FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

2.4 AND 5 GHz WIRELESS MODULE

MODEL NUMBER: 416549

FCC ID: A94416549

REPORT NUMBER: 14M19686-E1 Revision B

ISSUE DATE: MAY 19, 2015

Prepared for
BOSE CORPORATION
100 THE MOUNTAIN ROAD
FRAMINGHAM, MA, 01701, USA

Prepared by
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	3/2/15	Initial Issue	F. de Anda
A	3/20/15	Updated plot on page 165	F. de Anda
B	5/19/15	Revised the EUT Description	S. Kuwatani

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TABLE OF CONTENTS

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: BOSE CORPORATION
100 THE MOUNTAIN ROAD
FRAMINGHAM, MA, 01701, USA

EUT DESCRIPTION: 2.4 and 5 GHz Wireless Module

MODEL: 416549

SERIAL NUMBER: US-1 (Conducted); IC-R1 (Radiated)

DATE TESTED: JANUARY 20 – JANUARY 27, 2015

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

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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

Approved & Released For
UL Verification Services Inc. By:

FRANCISCO DE ANDA
PROJECT LEAD
UL Verification Services Inc.

Tested By:

ERIC YU
EMC ENGINEER
UL Verification Services Inc.

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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 14-30, KDB 905462 D02 and D03, FCC KDB 789033, ANSI C63.4-2009, RSS-GEN Issue 4, 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.

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☐ Chamber A	☐ Chamber D
☐ Chamber B	☒ Chamber E
☐ Chamber C	☐ Chamber F
	☐ Chamber G
	☒ Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://ts.nist.gov/standards/scopes/2000650.htm.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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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
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 5.23 dB

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

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a 2.4 and 5 GHz Wireless Module.

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)
5180 - 5240	802.11a	15.34	34.20
5180 - 5240	802.11n HT20	15.50	35.48
5190 - 5230	802.11n HT40	14.16	26.06
5260 - 5320	802.11a	12.46	17.62
5260 - 5320	802.11n HT20	12.24	16.75
5270 - 5310	802.11n HT40	14.04	25.35
5500 - 5700	802.11a	12.72	18.71
5500 - 5700	802.11n HT20	11.28	13.43
5510 - 5670	802.11n HT40	14.69	29.44
5745 - 5825	802.11a	15.74	37.50
5745 - 5825	802.11n HT20	15.83	38.28
5755 - 5795	802.11n HT40	15.1	32.36

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a printed PCB etch antenna, with a maximum gain of 4.0 dBi.

EUT has two antenna ports. Port 0 and 1, Port 1 is used for SISO modes. All 5 GHz Bands support SISO mode only.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 8.0.3.18697.1059216

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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 X-orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X-orientation.

Worst-case data rates as provided by the client were:

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

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

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	2349CW5	PBE5C1R	N/A
AC/DC Adapter #1	Lenovo	ADLX65NLT2A	11S45N0319Z1ZLZF38M5M0	N/A
AC/DC Adapter #2	Intertek	S024RU1700100	344666-0020	N/A

I/O CABLES

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	Barrel	Un-Shielded	1.5	N/A
2	USB/Serial	1	USB	Un-Shielded	0.5	N/A
3	DC	1	Barrel	Un-Shielded	1	N/A
4	DATA	1	edge	Shielded	0.2	Ribbon cable

TEST SETUP

The EUT is a module connected to a test box and linked to host laptop computer via serial-to-USB interface. Test software exercised the radio card.

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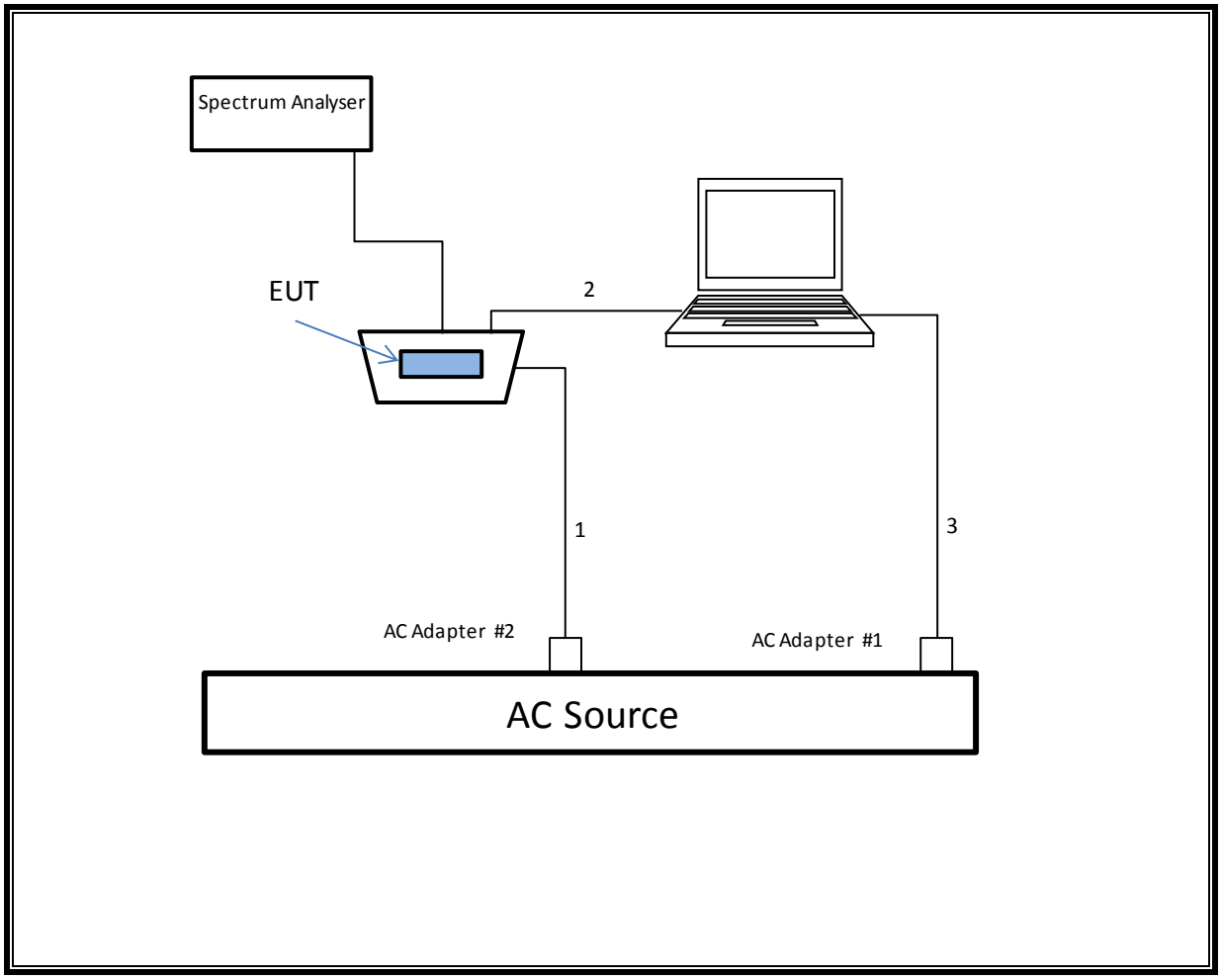
CONDUCTED PORT SETUP DIAGRAM FOR TESTS



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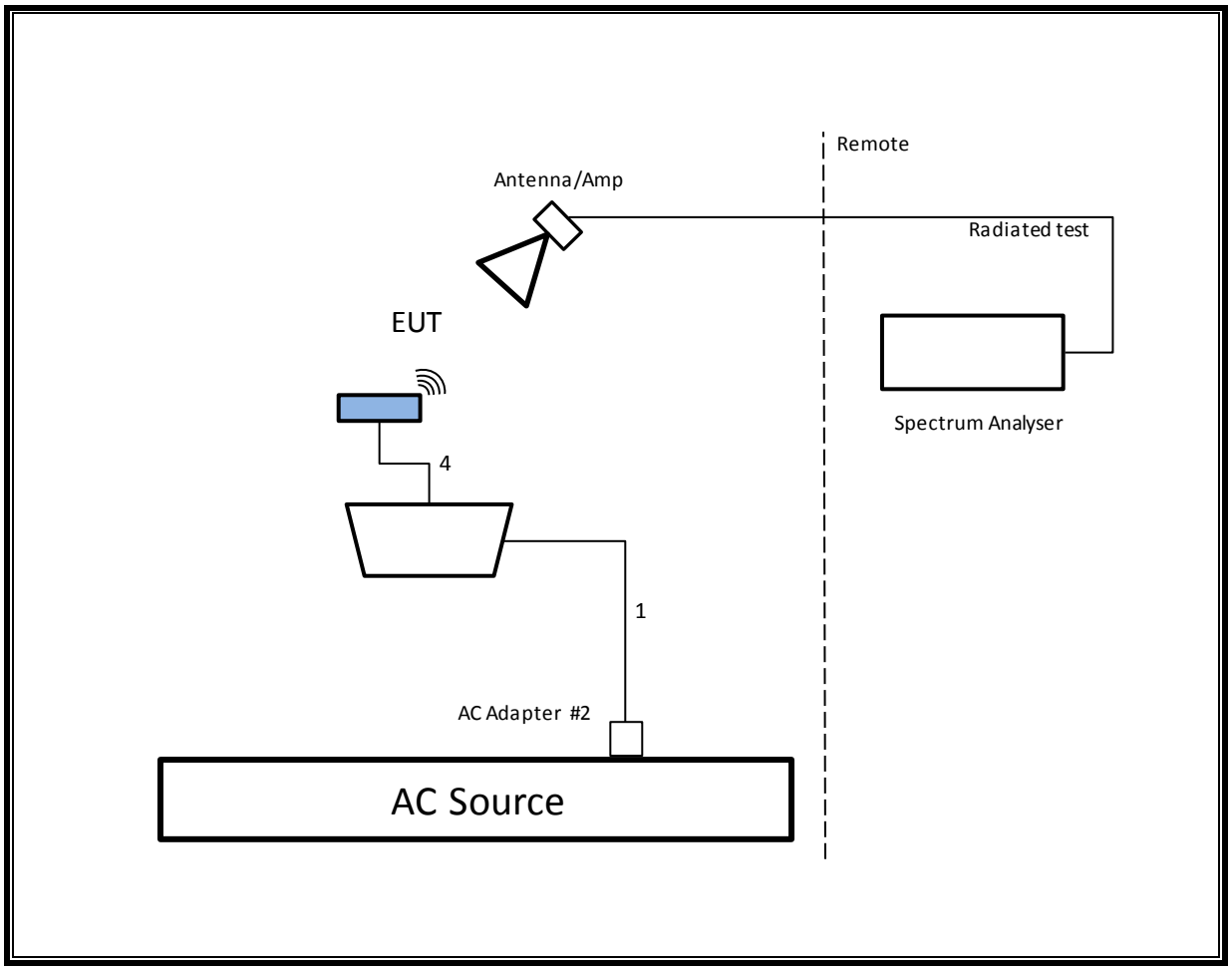
RADIATED SETUP DIAGRAM FOR TESTS



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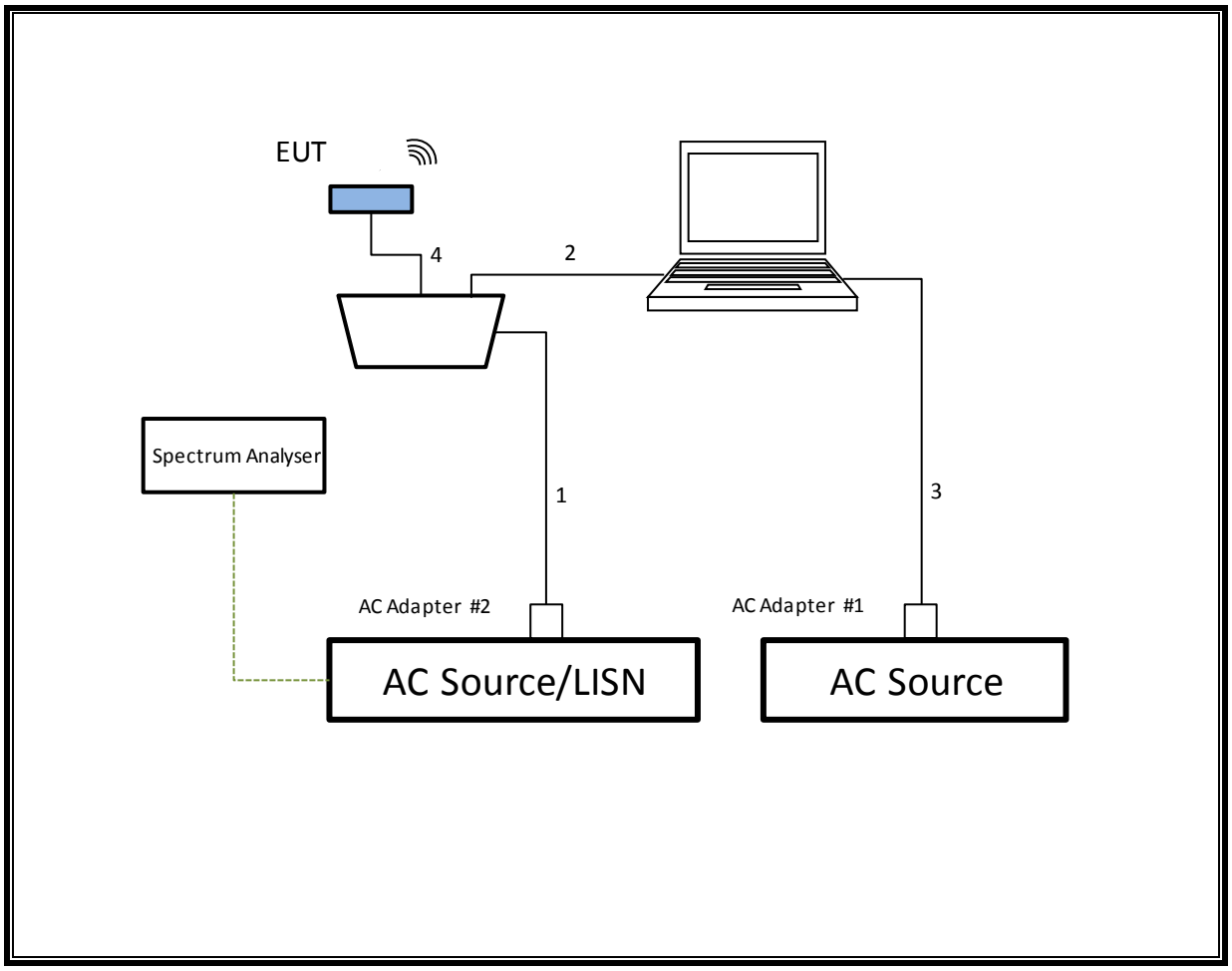
LC SETUP DIAGRAM FOR TESTS



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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**	**T No.**	**Cal Date**	**Cal Due**
Radiated					
Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014		
Antenna, Horn 18 GHz	ETS Lindgren	3117	863	04/14/14	04/14/15
Antenna, Biconolog, 30MHz-1GHz	Sunol Sciences	JB3	900	05/14/14	04/27/15
RF PreAmplifier, 1-18GHz	Miteq	AFS42-00101800-25-S-42	495	06/05/14	06/05/15
Preamp, 1000MHz	Sonoma	310N	835	06/05/14	06/05/15
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	906	05/07/14	05/07/15
Antenna, Horn 18 to 26.5GHz	ARA	SWH-28	T125	05/09/14	05/09/15
Amp. 26GHz	Agilent	8449B	T404	03/25/14	03/25/15
Antenna, Horn 26 to 40GHz	ARA	MWh-2640	T90	07/15/14	07/15/15
Amp. 26 to 40GHz	Miteq	NSP4000-SP2	T88	09/03/14	09/03/15
Spectrum Analyzer, 40 GHz	HP	8564E	T106	08/06/14	08/06/15
Conducted					
Spectrum Anaylyzer	Agilent	E4440A	189	05/09/14	05/09/15
Power Meter, P-series single channel	Agilent	N1911A	382	04/09/14	04/09/15
Power Sensor, Peak and average, 50 MHz to 6 GHz, 5 MHz BW	Agilent	E9323A	400	05/02/14	05/02/15
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/16/15	01/16/16

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7. MEASUREMENT METHODS

26 dB Emission BW: KDB 789033 D02 v01r, Section C.

99% Occupied BW: KDB 789033 D02 v01, Section D.

Conducted Output Power: KDB 789033 D02 v01, Section E.3.a (Method PM).

Power Spectral Density: KDB 789033 D02 v01, Section F.

Unwanted emissions in restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, and G.5.

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8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

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/B Minimum VBW (kHz)
802.11a 1TX	0.412	0.806	0.511	51.12%	2.91	2.427
802.11n HT20 1TX	0.288	0.574	0.502	50.17%	3.00	3.472
802.11n HT40 1TX	0.284	0.561	0.506	50.62%	2.96	3.521

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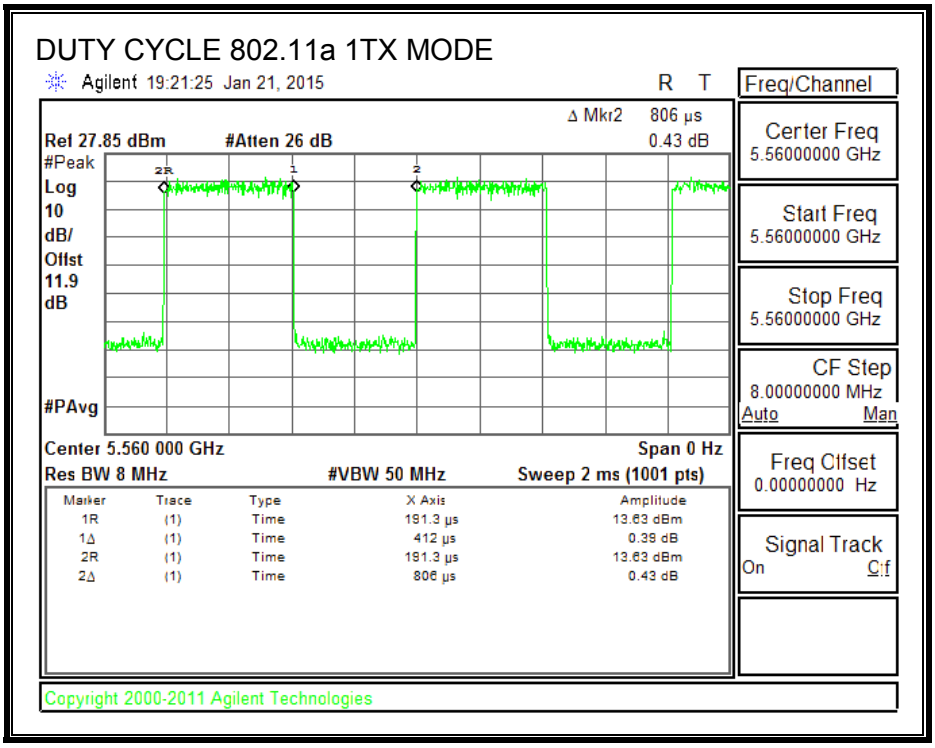
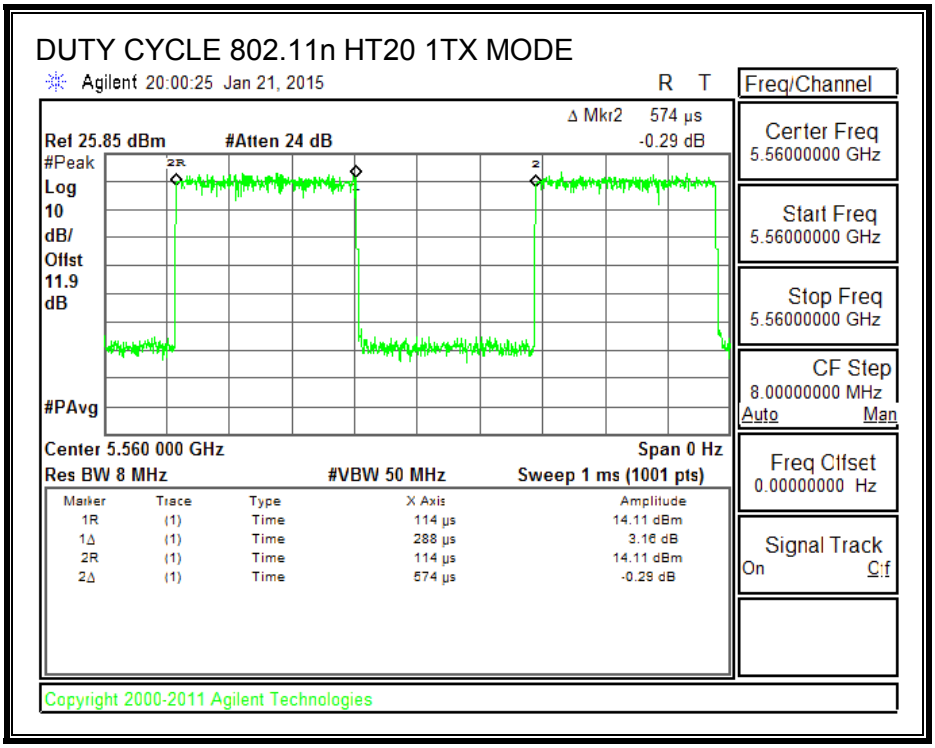
DUTY CYCLE PLOTS





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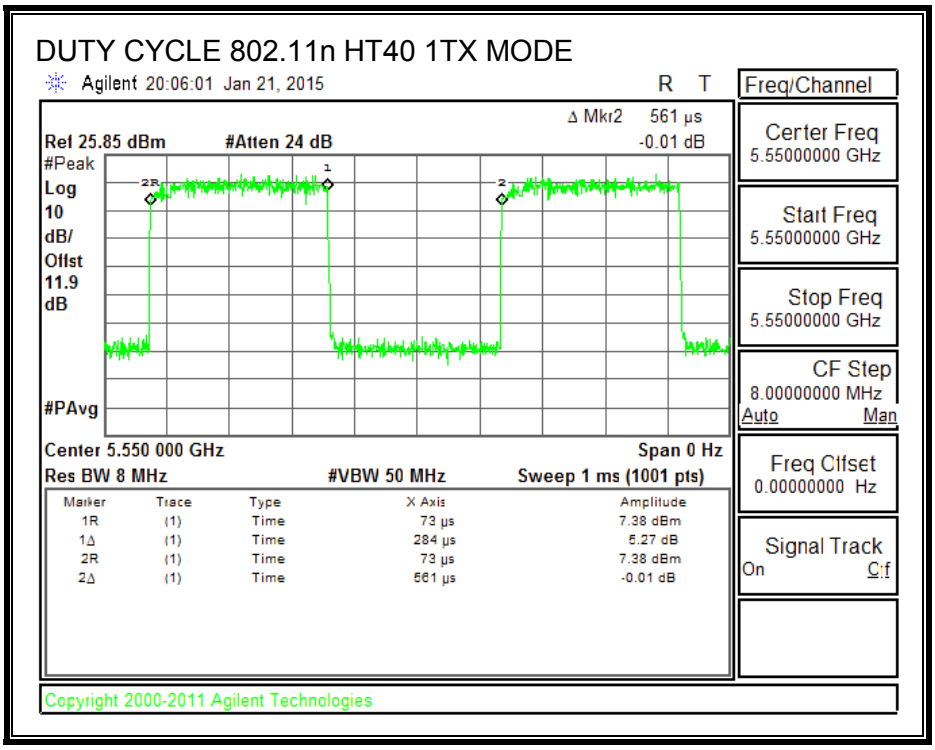

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8.2. 802.11a MODE IN THE 5.2 GHz BAND

8.2.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	24.78
Mid	5200	28.32
High	5240	27.76

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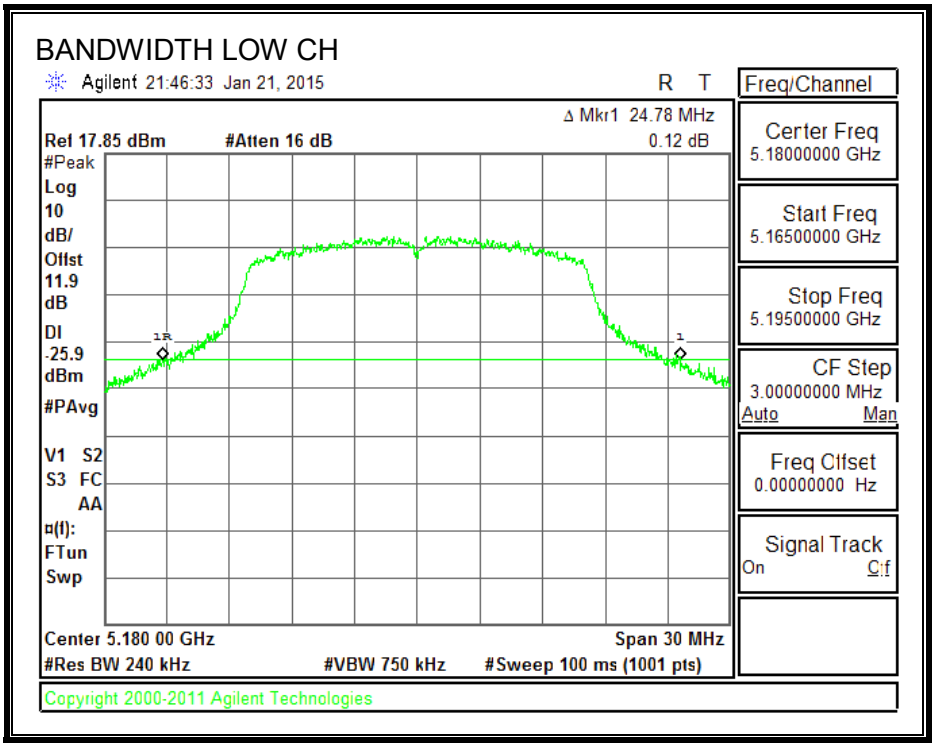
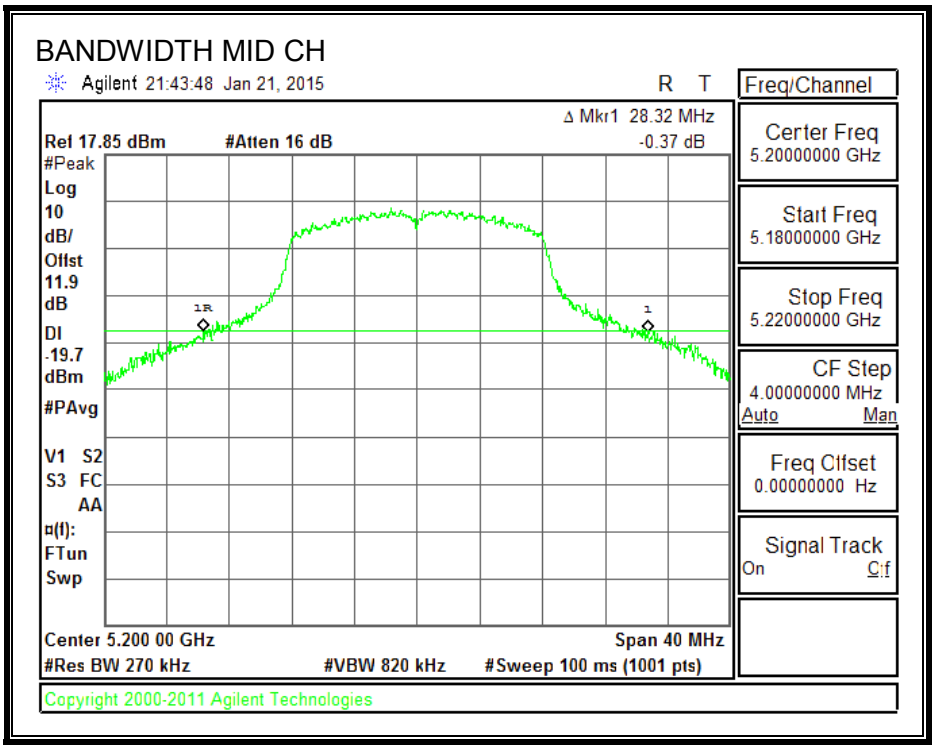
26 dB BANDWIDTH





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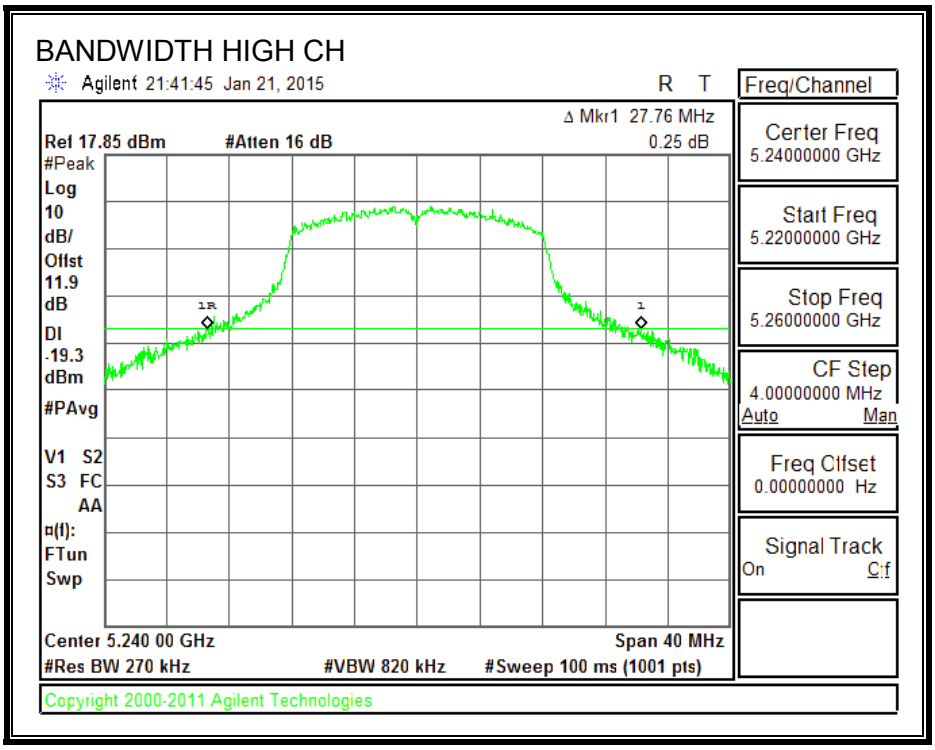

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8.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.3014
Mid	5200	16.3167
High	5240	16.3179

