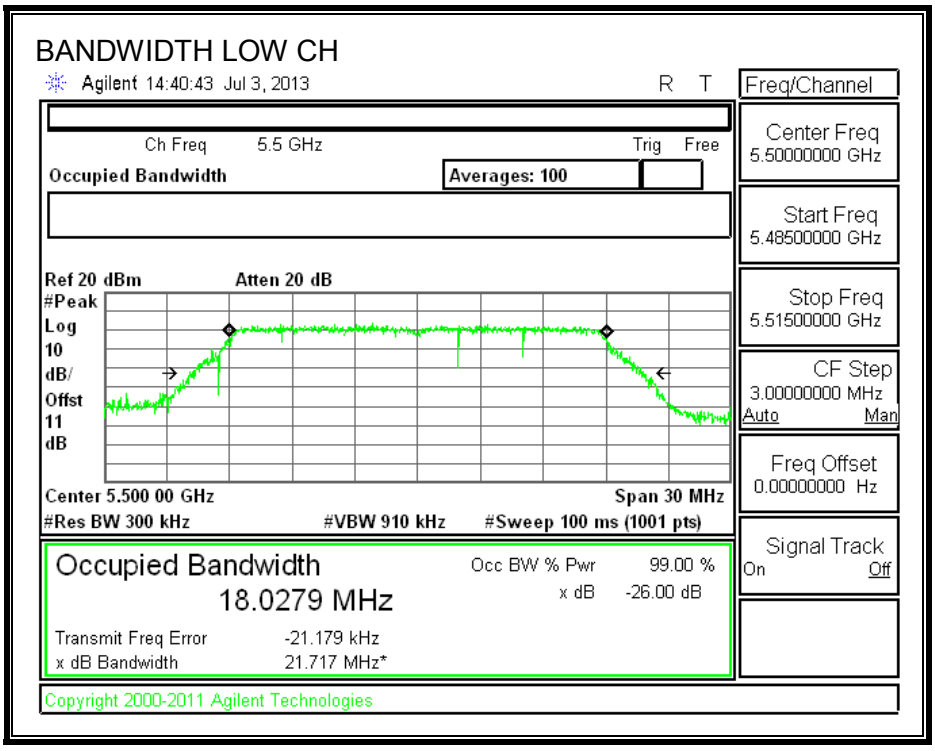
LIMITS

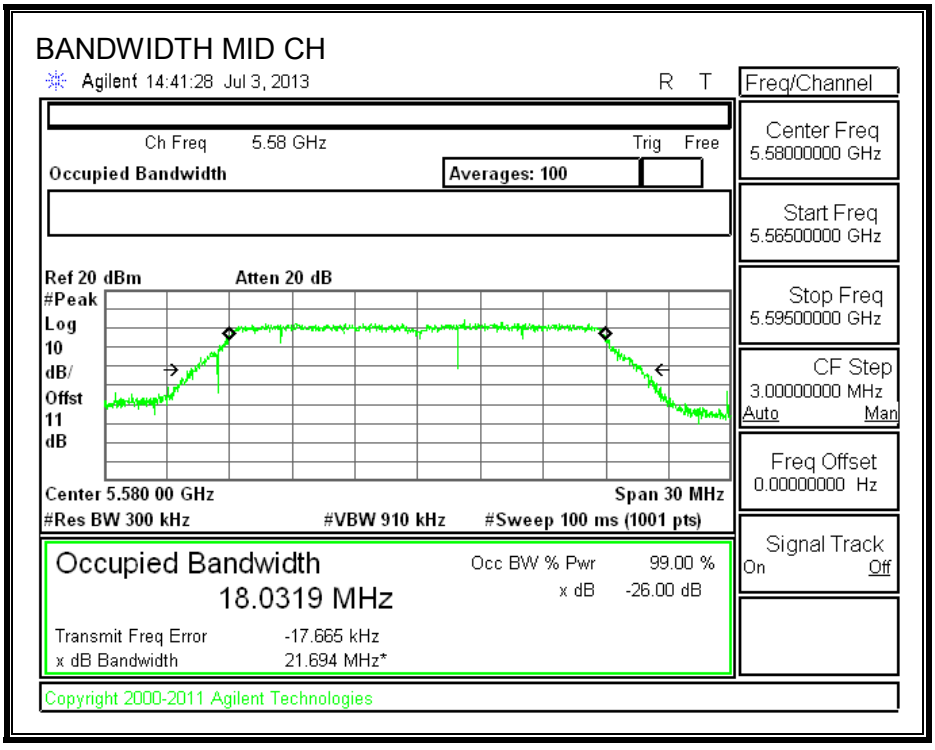
None; for reporting purposes only.

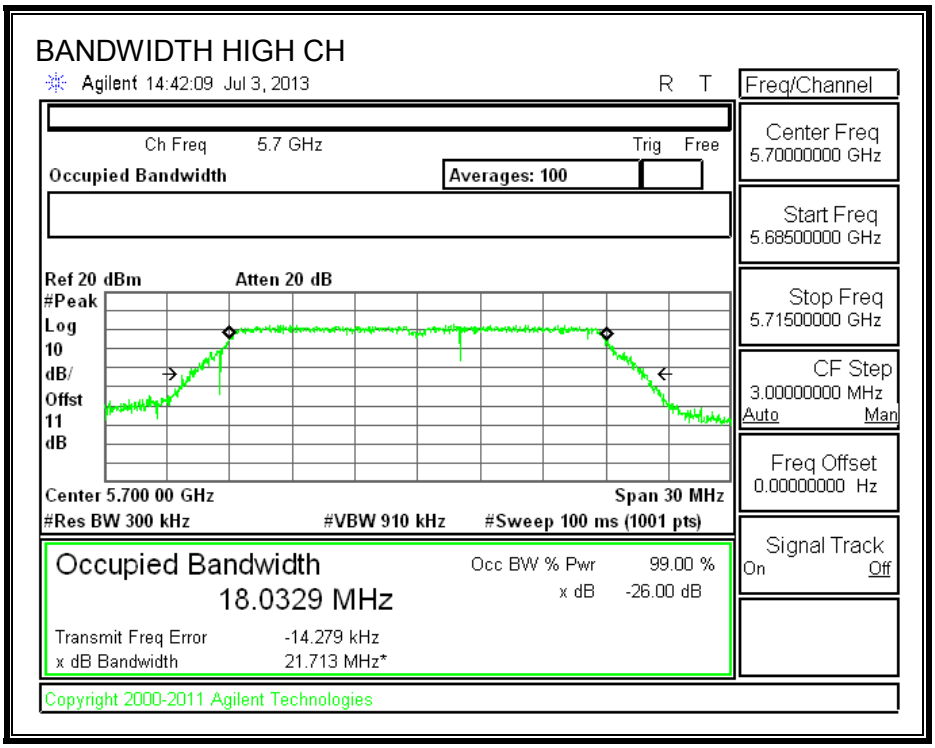
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	18.028
Mid	5580	18.032
High	5700	18.033

99% BANDWIDTH







9.6.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 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	5500	10.0
Mid	5580	10.1
High	5700	9.7

9.6.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	21.95	18.028	-6.40
Mid	5580	21.95	18.028	-6.40
High	5700	21.95	18.028	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.56	29.56	23.56	11.00	11.00	11.00
Mid	5580	24.00	23.56	29.56	23.56	11.00	11.00	11.00
High	5700	24.00	23.56	29.56	23.56	11.00	11.00	11.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PPSD

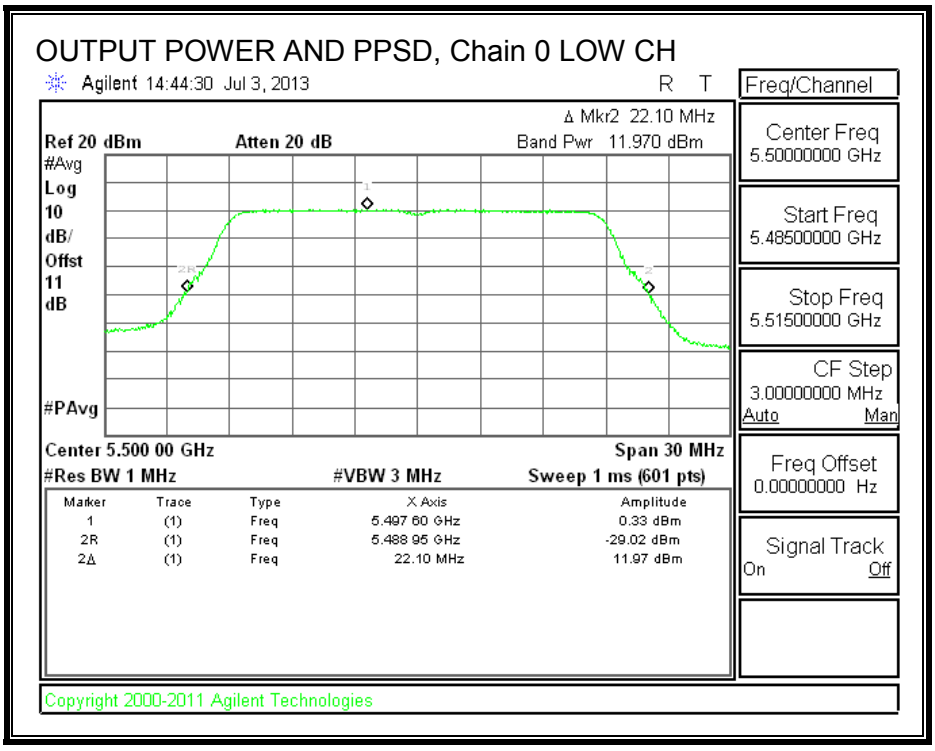
Output Power Results

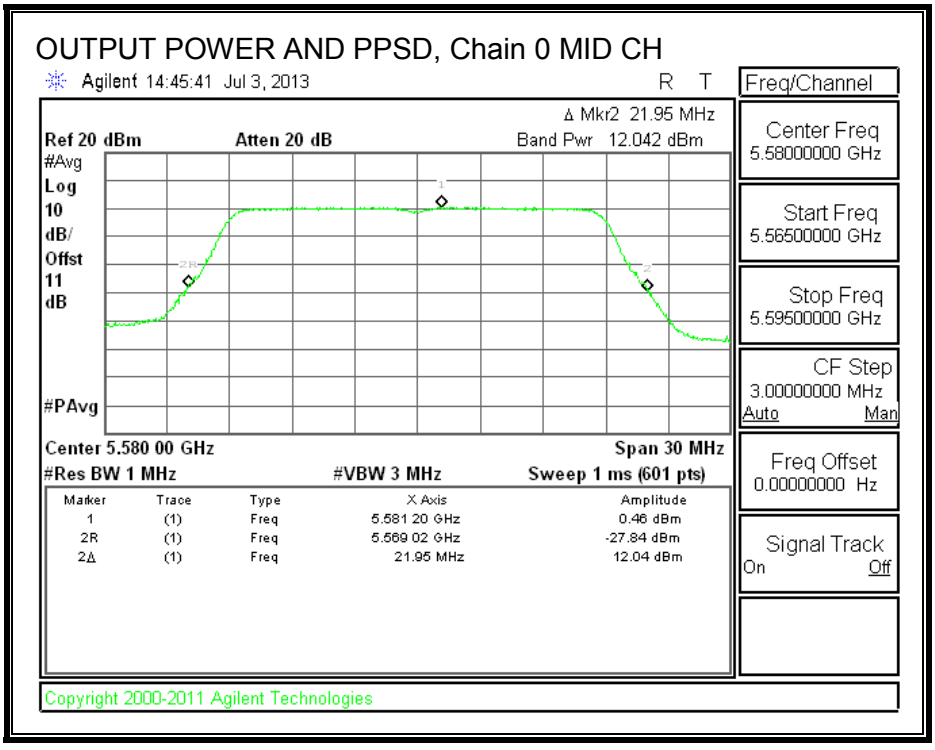
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	11.970	12.19	23.56	-11.37
Mid	5580	12.042	12.26	23.56	-11.30
High	5700	11.964	12.18	23.56	-11.38

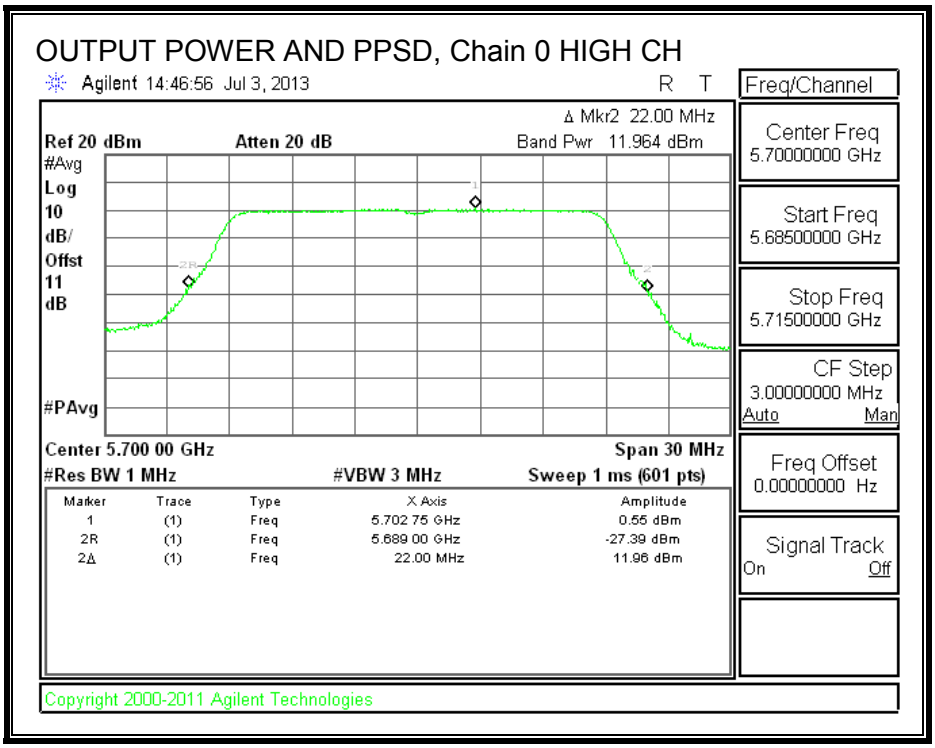
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.330	0.55	11.00	-10.45
Mid	5580	0.460	0.68	11.00	-10.32
High	5700	0.550	0.77	11.00	-10.23

OUTPUT POWER AND PPSD, Chain 0







9.7. 802.11n HT40 MODE IN THE 5.6 GHz BAND

9.7.1. 26 dB BANDWIDTH

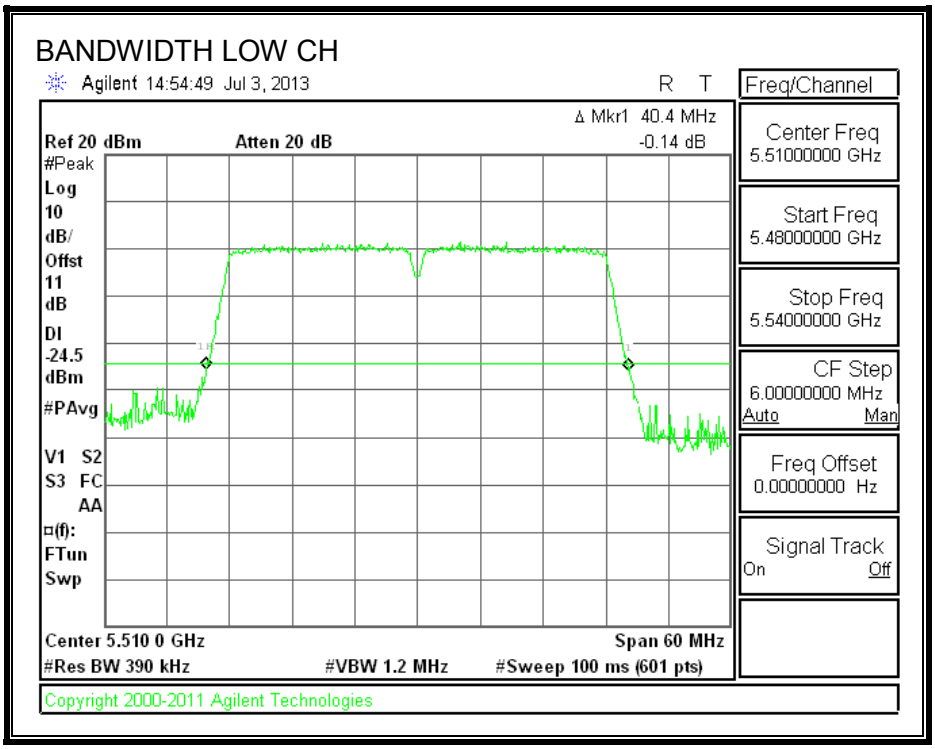
LIMITS

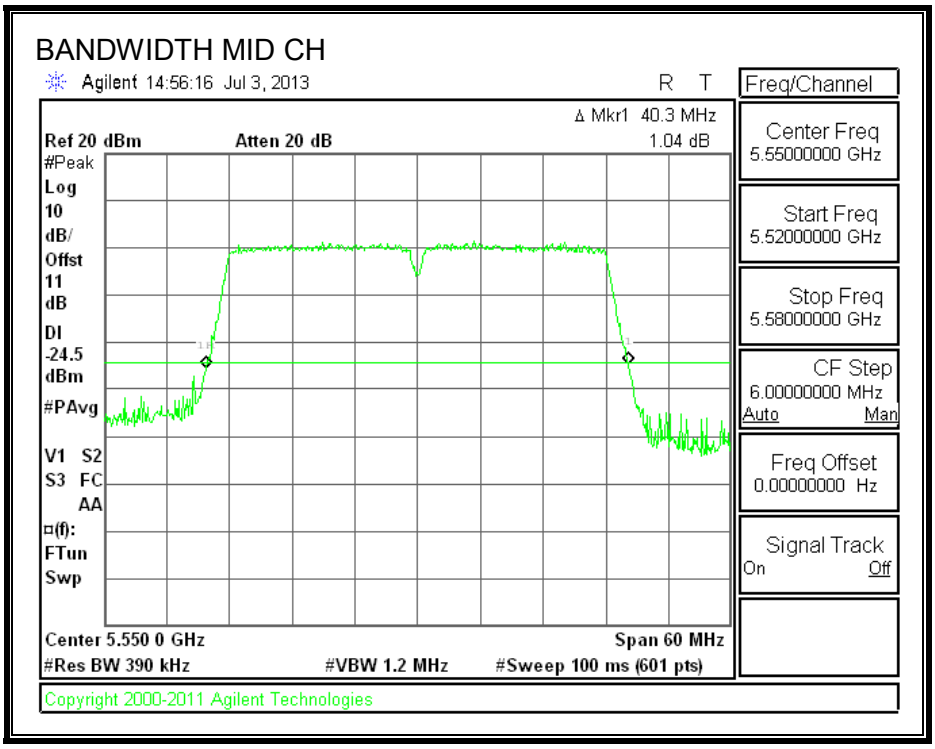
None; for reporting purposes only.

RESULTS

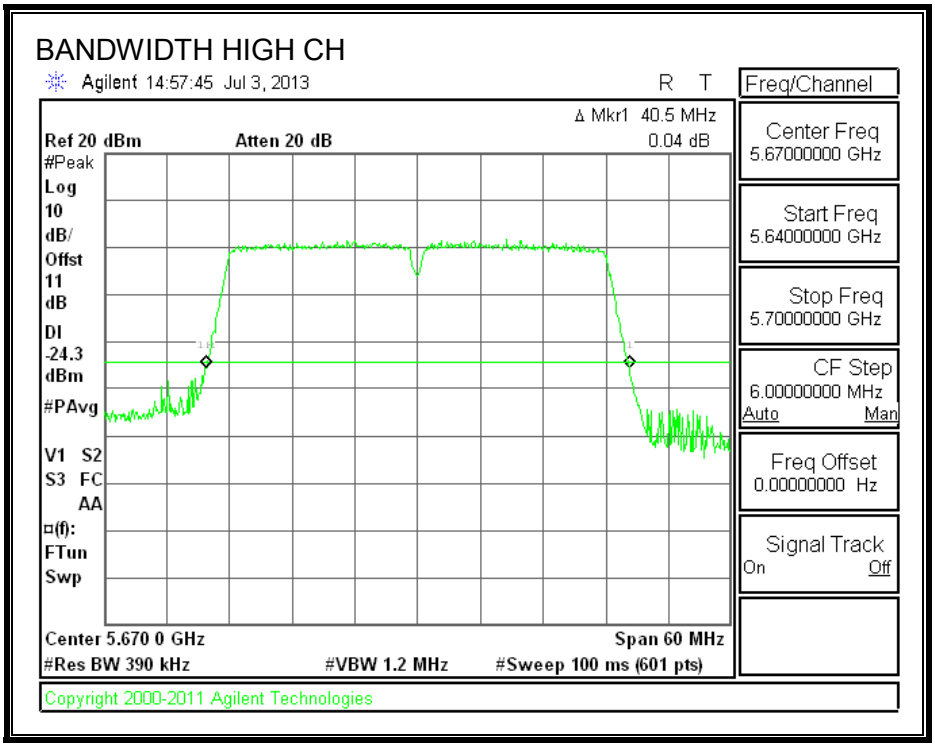
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	40.4
Mid	5550	40.3
High	5670	40.5

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.7.2. 99% BANDWIDTH

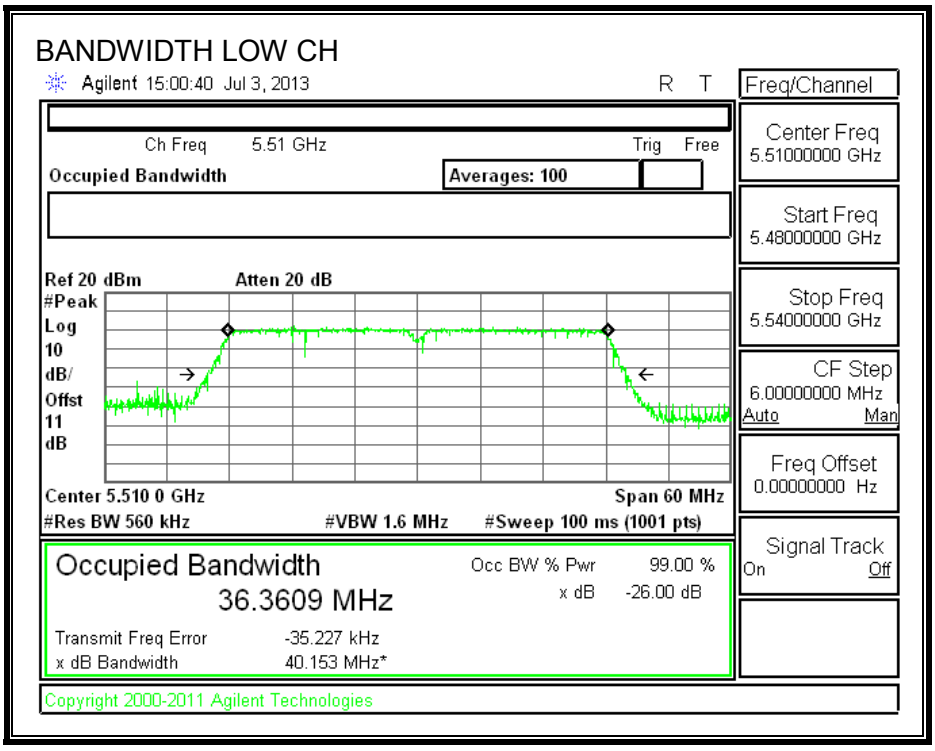
LIMITS

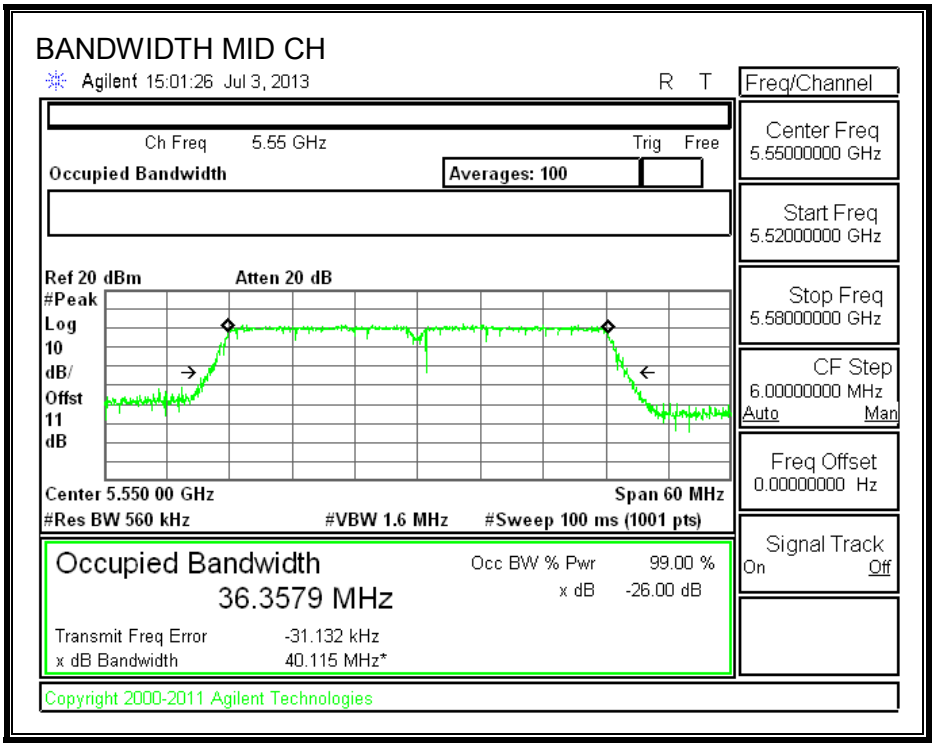
None; for reporting purposes only.

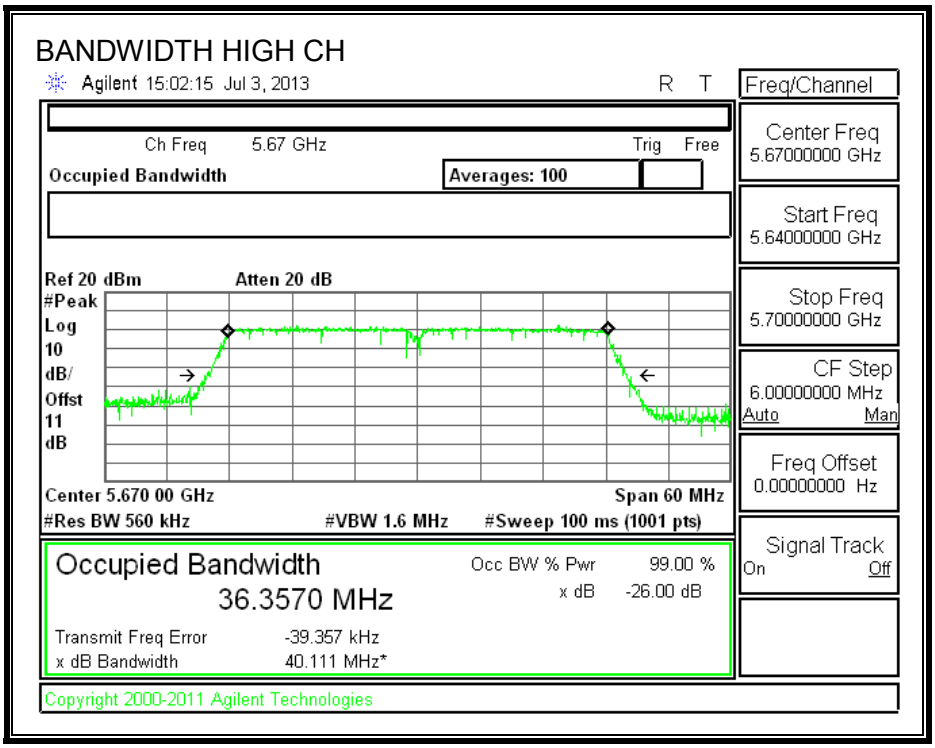
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.361
Mid	5550	36.358
High	5670	36.357

99% BANDWIDTH







9.7.3. 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 11 dB (including 10 dB pad and 1 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	5510	9.60
High	5670	9.00

9.7.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	40.3	36.357	-6.40
Mid	5550	40.3	36.357	-6.40
High	5670	40.3	36.357	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.49	Included in Calculations of Corr'd Power & PPSD

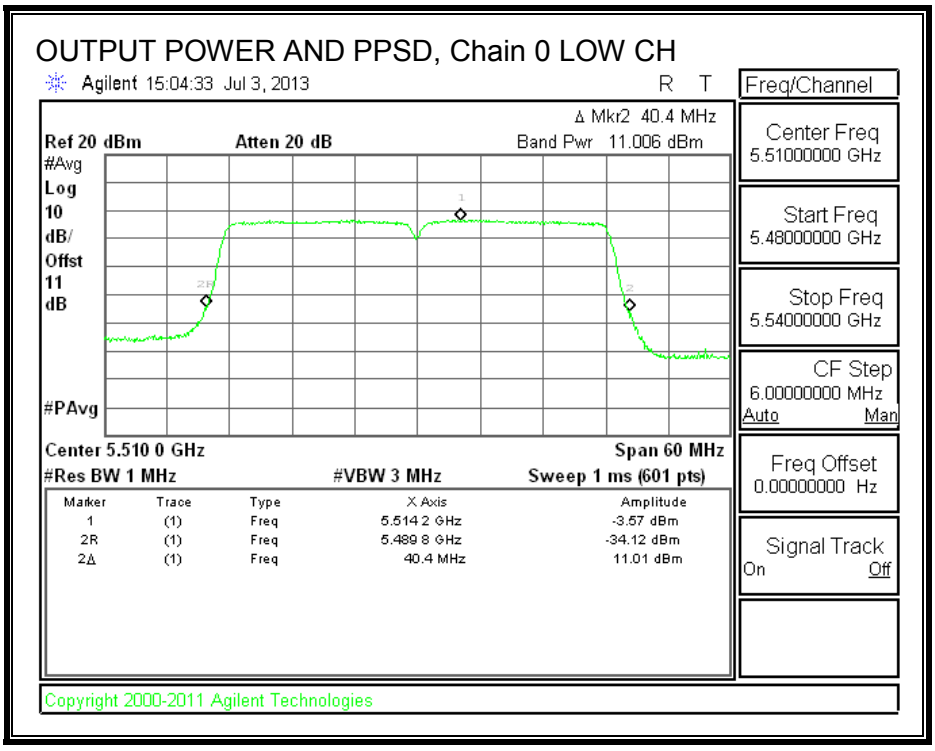
Output Power Results

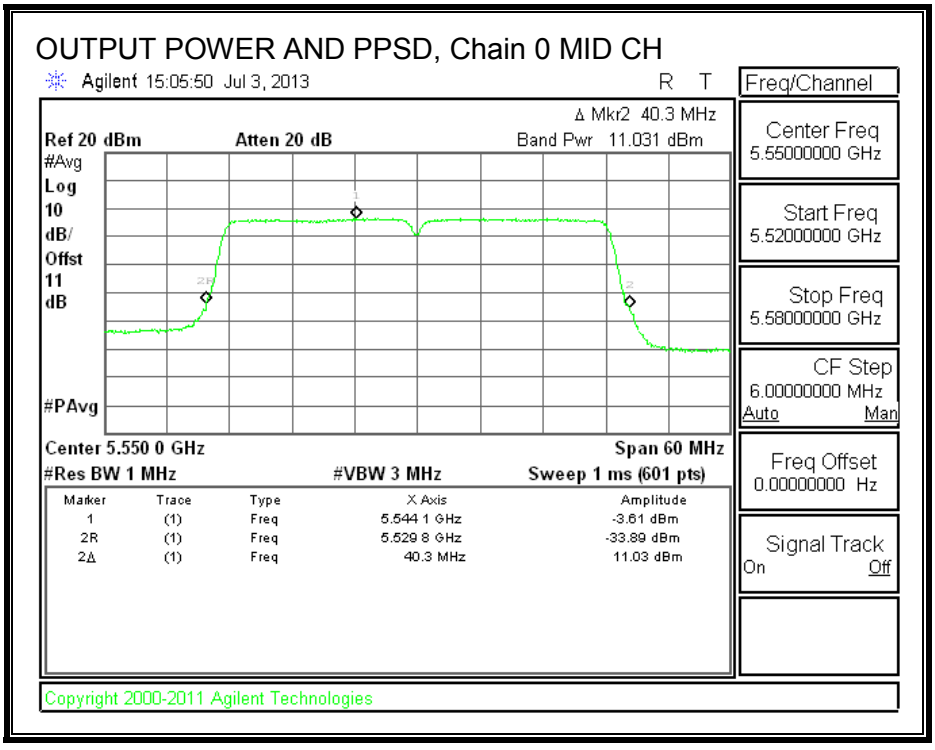
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	11.006	11.50	24.00	-12.50
Mid	5550	11.031	11.52	24.00	-12.48
High	5670	11.047	11.54	24.00	-12.46

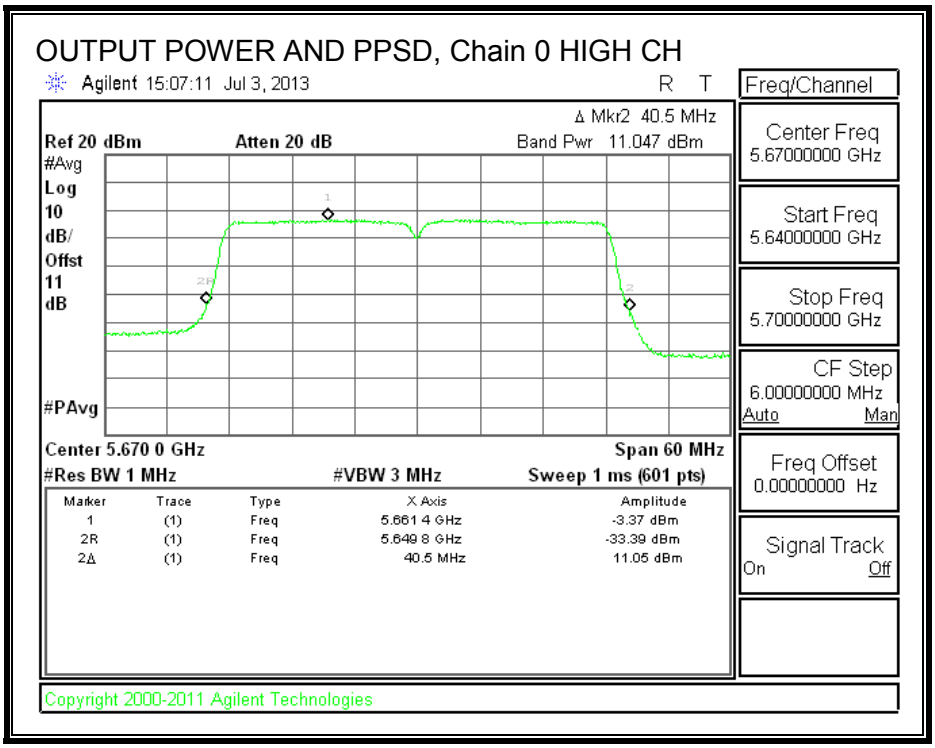
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-3.570	-3.08	11.00	-14.08
Mid	5550	-3.610	-3.12	11.00	-14.12
High	5670	-3.370	-2.88	11.00	-13.88

OUTPUT POWER AND PPSD, Chain 0







9.8. 802.11ac HT20 MODE IN THE 5.6 GHz BAND

9.8.1. 26 dB BANDWIDTH

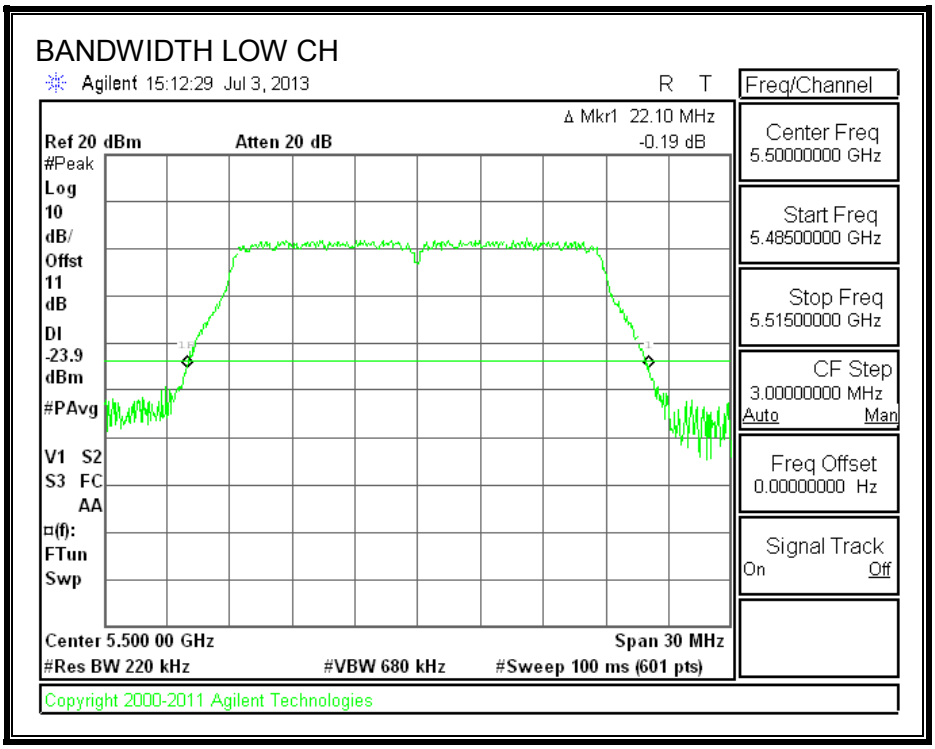
LIMITS

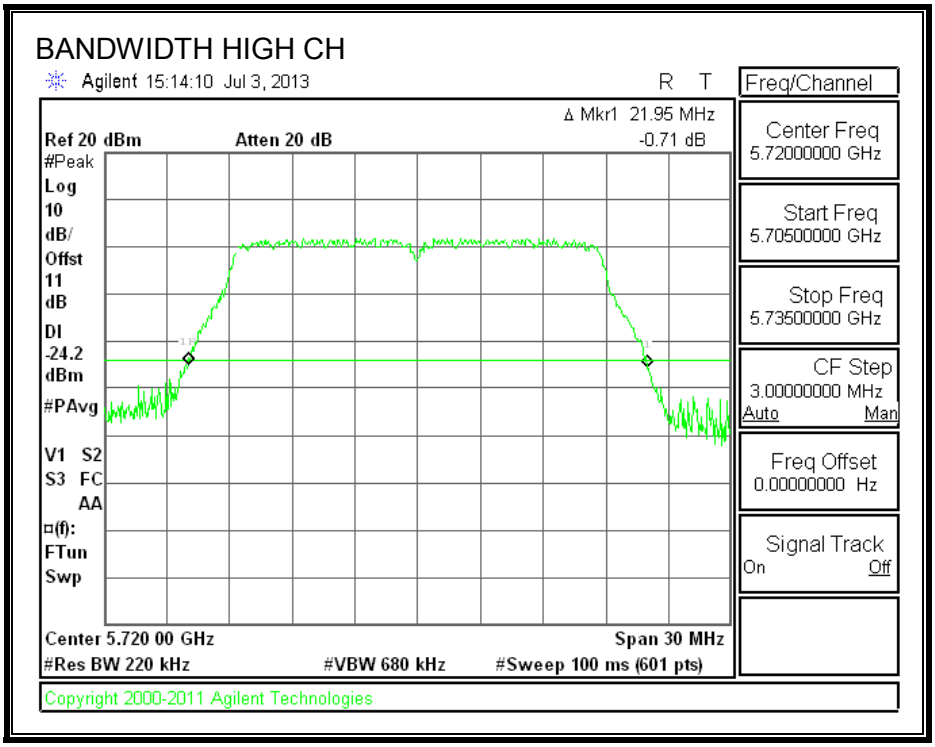
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.100
High	5720	21.950

26 dB BANDWIDTH





9.8.2. 99% BANDWIDTH

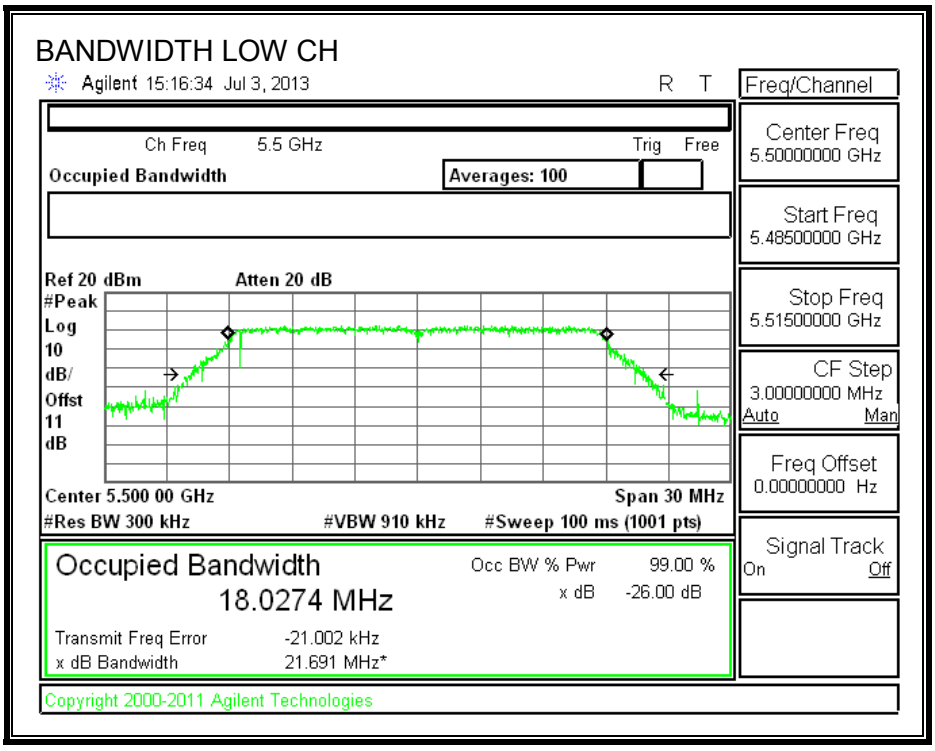
LIMITS

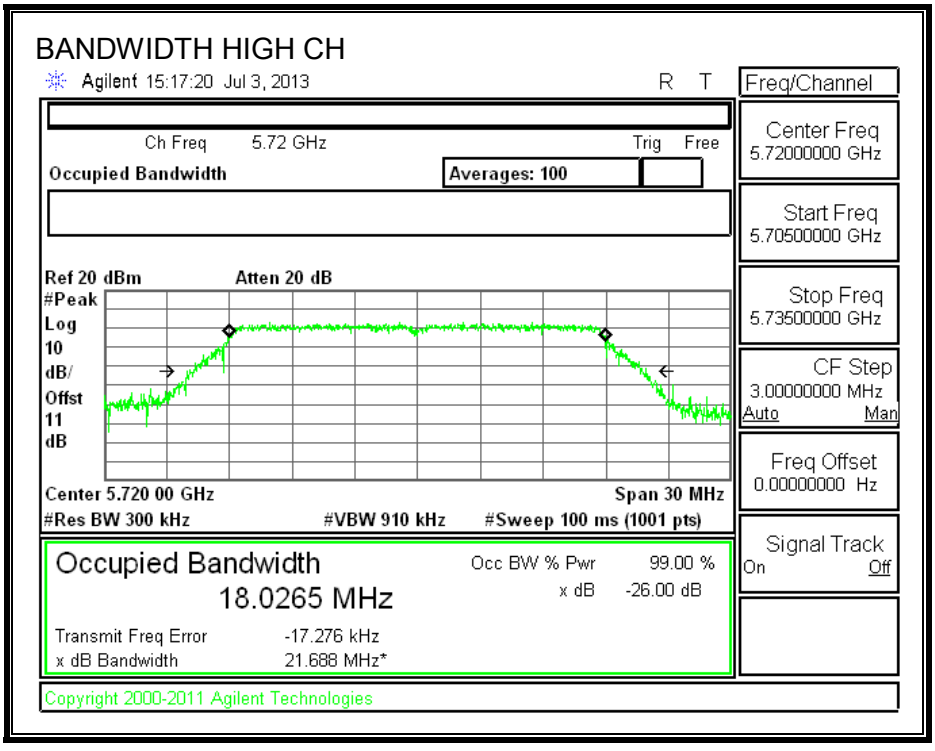
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	18.027
High	5720	18.027