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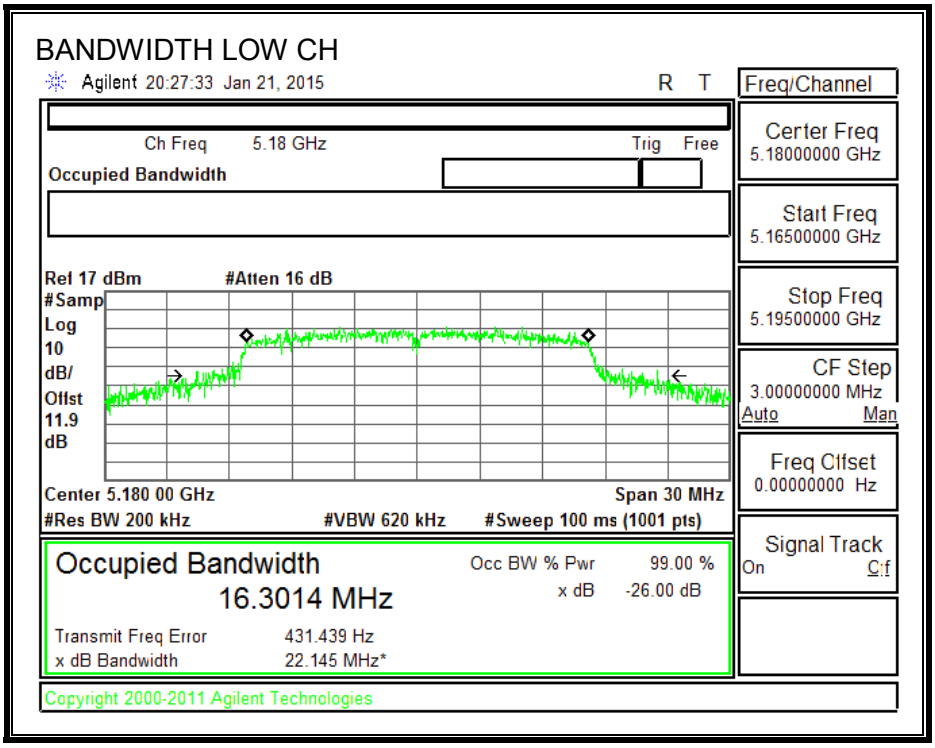
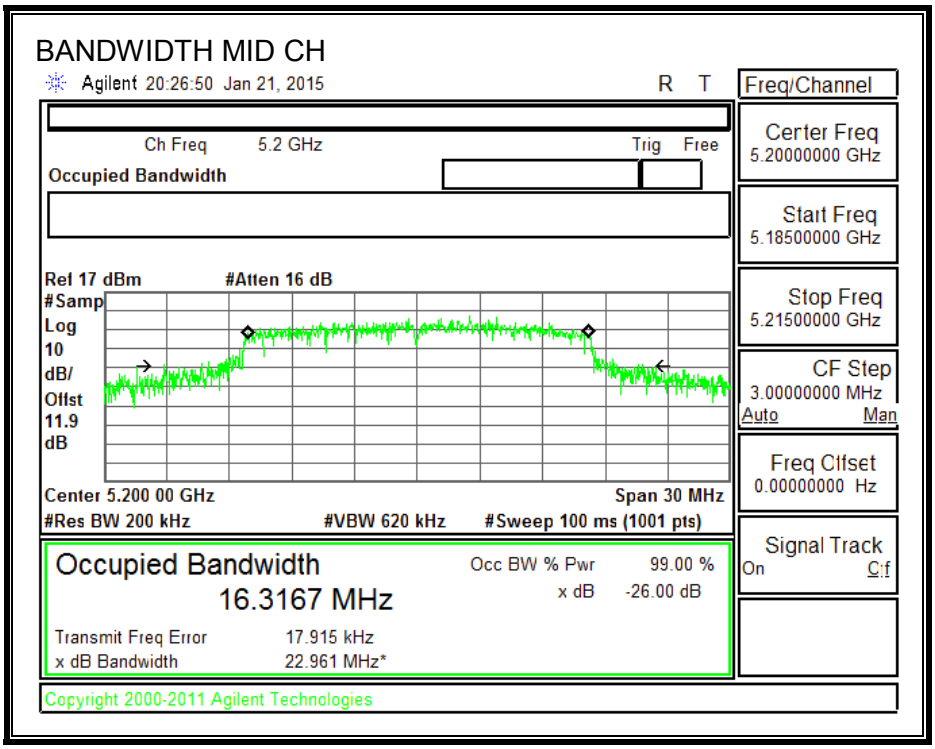
99% BANDWIDTH





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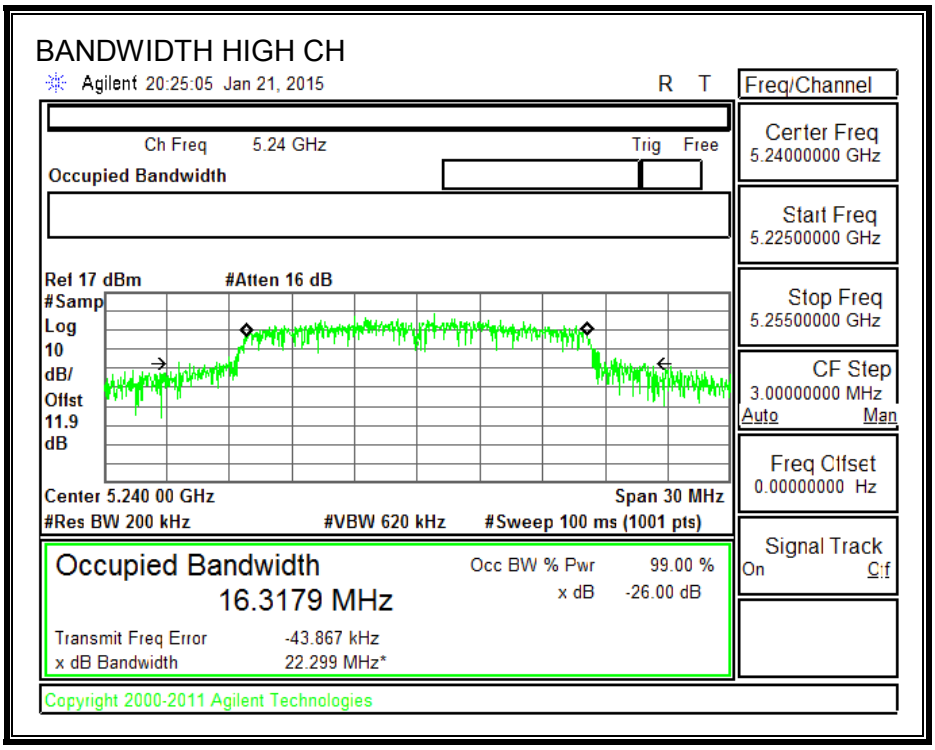

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8.2.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5180	4.00	4.00	24.00	11.00
Mid	5200	4.00	4.00	24.00	11.00
High	5240	4.00	4.00	24.00	11.00

Duty Cycle CF (dB)	2.91	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	6.78	9.69	24.00	-14.31
Mid	5200	12.33	15.24	24.00	-8.76
High	5240	12.43	15.34	24.00	-8.66

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5180	-2.49	0.42	11.00	-10.58
Mid	5200	2.82	5.73	11.00	-5.27
High	5240	2.76	5.67	11.00	-5.33

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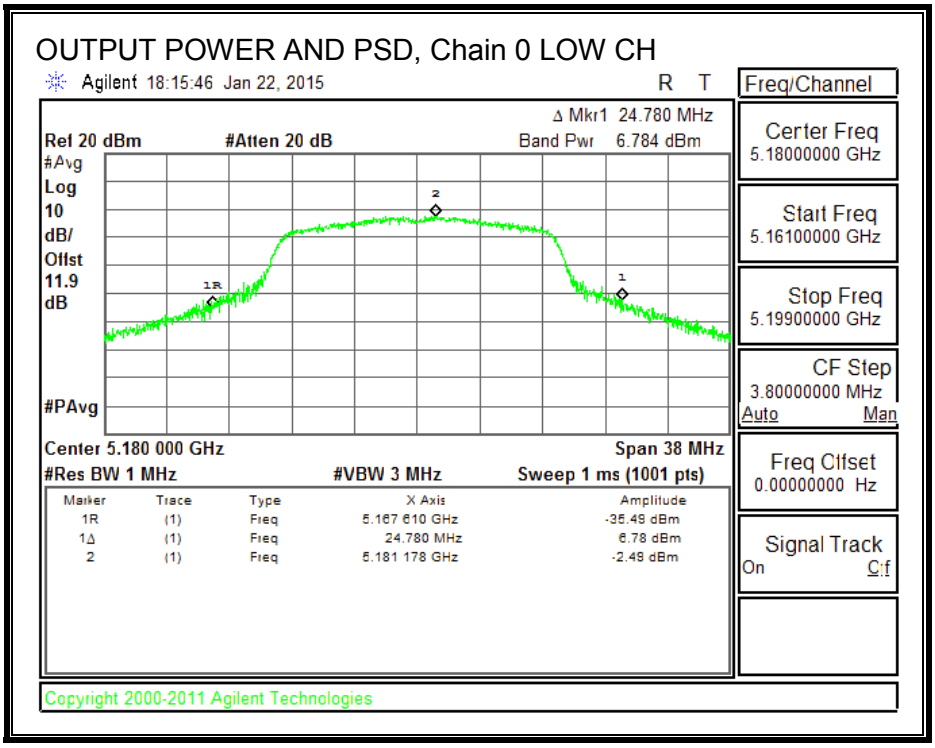
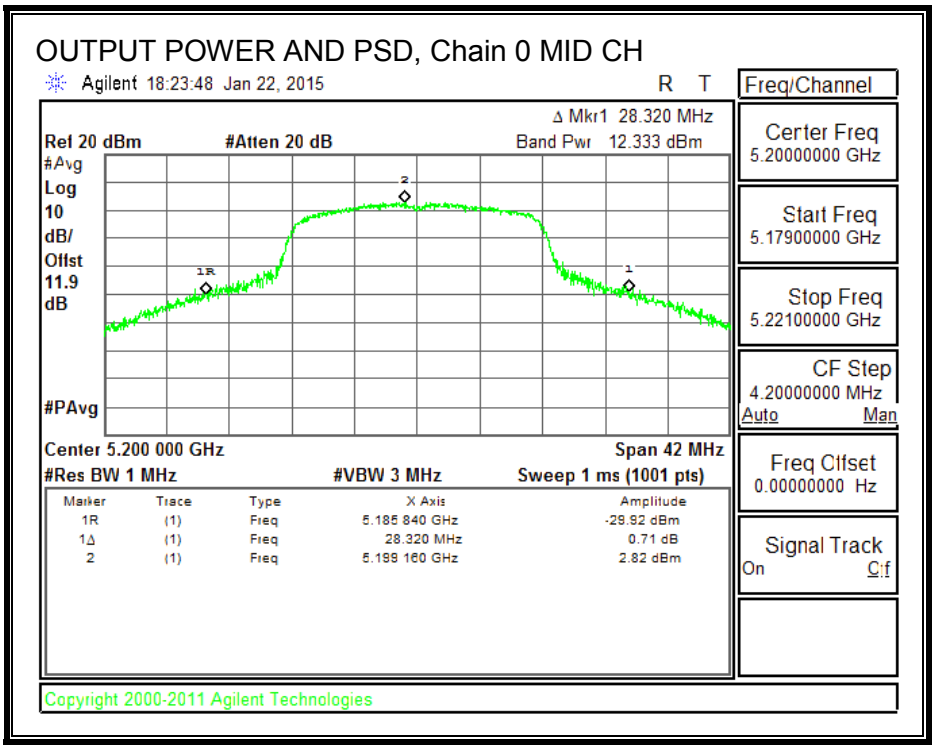
OUTPUT POWER AND PSD, Chain 0





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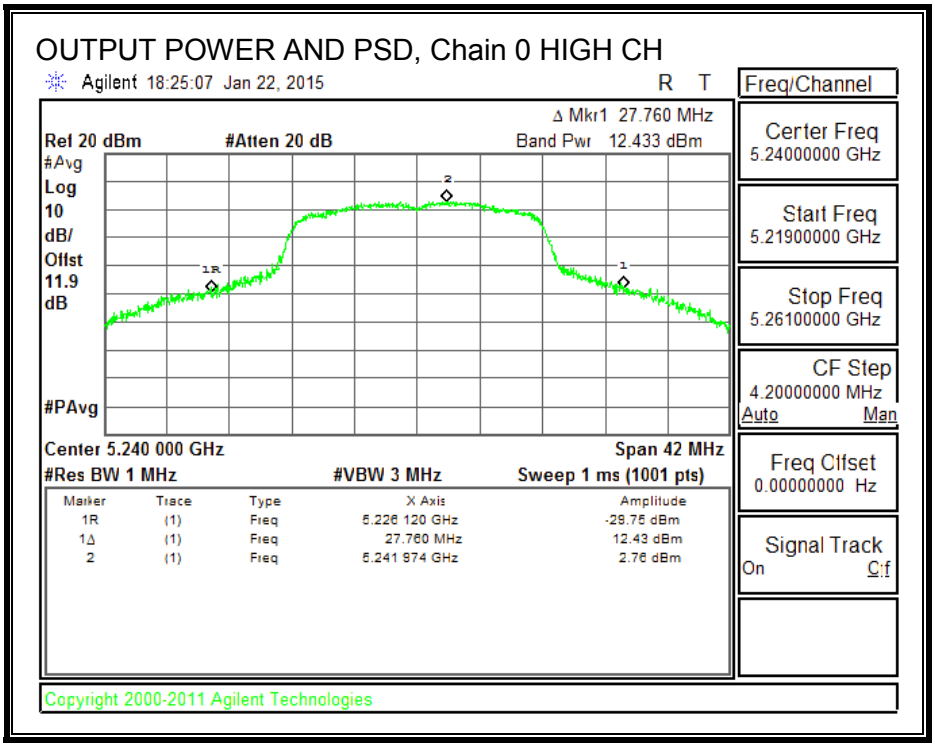

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8.3. 802.11n HT20 MODE IN THE 5.2 GHz BAND

8.3.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	25.26
Mid	5200	30.40
High	5240	29.96

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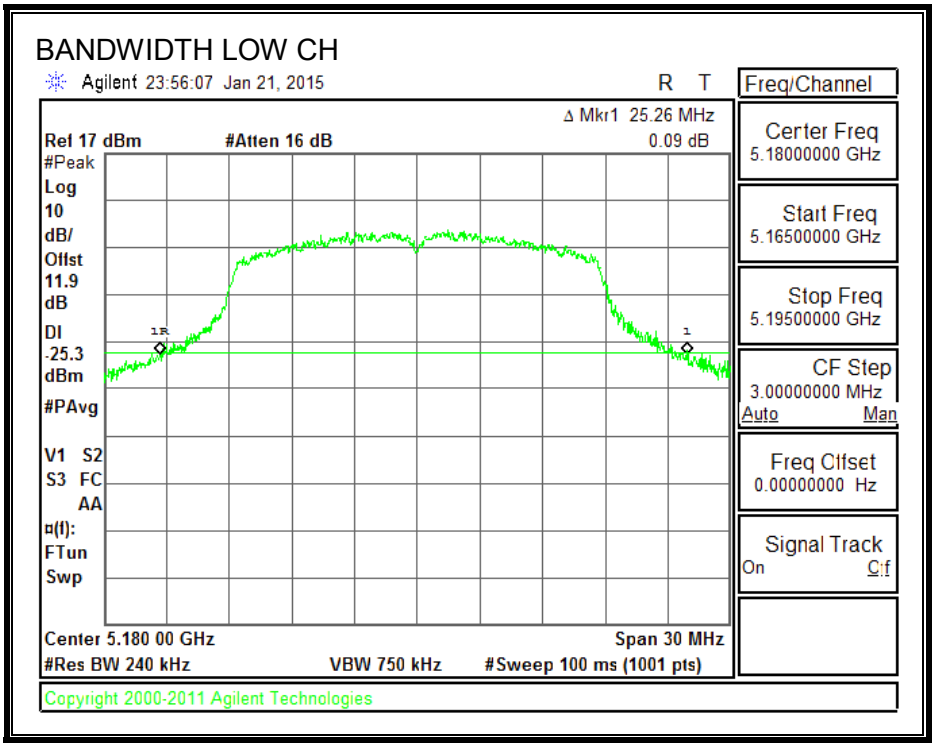
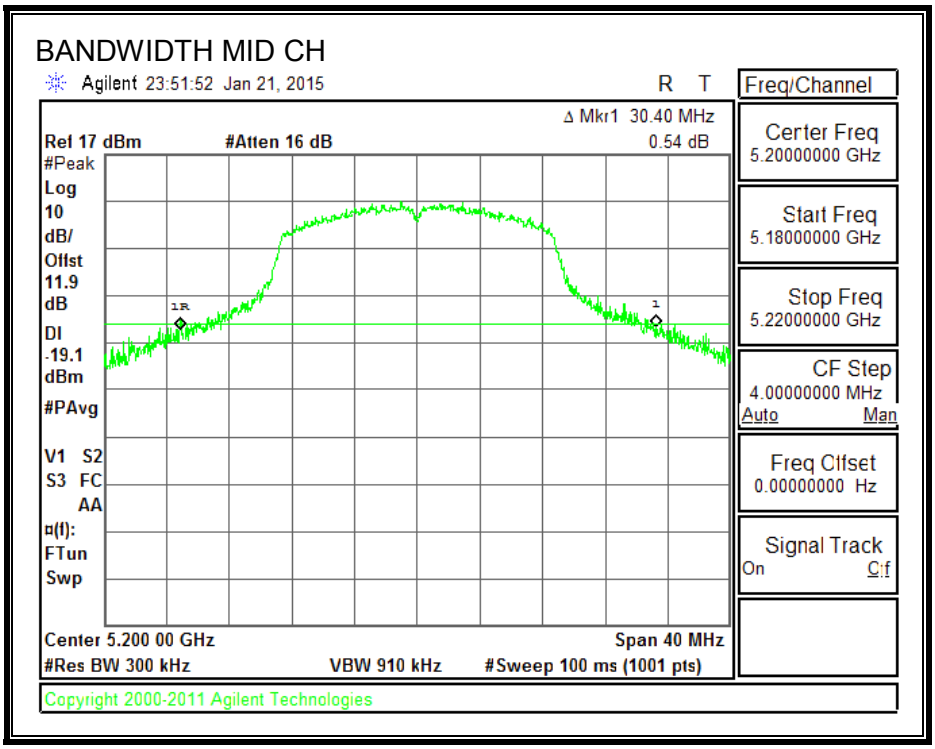
26 dB BANDWIDTH





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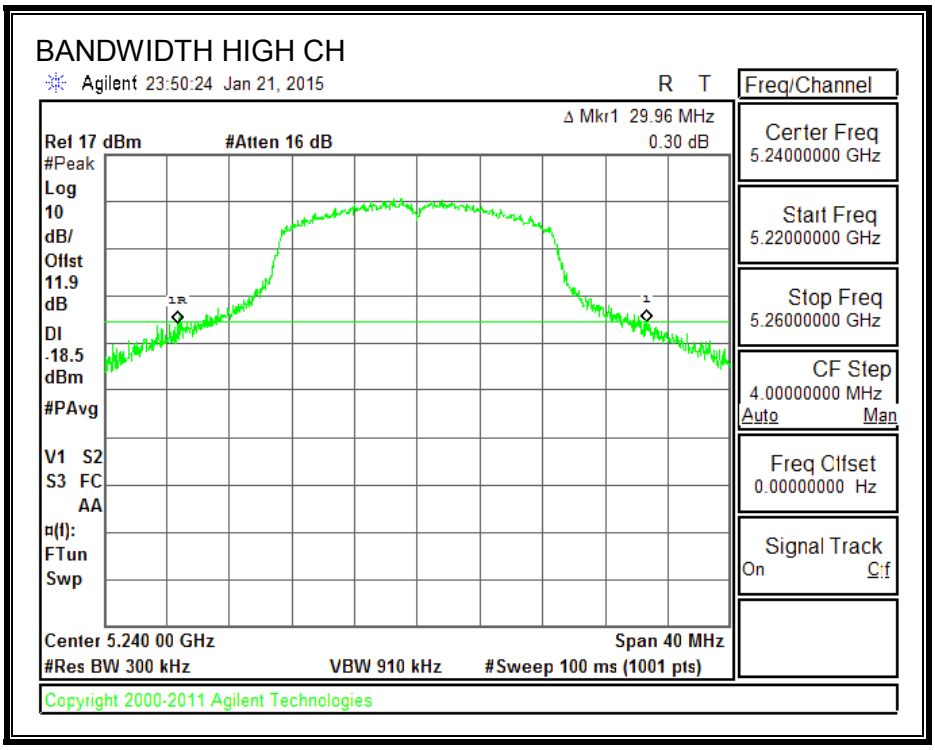

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8.3.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.4522
Mid	5200	17.4890
High	5240	17.4973

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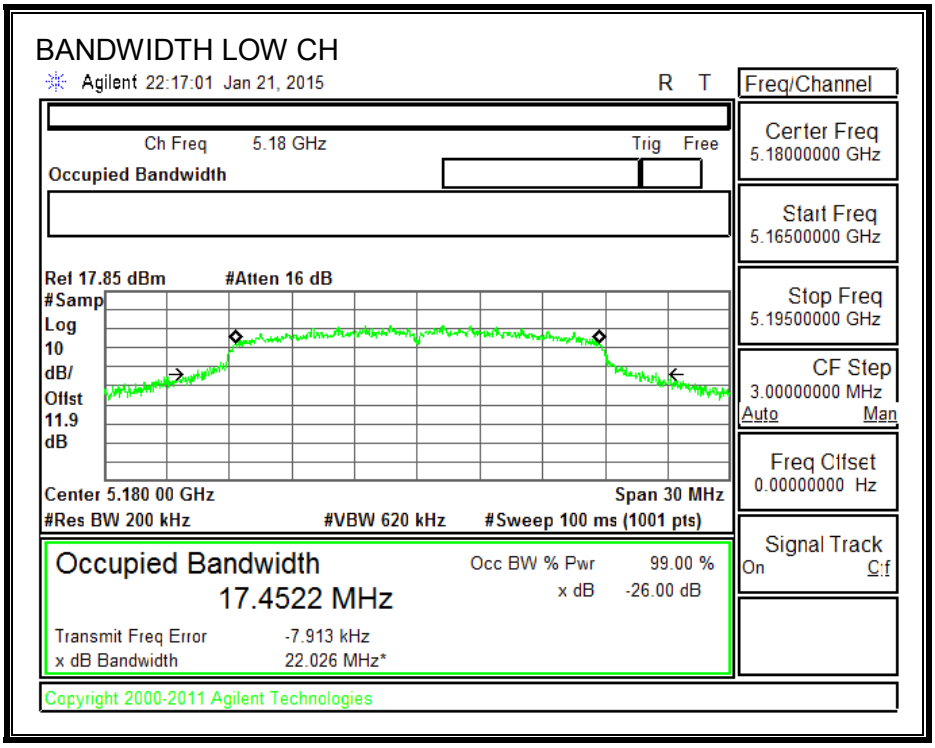
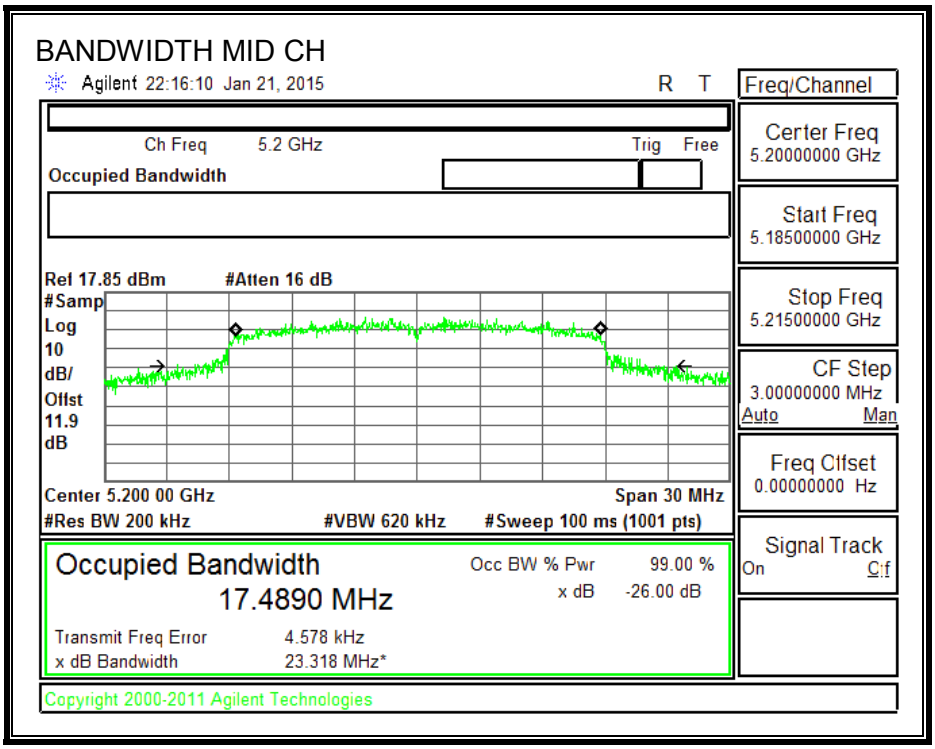
99% BANDWIDTH





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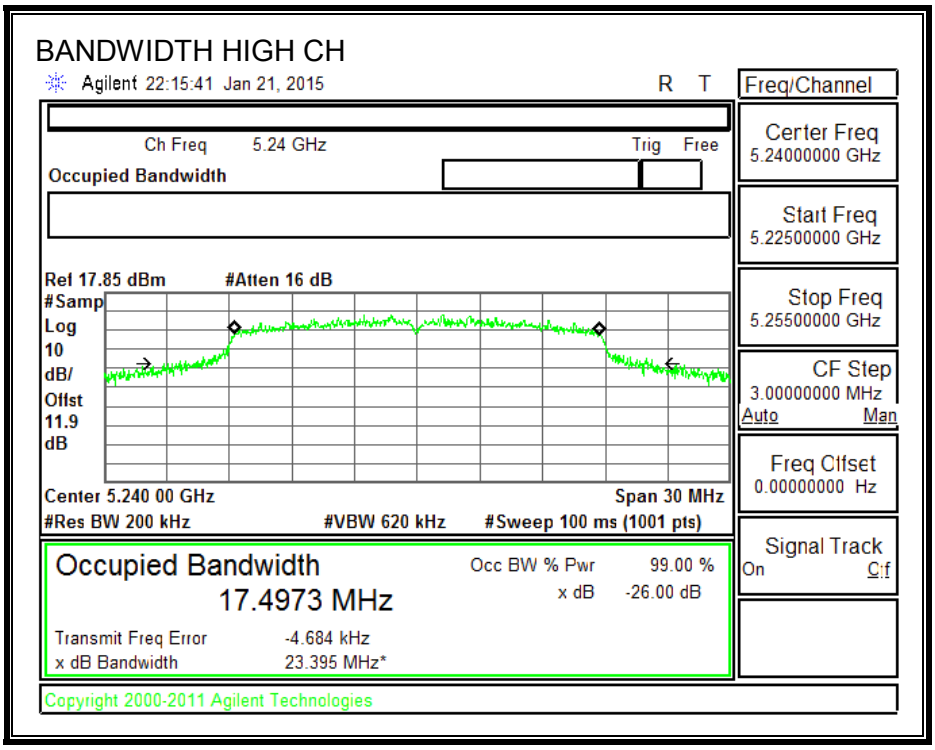

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8.3.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5180	4.00	4.00	24.00	11.00
Mid	5200	4.00	4.00	24.00	11.00
High	5240	4.00	4.00	24.00	11.00

Duty Cycle CF (dB)	3.00	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	6.87	9.87	24.00	-14.13
Mid	5200	12.50	15.50	24.00	-8.50
High	5240	12.10	15.10	24.00	-8.90

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5180	-2.63	0.37	11.00	-10.63
Mid	5200	3.73	6.73	11.00	-4.27
High	5240	2.59	5.59	11.00	-5.41

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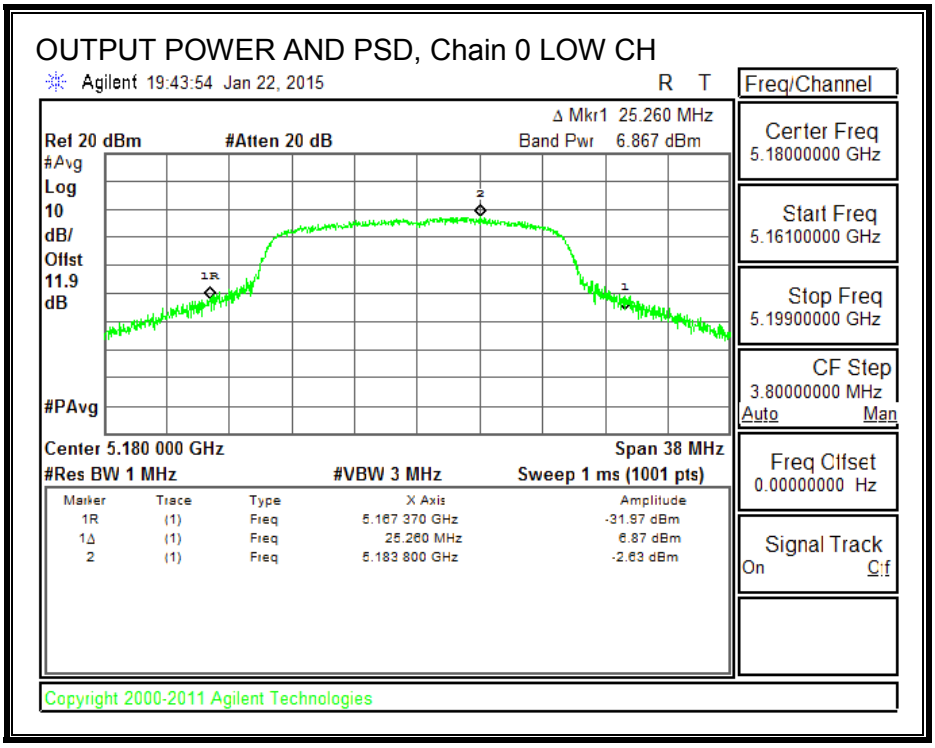
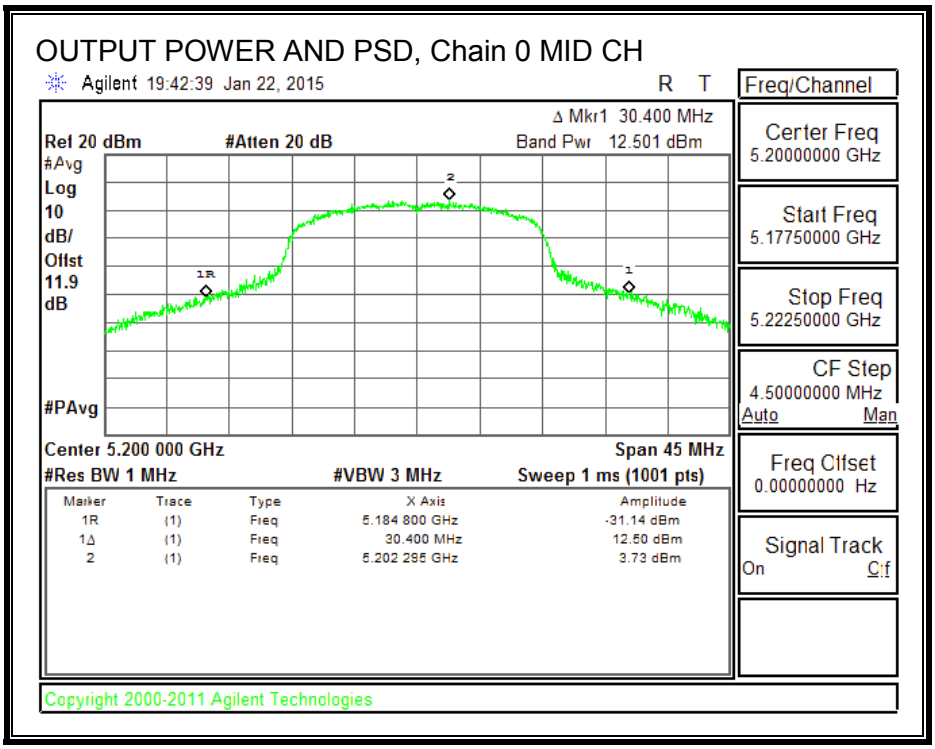
OUTPUT POWER AND PSD, Chain 0