99% BANDWIDTH





9.8.3. 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	5500	8.8
High	5720	8.4

9.8.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	22.950	18.027	-6.40
High	5700	22.950	18.027	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.56	29.56	23.56	11.00	11.00	11.00
High	5720	24.00	23.56	29.56	23.56	11.00	11.00	11.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

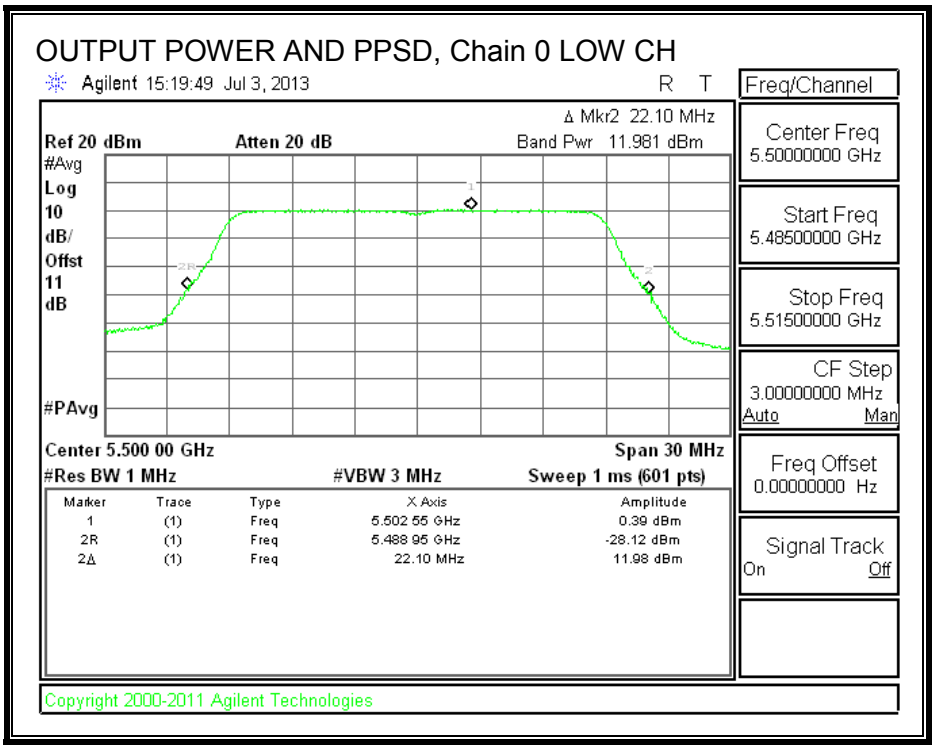
Output Power Results

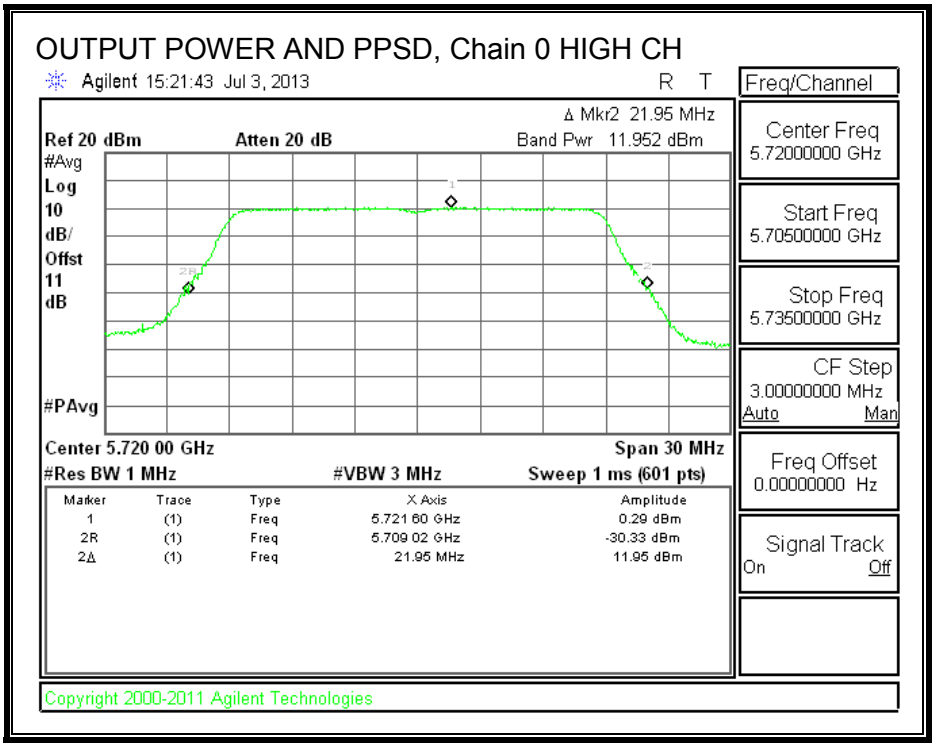
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	11.98	12.19	23.56	-11.37
High	5700	11.95	12.16	23.56	-11.40

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.39	0.60	11.00	-10.40
High	5700	0.29	0.50	11.00	-10.50

OUTPUT POWER AND PPSD, Chain 0





9.9. 802.11ac HT40 MODE IN THE 5.6 GHz BAND

9.9.1. 26 dB BANDWIDTH

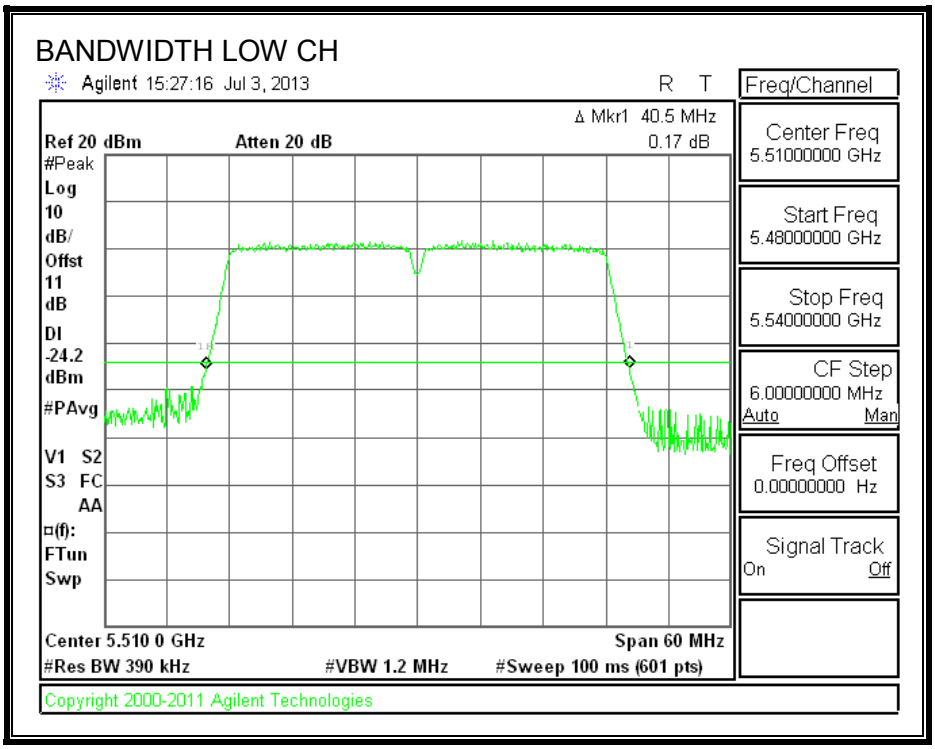
LIMITS

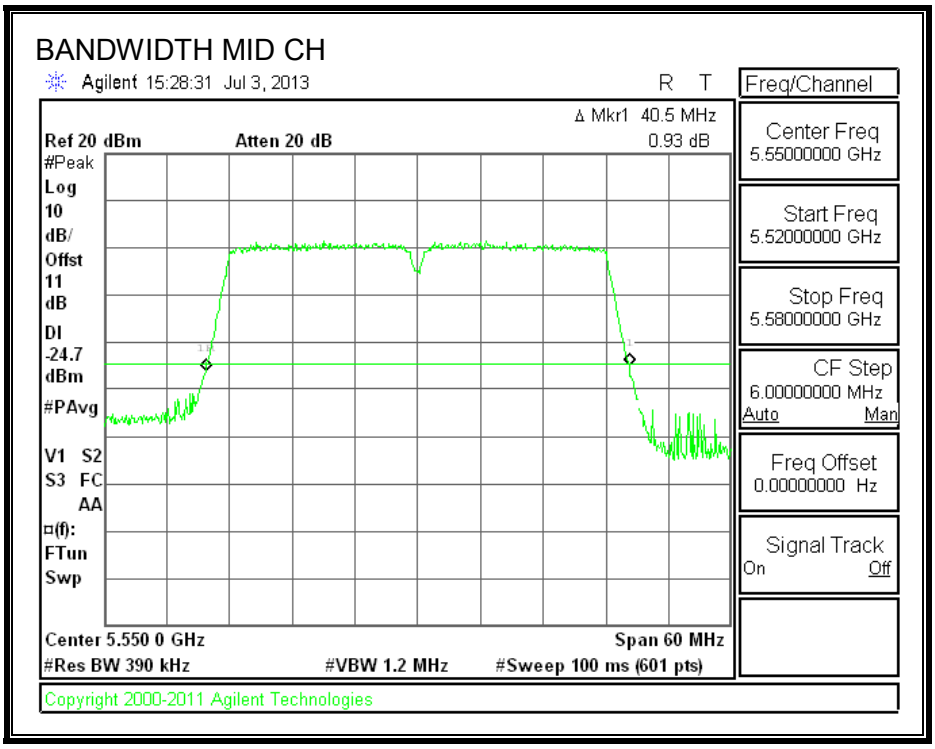
None; for reporting purposes only.

RESULTS

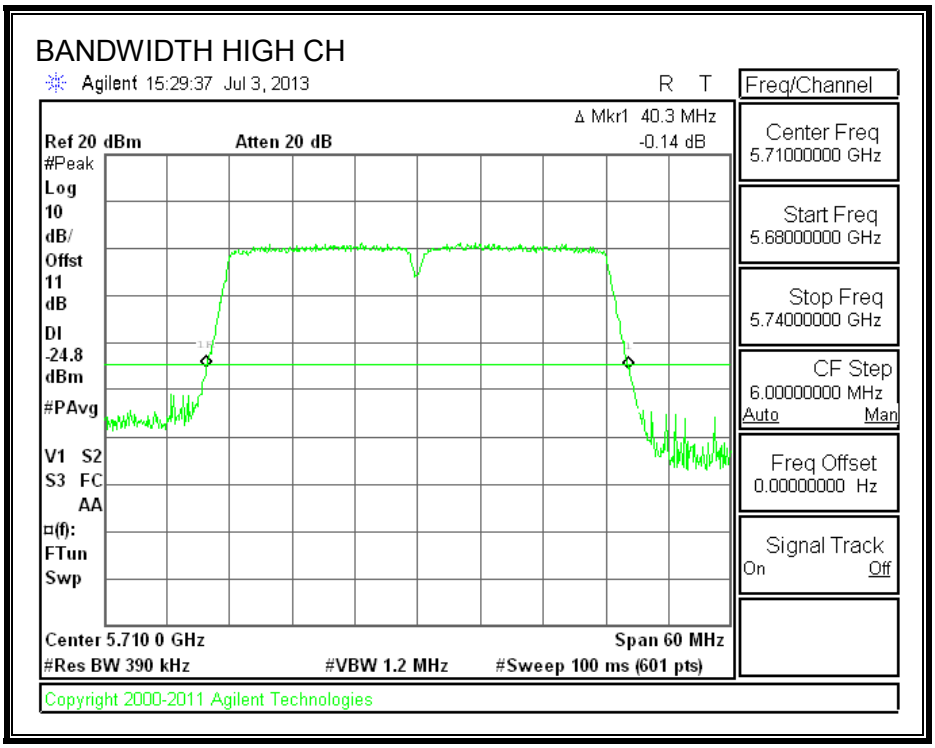
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	40.500
Mid	5550	40.500
High	5710	40.300

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.9.2. 99% BANDWIDTH

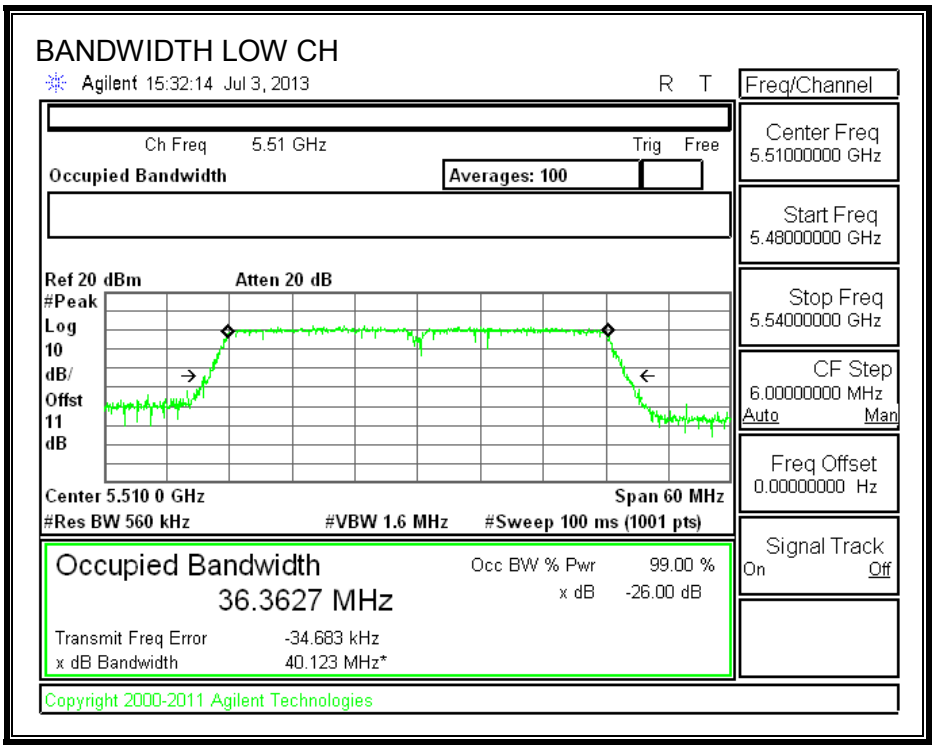
LIMITS

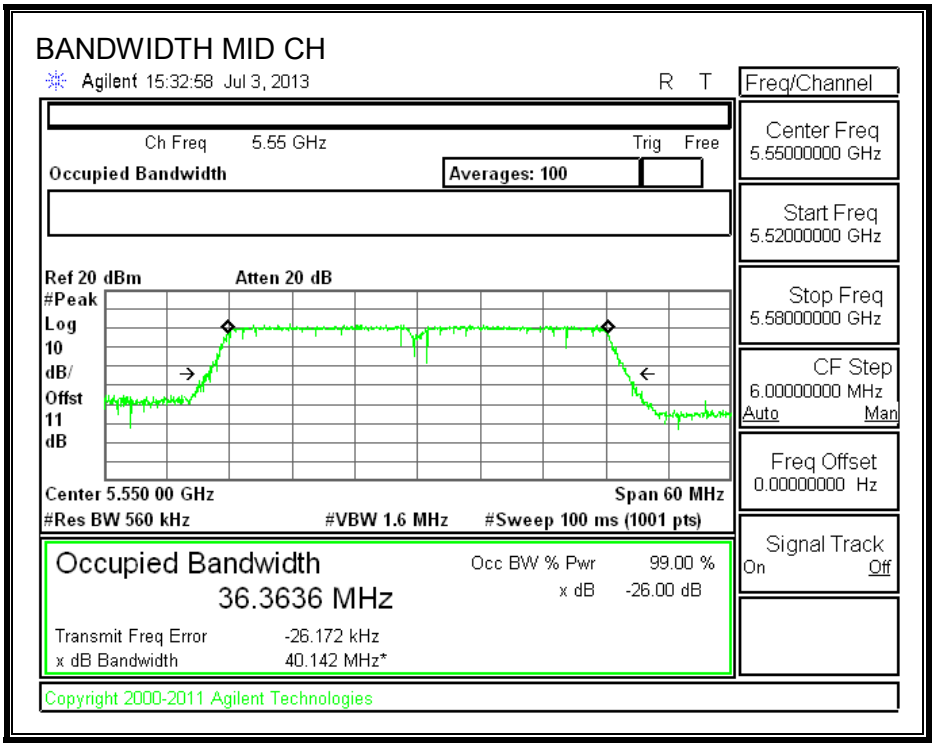
None; for reporting purposes only.

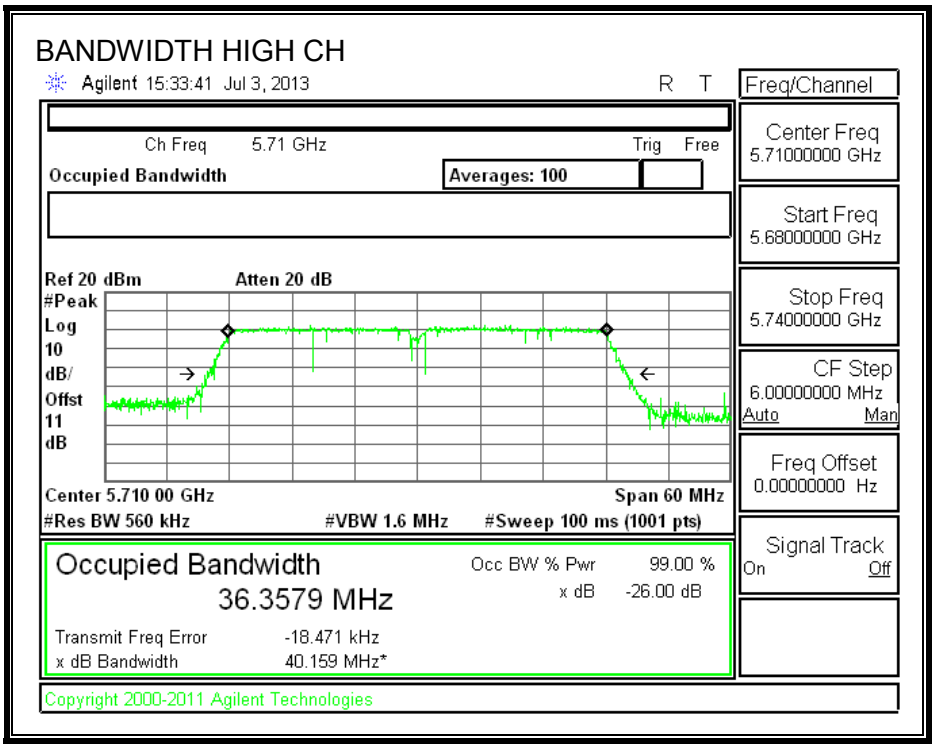
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.363
Mid	5550	36.364
High	5710	36.358

99% BANDWIDTH







9.9.3. 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	5510	8.5
Mid	5670	7.9
High	5710	7.8

9.9.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	40.300	36.358	-6.40
Mid	5670	40.300	36.358	-6.40
High	5710	40.300	36.358	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5710	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