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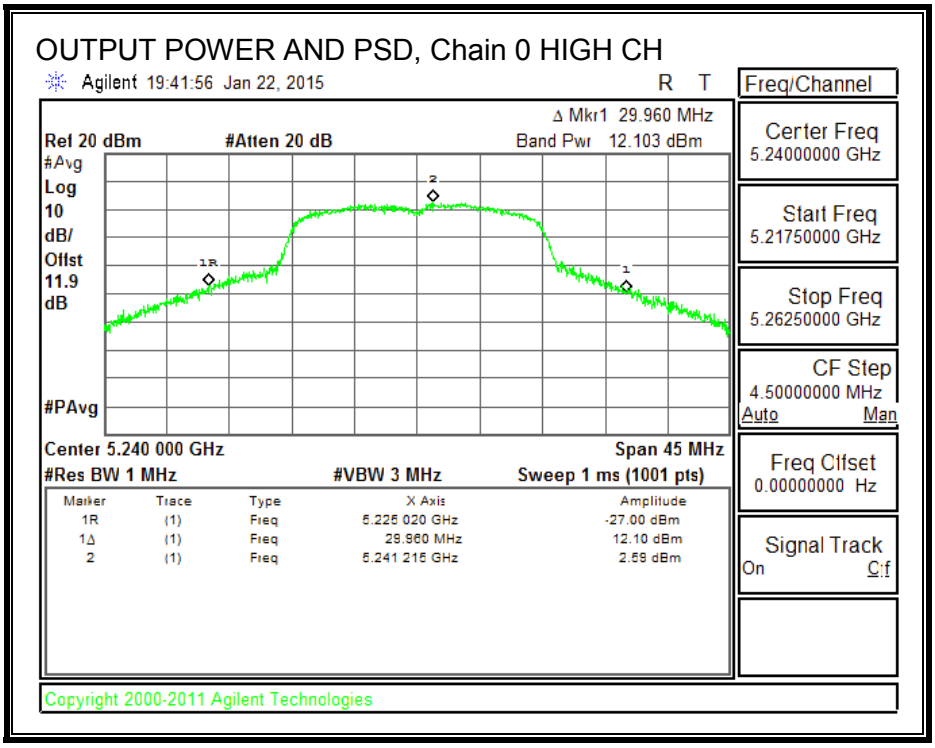

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8.4. 802.11n HT40 MODE IN THE 5.2 GHz BAND

8.4.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5190	44.64
High	5230	45.00

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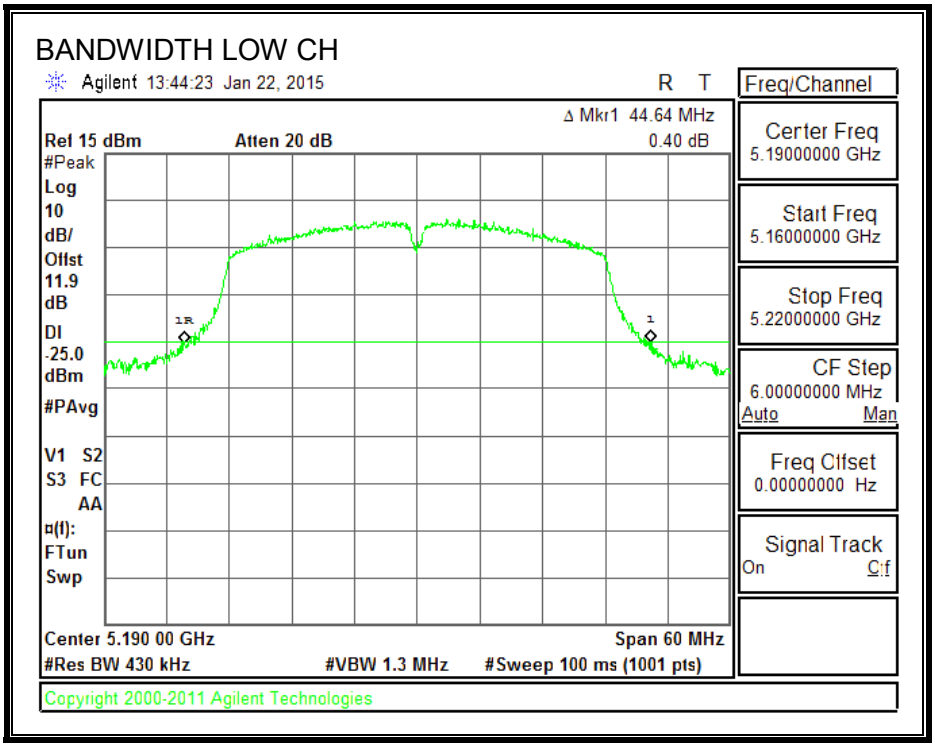
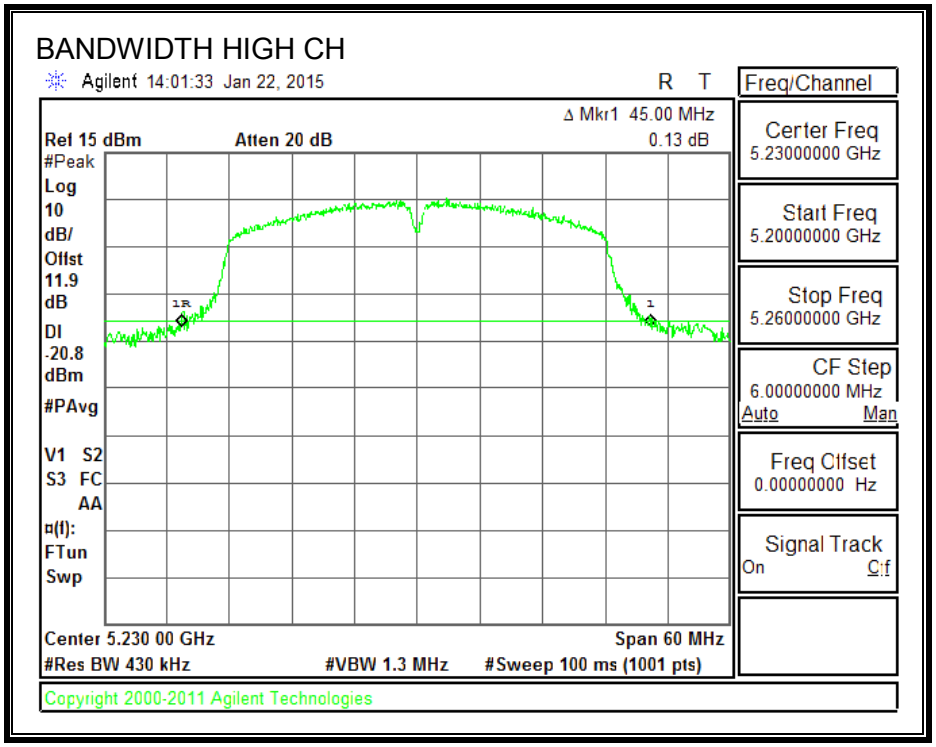
26 dB BANDWIDTH





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8.4.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	35.7472
High	5230	35.8377

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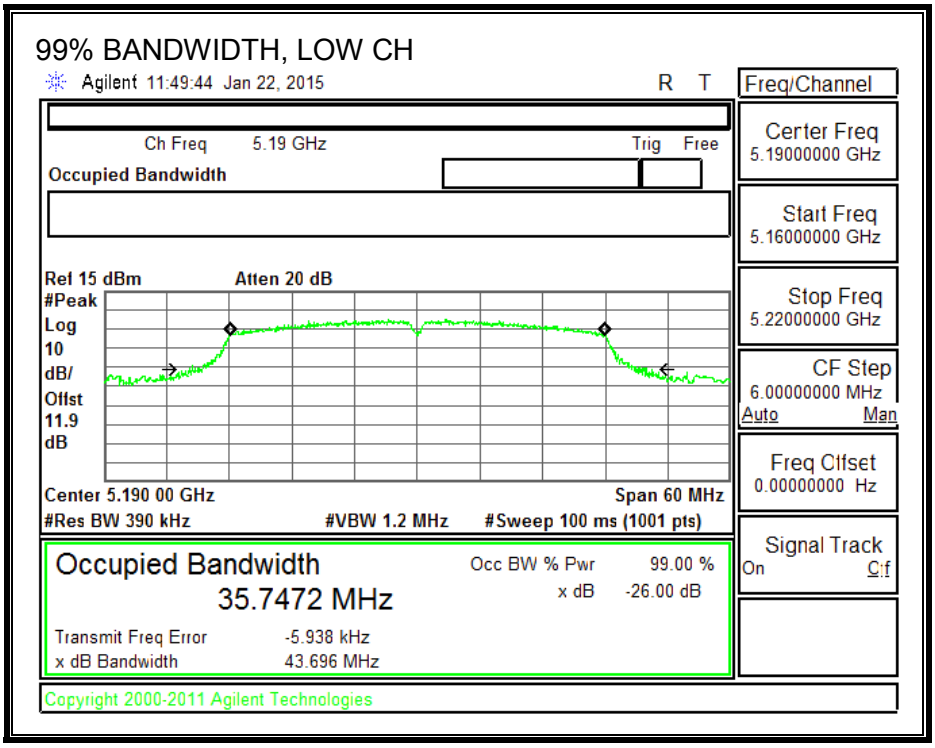
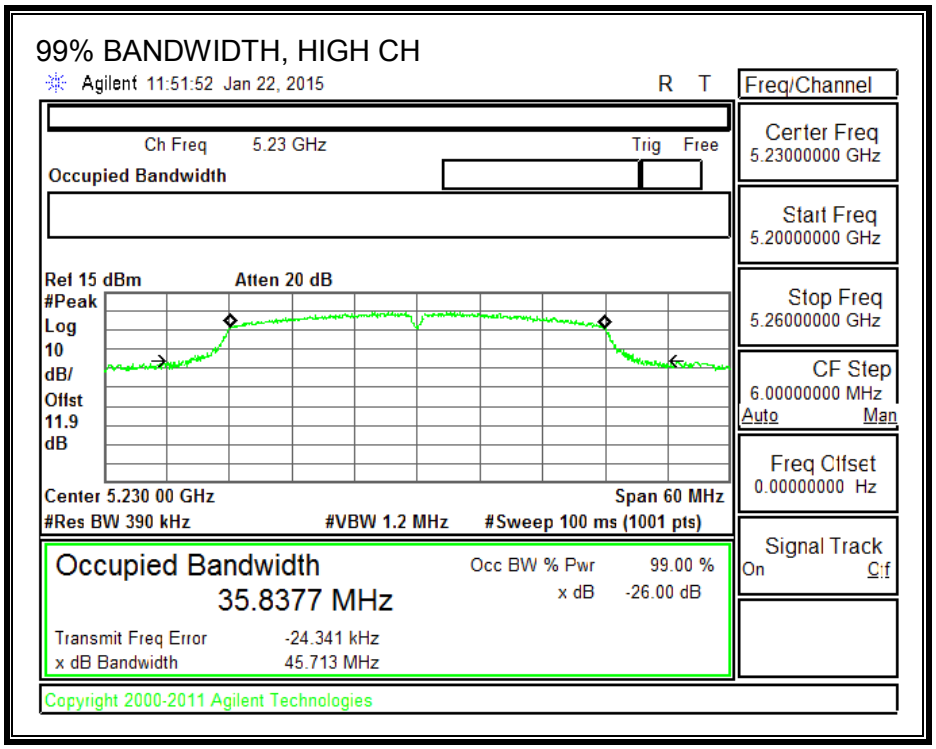
99% BANDWIDTH





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8.4.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5190	4.00	4.00	24.00	11.00
High	5230	4.00	4.00	24.00	11.00

Duty Cycle CF (dB)	2.96	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	7.06	10.02	24.00	-13.98
High	5230	11.20	14.16	24.00	-9.84

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5190	-4.91	-1.95	11.00	-12.95
High	5230	-1.08	1.88	11.00	-9.12

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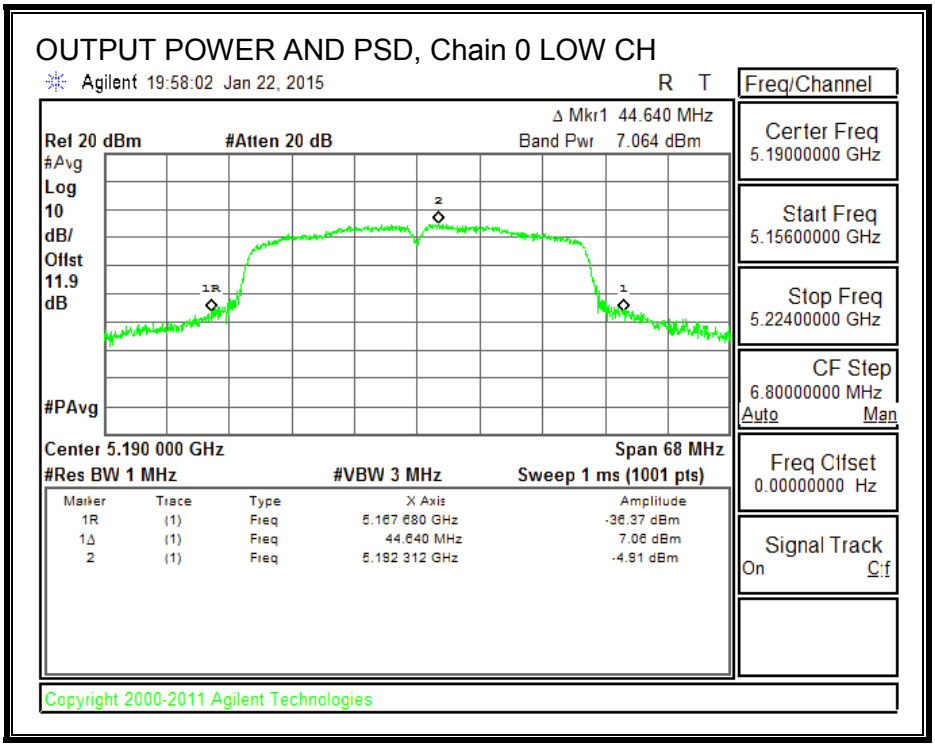
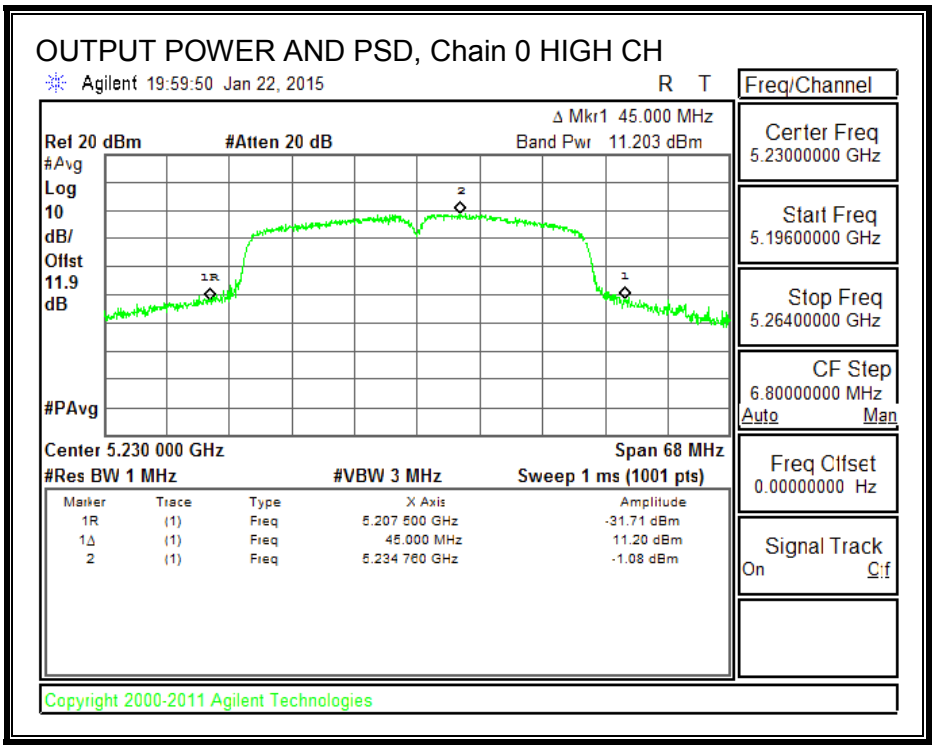
OUTPUT POWER AND PSD, Chain 0





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8.5. 802.11a MODE IN THE 5.3 GHz BAND

8.5.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	28.20
Mid	5300	24.06
High	5320	23.25

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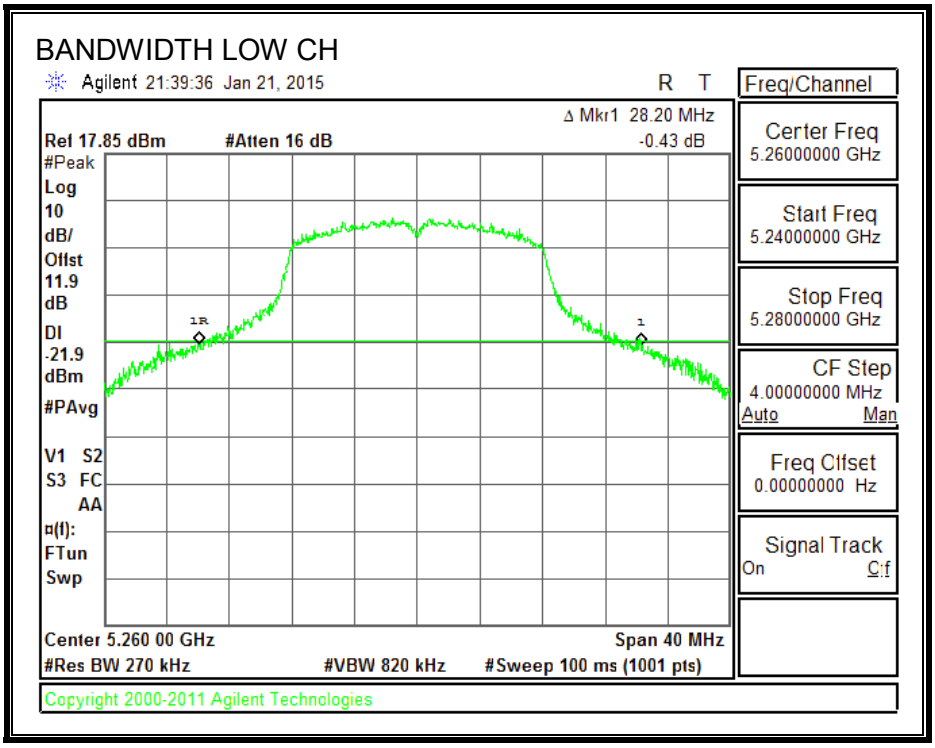
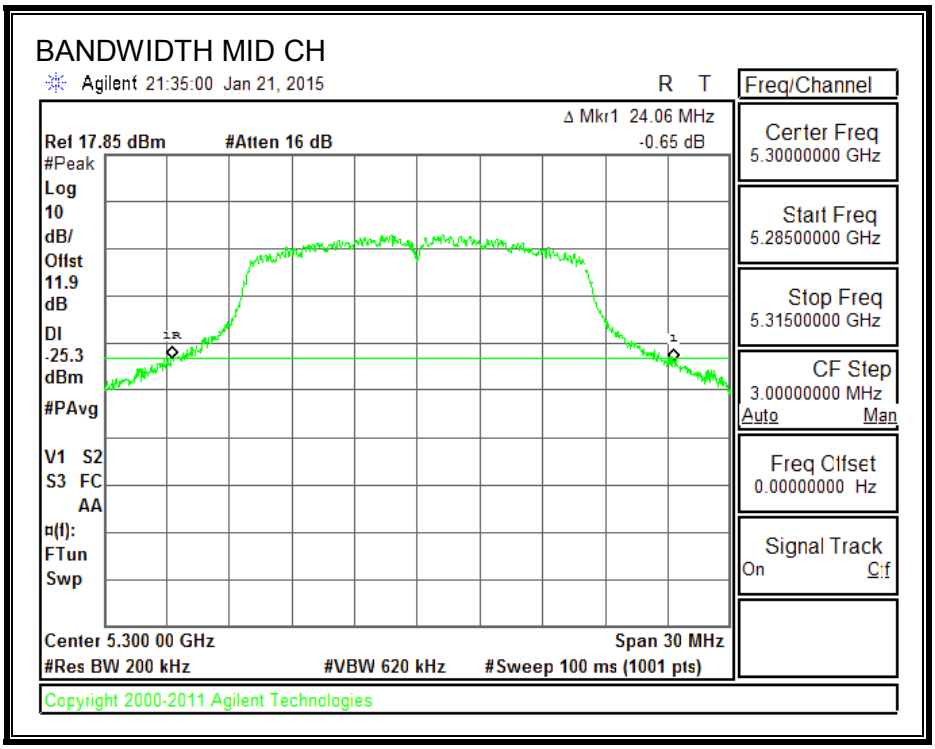
26 dB BANDWIDTH





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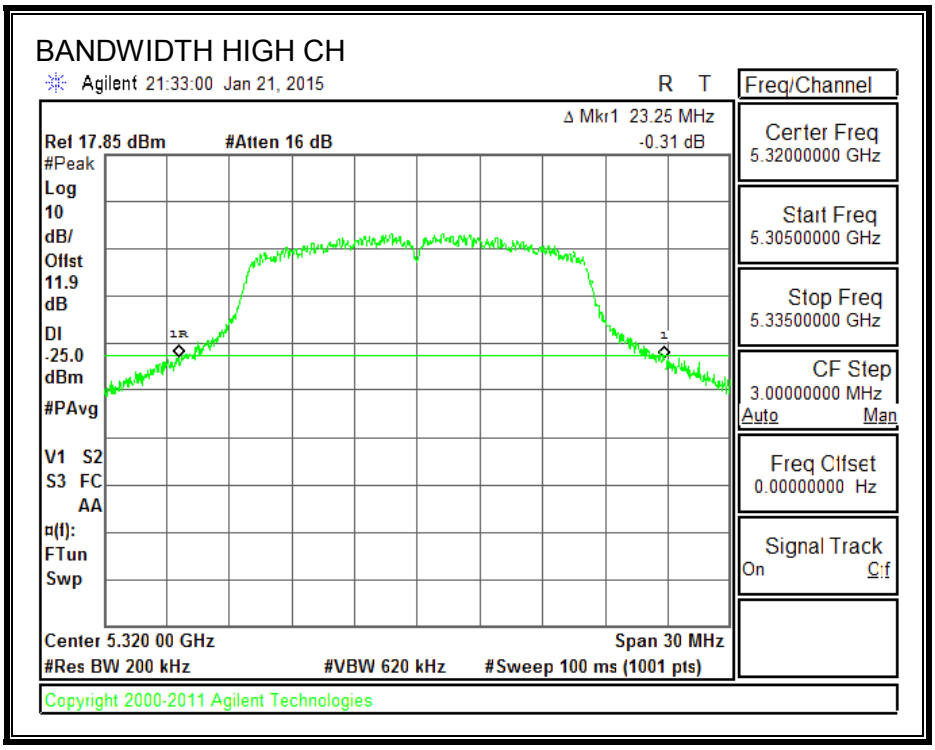

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8.5.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.3770
Mid	5300	16.3313
High	5320	16.3274

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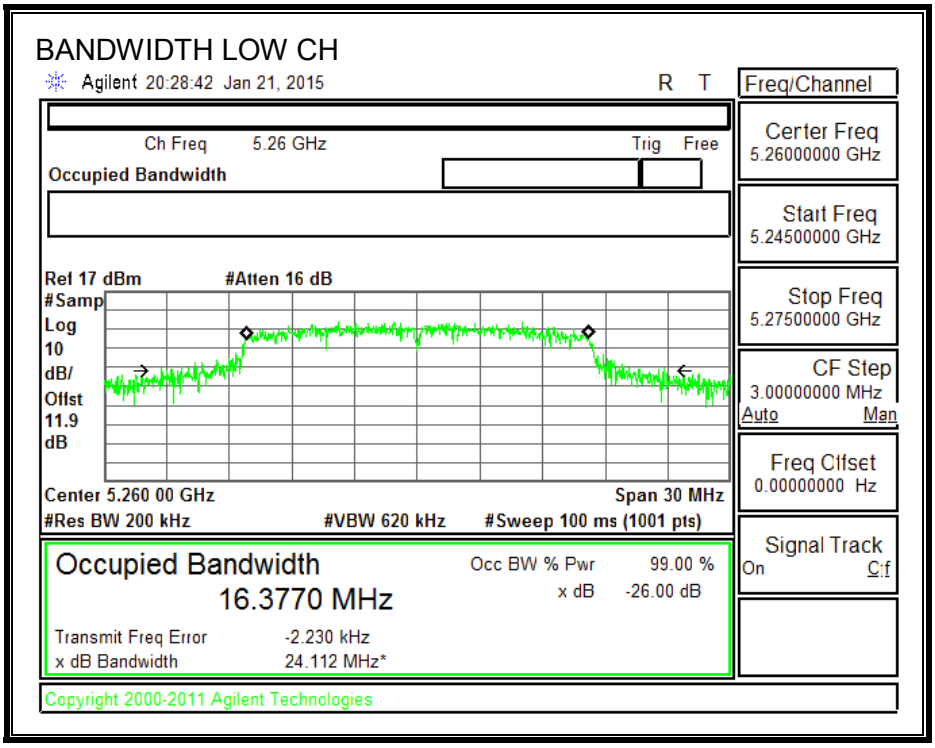
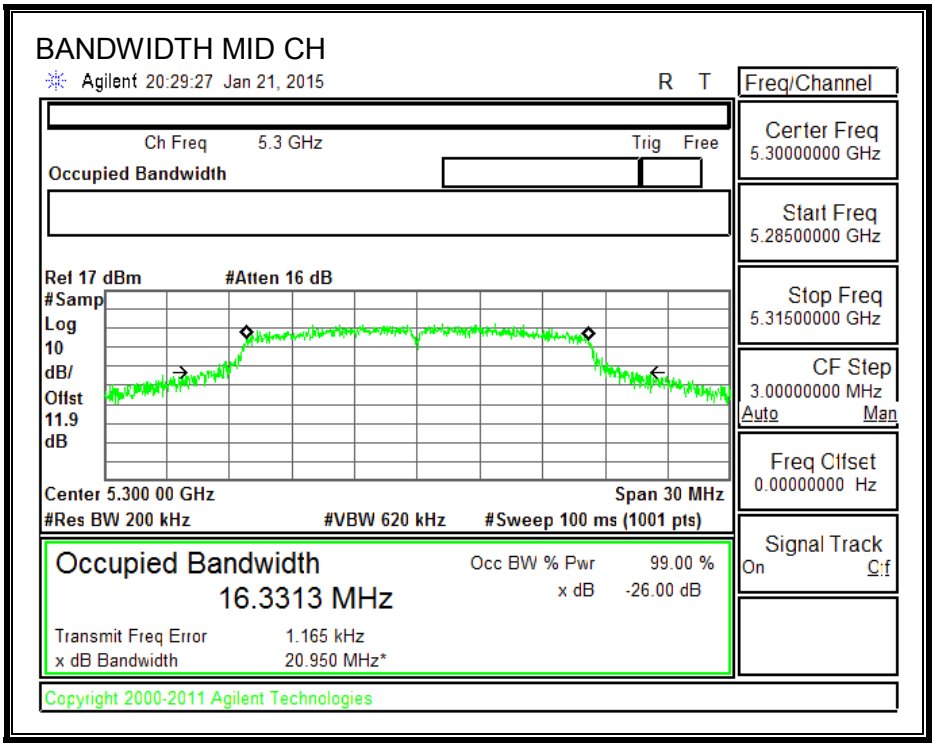
99% BANDWIDTH





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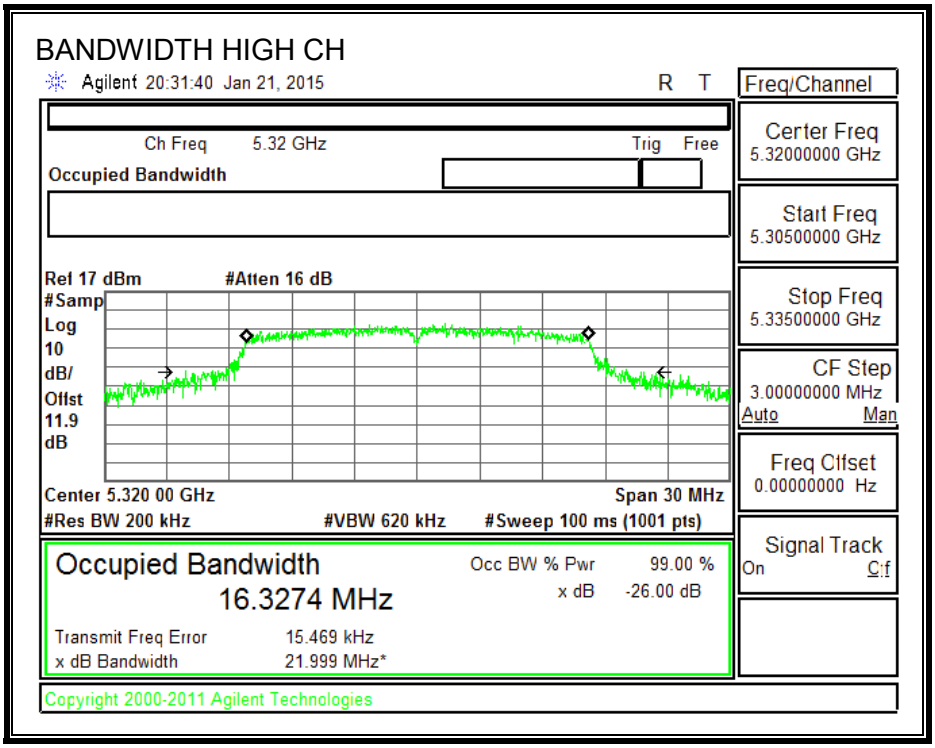

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8.5.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 maximum 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.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5260	28.20	4.00	24.00	11.00
Mid	5300	24.06	4.00	24.00	11.00
High	5320	23.25	4.00	24.00	11.00

Duty Cycle CF (dB)	2.91	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	9.55	12.46	24.00	-11.54
Mid	5300	8.31	11.22	24.00	-12.78
High	5320	8.74	11.65	24.00	-12.35

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5260	0.26	3.17	11.00	-7.83
Mid	5300	-1.30	1.61	11.00	-9.39
High	5320	-0.94	1.97	11.00	-9.03

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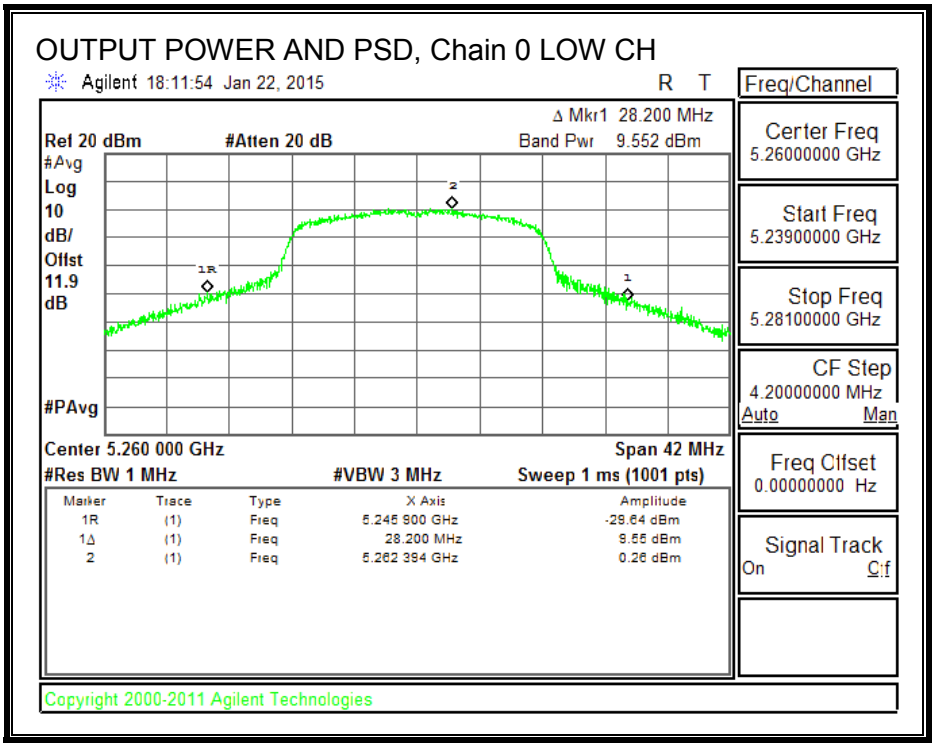
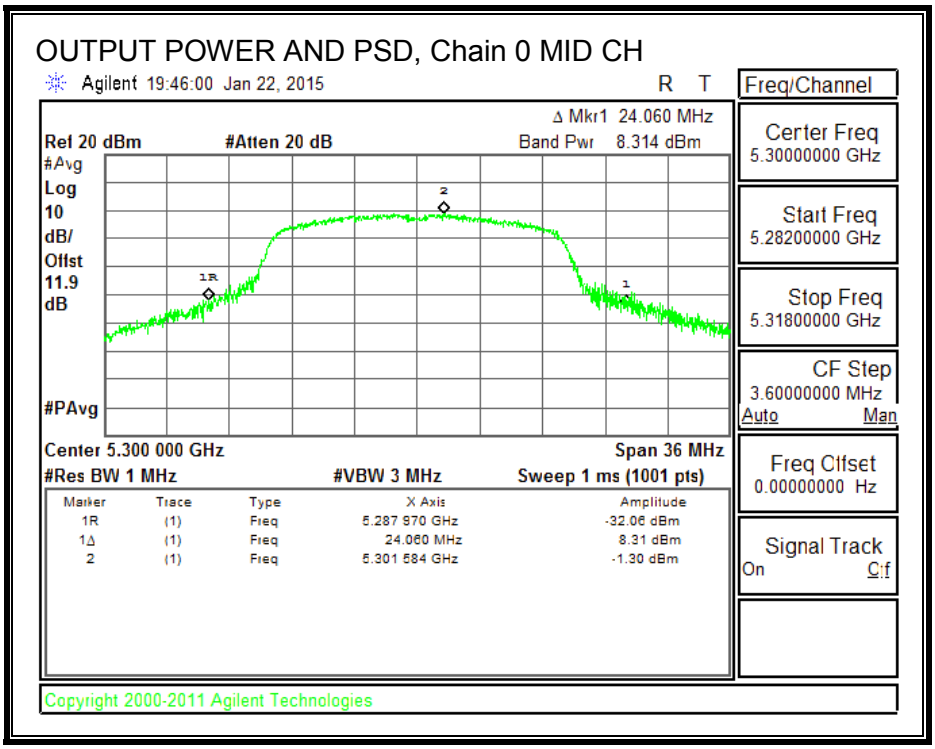
OUTPUT POWER AND PSD, Chain 0





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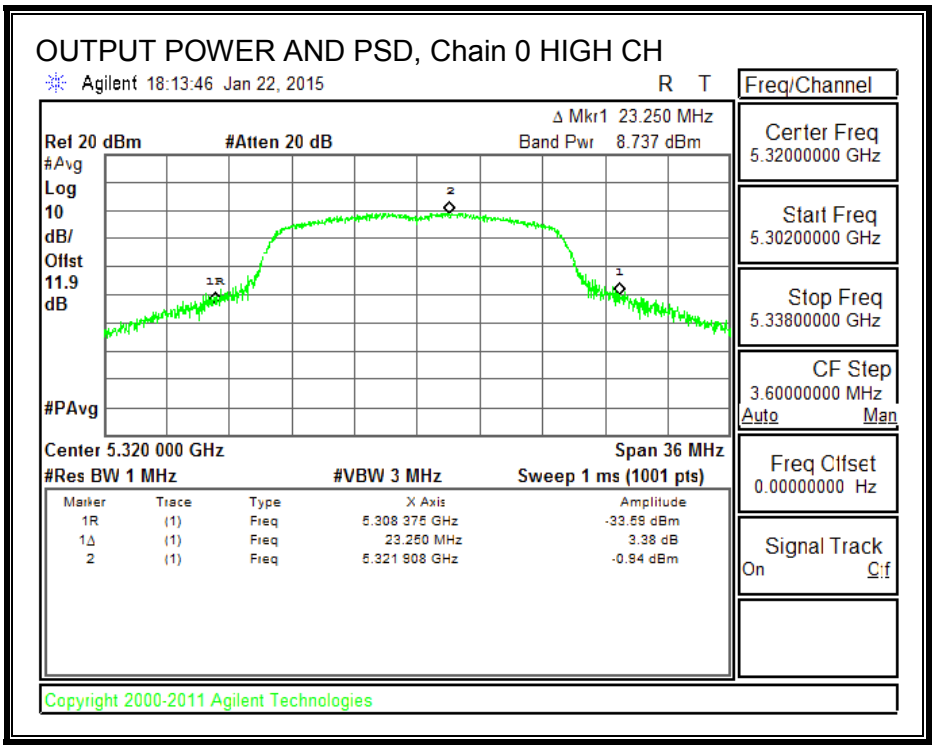

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8.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

8.6.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	29.96
Mid	5300	24.93
High	5320	24.69

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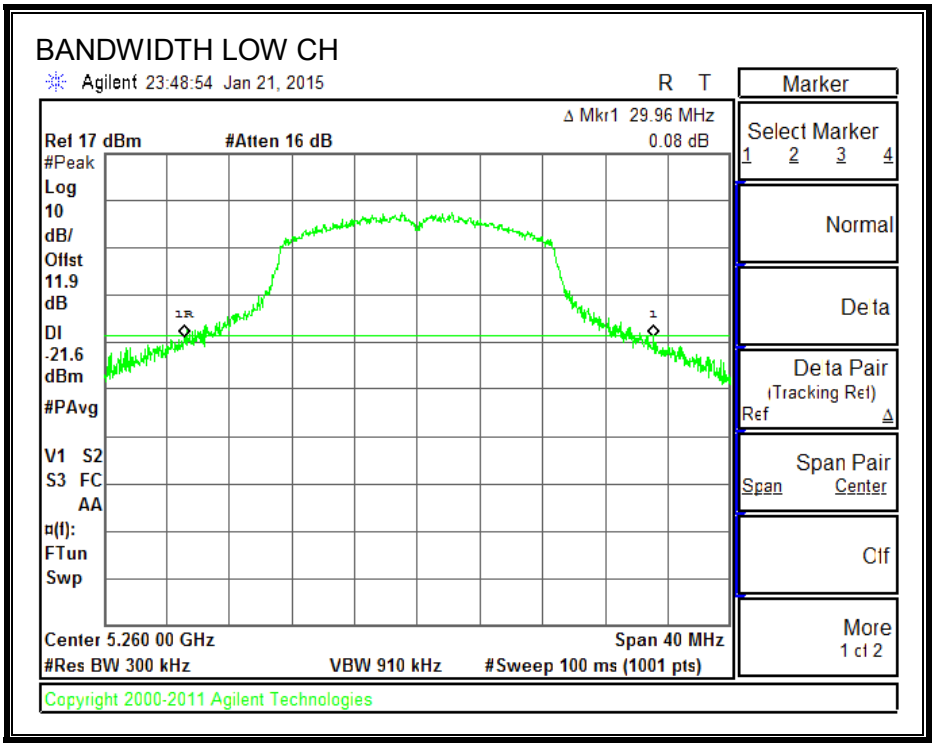
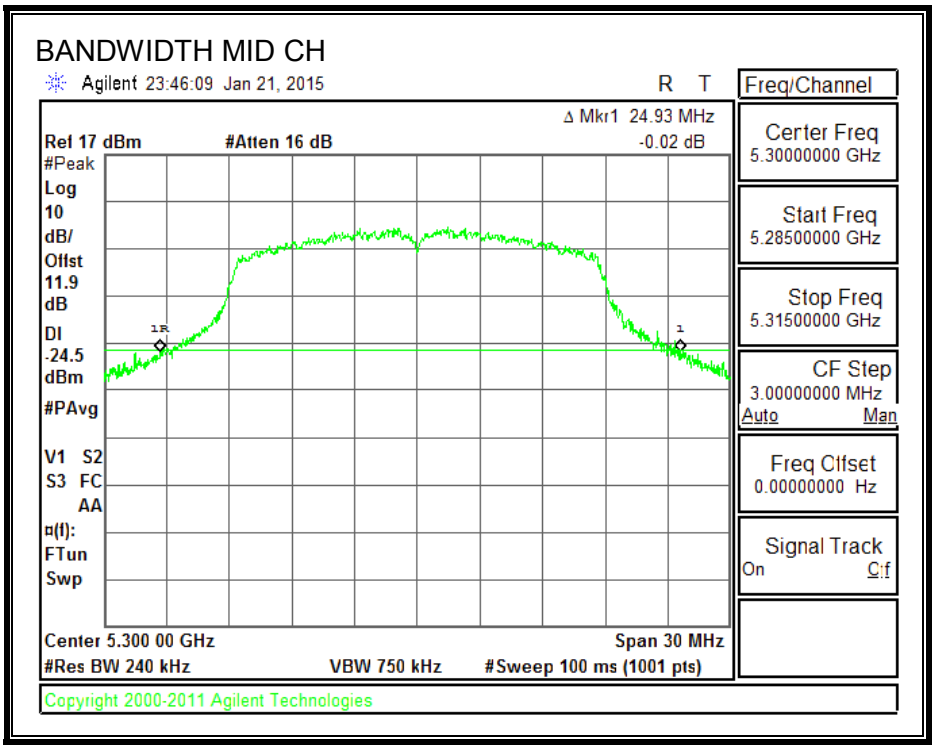
26 dB BANDWIDTH





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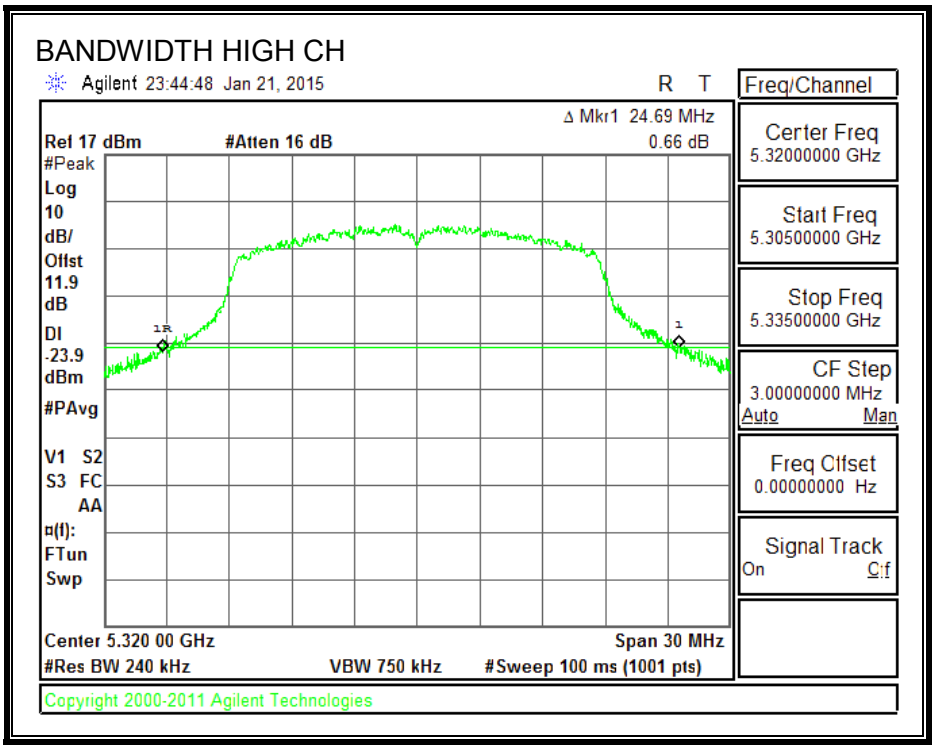

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8.6.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.5413
Mid	5300	17.4593
High	5320	17.4754

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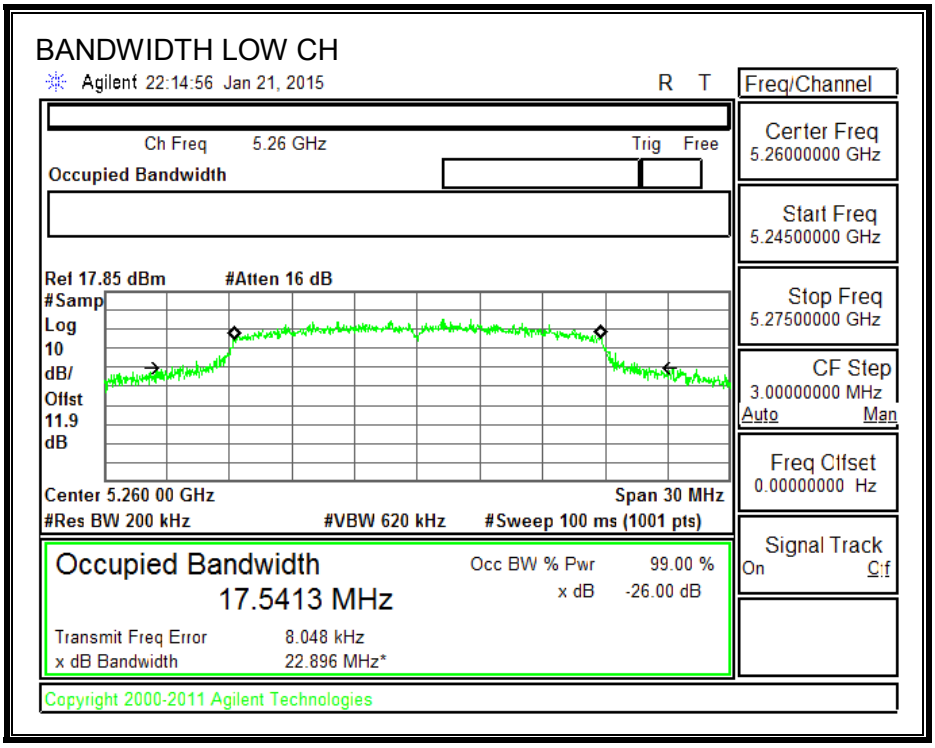
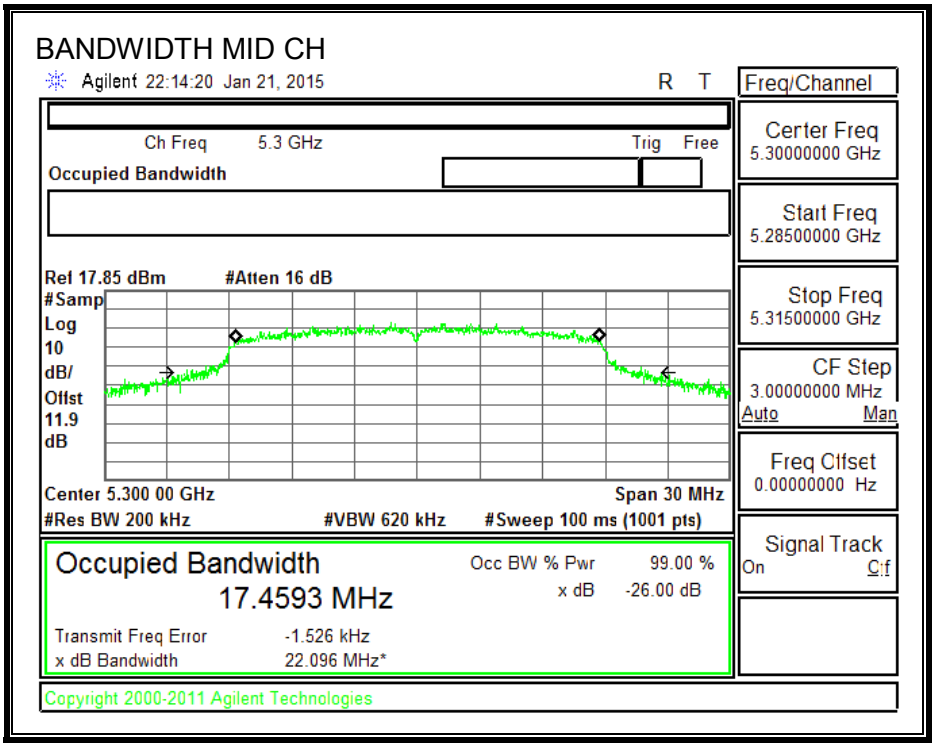
99% BANDWIDTH





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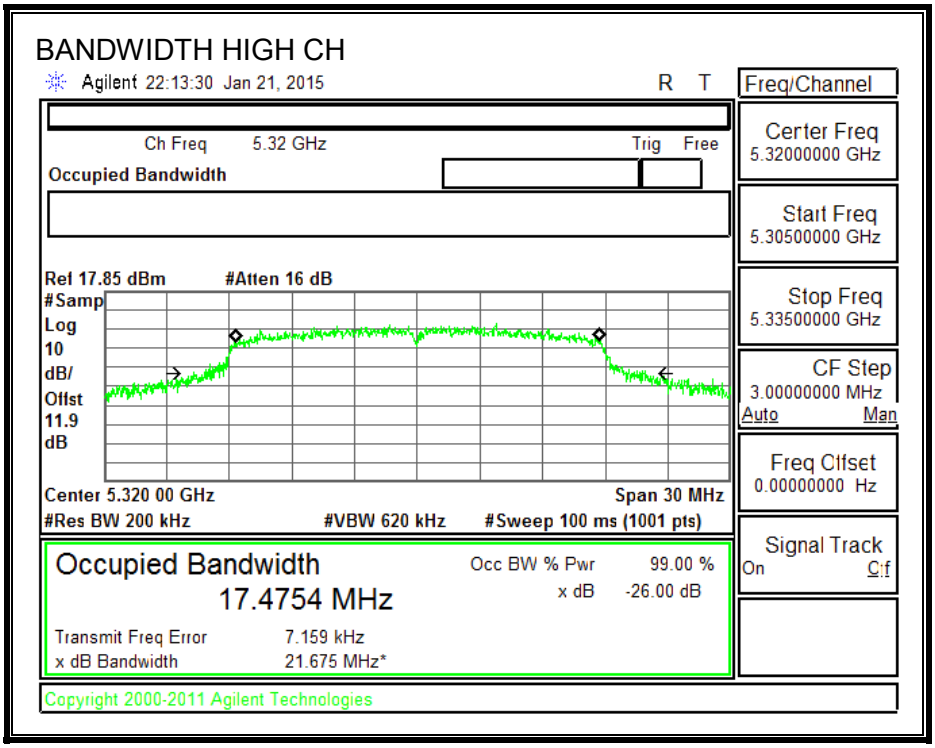

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8.6.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 maximum 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.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5260	29.96	4.00	24.00	11.00
Mid	5300	24.93	4.00	24.00	11.00
High	5320	24.69	4.00	24.00	11.00

Duty Cycle CF (dB)	3.00	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	9.24	12.24	24.00	-11.76
Mid	5300	7.89	10.89	24.00	-13.11
High	5320	8.94	11.94	24.00	-12.06

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5260	-0.32	2.68	11.00	-8.32
Mid	5300	-1.74	1.26	11.00	-9.74
High	5320	-0.48	2.52	11.00	-8.48

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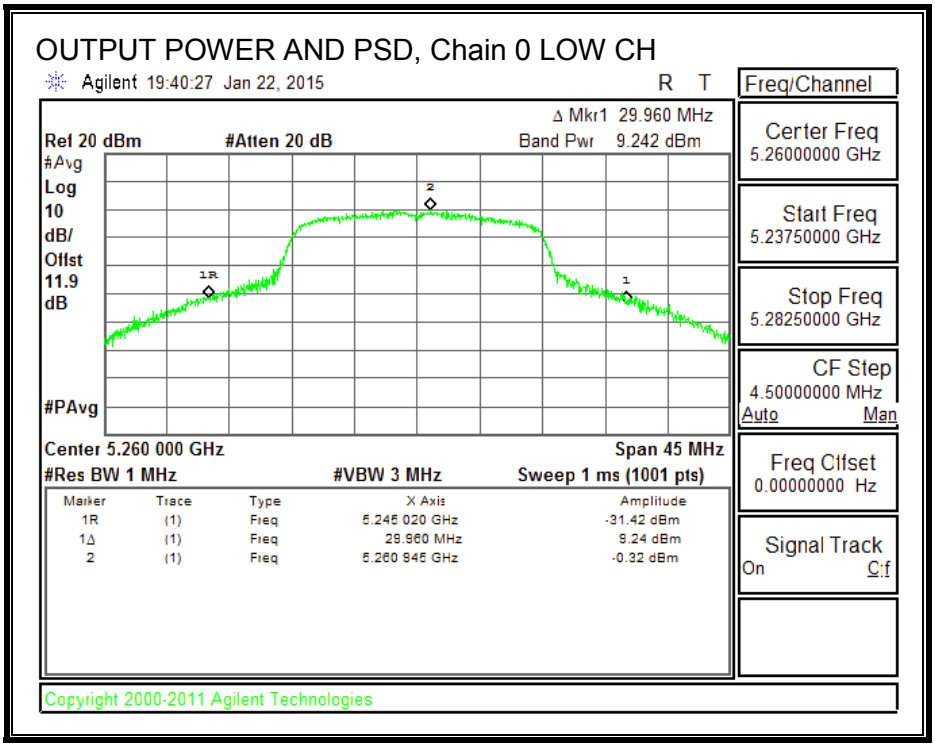
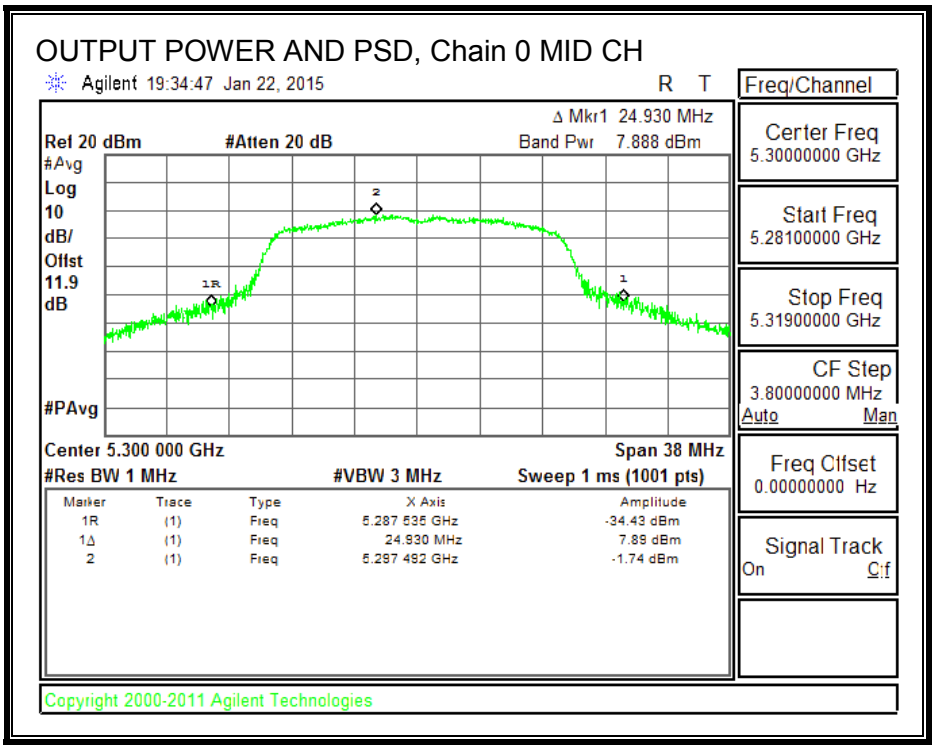
OUTPUT POWER AND PSD, Chain 0





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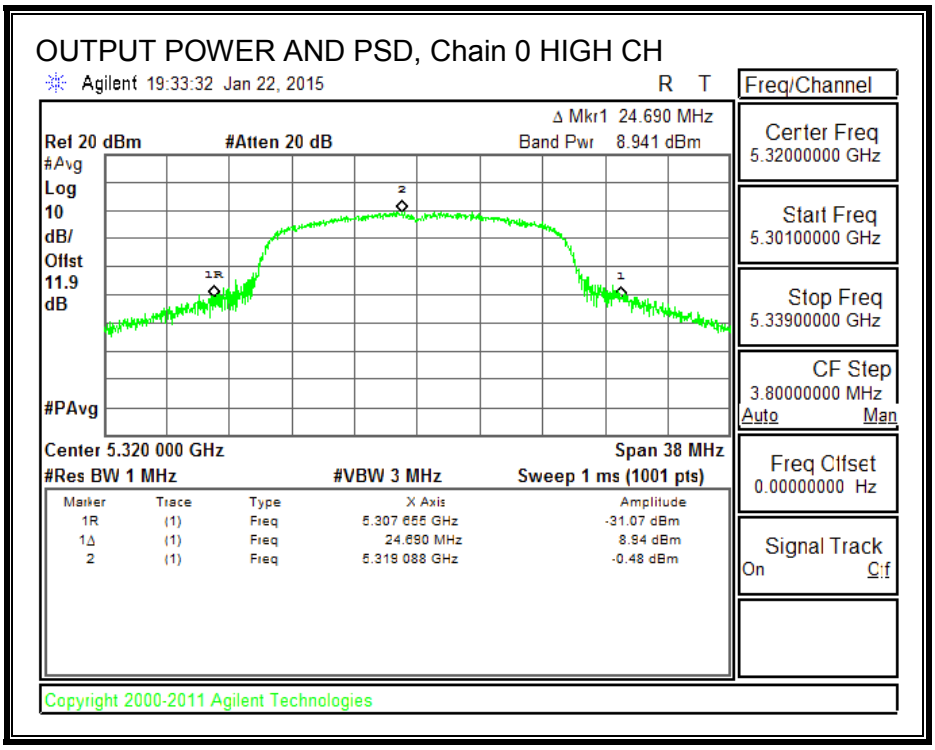

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8.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