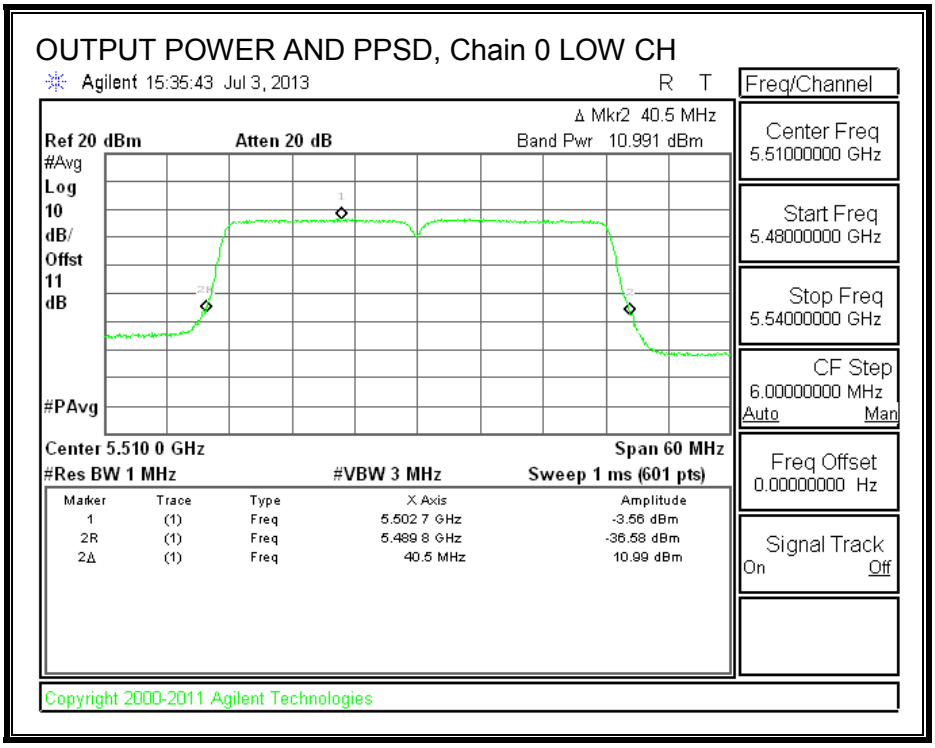
Output Power Results

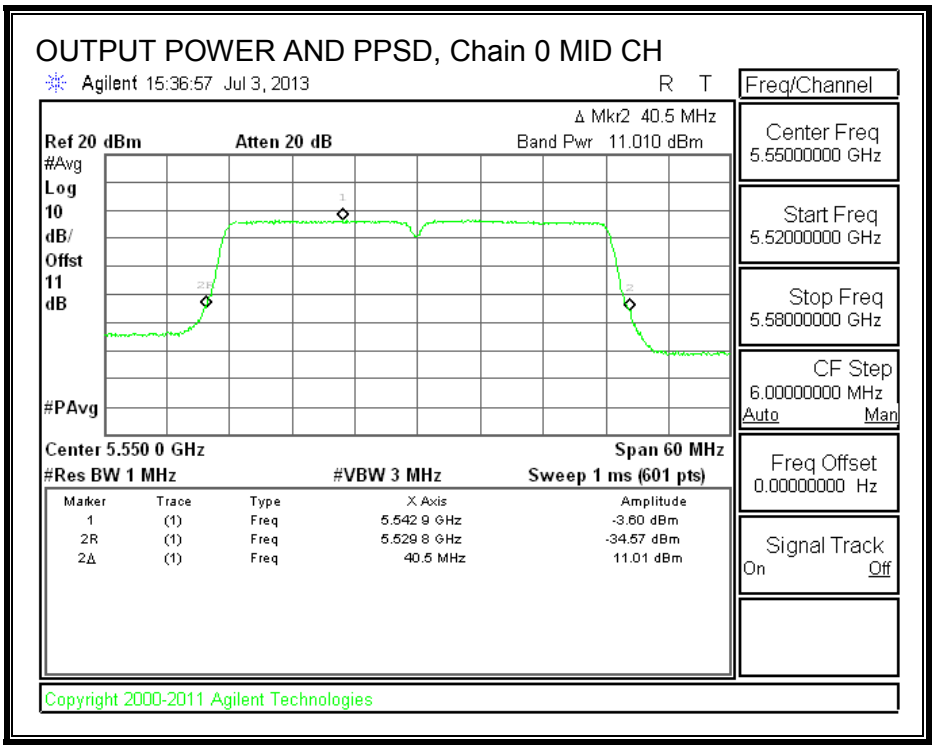
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	10.99	11.20	24.00	-12.80
Mid	5670	11.01	11.22	24.00	-12.78
High	5710	10.99	11.20	24.00	-12.80

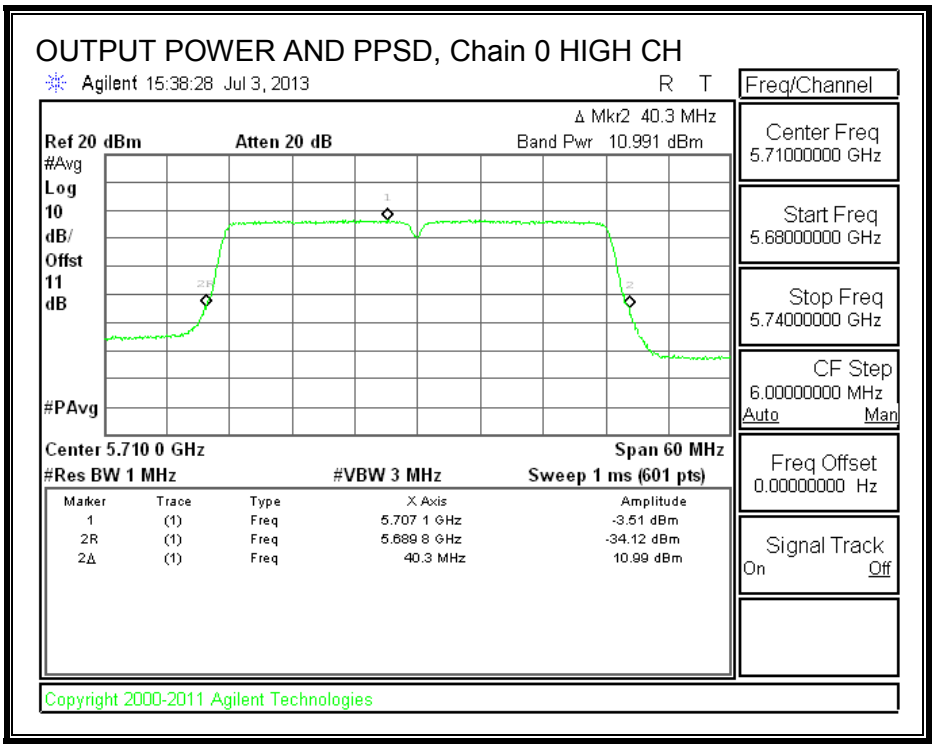
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-3.56	-3.35	11.00	-14.35
Mid	5670	-3.50	-3.29	11.00	-14.29
High	5710	-3.51	-3.30	11.00	-14.30

OUTPUT POWER AND PPSD, Chain 0







9.10. 802.11ac HT80 MODE IN THE 5.6 GHz BAND

9.10.1. 26 dB BANDWIDTH

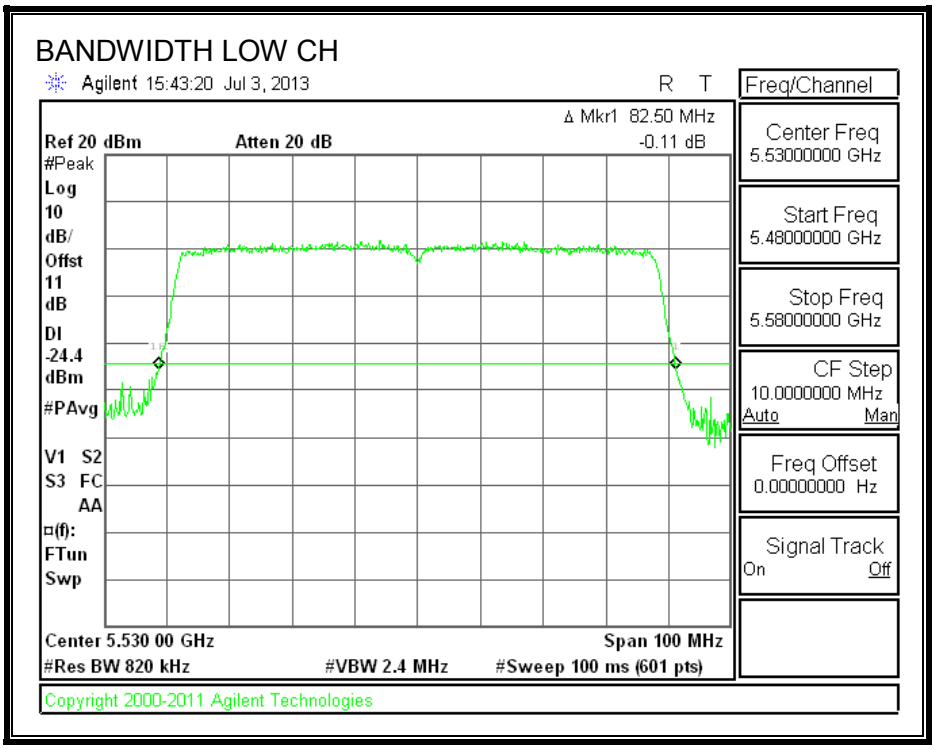
LIMITS

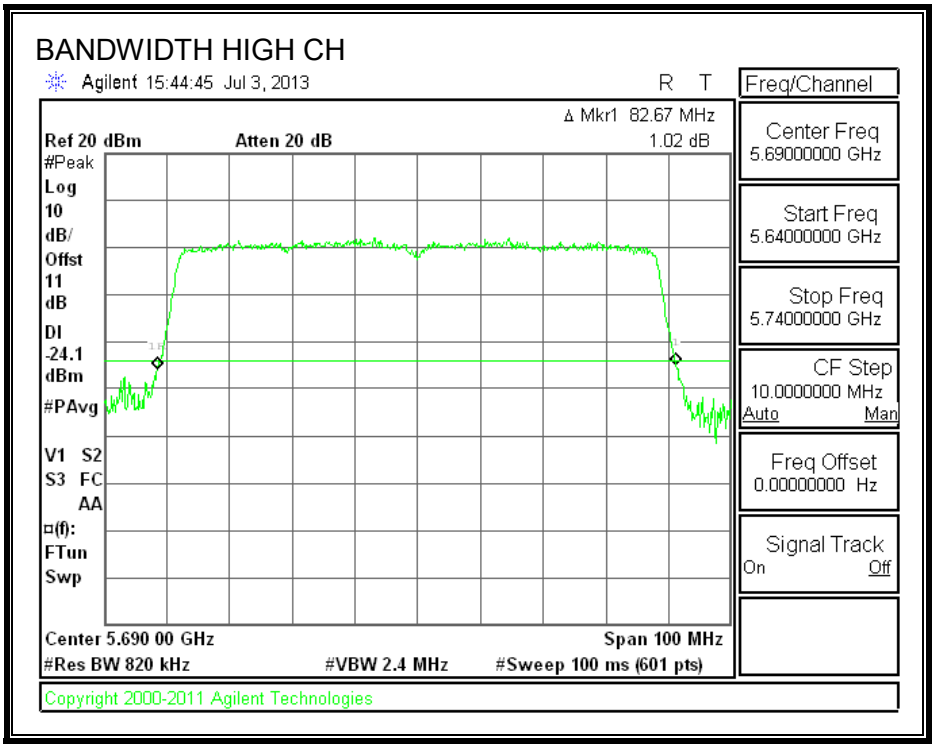
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5530	82.500
High	5690	82.670

26 dB BANDWIDTH





9.10.2. 99% BANDWIDTH

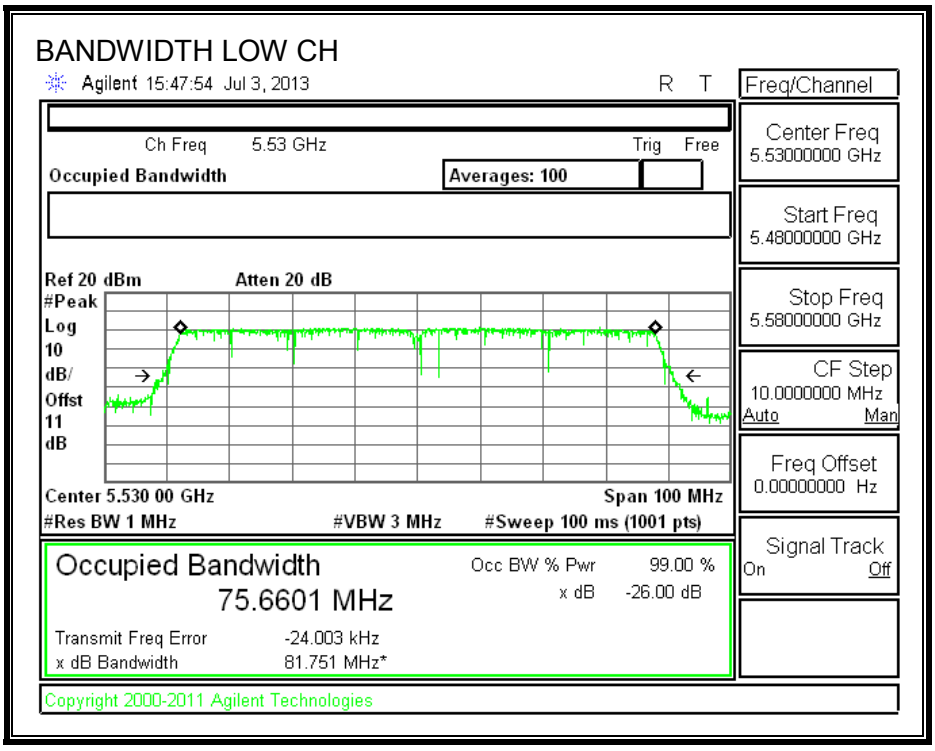
LIMITS

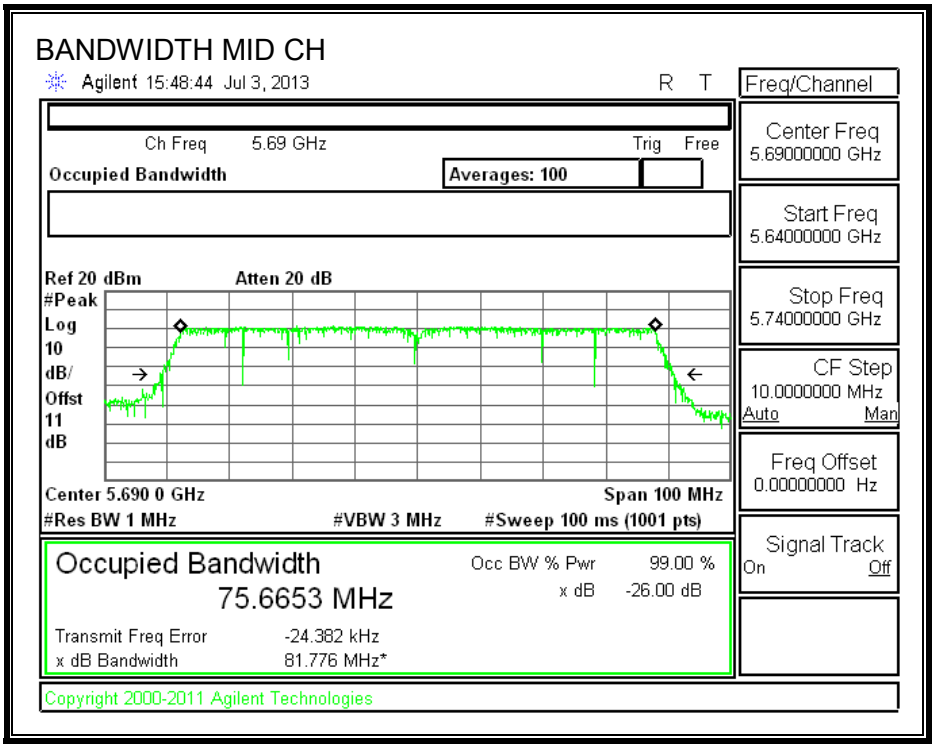
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5530	75.660
Mid	5690	75.665

99% BANDWIDTH





9.10.3. 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	5530	9.370
High	5690	8.650

9.10.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5530	82.500	75.660	-6.40
Mid	5690	82.500	75.660	-6.40

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5530	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5690	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

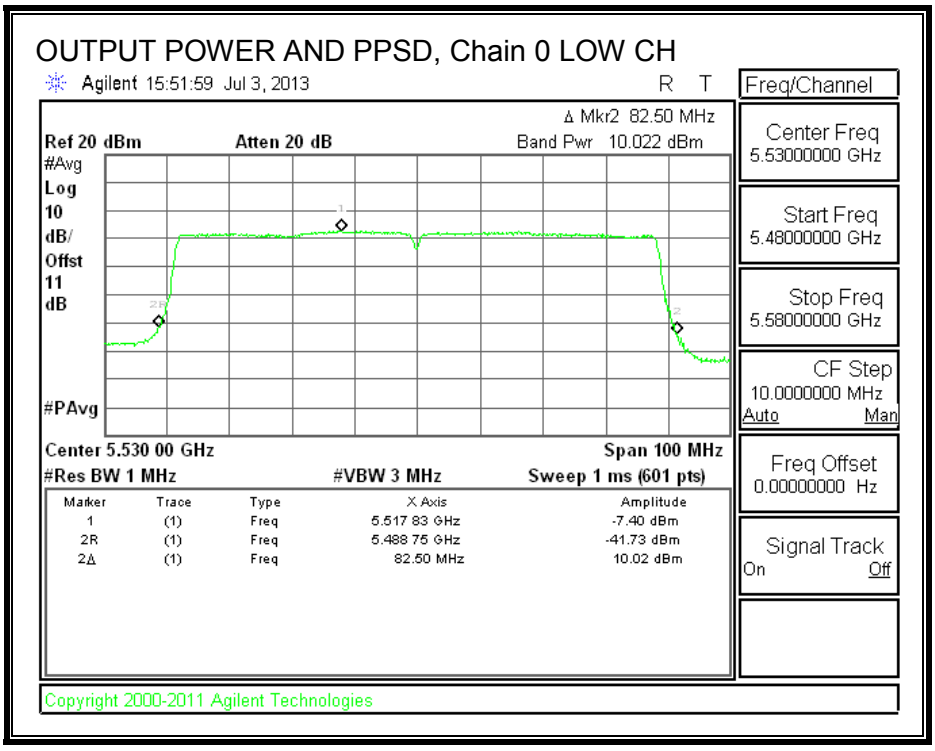
Output Power Results

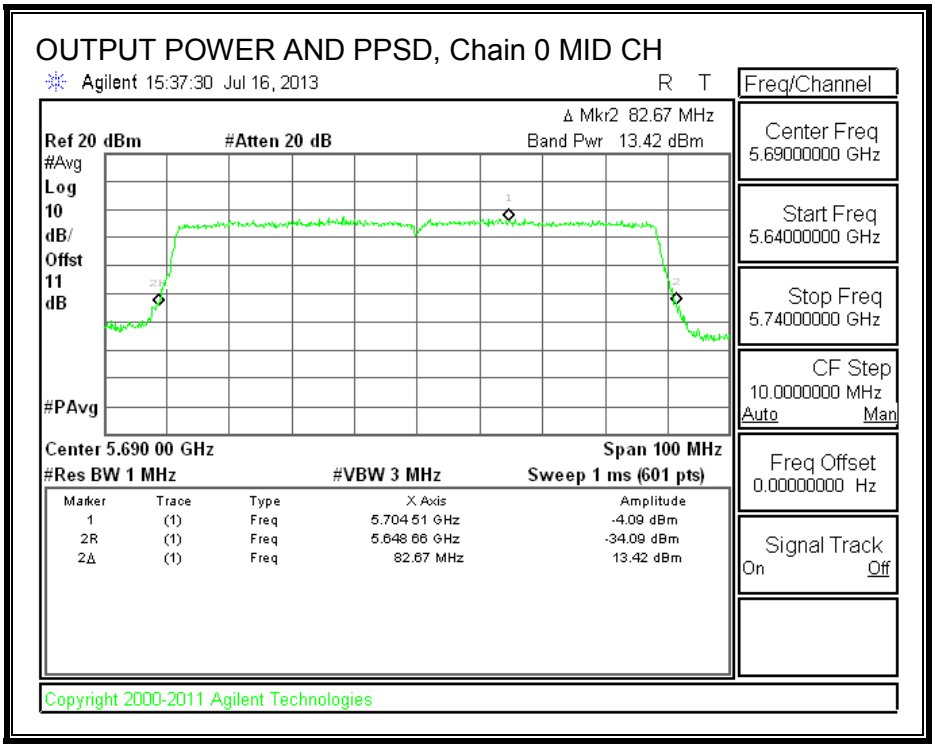
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	10.022	10.23	24.00	-13.77
Mid	5690	13.420	13.63	24.00	-10.37

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5530	-7.400	-7.19	11.00	-18.19
Mid	5690	-4.090	-3.88	11.00	-14.88

OUTPUT POWER AND PPSD, Chain 0





9.1. 802.11a MODE IN THE 5.8 GHz BAND

9.1.1. Test Methodology

FCC KDB 644545 D02(Alternative Guidance for 802 11ac V01) was followed to test 5.8GHz DTS band under UNII band.