8.7.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	44.70
High	5310	43.42

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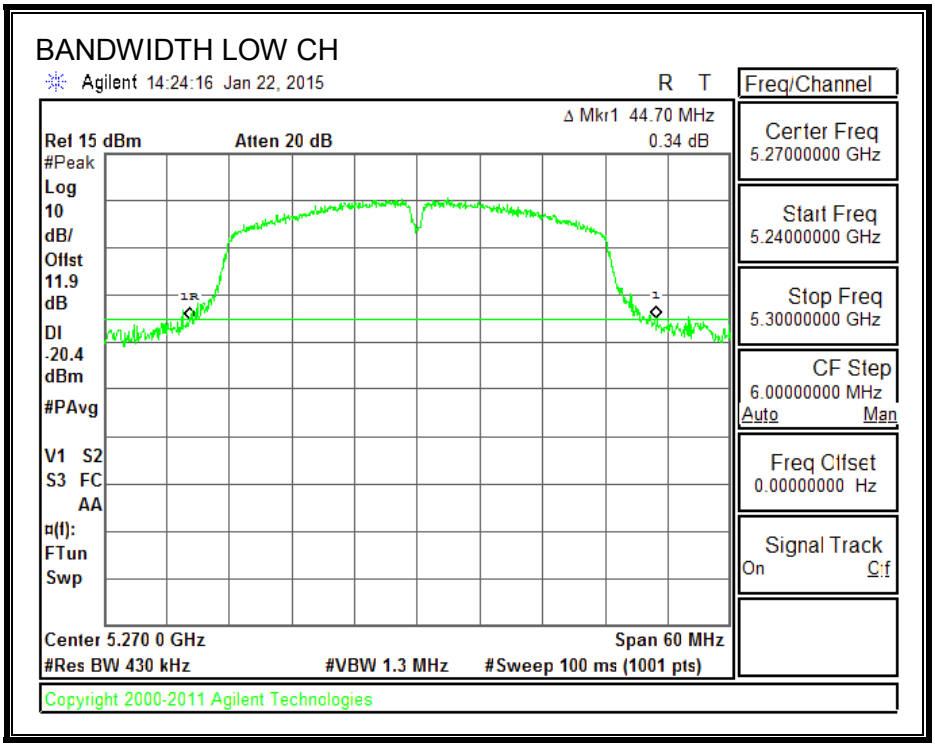
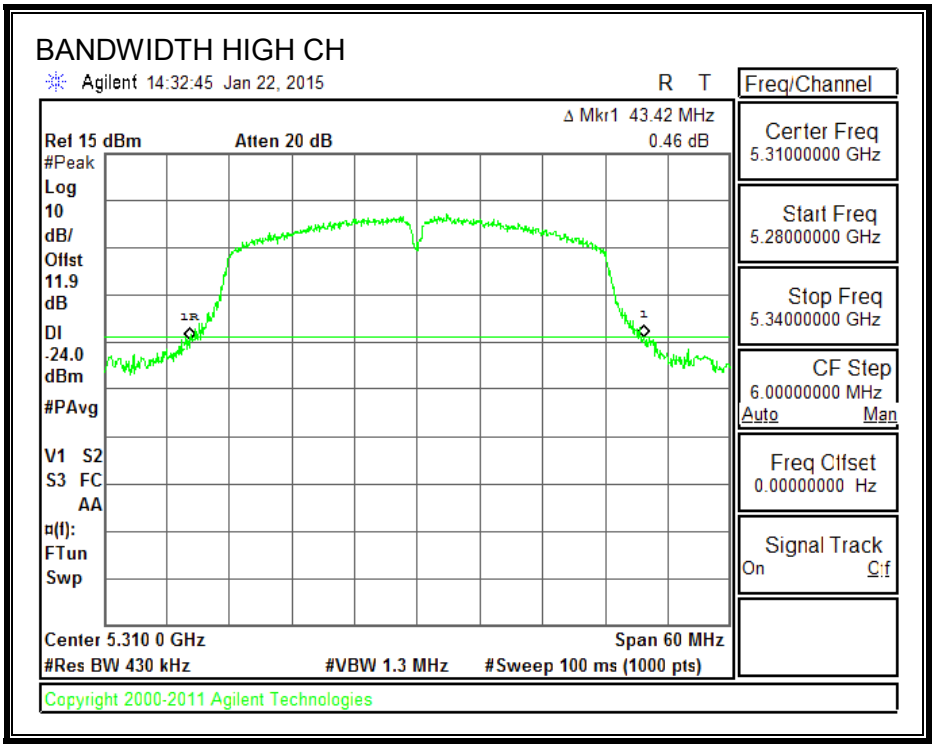
26 dB BANDWIDTH





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8.7.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	35.5461
High	5310	35.7153

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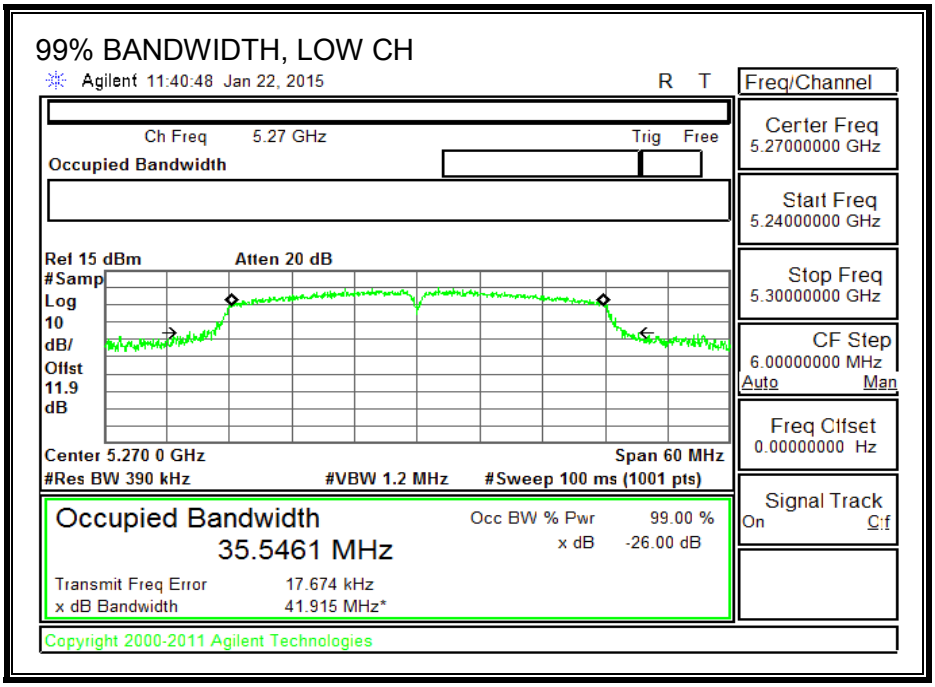
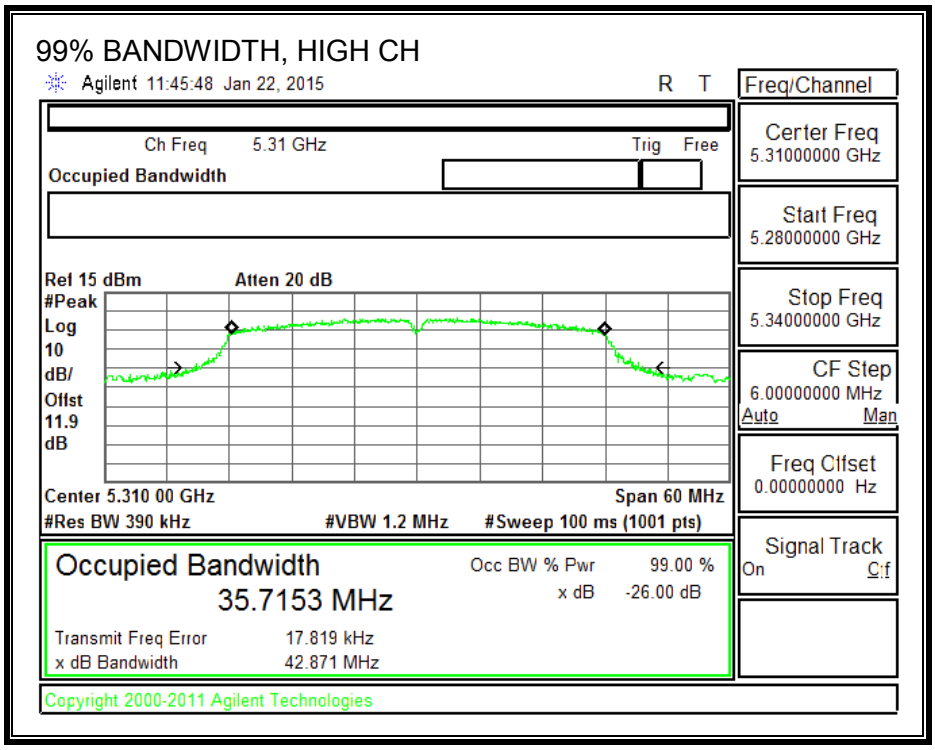
99% BANDWIDTH





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8.7.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 maximum 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.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5270	44.70	4.00	24.00	11.00
High	5310	43.42	4.00	24.00	11.00

Duty Cycle CF (dB)	2.96	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	11.08	14.04	24.00	-9.97
High	5310	8.29	11.25	24.00	-12.75

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5270	-1.01	1.95	11.00	-9.05
High	5310	-3.81	-0.85	11.00	-11.85

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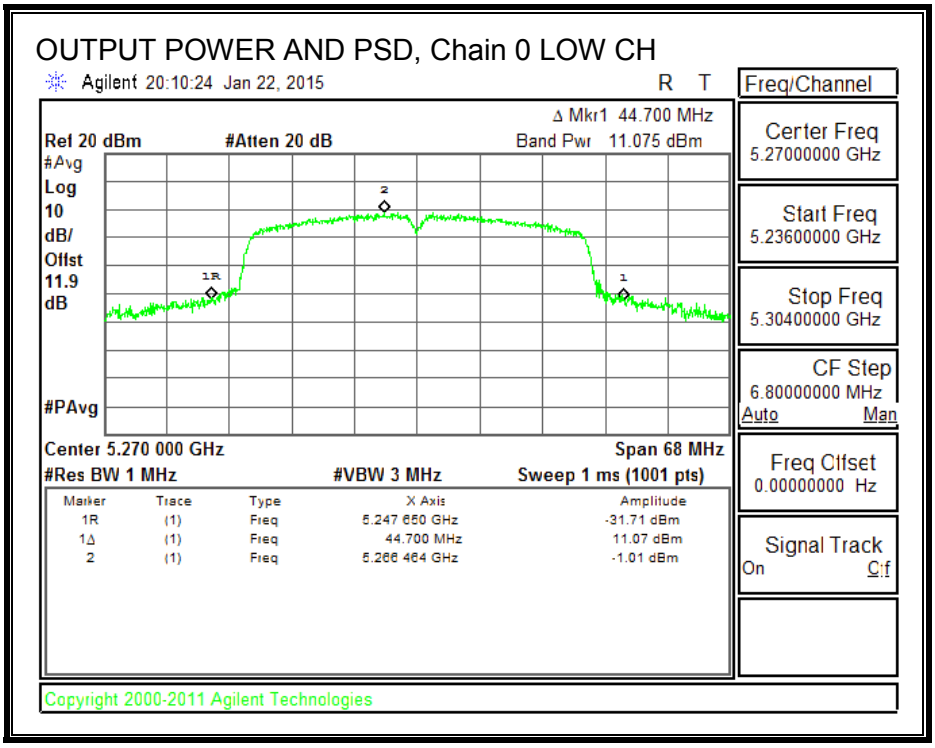
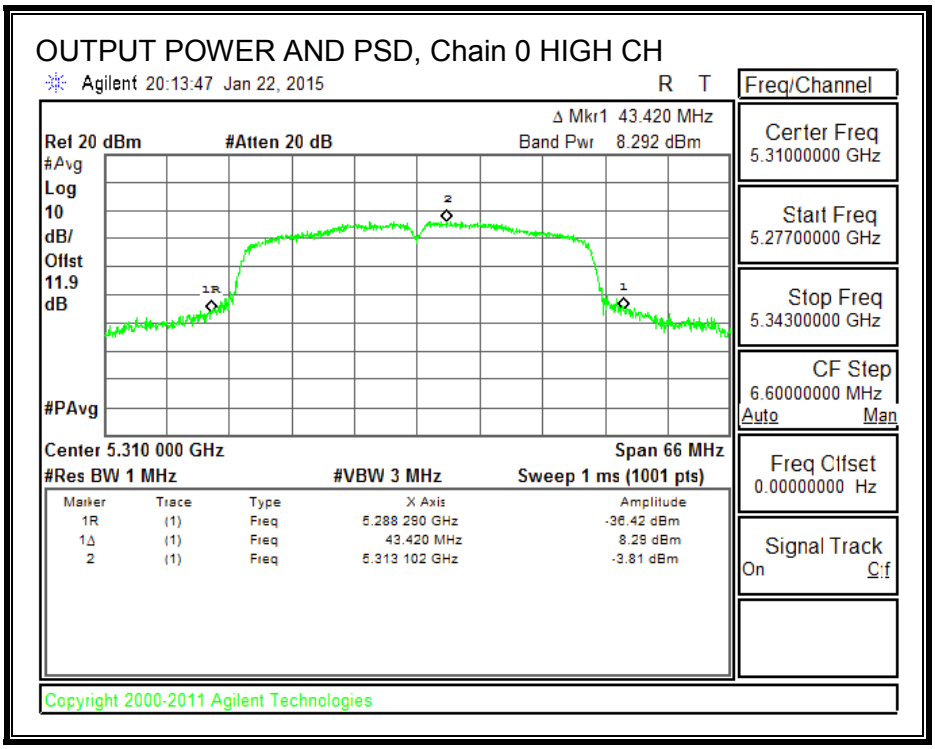
OUTPUT POWER AND PSD, Chain 0





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8.8. 802.11a MODE IN THE 5.6 GHz BAND

8.8.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	23,10
Mid	5580	24.69
High	5700	25.32

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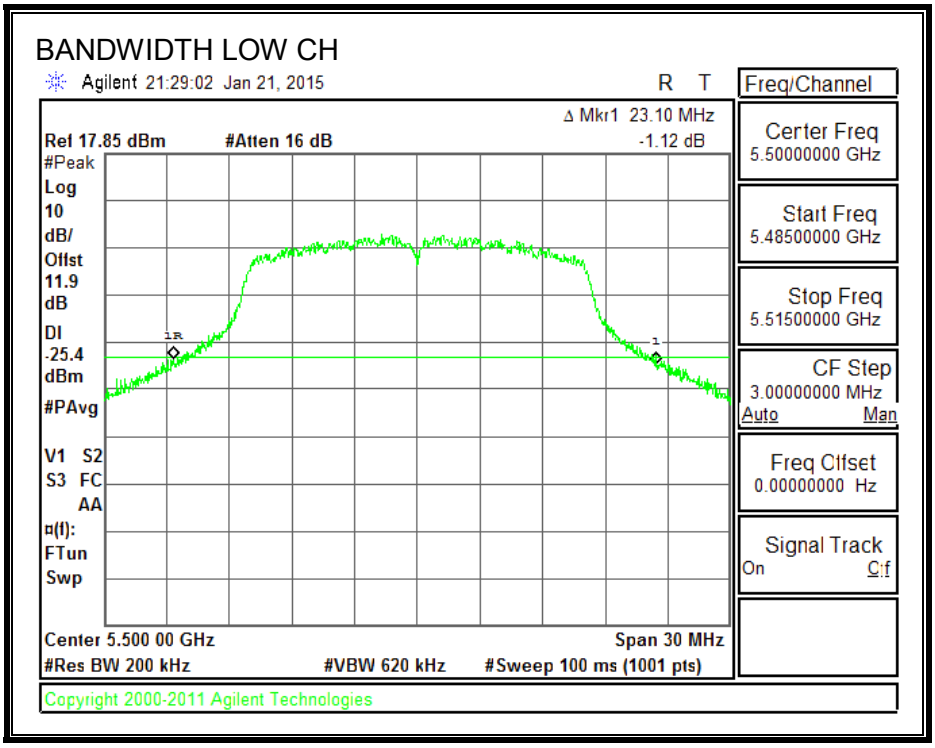
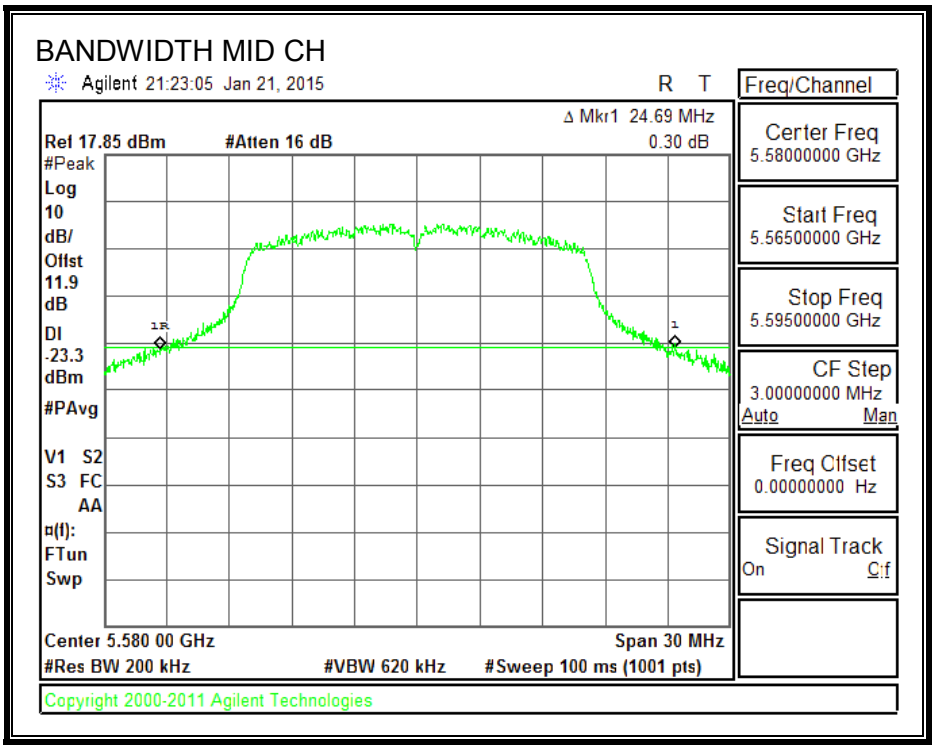
26 dB BANDWIDTH





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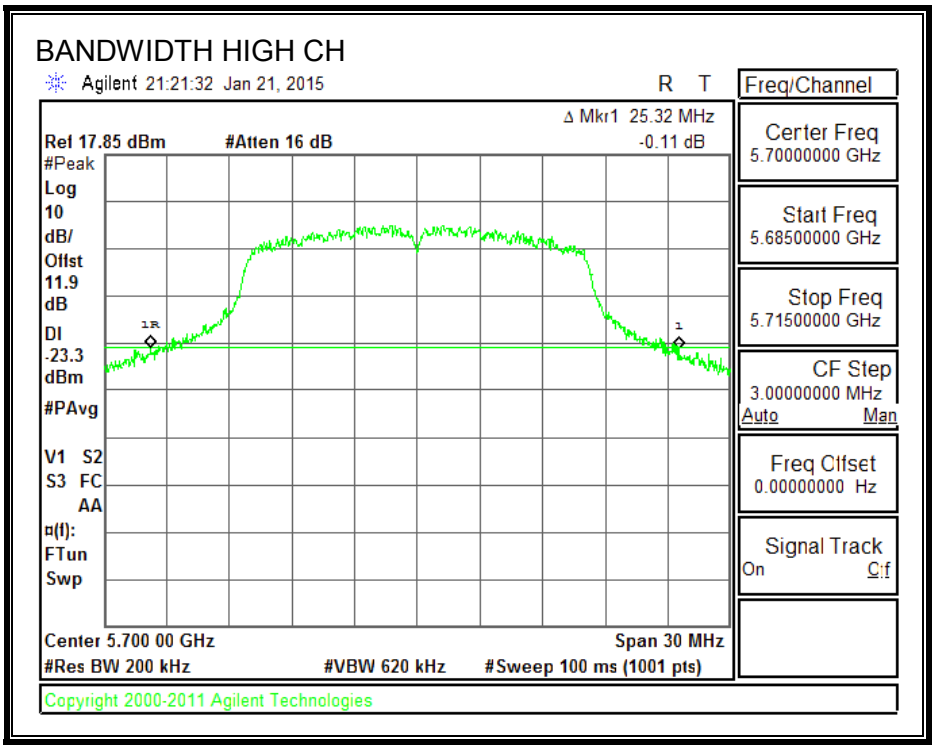

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8.8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.3028
Mid	5580	16.3644
High	5700	16.3208

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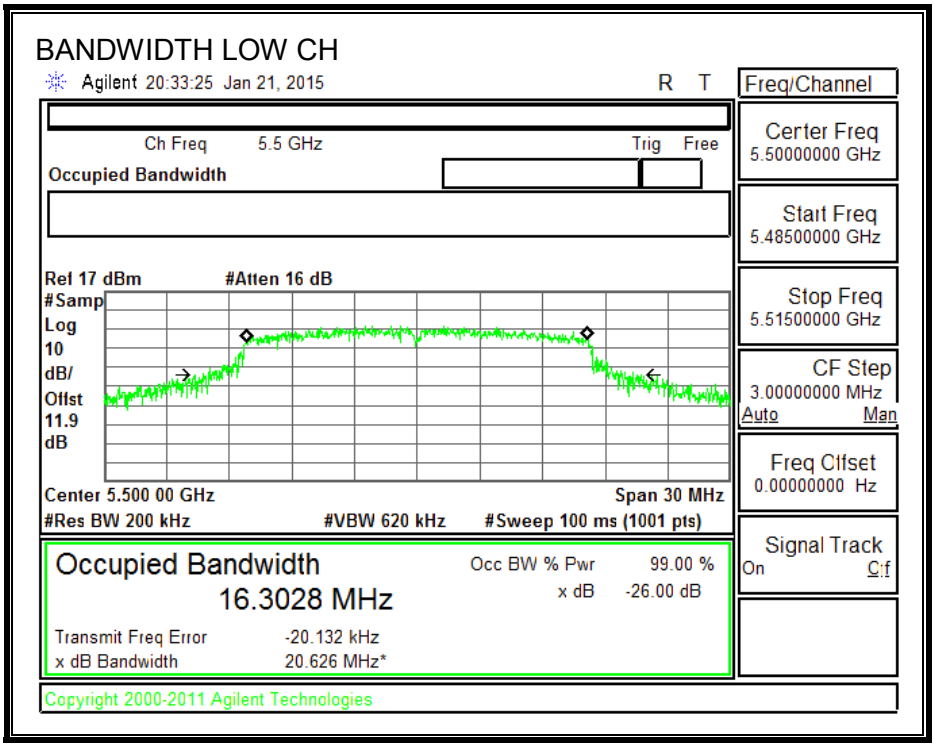
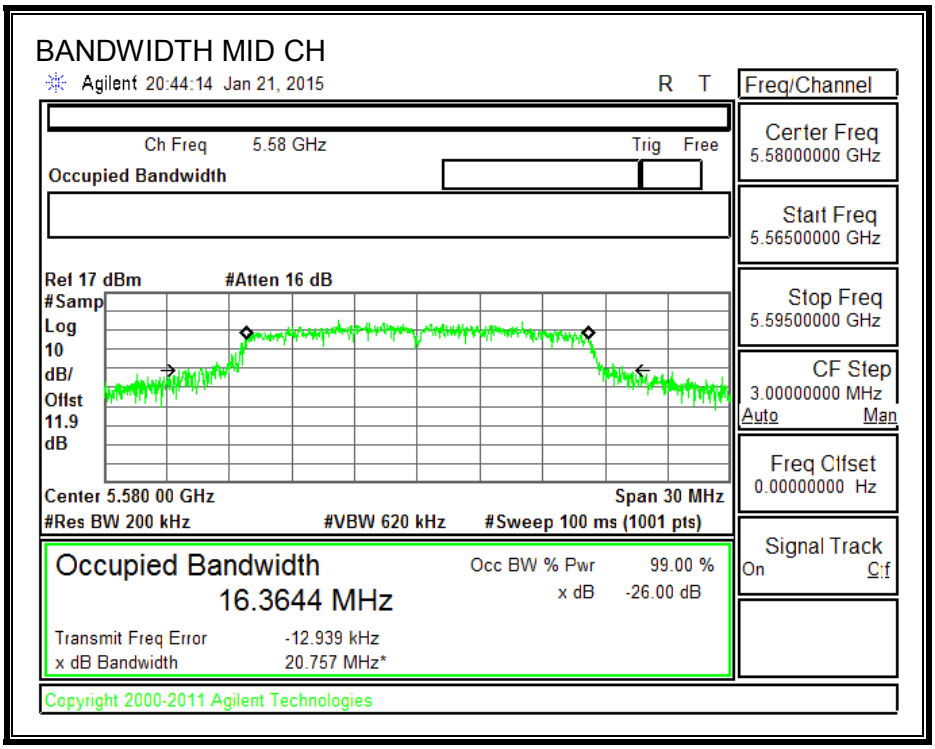
99% BANDWIDTH





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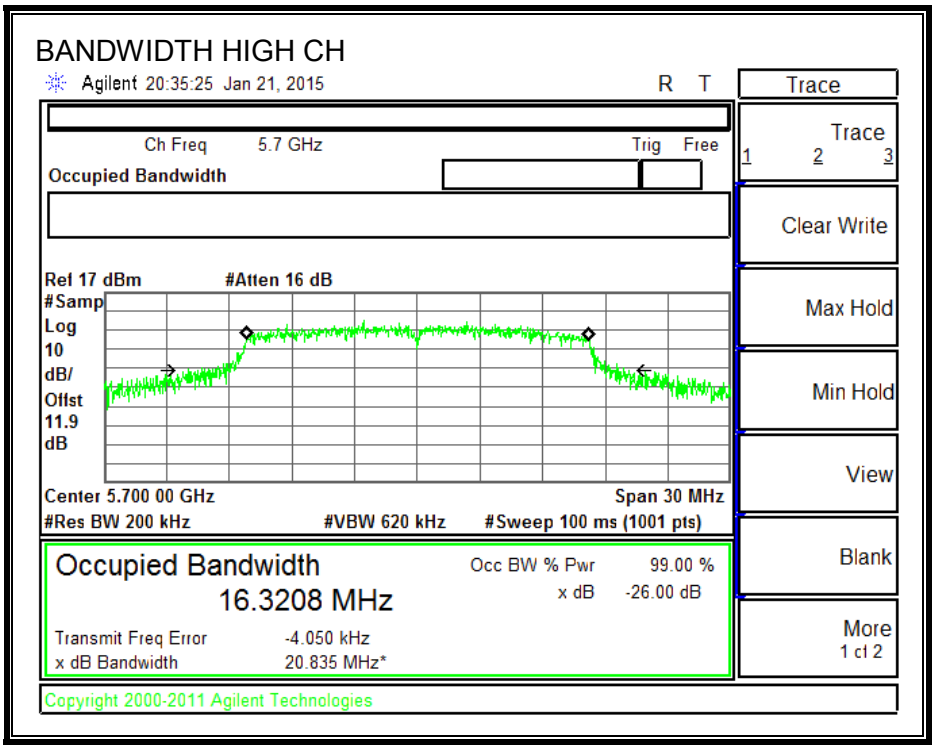

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8.8.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 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 maximum 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.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	23.10	4.00	24.00	11.00
Mid	5580	24.69	4.00	24.00	11.00
High	5700	25.32	4.00	24.00	11.00

Duty Cycle CF (dB)	2.91	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	7.04	9.95	24.00	-14.05
Mid	5580	9.78	12.69	24.00	-11.31
High	5700	9.81	12.72	24.00	-11.28

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	-2.16	0.75	11.00	-10.25
Mid	5580	0.39	3.30	11.00	-7.70
High	5700	0.53	3.44	11.00	-7.56

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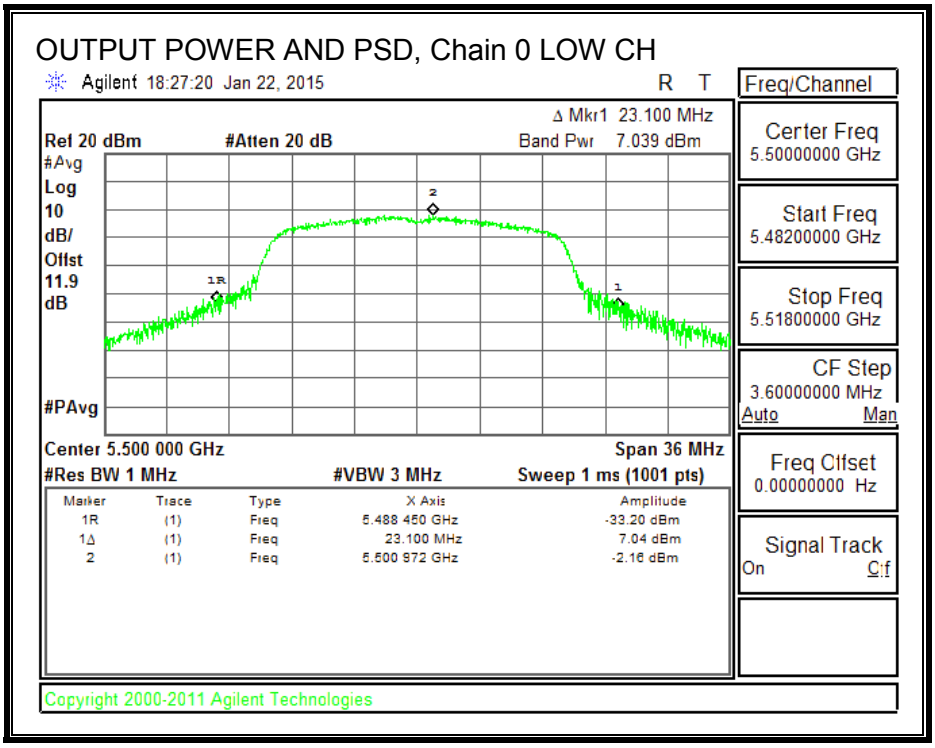
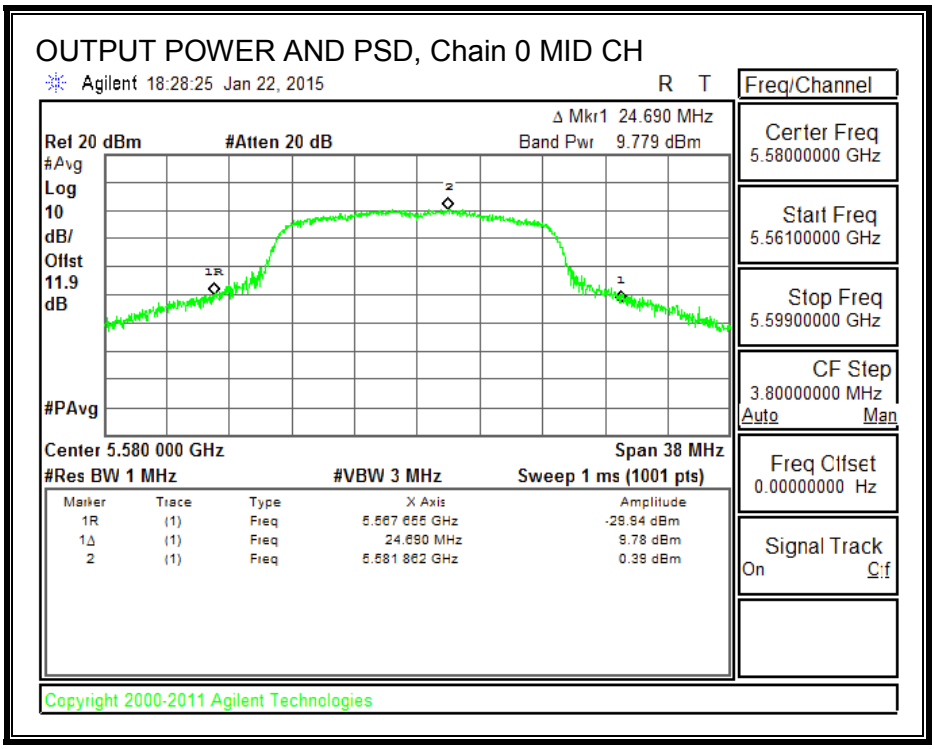
OUTPUT POWER AND PSD, Chain 0