9.1.2. 26 dB BANDWIDTH

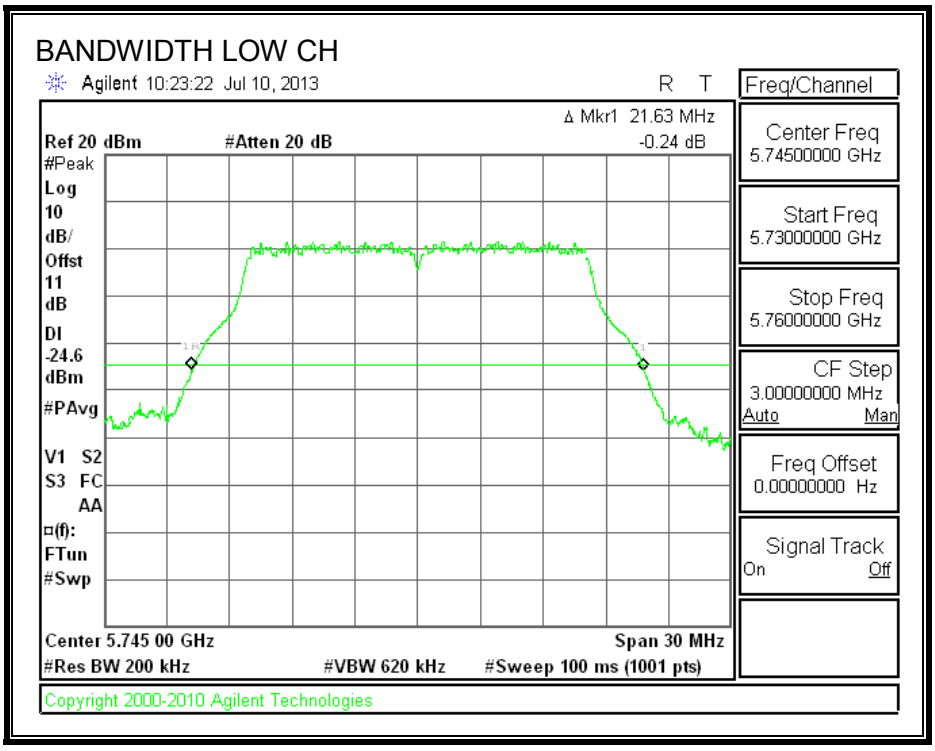
LIMITS

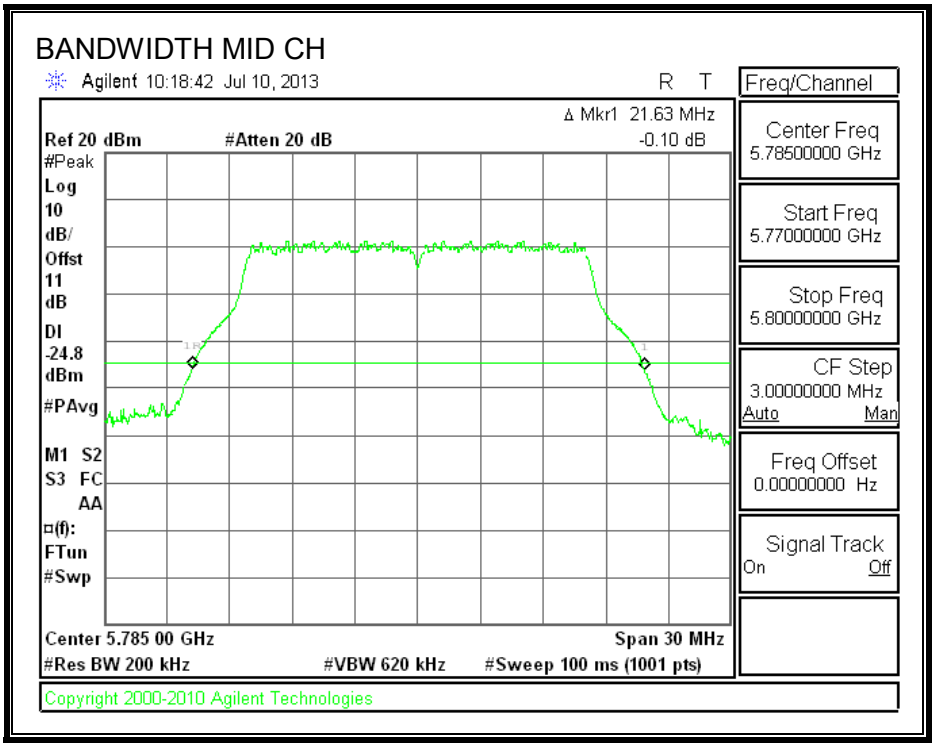
None; for reporting purposes only.

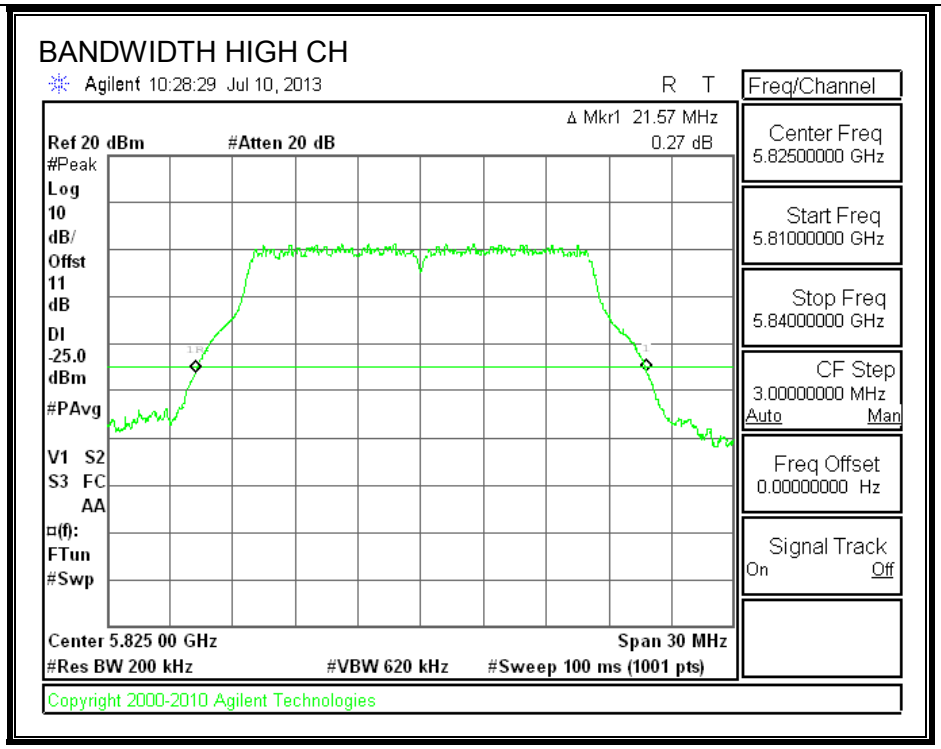
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	21.63
Mid	5785	21.63
High	5825	21.57

26 dB BANDWIDTH







9.1.2. 99% BANDWIDTH

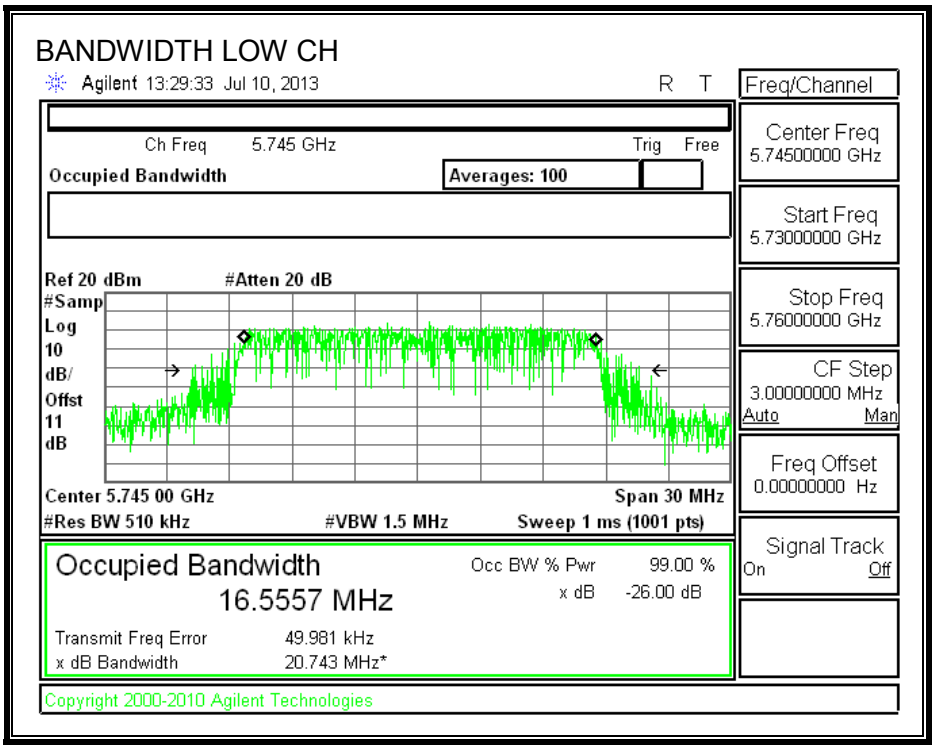
LIMITS

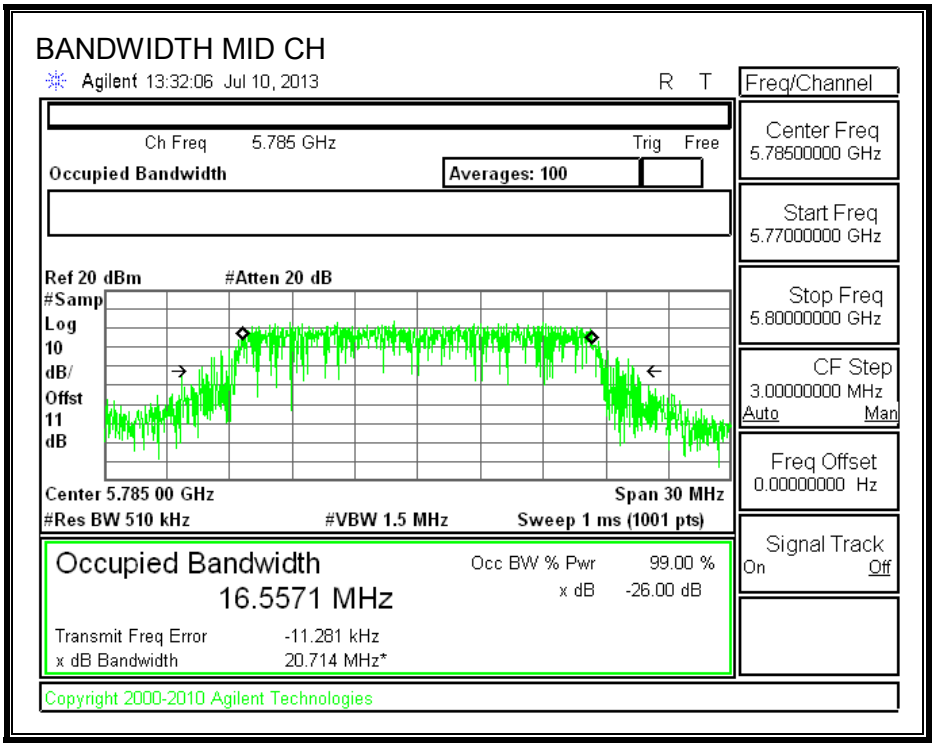
None; for reporting purposes only.

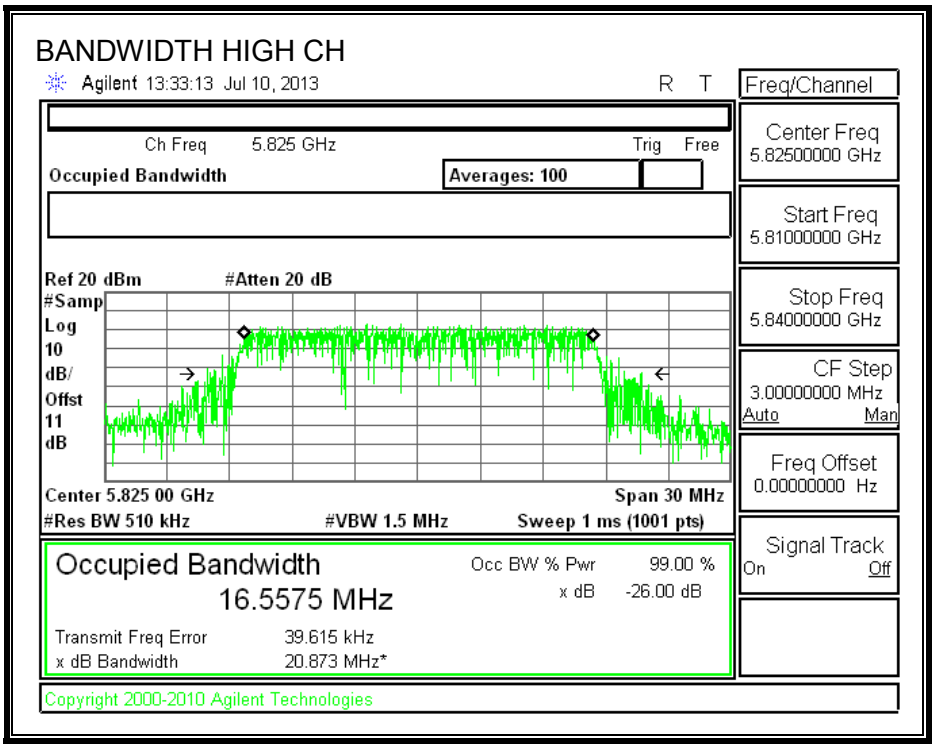
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.556
Mid	5785	16.557
High	5825	16.558

99% BANDWIDTH







9.1.1. 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 11 dB (including 10 dB pad and 1 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	5745	10.0
Mid	5785	9.8
High	5805	10.0

9.1.1. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power or peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	21.6	16.6	-1.00
Mid	5785	21.6	16.6	-1.00
High	5825	21.6	16.6	-1.00

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.19	35.19	29.19	17.00	17.00	17.00
Mid	5785	30.00	29.19	35.19	29.19	17.00	17.00	17.00
High	5825	30.00	29.19	35.19	29.19	17.00	17.00	17.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

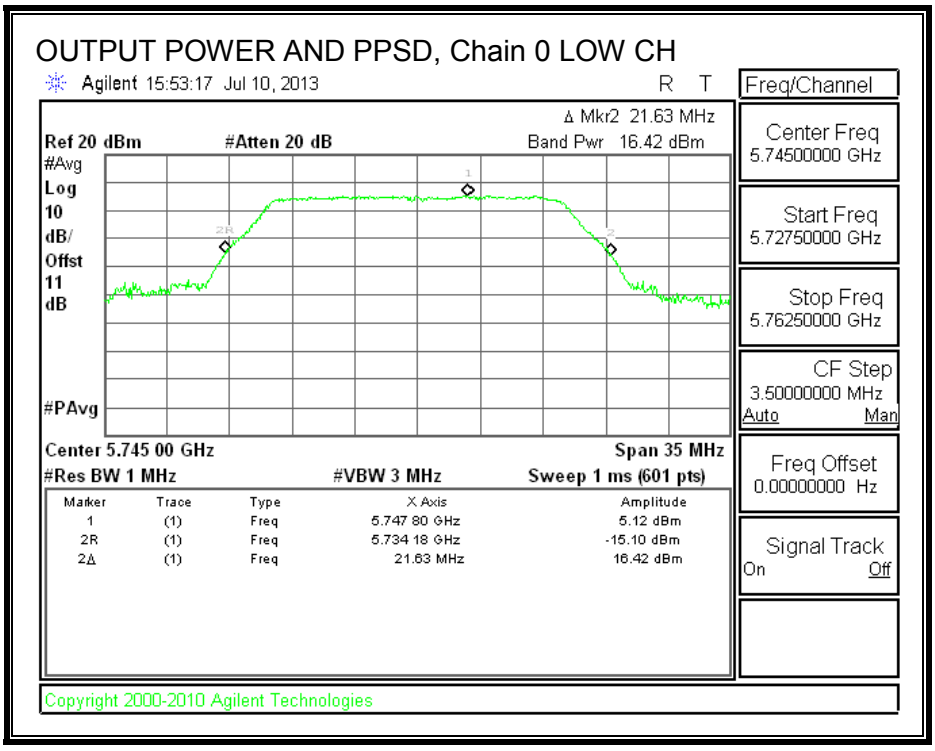
Output Power Results

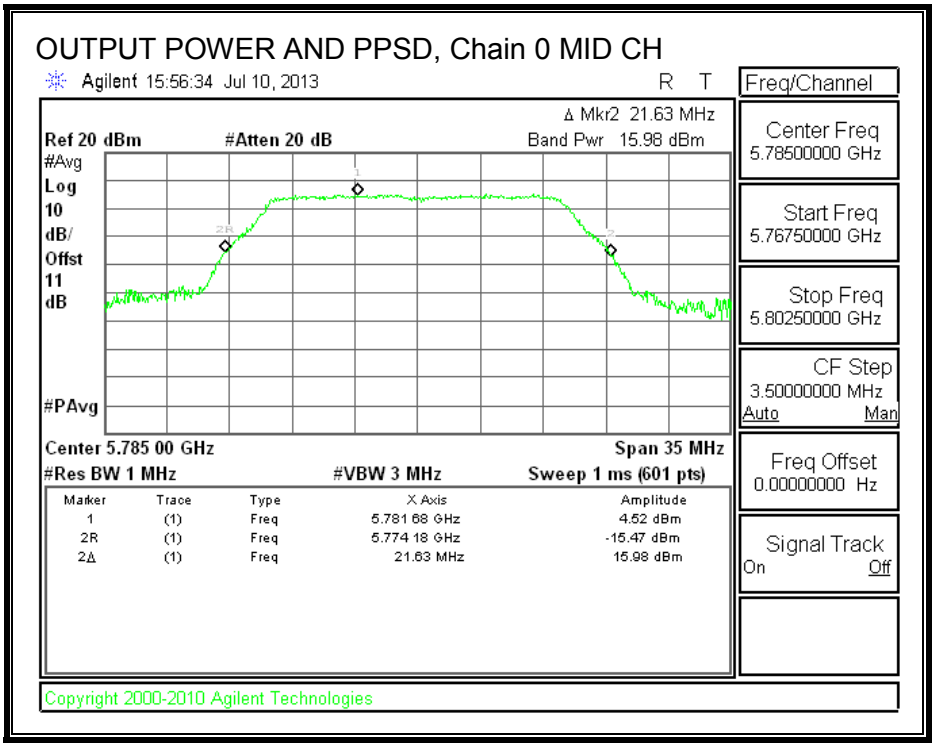
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.42	16.63	29.19	-12.56
Mid	5785	15.98	16.19	29.19	-13.00
High	5825	16.08	16.29	29.19	-12.90

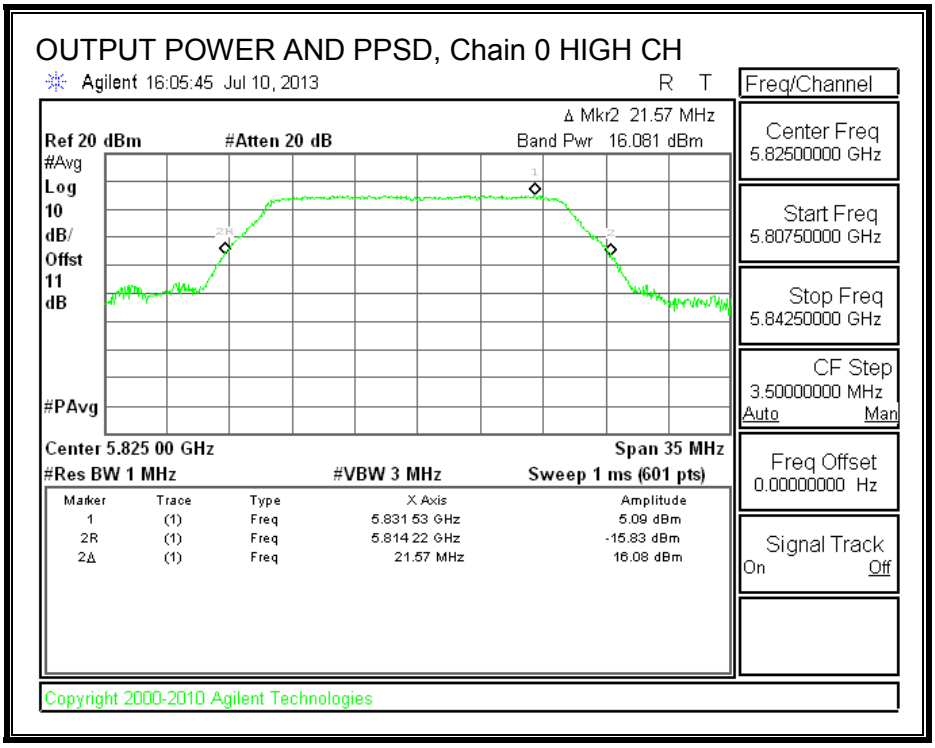
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	5.12	5.33	17.00	-11.67
Mid	5785	4.52	4.73	17.00	-12.27
High	5825	5.09	5.30	17.00	-11.70

OUTPUT POWER AND PPSD, Chain 0







9.1. 802.11n HT20 MODE IN THE 5.8 GHz BAND

9.1.1. Test Methodology

FCC KDB 644545 D02(Alternative Guidance for 802 11ac V01) was followed to test 5.8GHz DTS band under UNII band.