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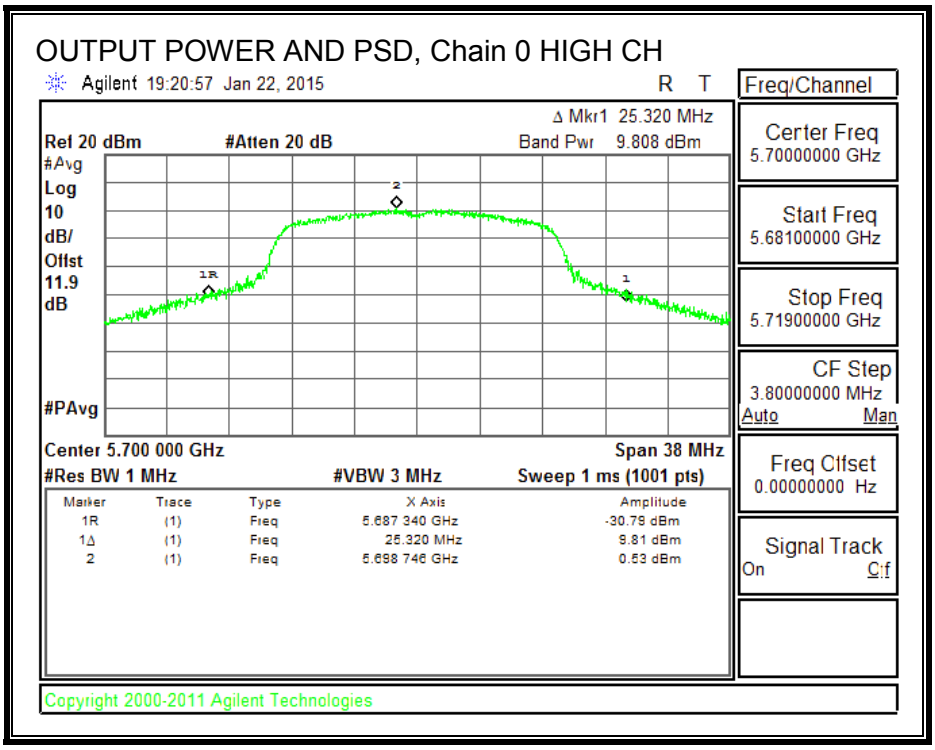

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8.9. 802.11n HT20 MODE IN THE 5.6 GHz BAND

8.9.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	24.45
Mid	5580	26.16
High	5700	26.46

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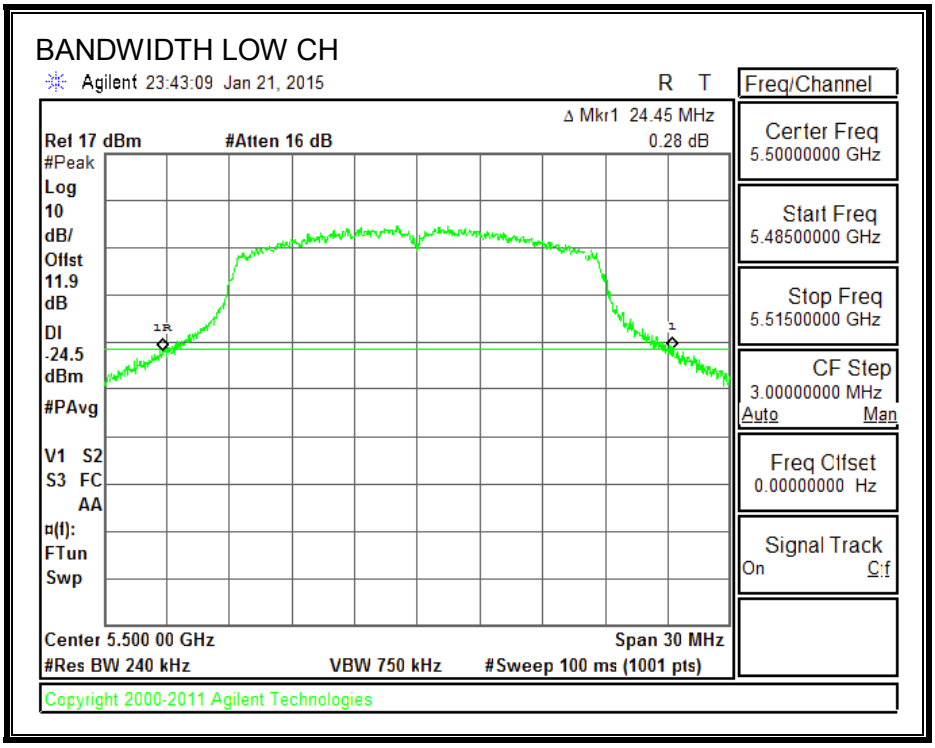
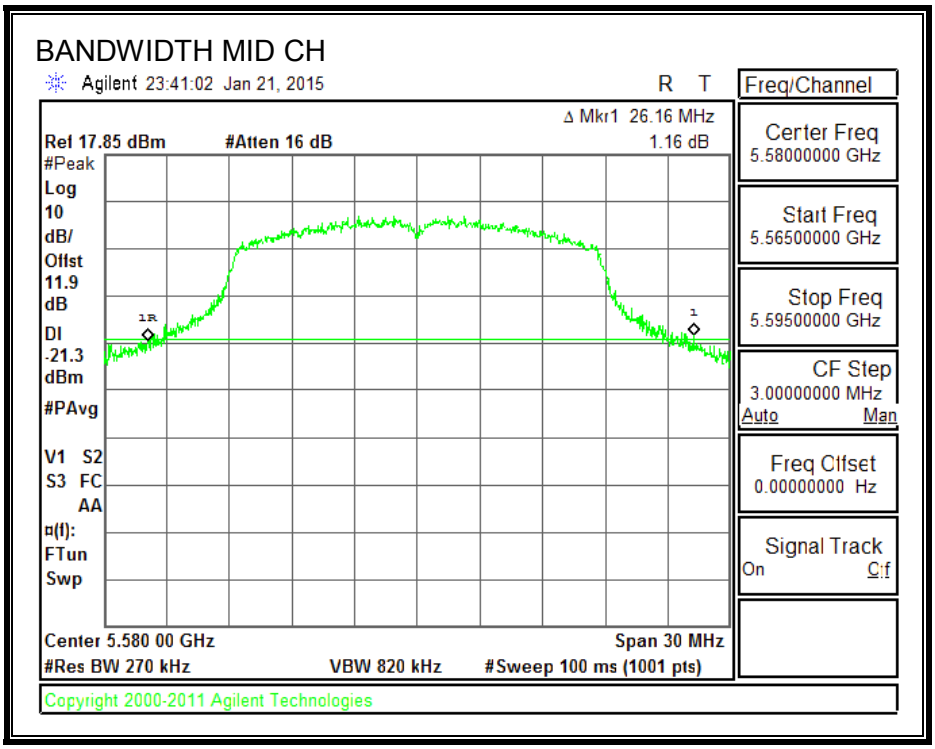
26 dB BANDWIDTH





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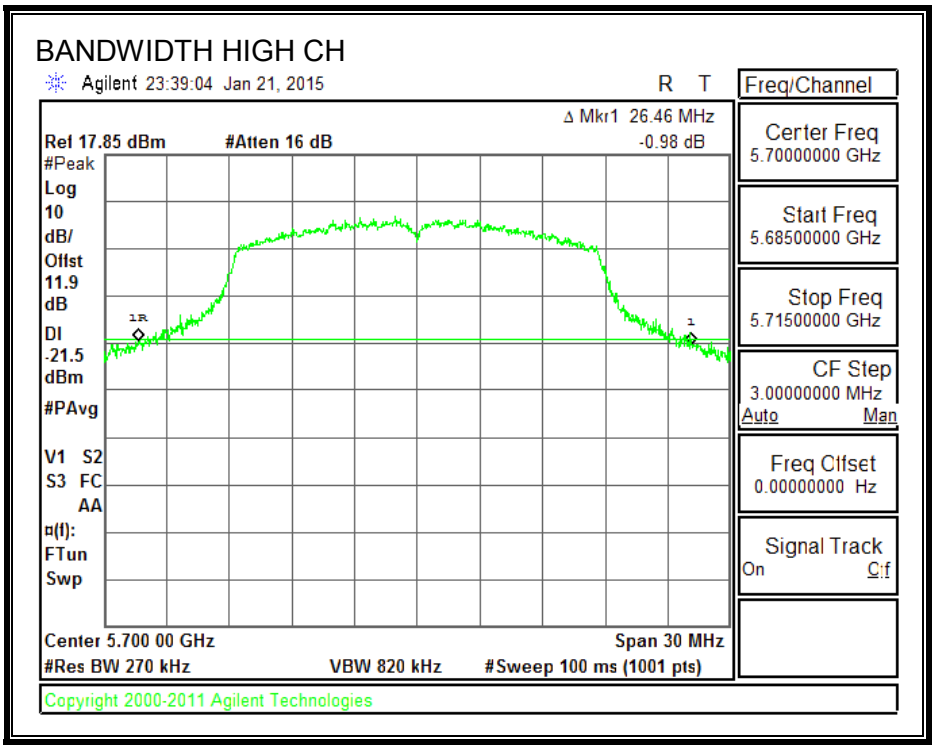

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8.9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.4525
Mid	5580	17.4557
High	5700	17.4736

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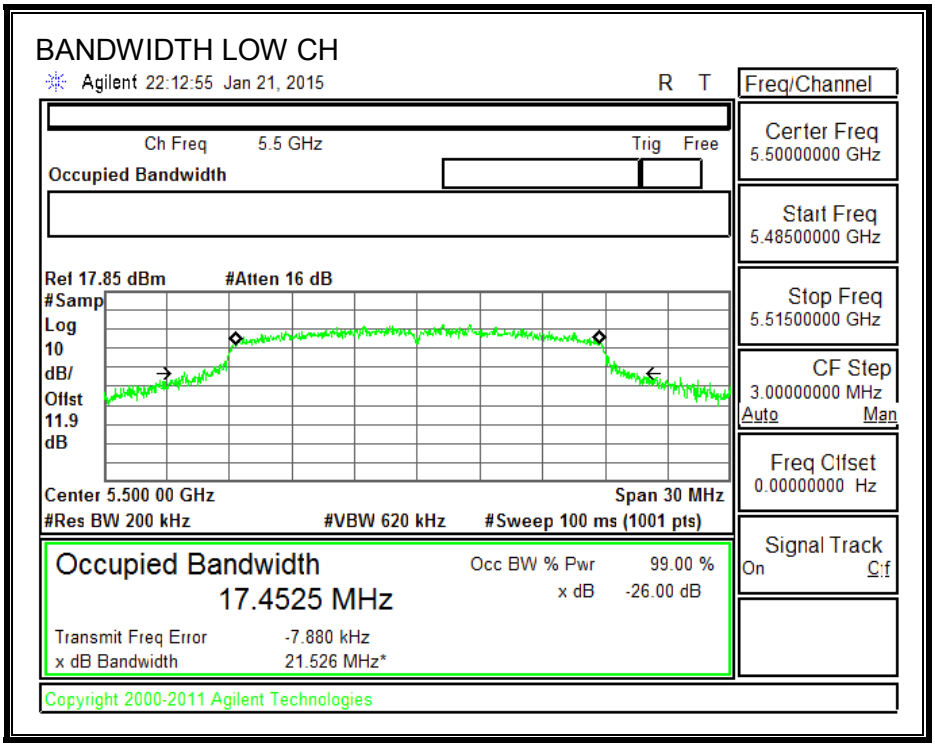
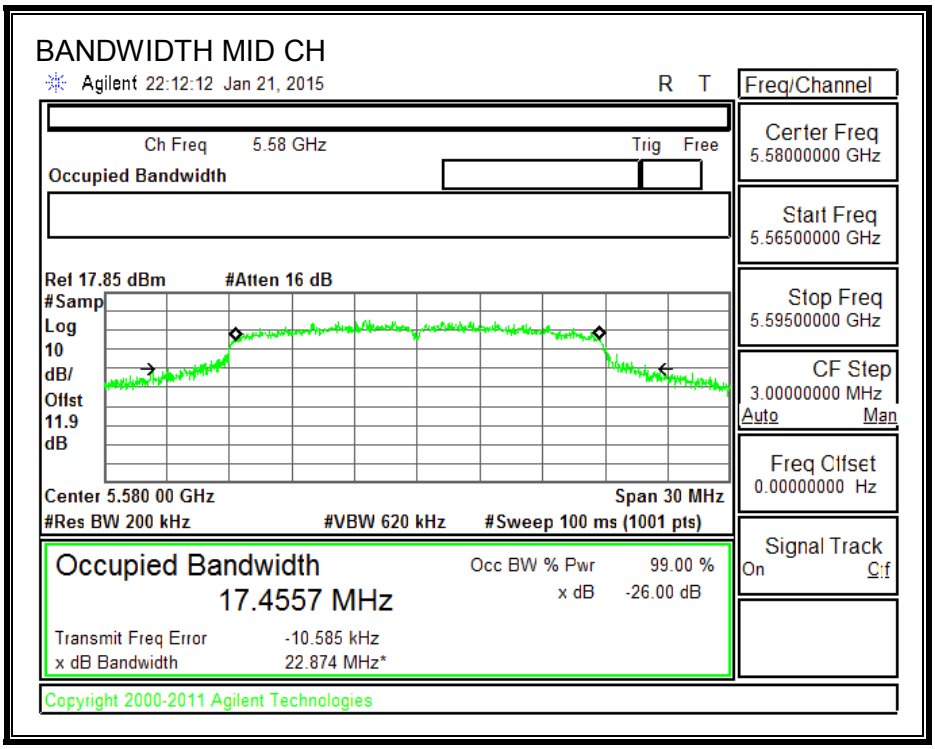
99% BANDWIDTH





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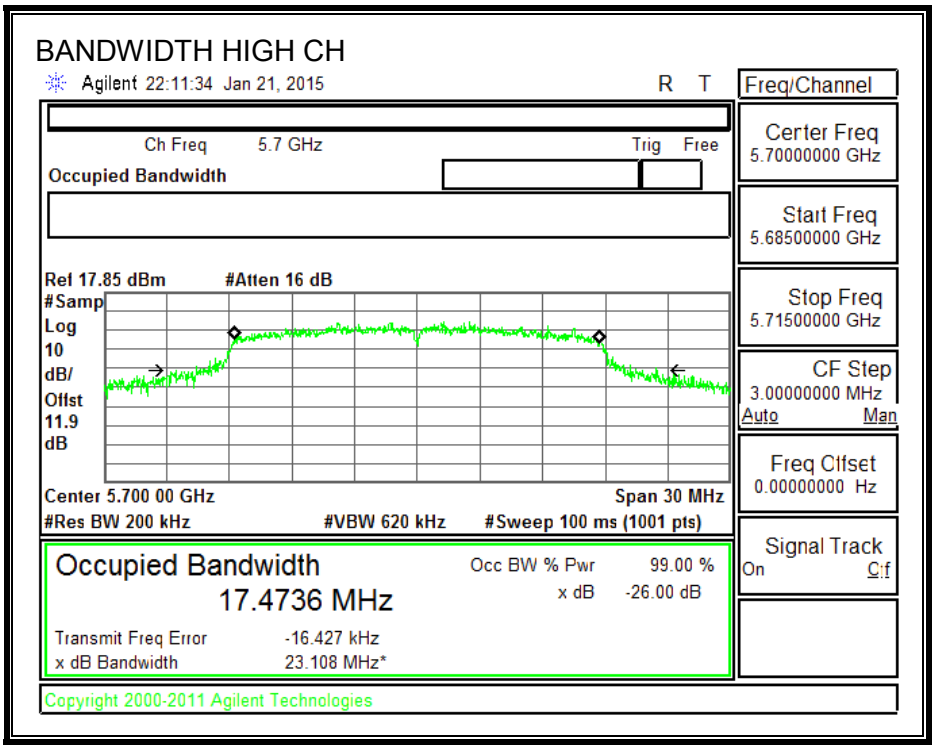

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8.9.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 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 maximum 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.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	24.45	4.00	24.00	11.00
Mid	5580	26.16	4.00	24.00	11.00
High	5700	26.46	4.00	24.00	11.00

Duty Cycle CF (dB)	3.00	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	6.77	9.77	24.00	-14.23
Mid	5580	8.07	11.07	24.00	-12.93
High	5700	8.28	11.28	24.00	-12.73

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	-2.69	0.31	11.00	-10.69
Mid	5580	-1.50	1.50	11.00	-9.50
High	5700	-1.32	1.68	11.00	-9.32

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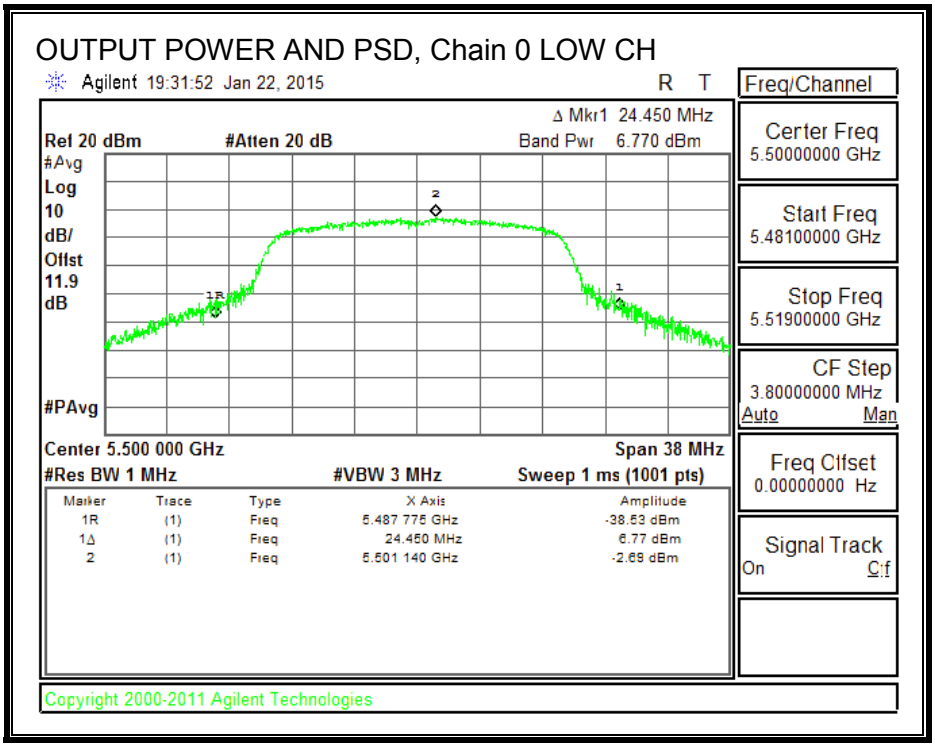
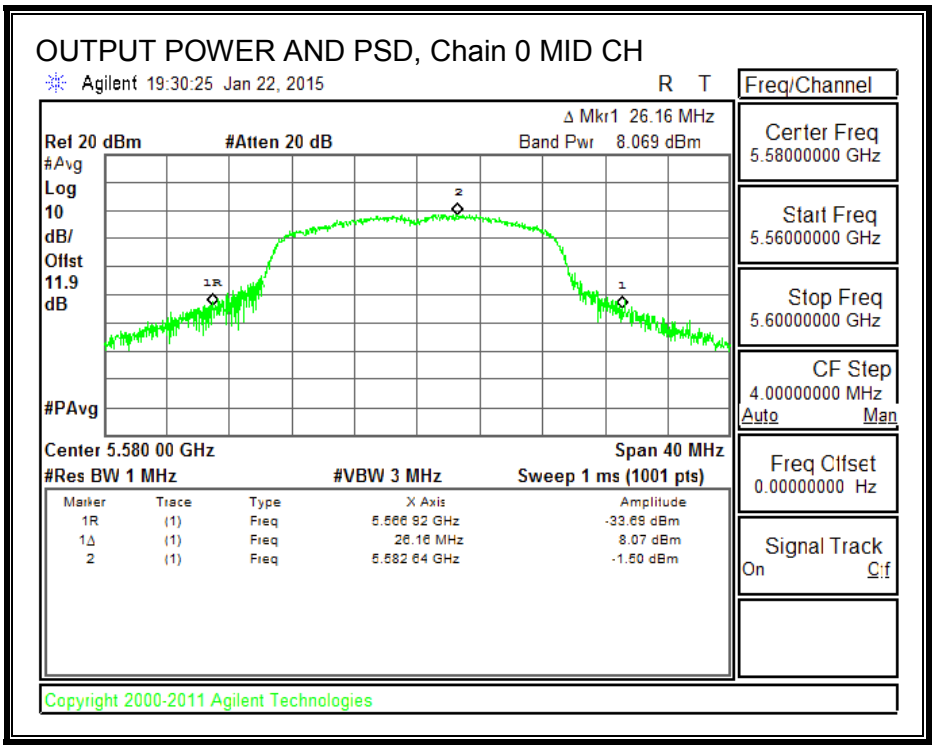
OUTPUT POWER AND PSD, Chain 0





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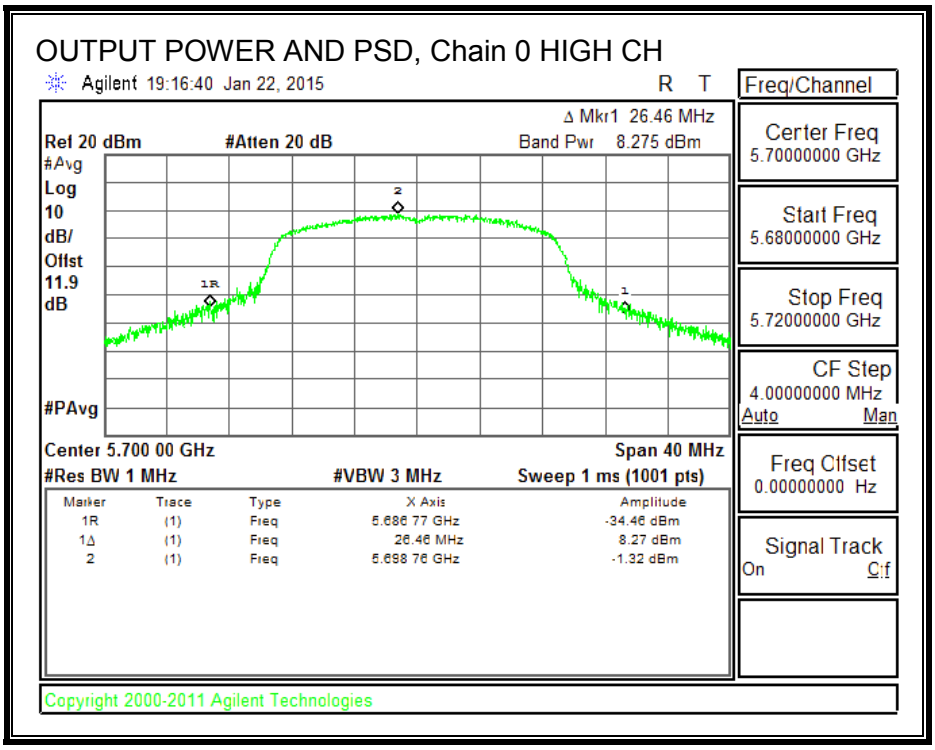

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8.10. 802.11n HT40 MODE IN THE 5.6 GHz BAND

8.10.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	42.88
Mid	5550	45.60
High	5670	43.92

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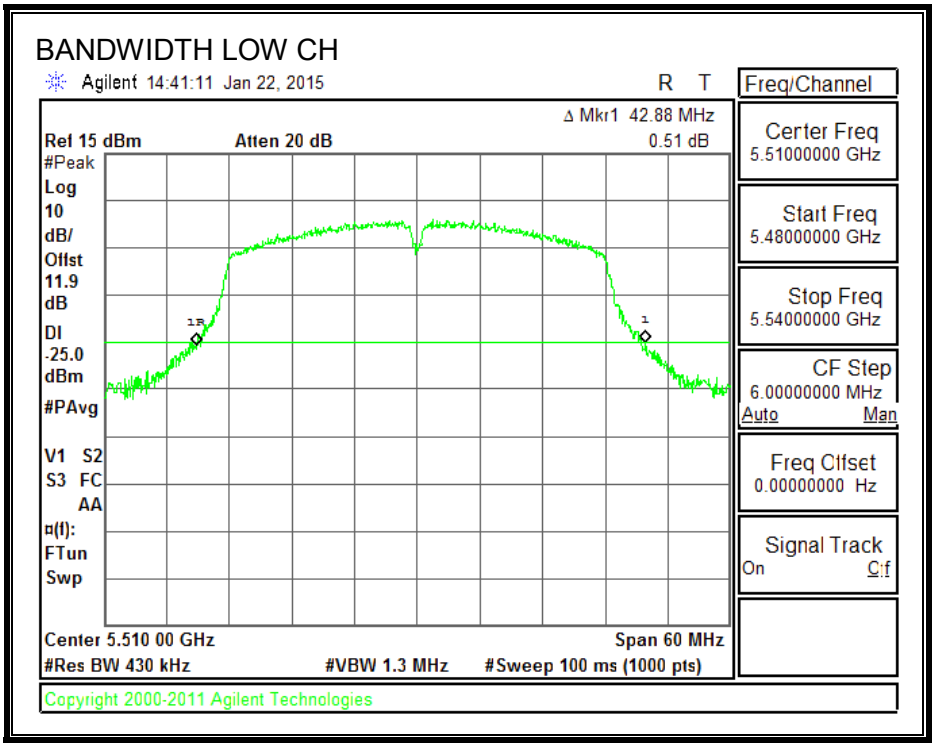
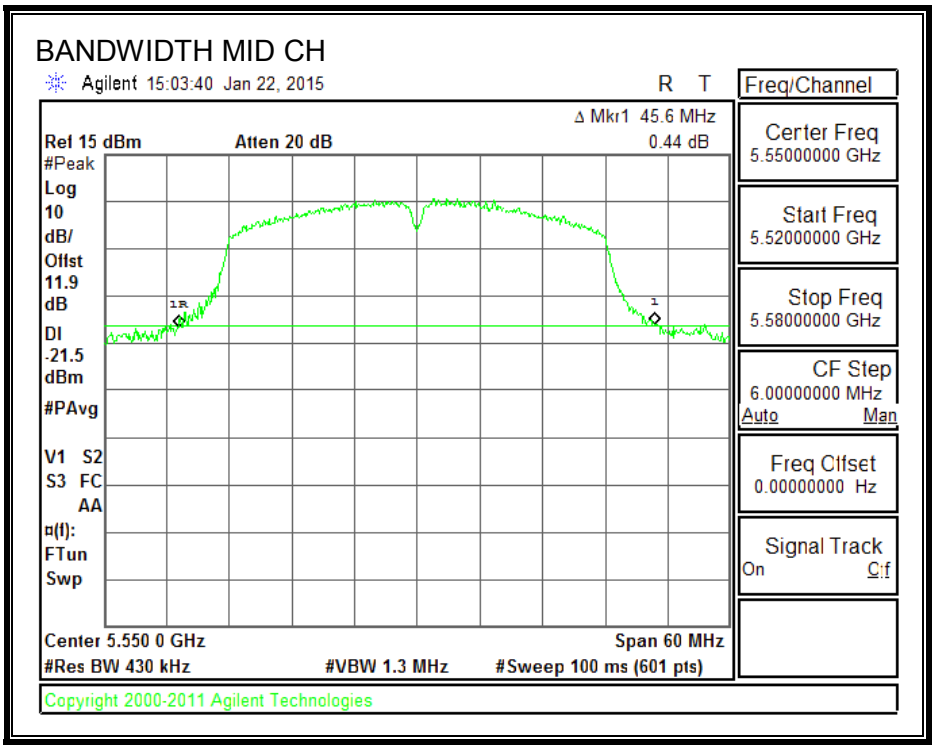
26 dB BANDWIDTH





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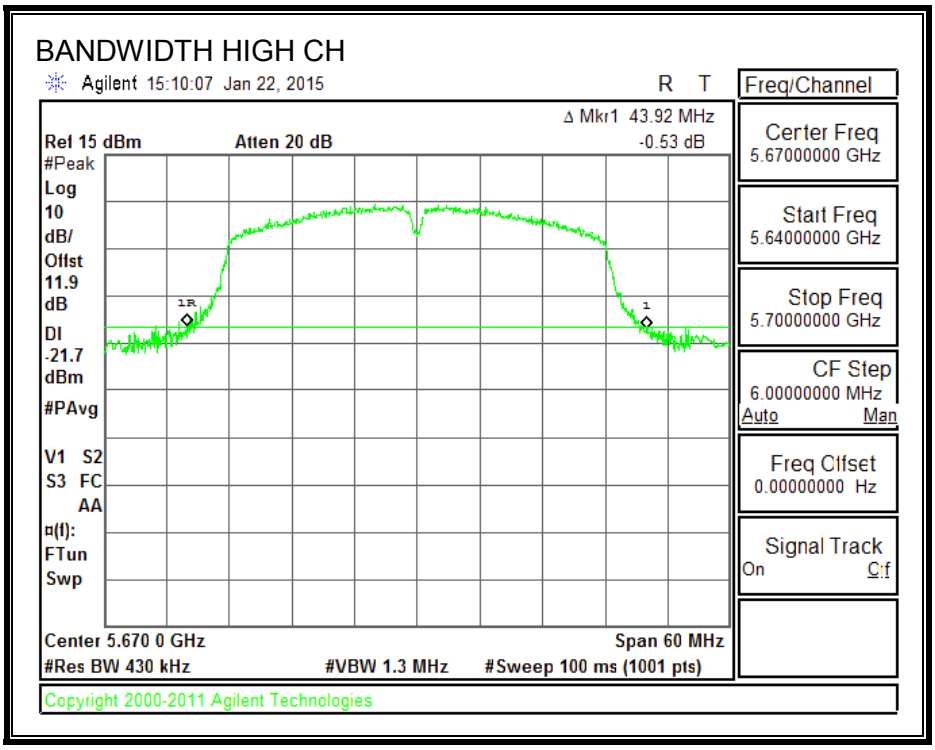