9.1.2. 26 dB BANDWIDTH

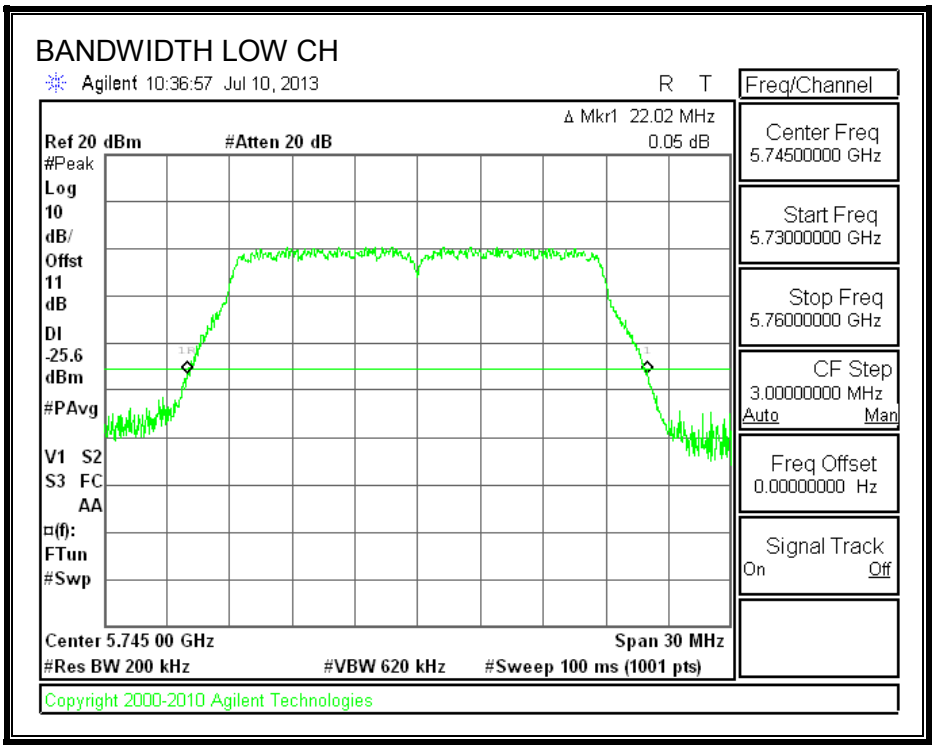
LIMITS

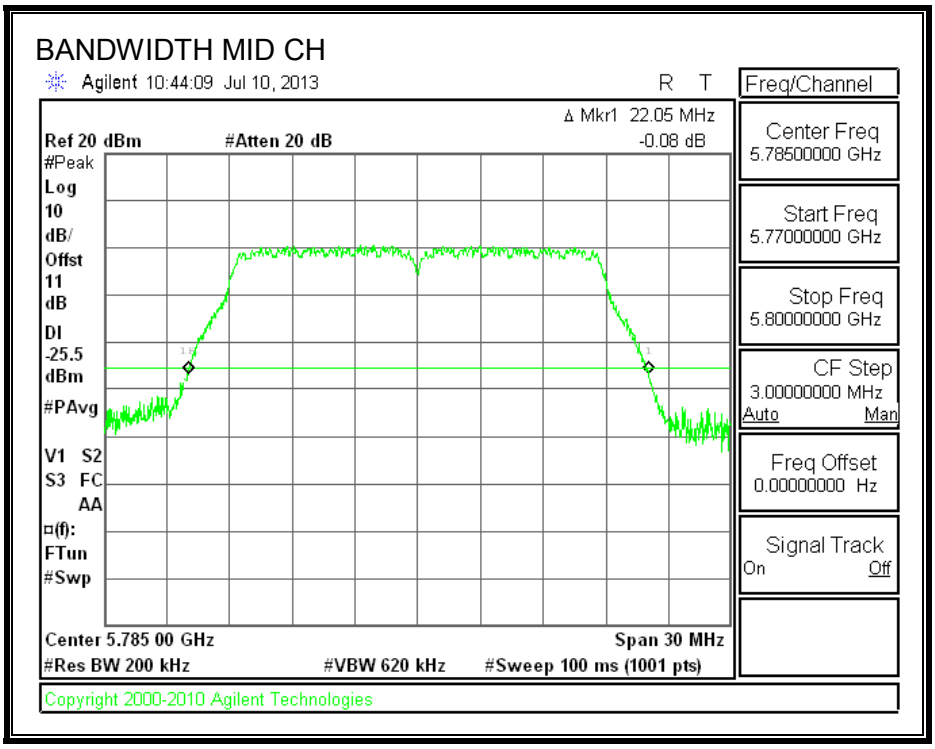
None; for reporting purposes only.

RESULTS

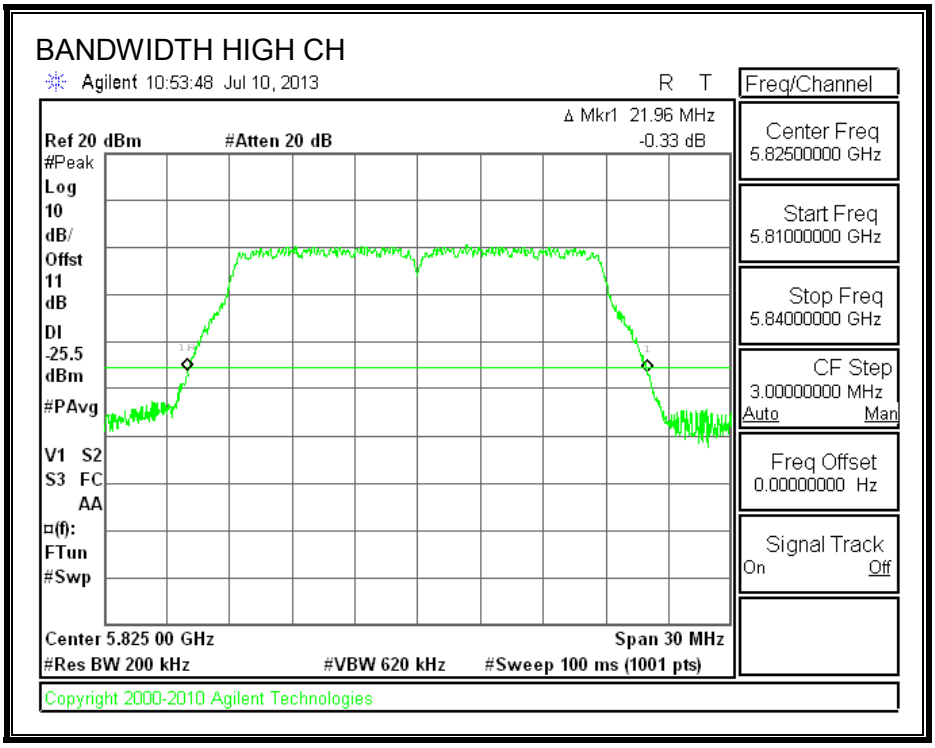
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.0
Mid	5785	22.1
High	5825	22.0

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.1.3. 99% BANDWIDTH

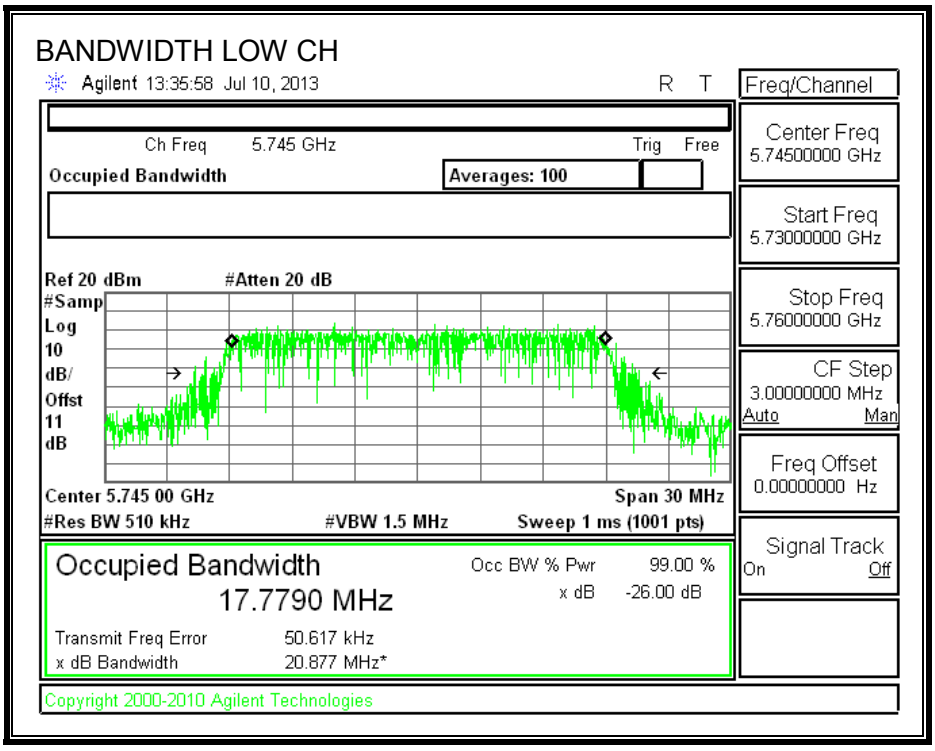
LIMITS

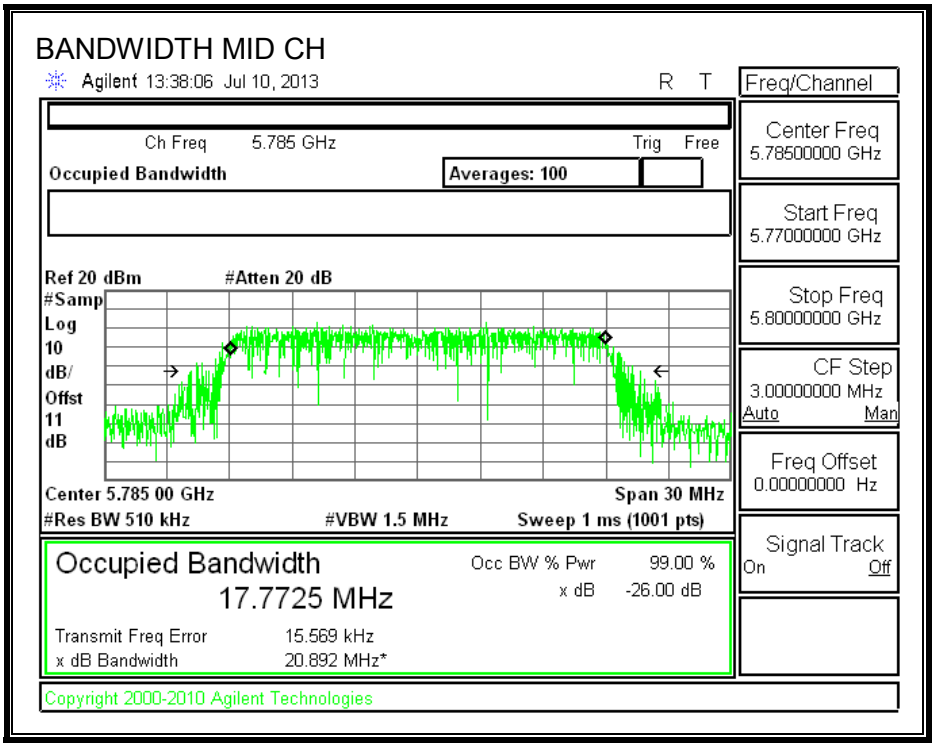
None; for reporting purposes only.

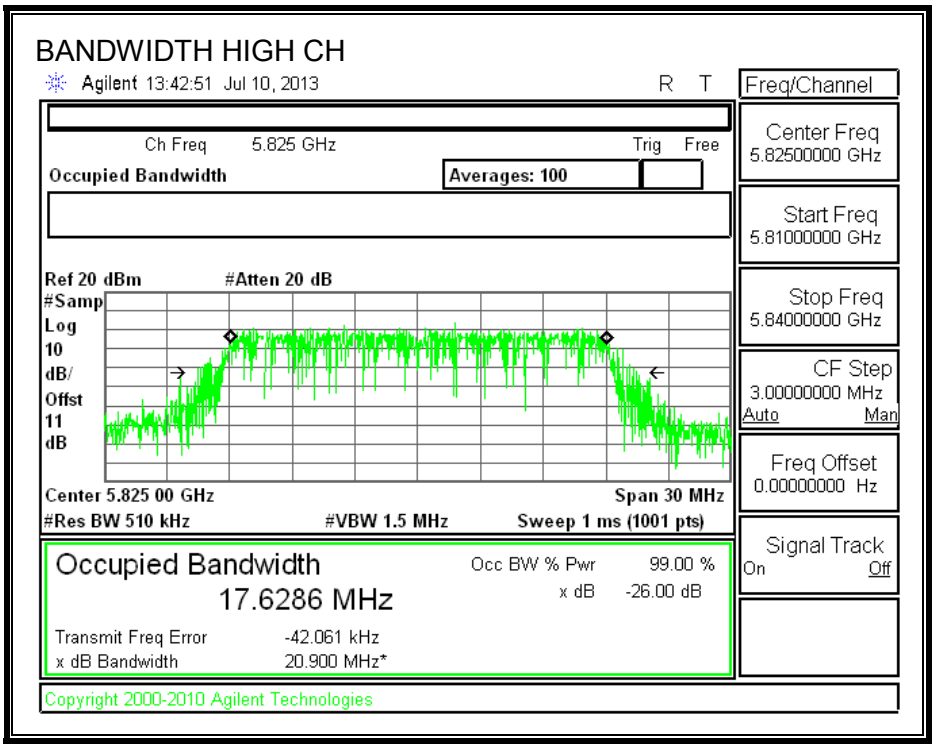
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.779
Mid	5785	17.773
High	5825	17.629

99% BANDWIDTH







9.1.1. 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 11 dB (including 10 dB pad and 1 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	5745	9.6
Mid	5785	9.5
High	5825	9.3

9.1.1. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power or peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	22.0	17.6	-1.00
Mid	5785	22.0	17.6	-1.00
High	5825	22.0	17.6	-1.00

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.46	35.46	29.46	17.00	17.00	17.00
Mid	5785	30.00	29.46	35.46	29.46	17.00	18.00	17.00
High	5825	30.00	29.46	35.46	29.46	17.00	17.00	17.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

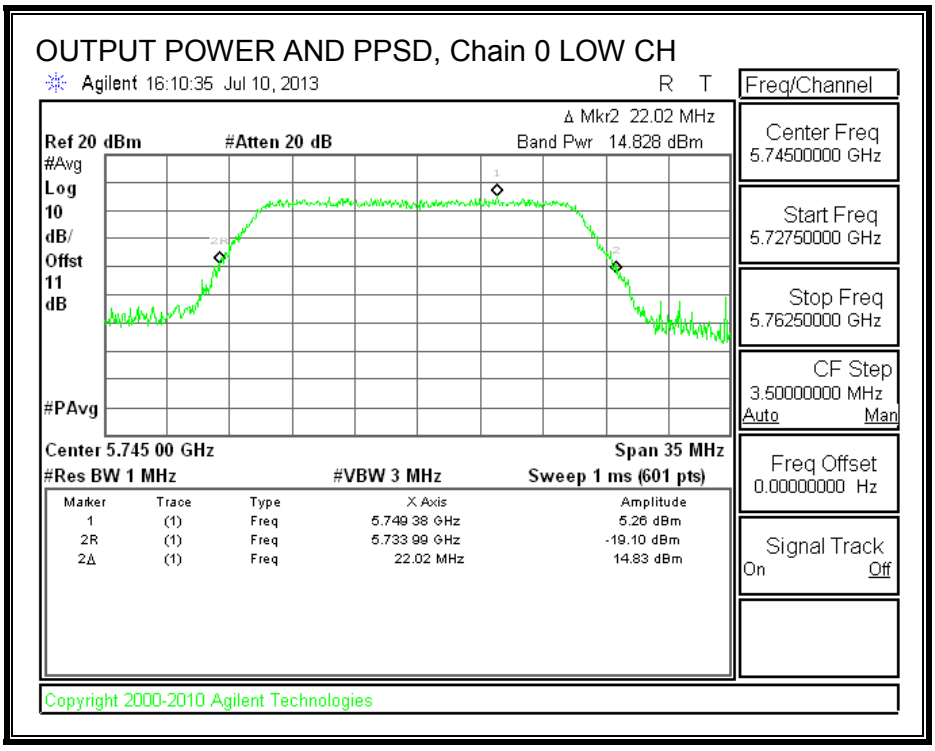
Output Power Results

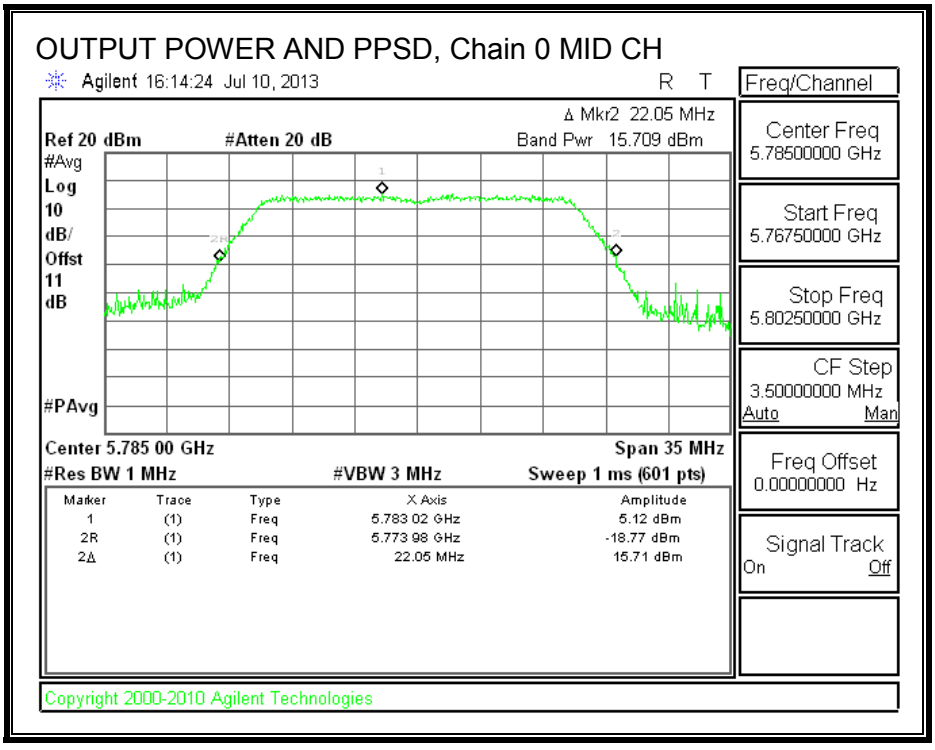
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	14.83	15.04	29.46	-14.42
Mid	5785	15.71	15.92	29.46	-13.54
High	5825	14.88	15.09	29.46	-14.37

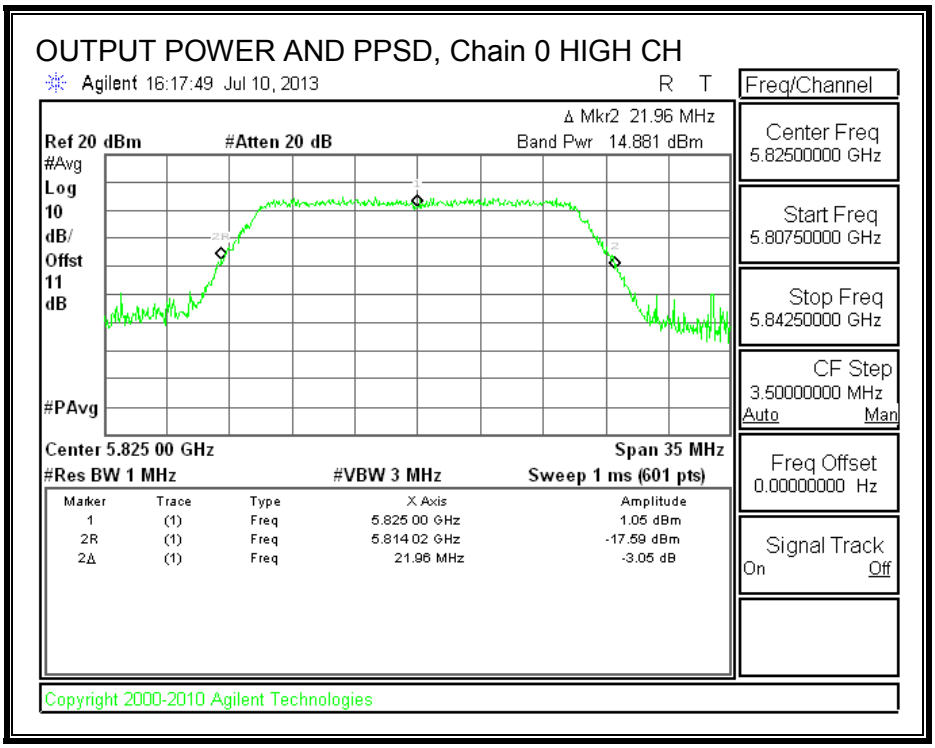
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	5.25	5.46	17.00	-11.54
Mid	5785	5.12	5.33	17.00	-11.67
High	5825	1.05	1.26	17.00	-15.74

OUTPUT POWER AND PPSD, Chain 0







9.1. 802.11n HT40 MODE IN THE 5.8 GHz BAND

9.1.1. Test Methodology

FCC KDB 644545 D02(Alternative Guidance for 802 11ac V01) was followed to test 5.8GHz DTS band under UNII band.