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8.10.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	35.6771
Mid	5550	35.8031
High	5670	35.7573

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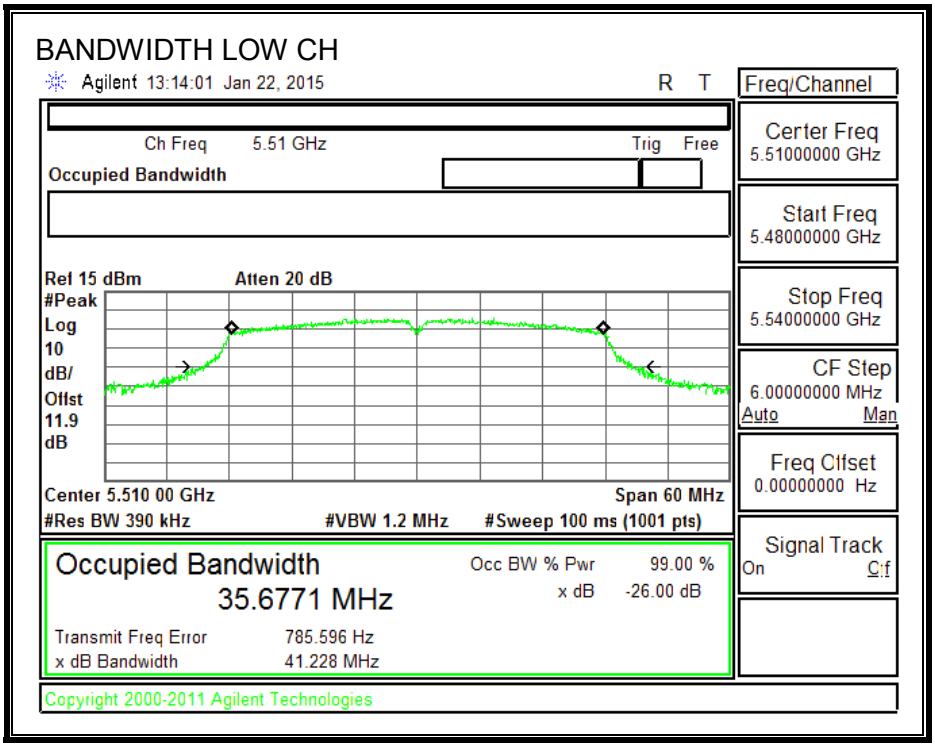
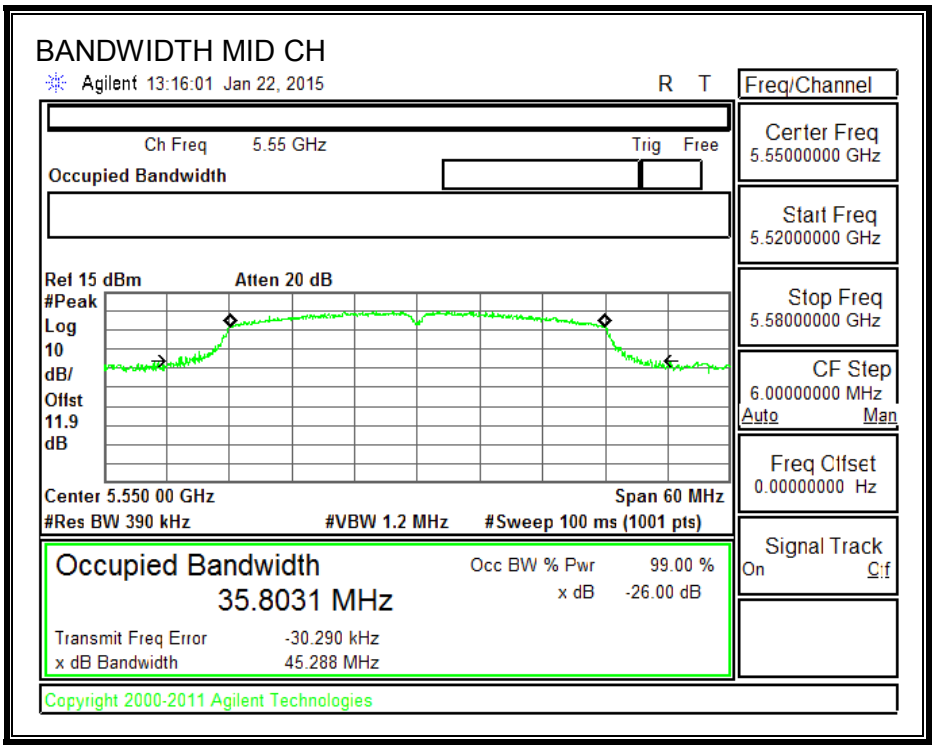
99% BANDWIDTH





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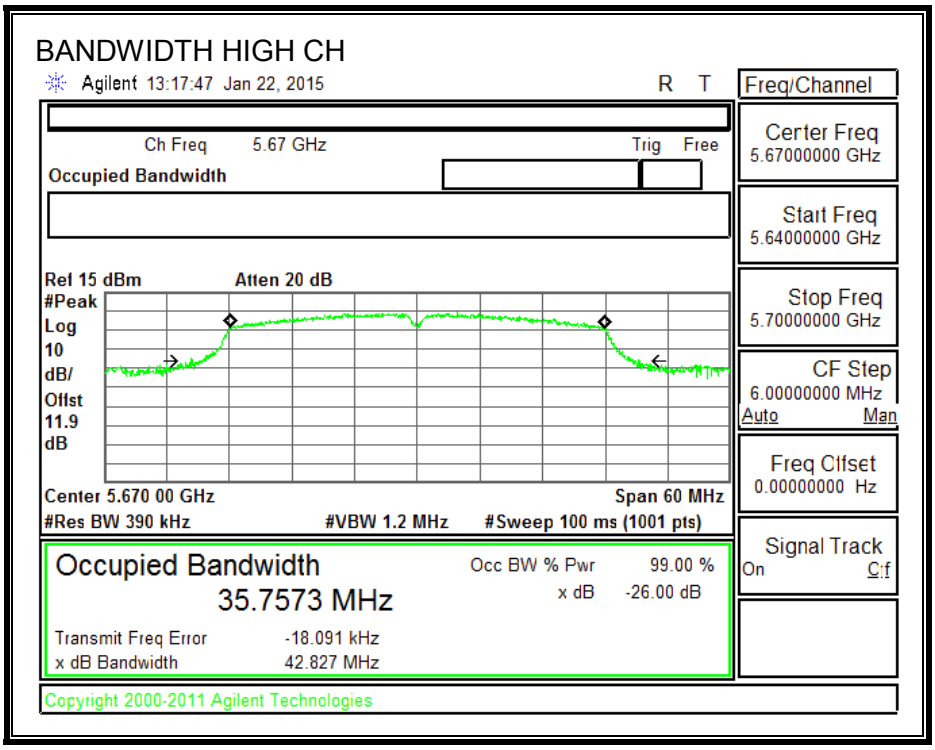

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8.10.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 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.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5510	42.88	4.00	24.00	11.00
Mid	5550	45.60	4.00	24.00	11.00
High	5670	43.92	4.00	24.00	11.00

Duty Cycle CF (dB)	2.96	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	6.86	9.82	24.00	-14.18
Mid	5550	11.73	14.69	24.00	-9.32
High	5670	11.42	14.38	24.00	-9.62

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	-6.03	-3.07	11.00	-14.07
Mid	5550	-0.17	2.79	11.00	-8.21
High	5670	-1.04	1.92	11.00	-9.08

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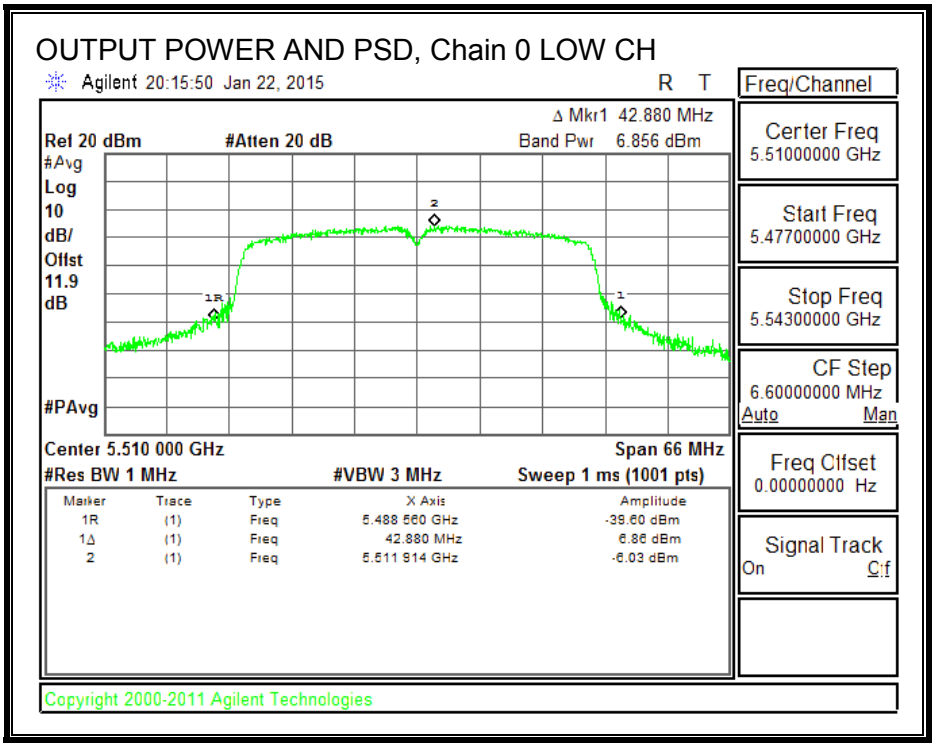
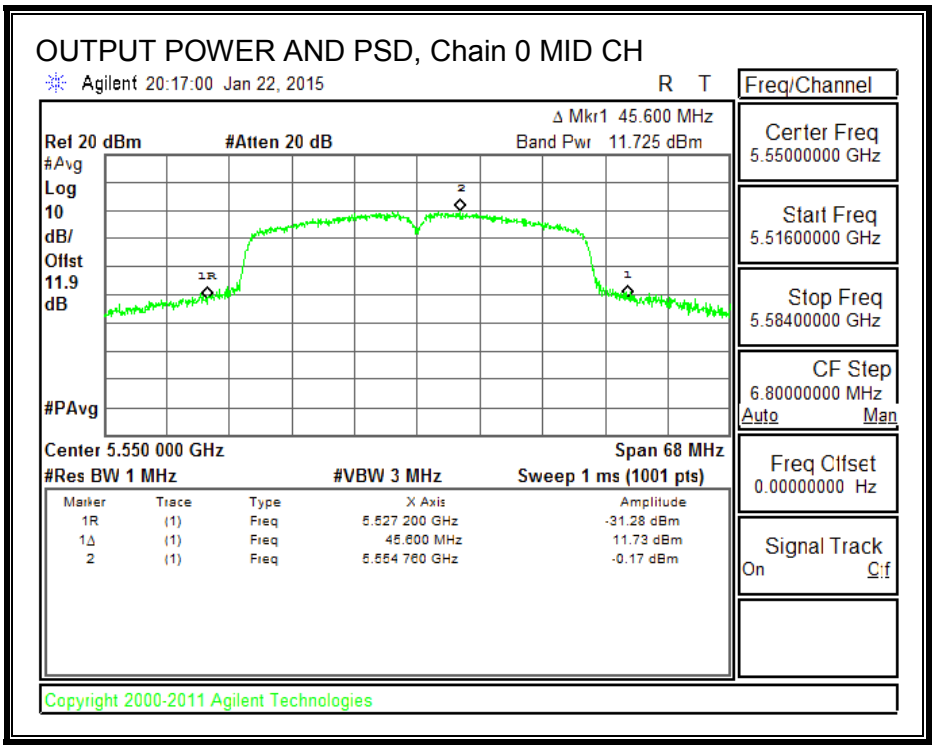
OUTPUT POWER AND PSD, Chain 0





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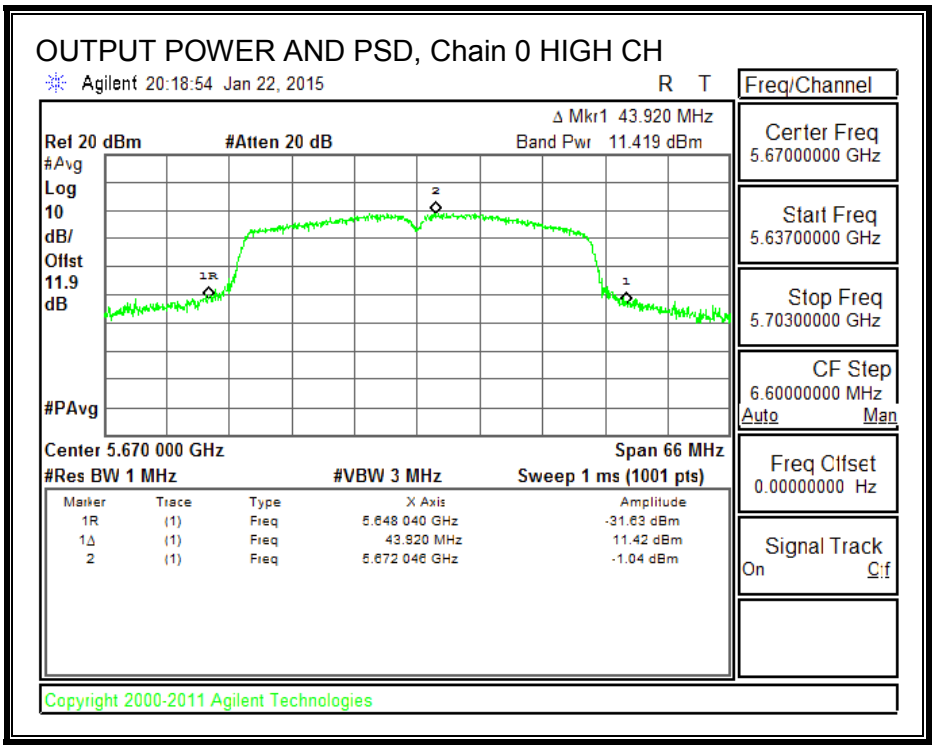

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8.11. 802.11a MODE IN THE 5.8 GHz BAND

8.11.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	15.1500	0.5
Mid	5785	15.1500	0.5
High	5825	15.1500	0.5

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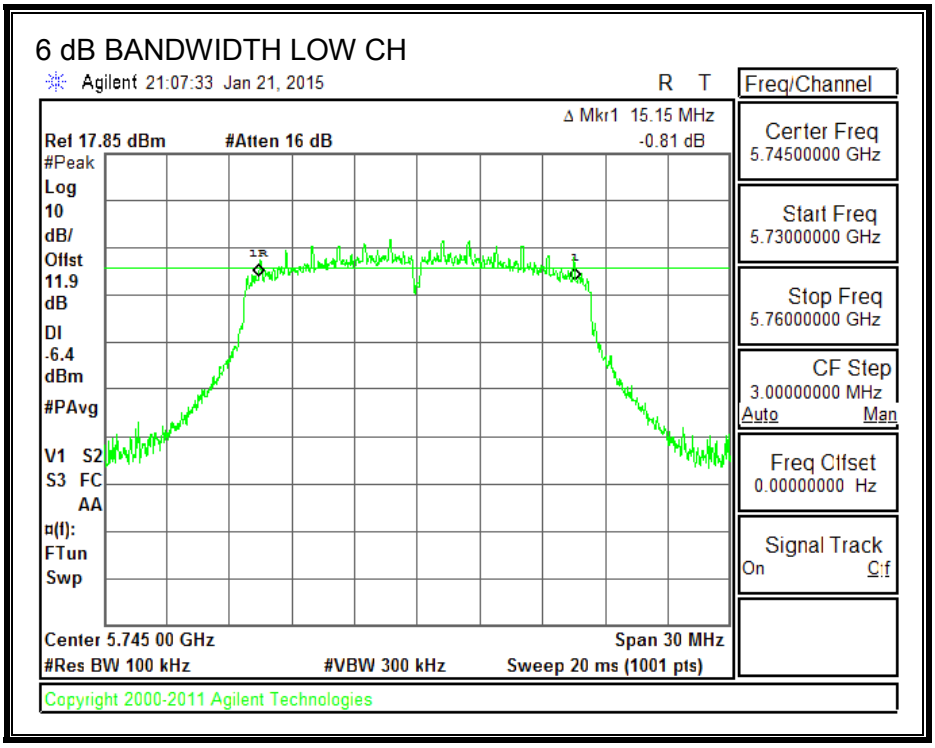
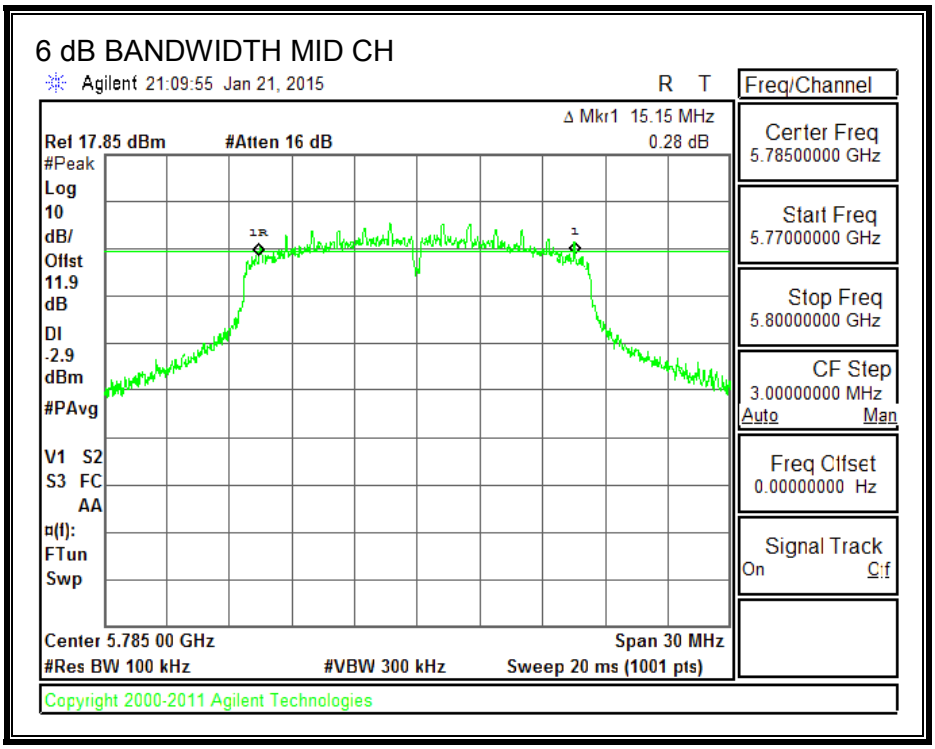
6 dB BANDWIDTH





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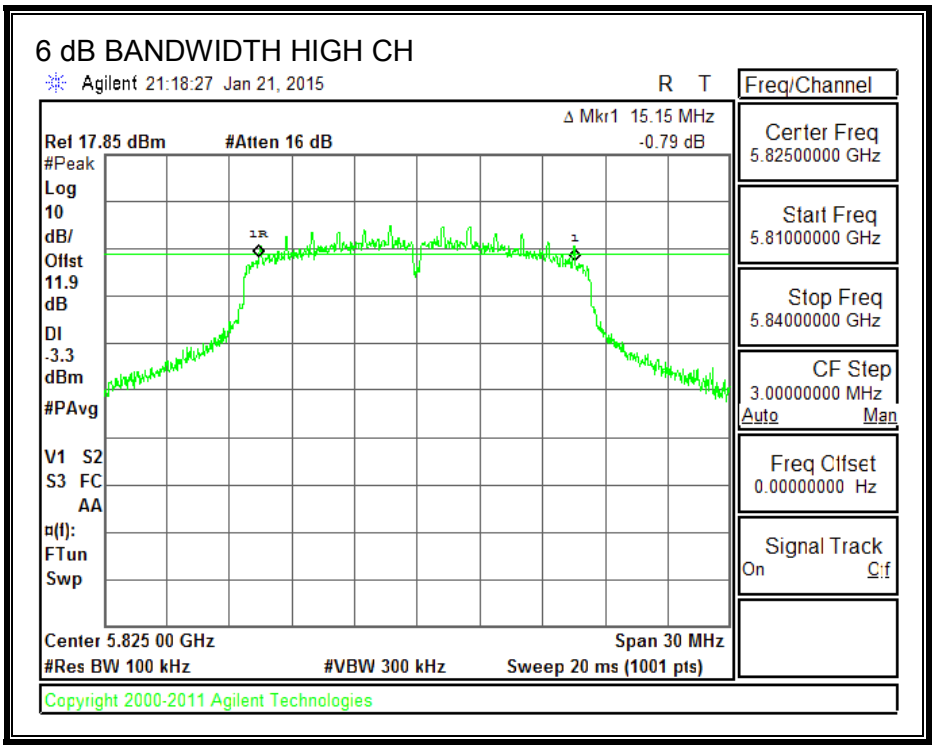

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8.11.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.2324
Mid	5785	16.4102
High	5825	16.3266

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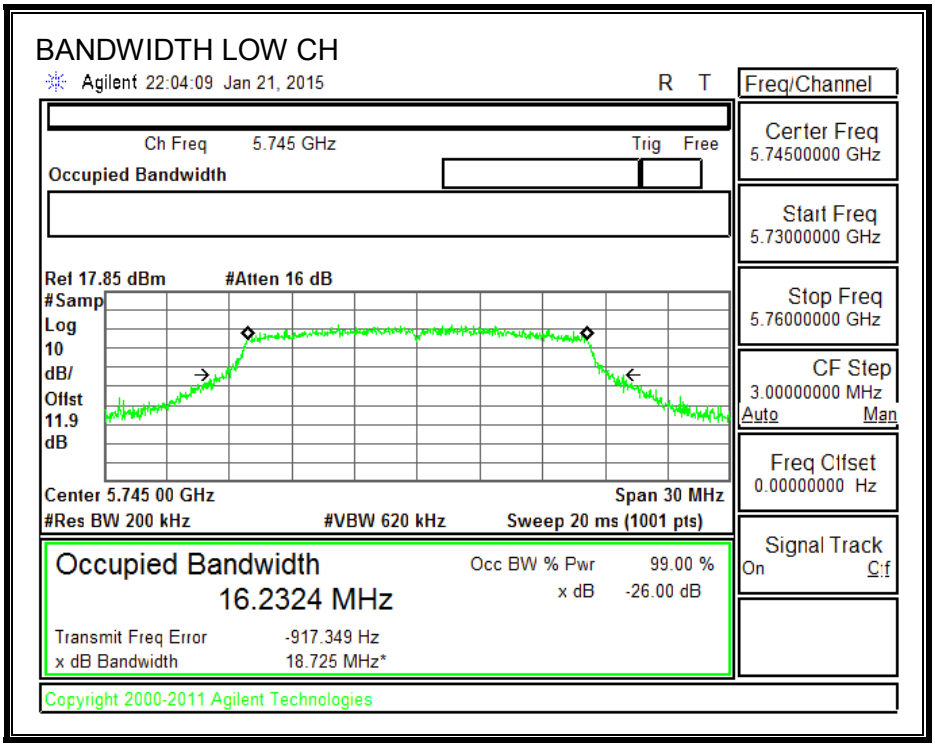
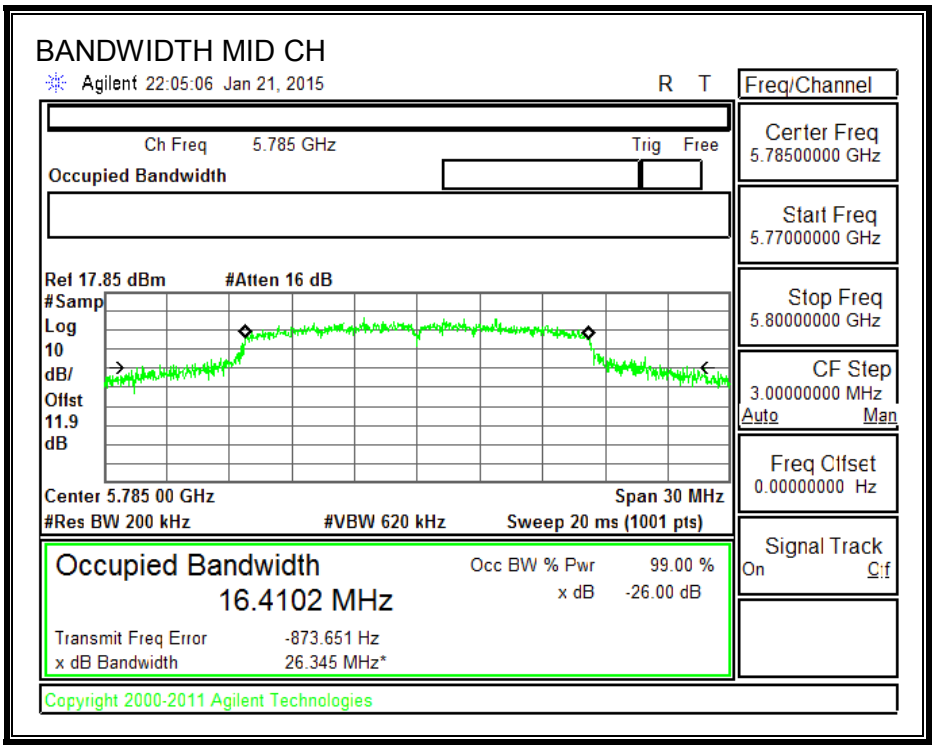
99% BANDWIDTH





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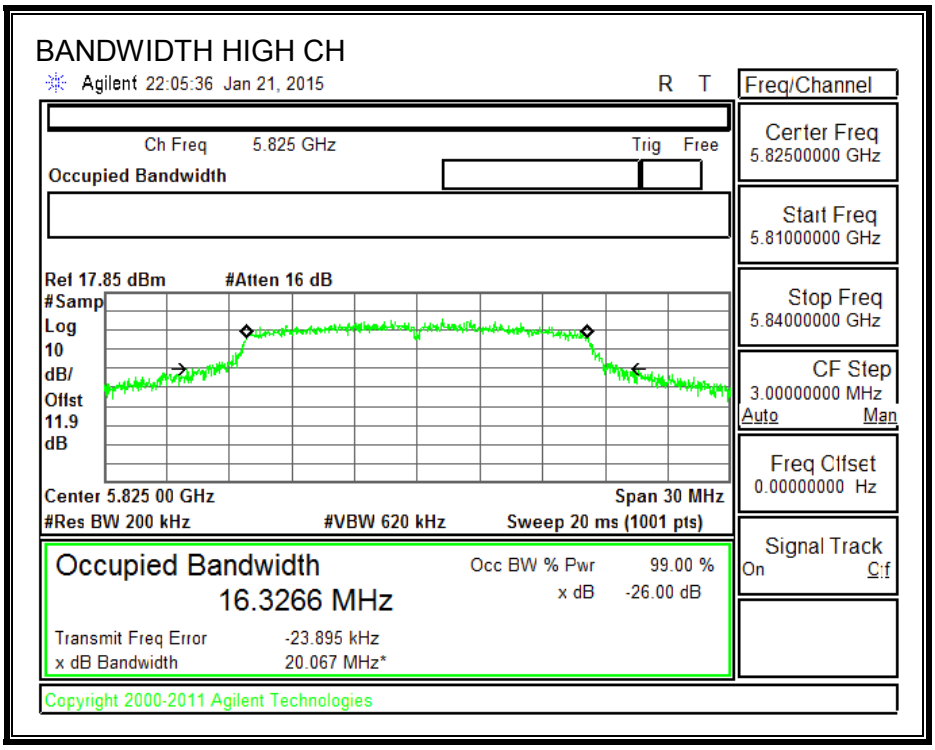

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8.11.3. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	4.00	30.00
Mid	5785	4.00	30.00
High	5825	4.00	30.00

Duty Cycle CF (dB)	2.91	**Included in Calculations of Corr'd Power**

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	9.20	12.11	30.00	-17.89
Mid	5785	12.83	15.74	30.00	-14.26
High	5825	12.45	15.36	30.00	-14.65