9.1.2. 26 dB BANDWIDTH

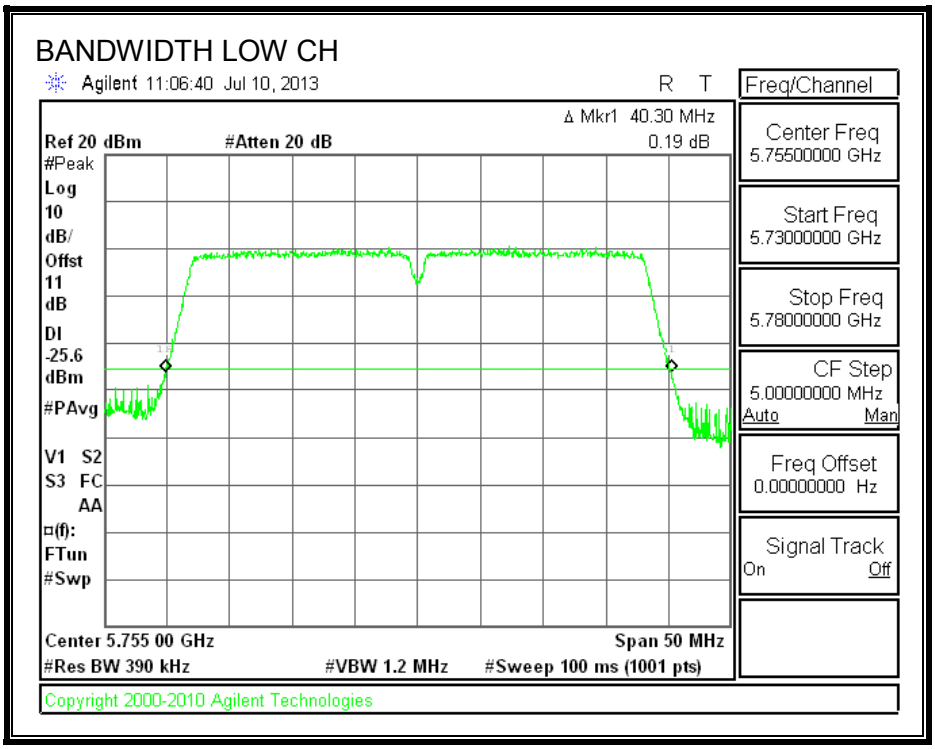
LIMITS

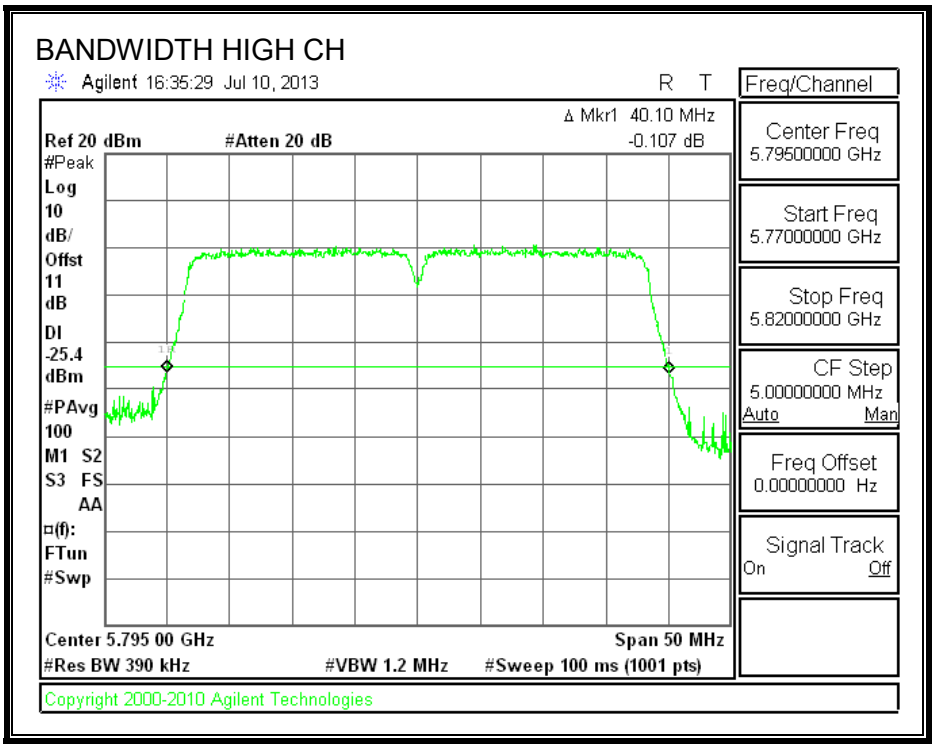
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.3
High	5795	40.1

26 dB BANDWIDTH





9.1.1. 99% BANDWIDTH

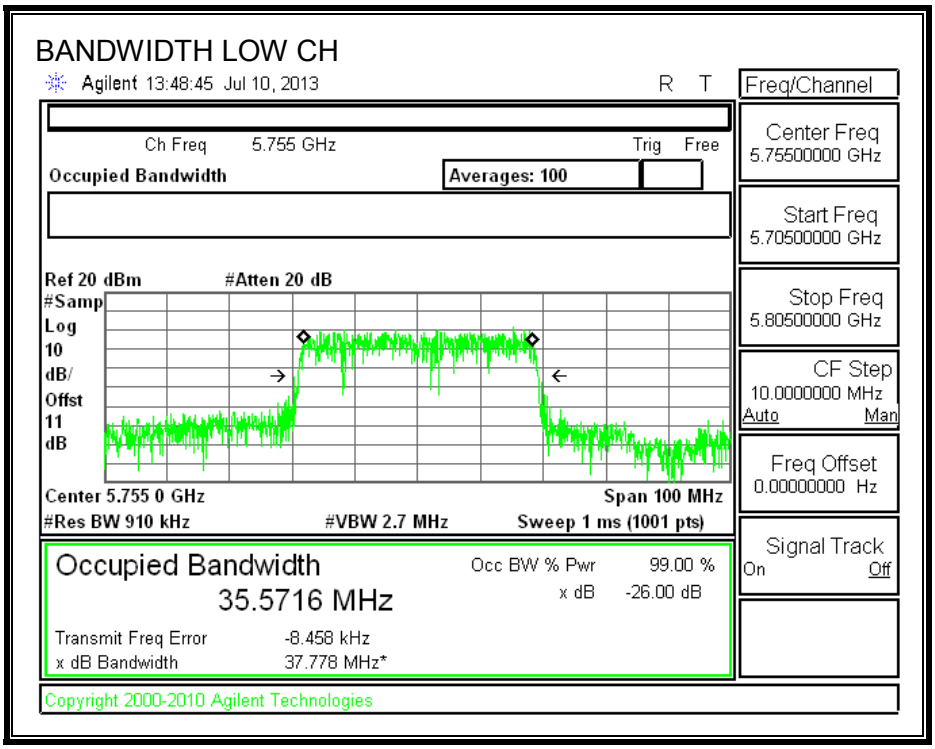
LIMITS

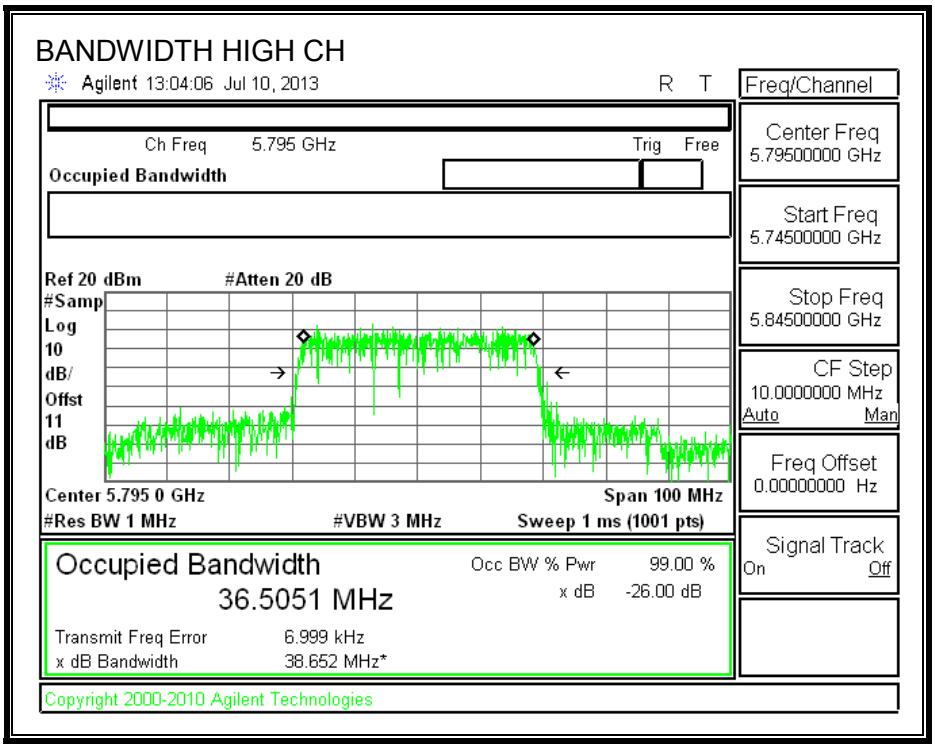
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	35.572
High	5795	36.505

99% BANDWIDTH





9.1.2. 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 11 dB (including 10 dB pad and 1 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	5755	8.7
Mid	5795	8.7

9.1.1. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power or peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5755	40.1	35.5	-1.00
High	5795	40.1	35.5	-1.00

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5755	30.00	30.00	36.00	30.00	17.00	17.00	17.00
High	5795	30.00	30.00	36.00	30.00	17.00	17.00	17.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

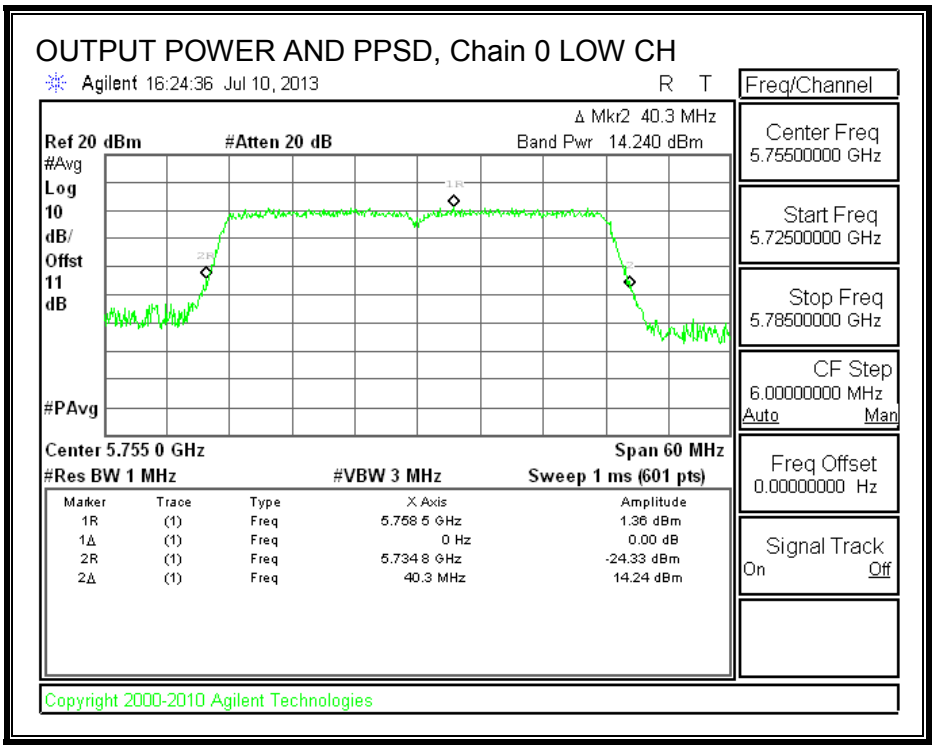
Output Power Results

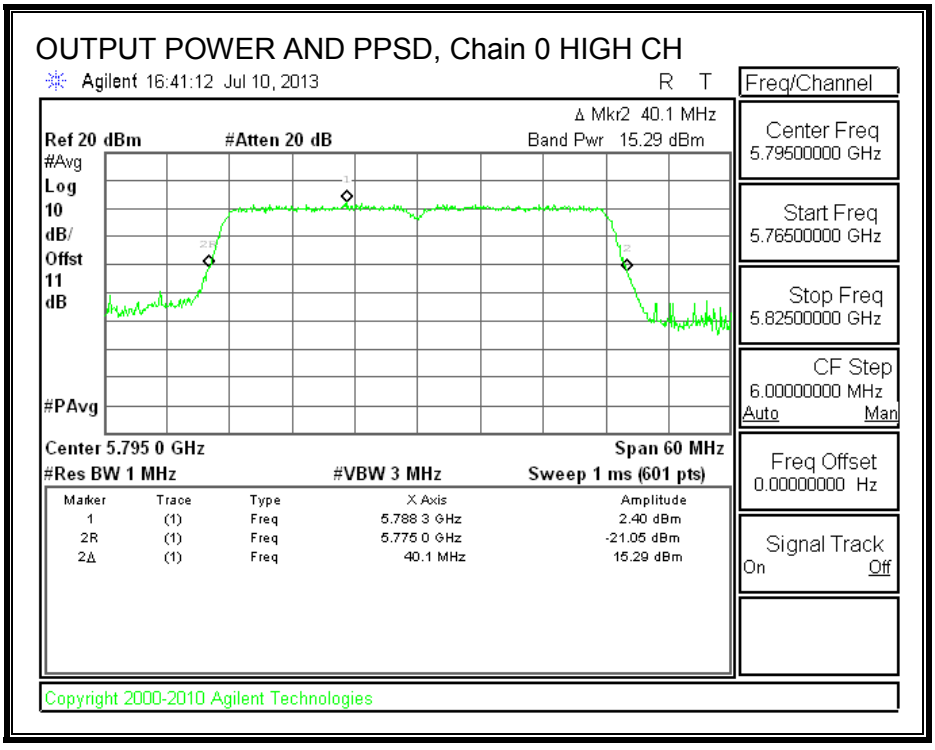
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	14.24	14.45	30.00	-15.55
High	5795	15.29	15.50	30.00	-14.50

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	1.36	1.57	17.00	-15.43
High	5795	2.40	2.61	17.00	-14.39

OUTPUT POWER AND PPSD, Chain 0





9.1. 802.11ac HT20 MODE IN THE 5.8 GHz BAND

9.1.1. Test Methodology

FCC KDB 644545 D02(Alternative Guidance for 802 11ac V01) was followed to test 5.8GHz DTS band under UNII band.

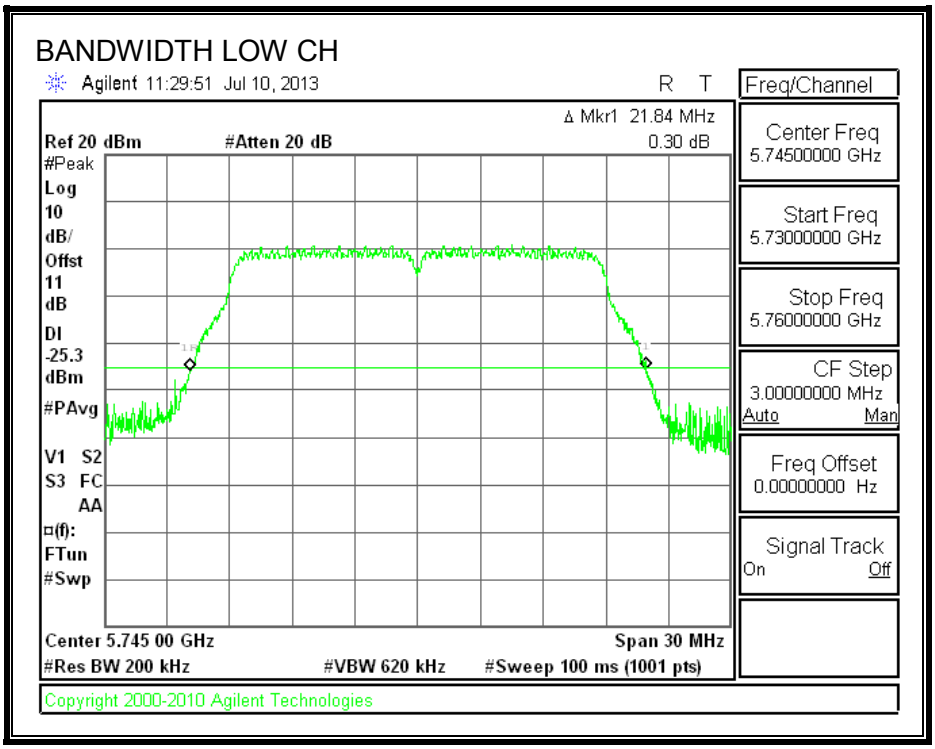
9.1.2. 26 dB BANDWIDTH

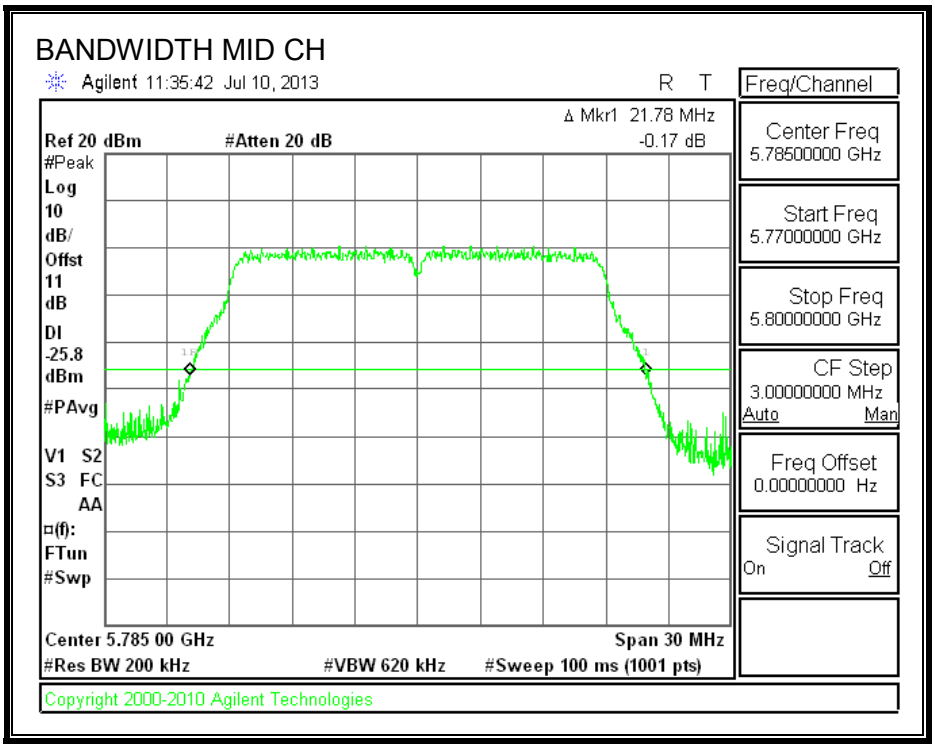
LIMITS

None; for reporting purposes only.

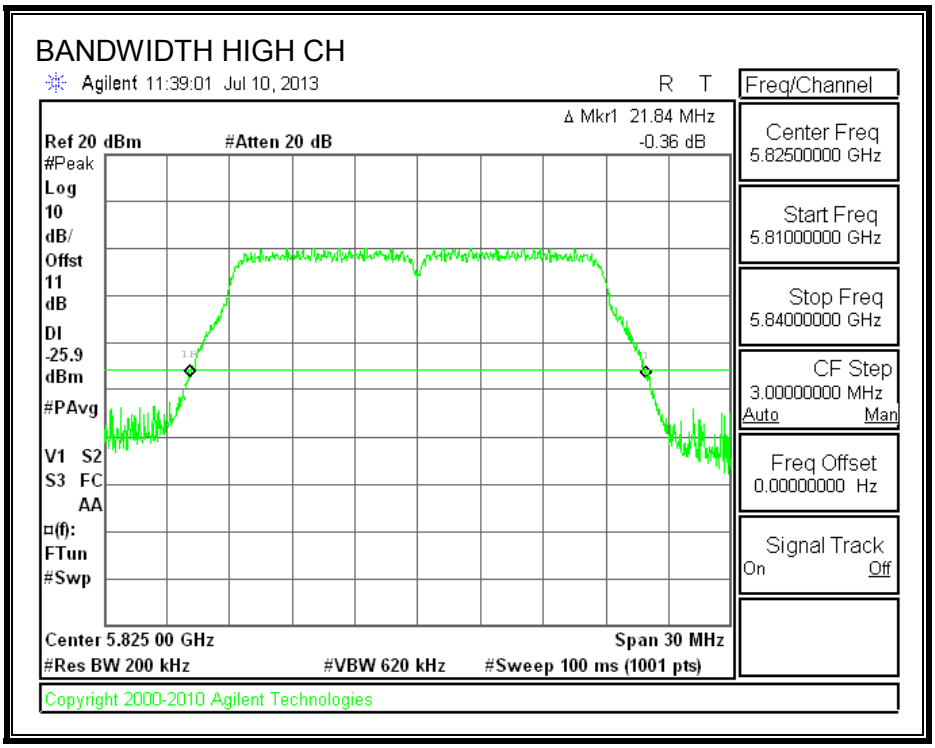
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	21.8
Mid	5785	21.8
High	5825	21.8

26 dB BANDWIDTH





BANDWIDTH HIGH CH



9.1.3. 99% BANDWIDTH

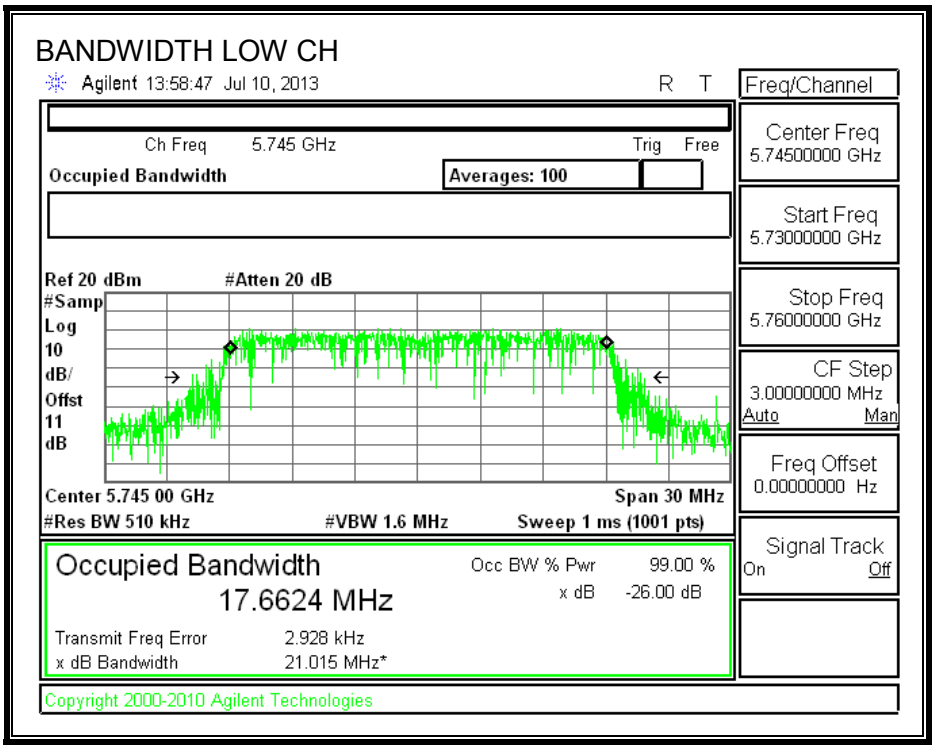
LIMITS

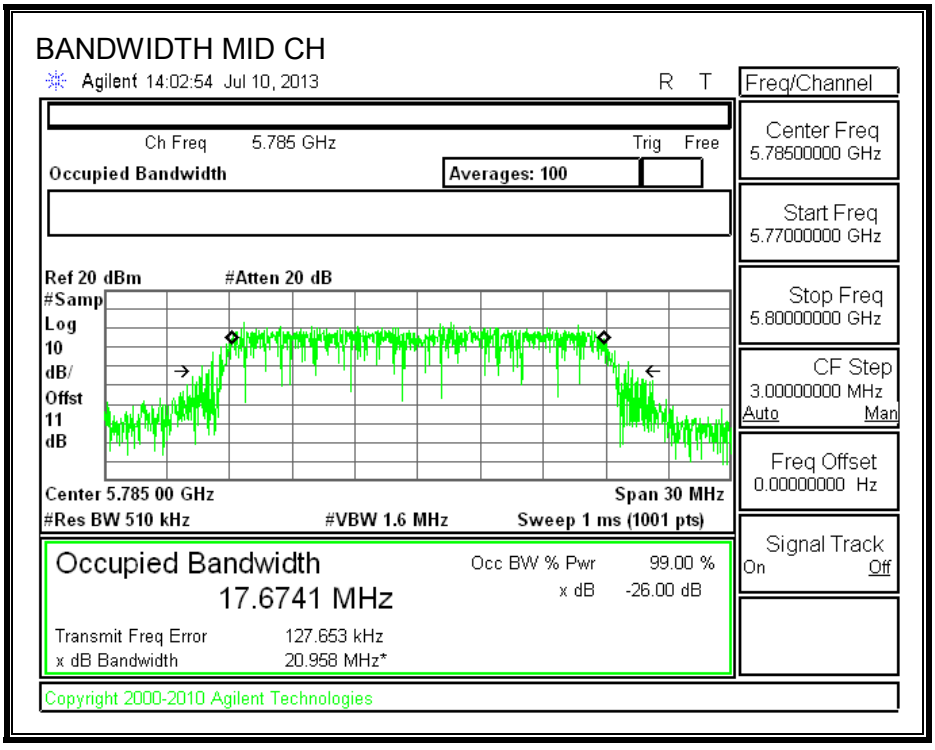
None; for reporting purposes only.

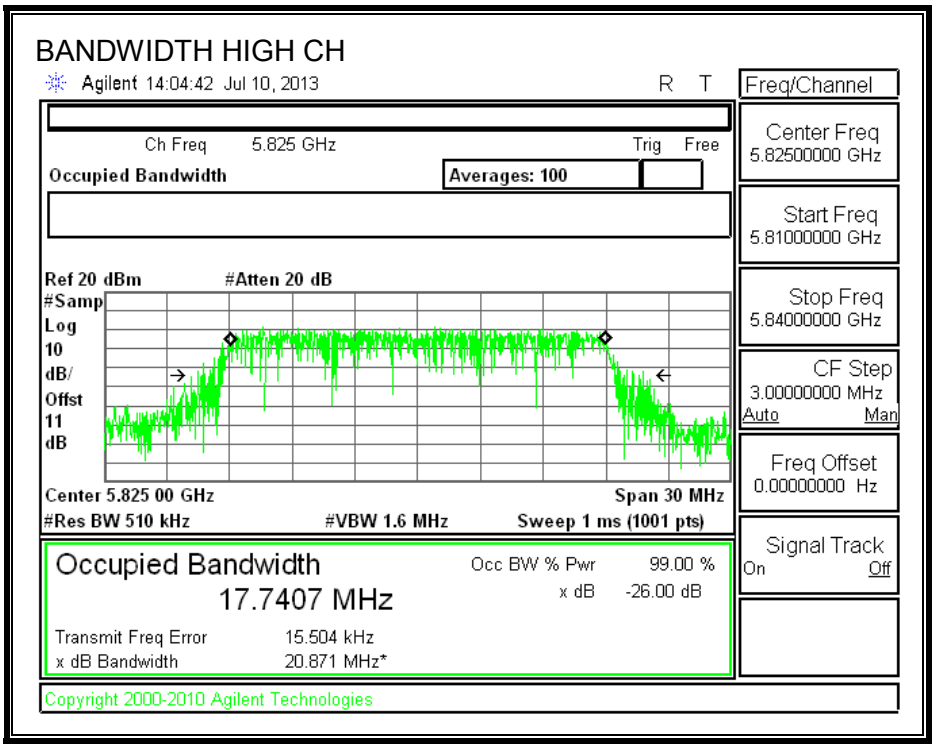
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.662
Mid	5785	17.674
High	5825	17.741

99% BANDWIDTH







9.1.1. 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 11 dB (including 10 dB pad and 1 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	5745	9.6
Mid	5785	9.5
High	5825	9.2

9.1.1. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power or peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	21.8	17.7	-1.00
Mid	5785	21.8	17.7	-1.00
High	5805	21.8	17.7	-1.00

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.47	35.47	29.47	17.00	17.00	17.00
Mid	5785	30.00	29.47	35.47	29.47	17.00	17.00	17.00
High	5805	30.00	29.47	35.47	29.47	17.00	17.00	17.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

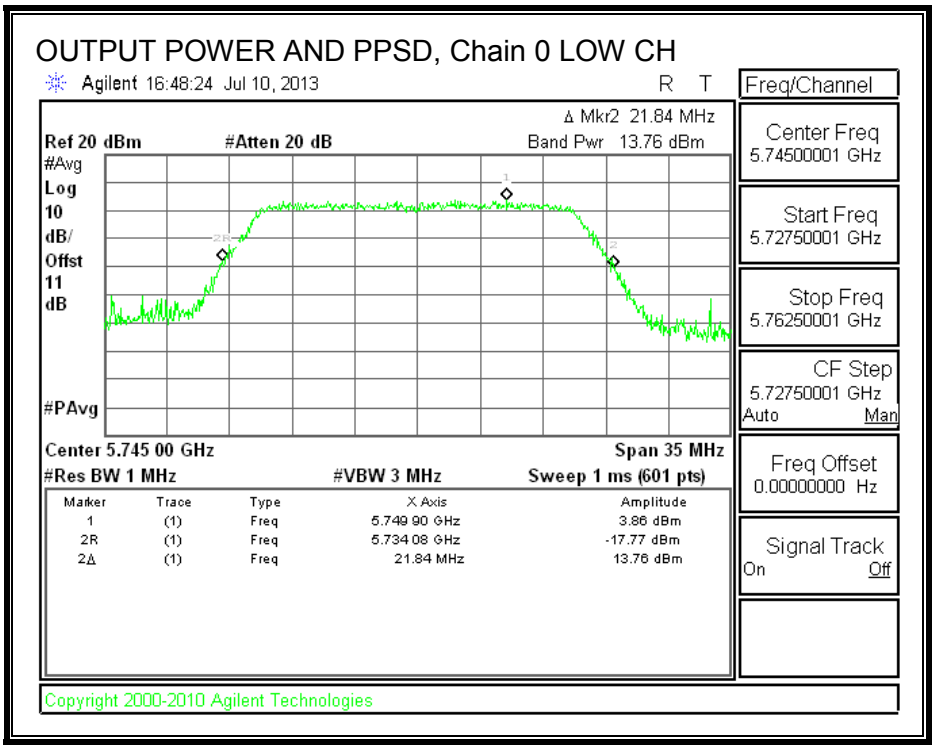
Output Power Results

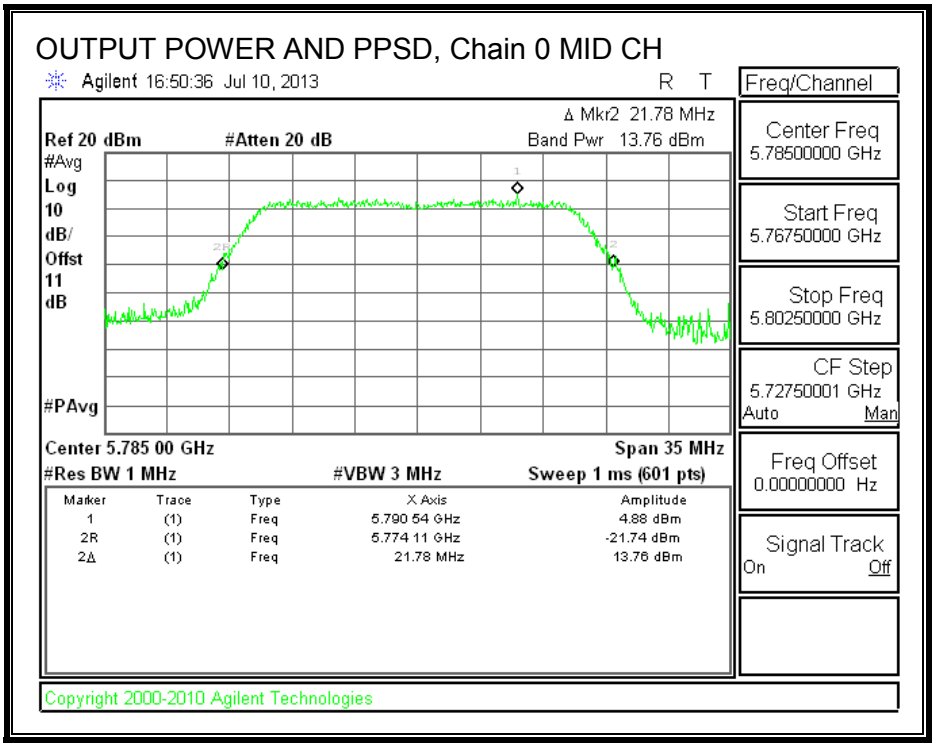
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	13.76	13.97	29.47	-15.50
Mid	5785	13.76	13.97	29.47	-15.50
High	5805	13.75	13.96	29.47	-15.51

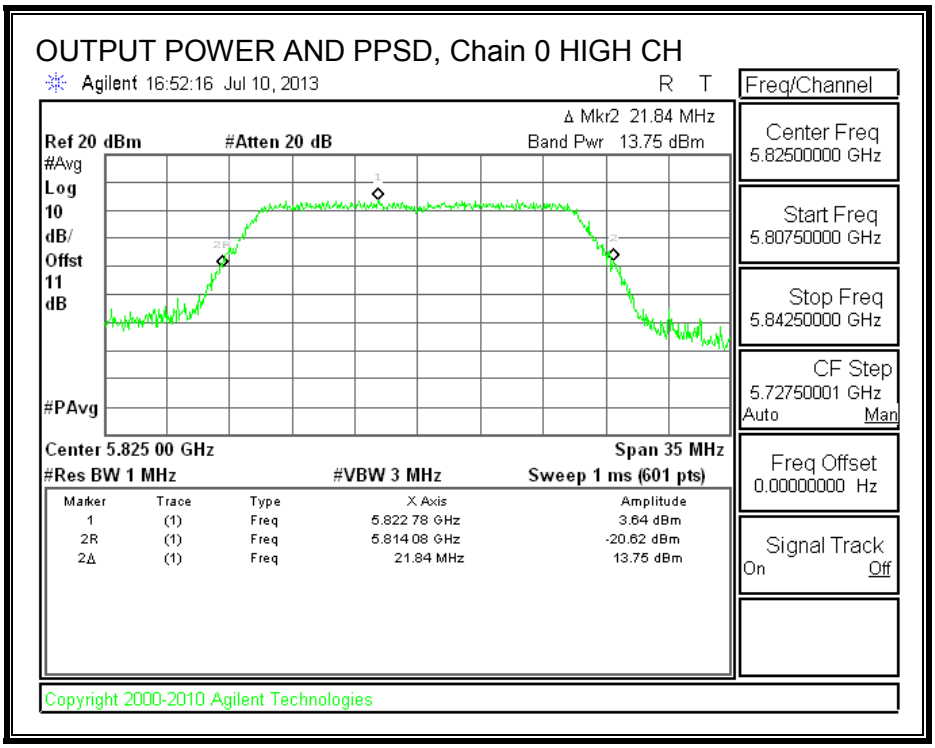
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	3.86	4.07	17.00	-12.93
Mid	5785	4.88	5.09	17.00	-11.91
High	5805	3.54	3.75	17.00	-13.25

OUTPUT POWER AND PPSD, Chain 0







9.2. 802.11ac HT40 MODE IN THE 5.8 GHz BAND

9.2.1. Test Methodology

FCC KDB 644545 D02(Alternative Guidance for 802 11ac V01) was followed to test 5.8GHz DTS band under UNII band.

9.2.2. 26 dB BANDWIDTH

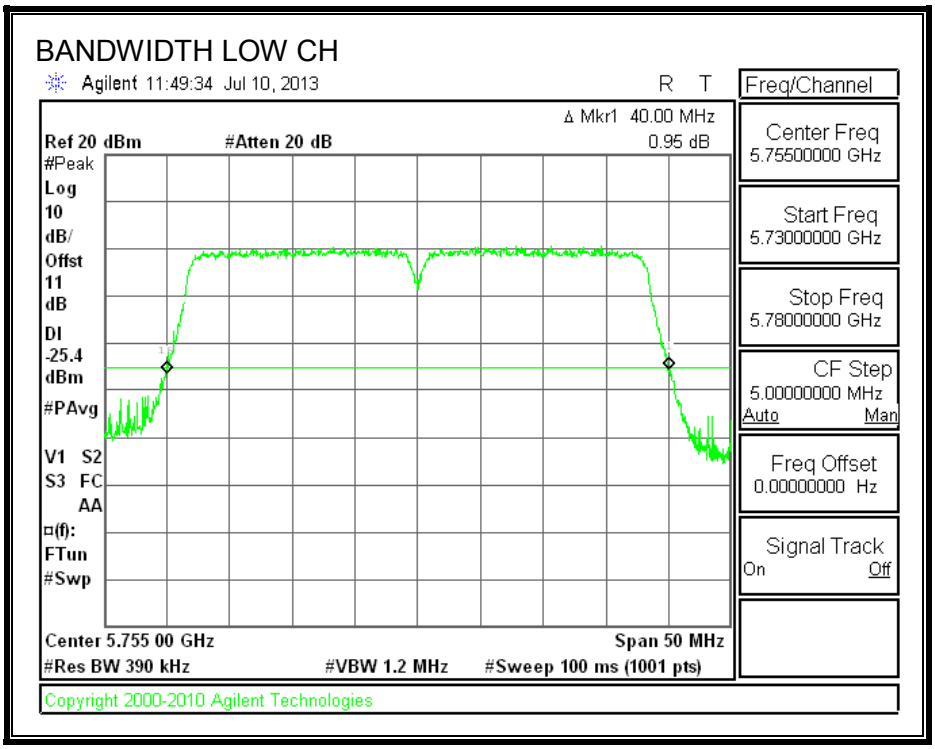
LIMITS

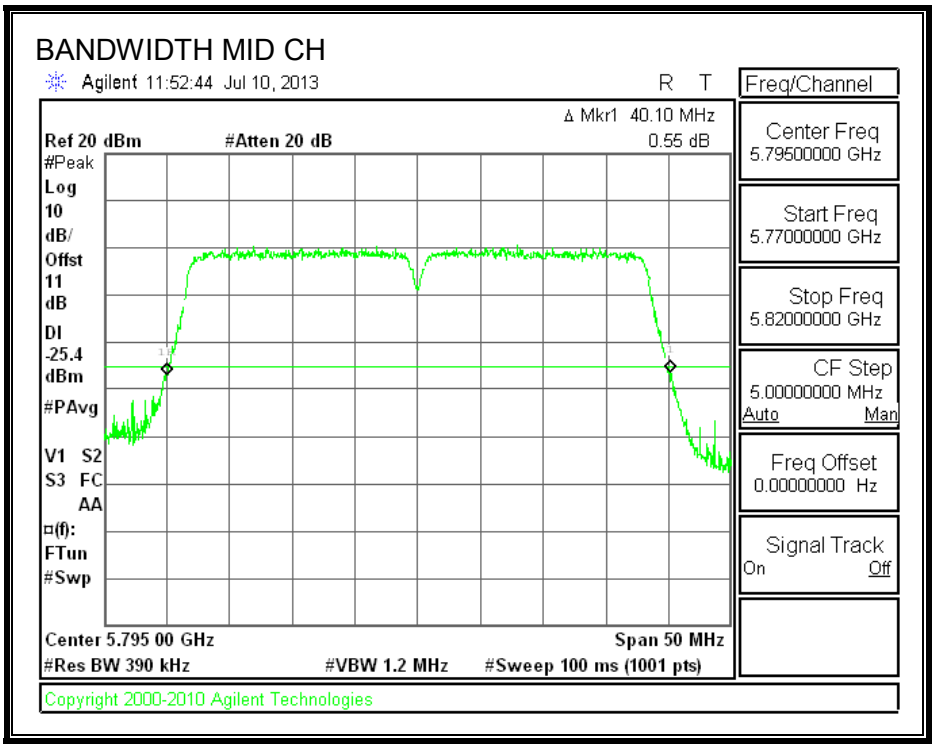
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.0
High	5795	40.1

26 dB BANDWIDTH





9.2.3. 99% BANDWIDTH

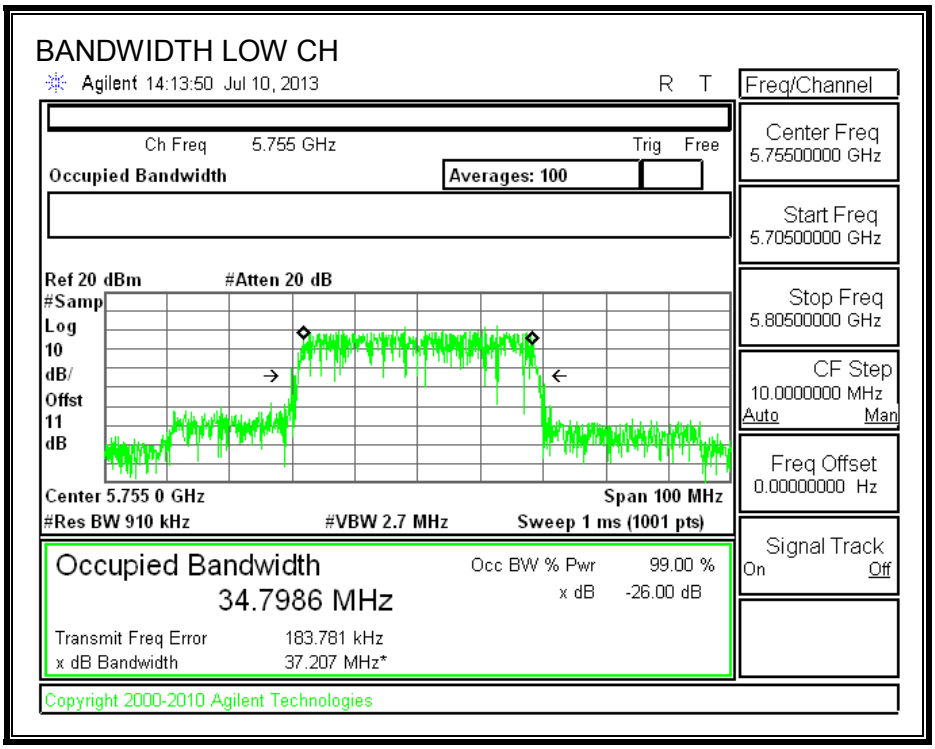
LIMITS

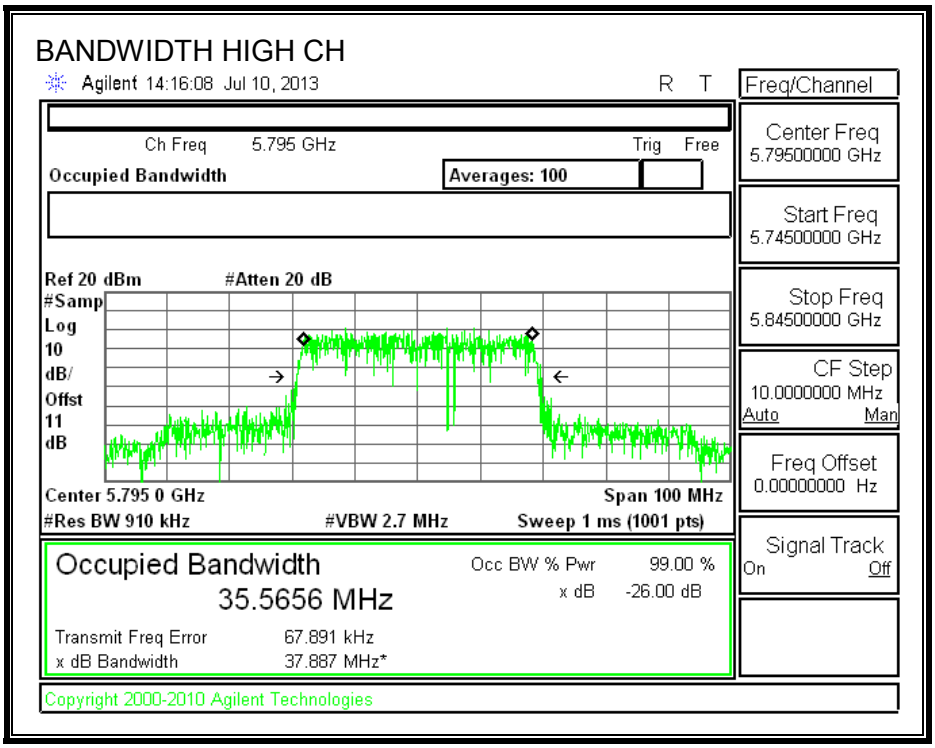
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	34.799
High	5795	35.566

99% BANDWIDTH





9.2.4. 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 11 dB (including 10 dB pad and 1 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	5755	8.7
Mid	5795	8.6

9.2.1. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power or peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5755	40.0	35.6	-1.00
High	5795	40.0	35.6	-1.00

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5755	30.00	30.00	36.00	30.00	17.00	17.00	17.00
High	5795	30.00	30.00	36.00	30.00	17.00	17.00	17.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	12.94	13.15	30.00	-16.85
High	5795	12.88	13.09	30.00	-16.91

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	0.30	0.51	17.00	-16.49
High	5795	0.17	0.38	17.00	-16.62