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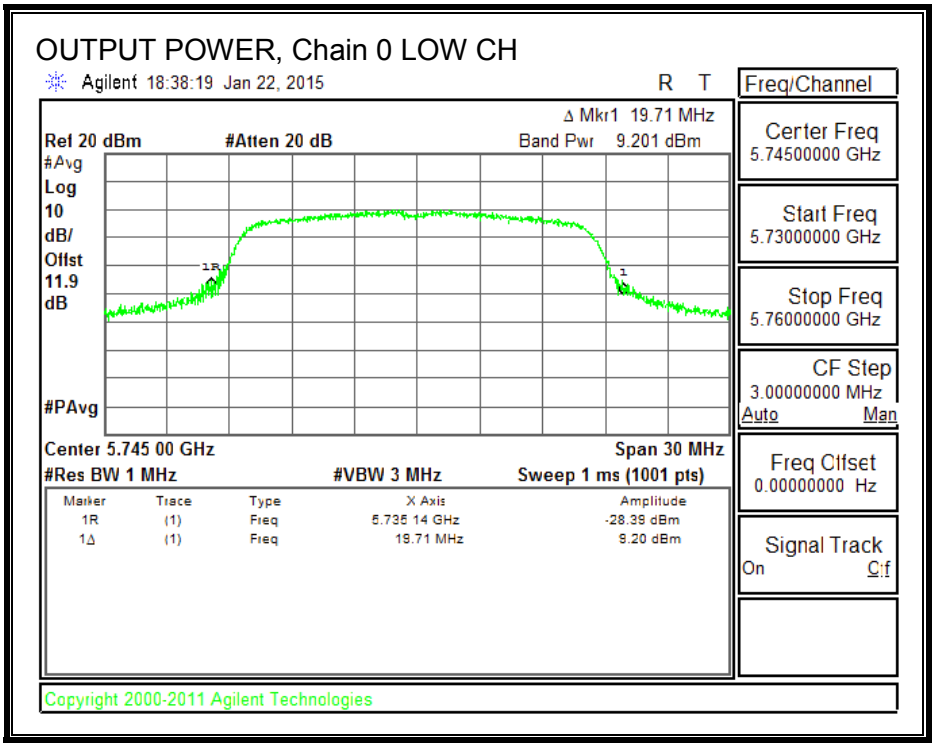
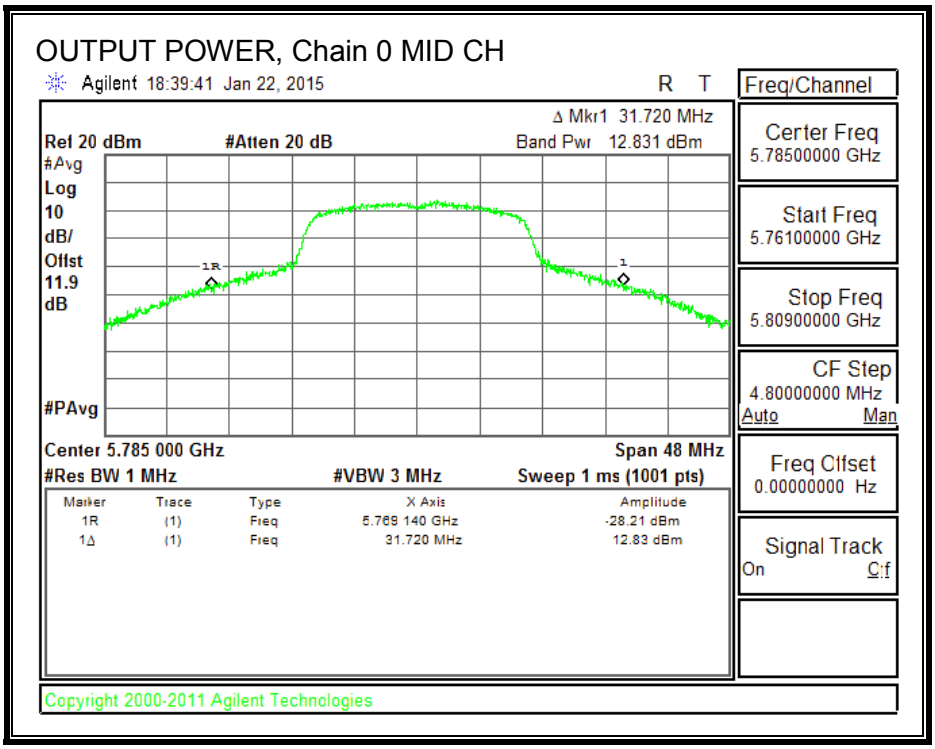
OUTPUT POWER, Chain 0





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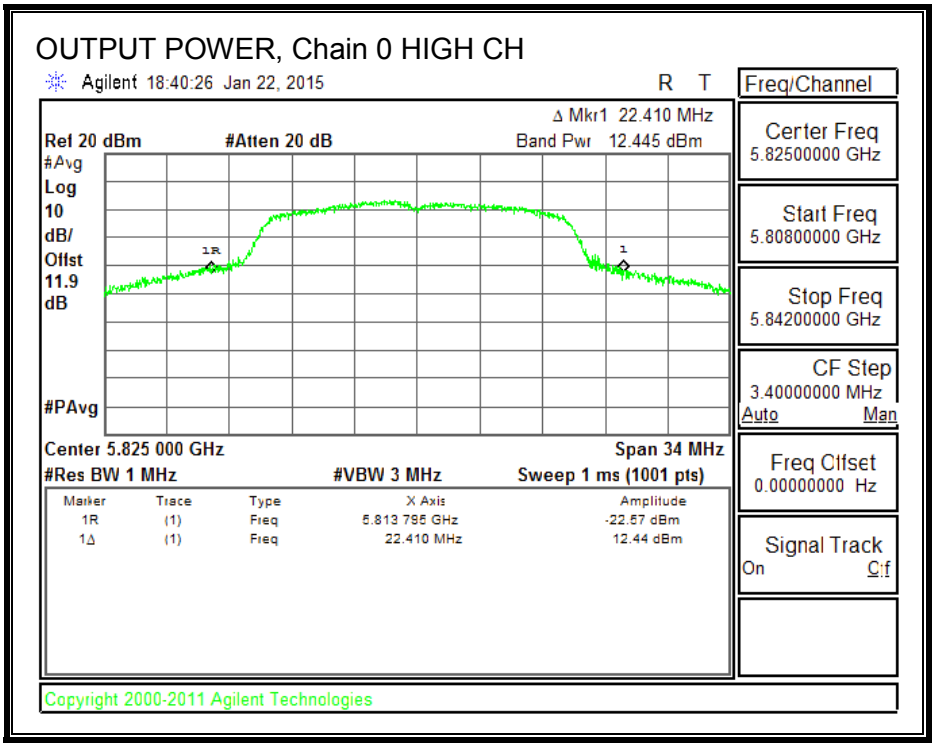

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8.11.4. MAXIMUM POWER SPECTRAL DENSITY (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	4.00	30.00
Mid	5785	4.00	30.00
High	5825	4.00	30.00

Duty Cycle CF (dB)	2.91	**Included in Calculations of Corr'd PSD**

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	-3.12	-0.21	30.00	-30.21
Mid	5785	0.40	3.31	30.00	-26.69
High	5825	-0.36	2.56	30.00	-27.45

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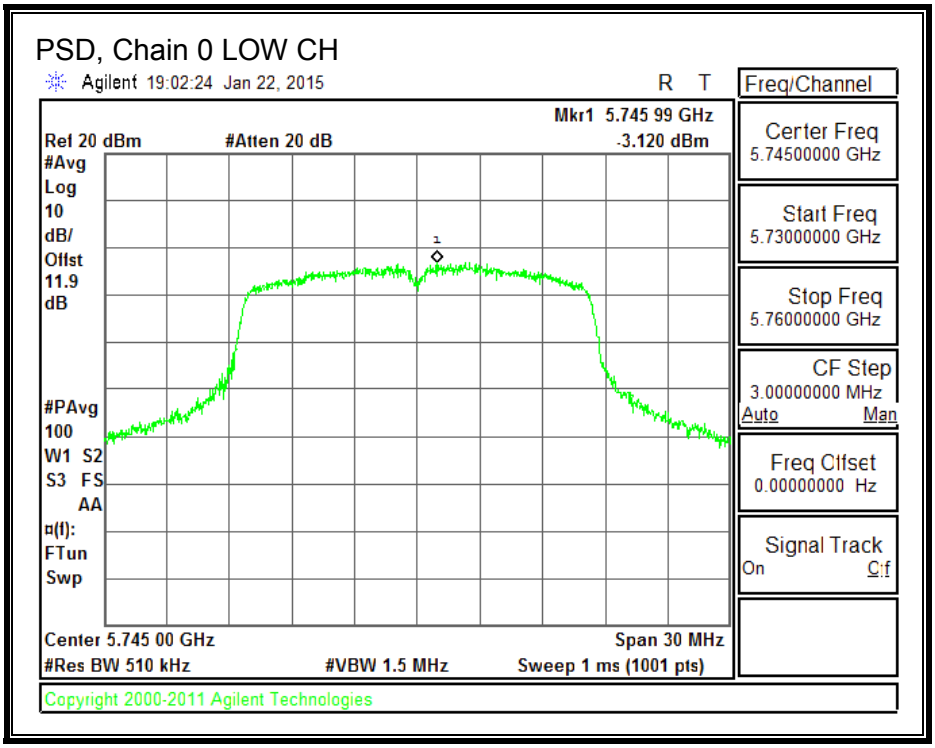
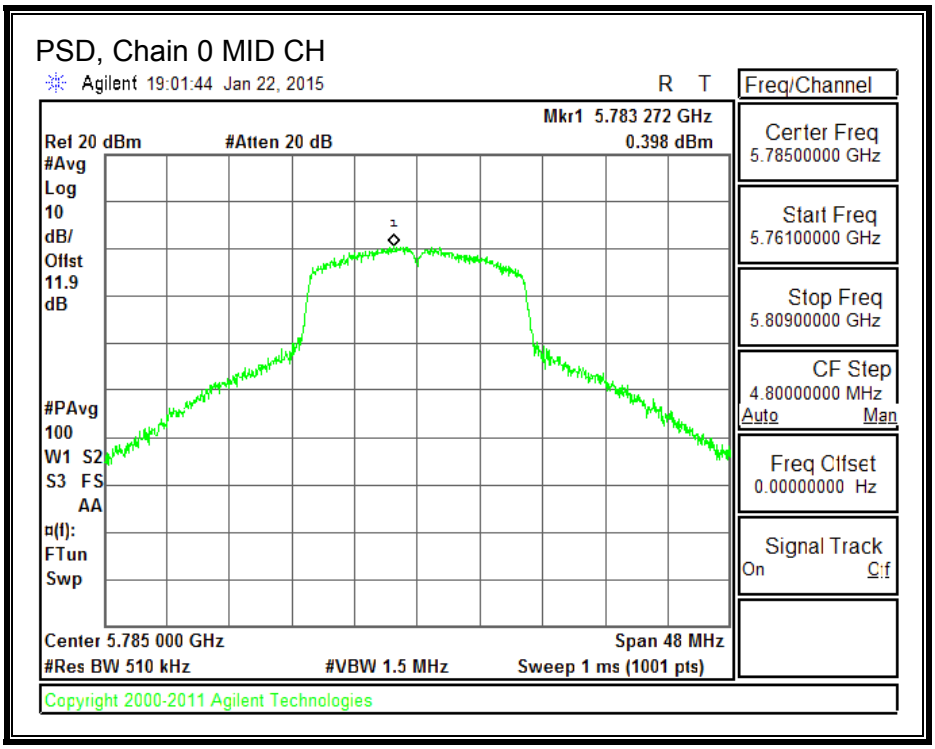
PSD, Chain 0





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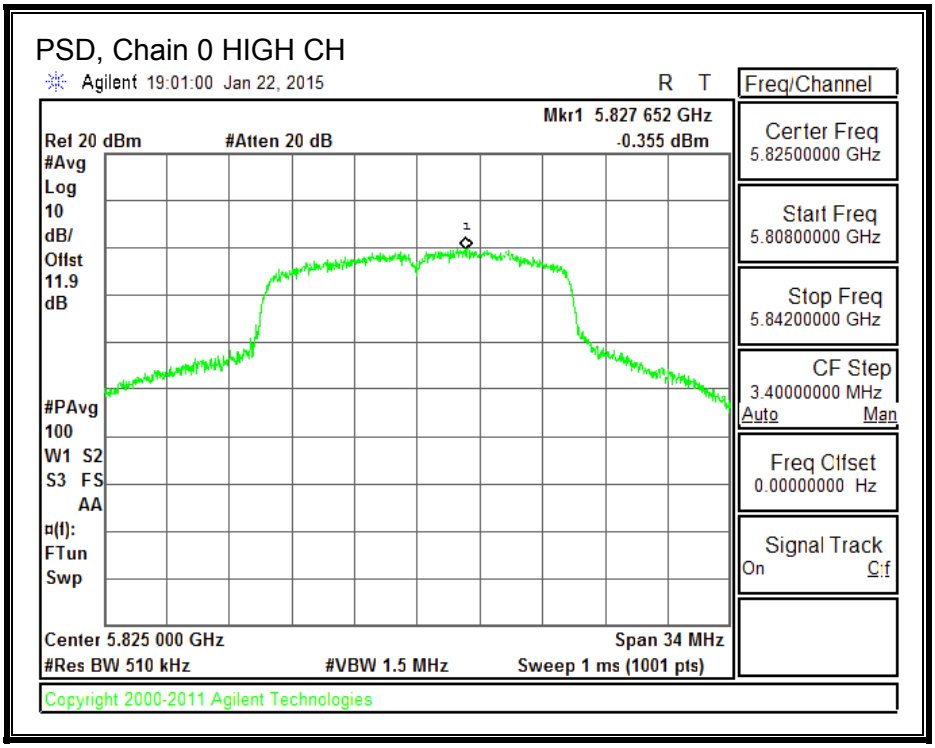

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8.12. 802.11n HT20 MODE IN THE 5.8 GHz BAND

8.12.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	15.150	0.5
Mid	5785	15.150	0.5
High	5825	15.150	0.5

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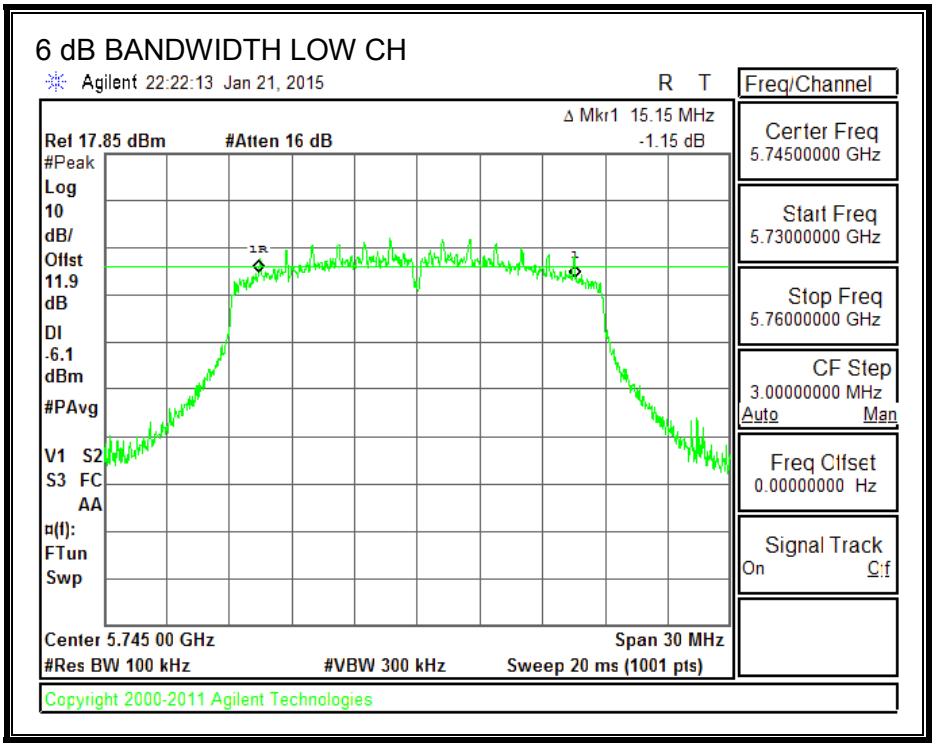
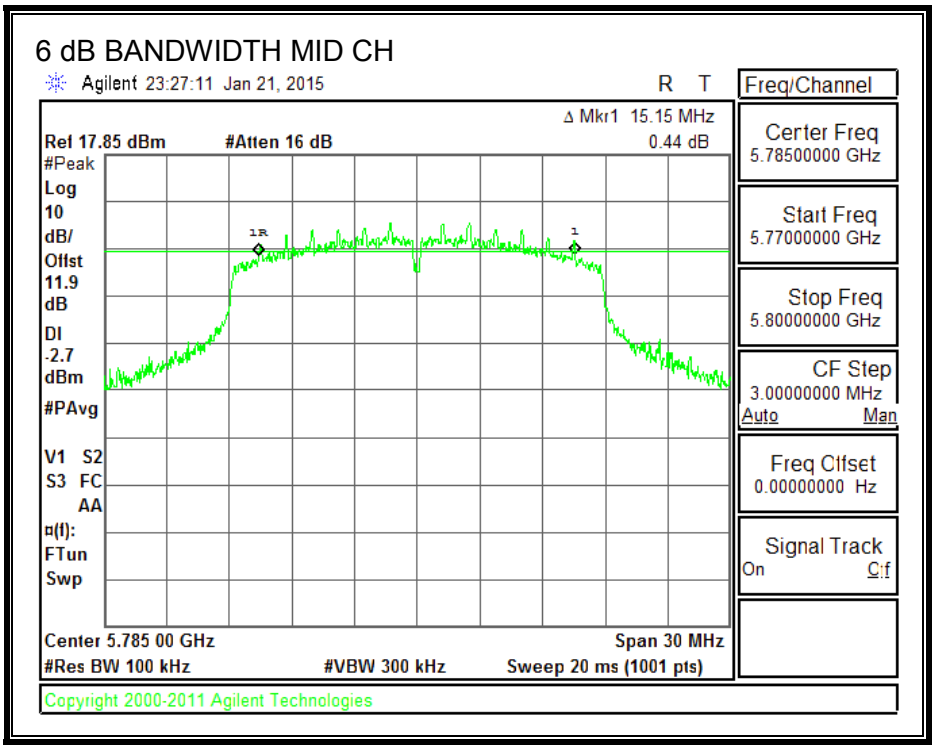
6 dB BANDWIDTH





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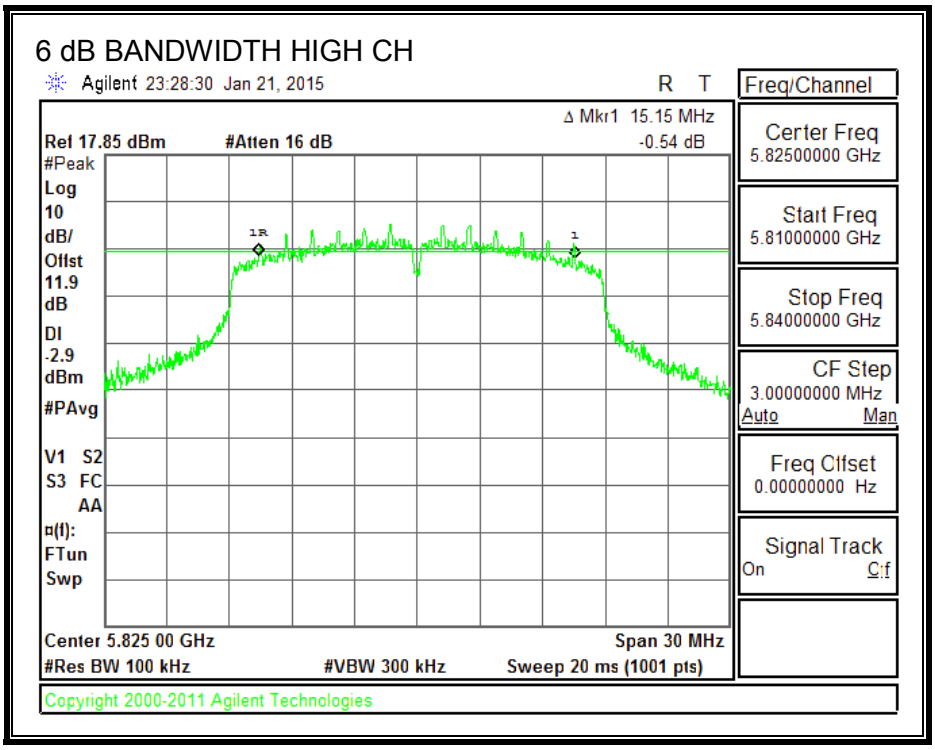

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8.12.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.3703
Mid	5785	17.4835
High	5825	17.4316

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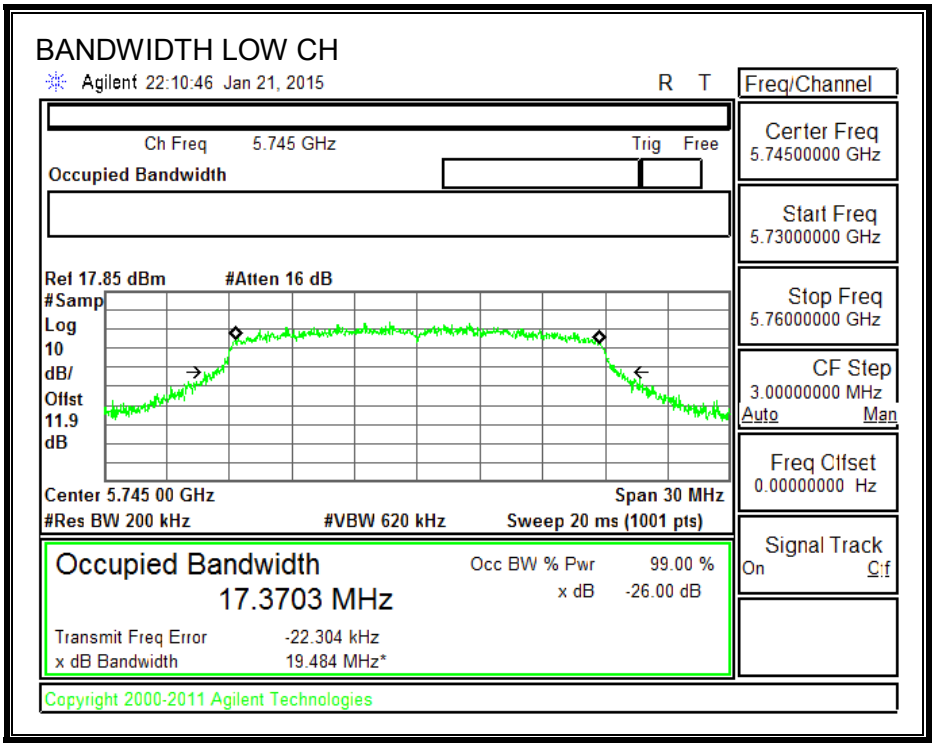
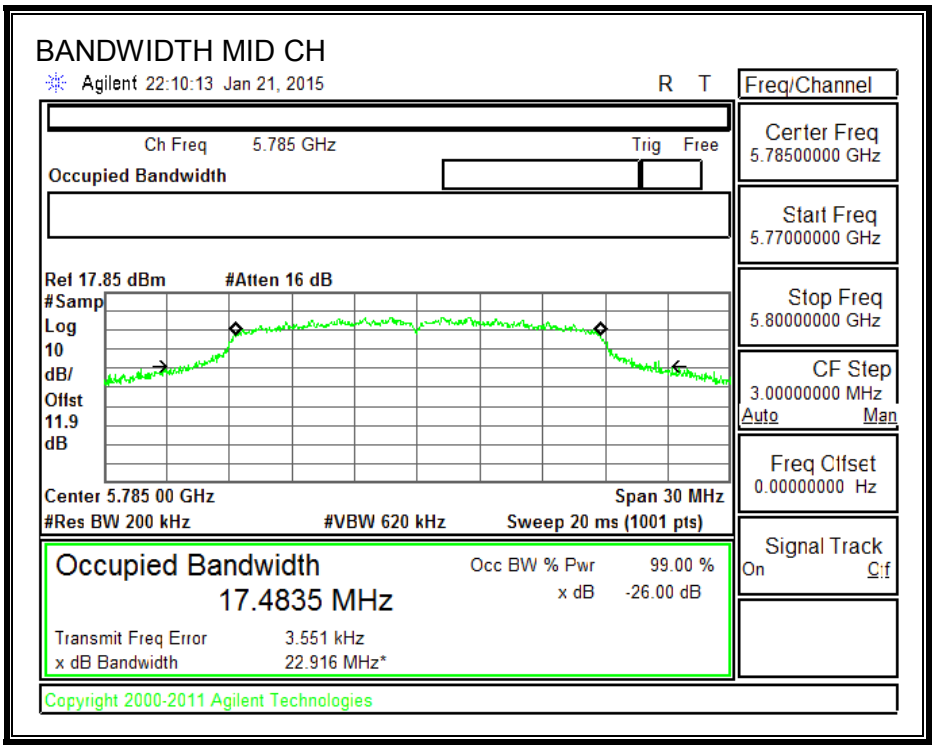
99% BANDWIDTH





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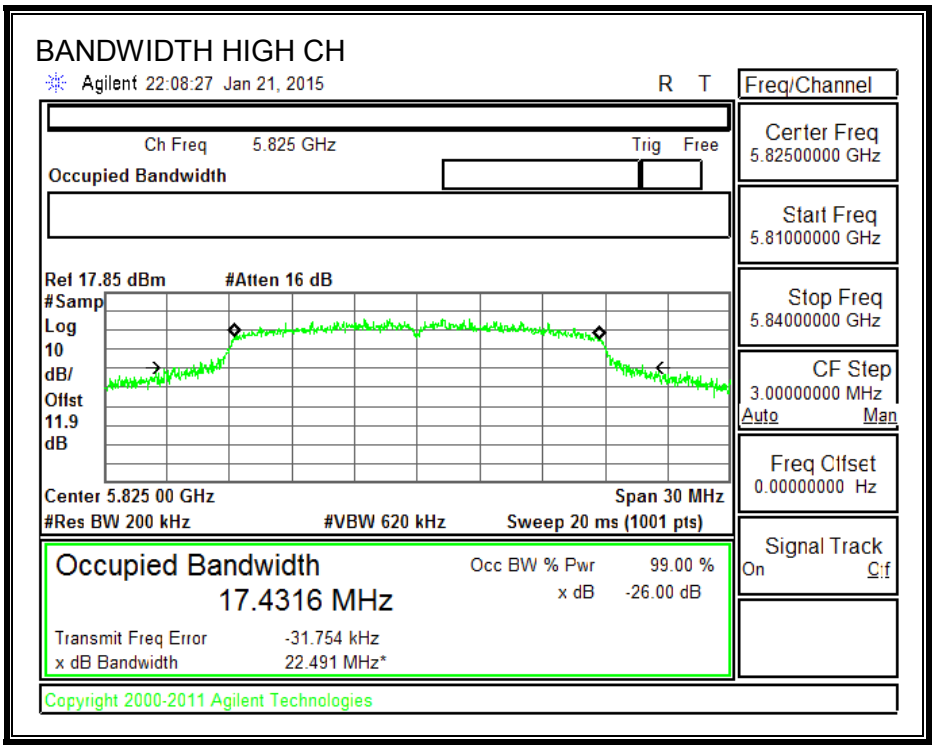

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8.12.3. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	4.00	30.00
Mid	5785	4.00	30.00
High	5825	4.00	30.00

Duty Cycle CF (dB)	3.00	Included in Calculations of Corr'd Power

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	9.44	12.44	30.00	-17.56
Mid	5785	12.83	15.83	30.00	-14.17
High	5825	12.43	15.43	30.00	-14.57

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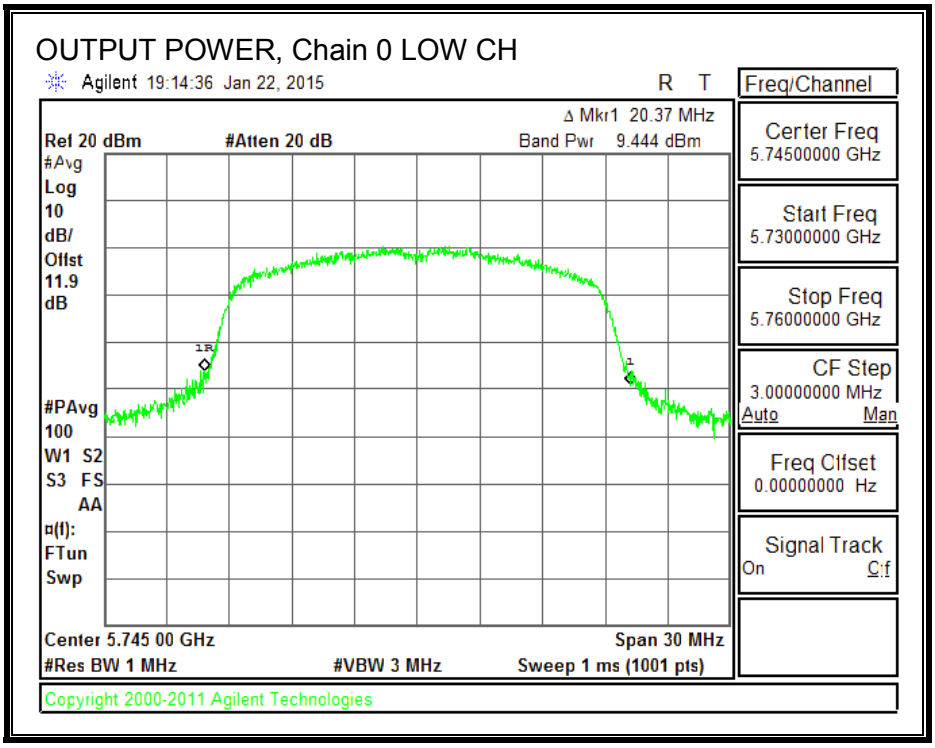
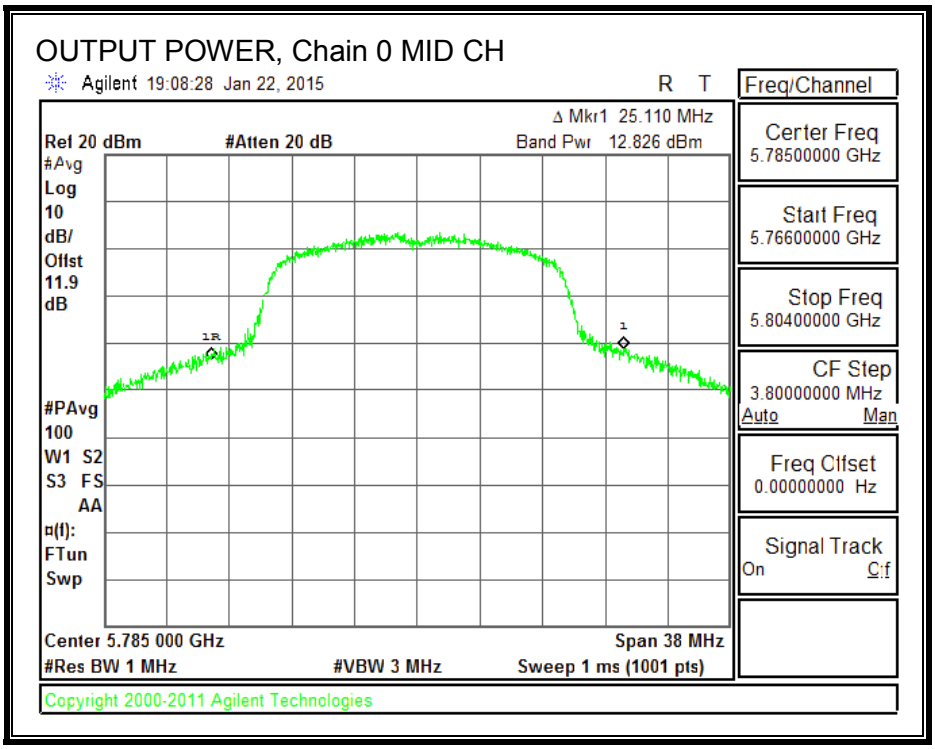
OUTPUT POWER, Chain 0





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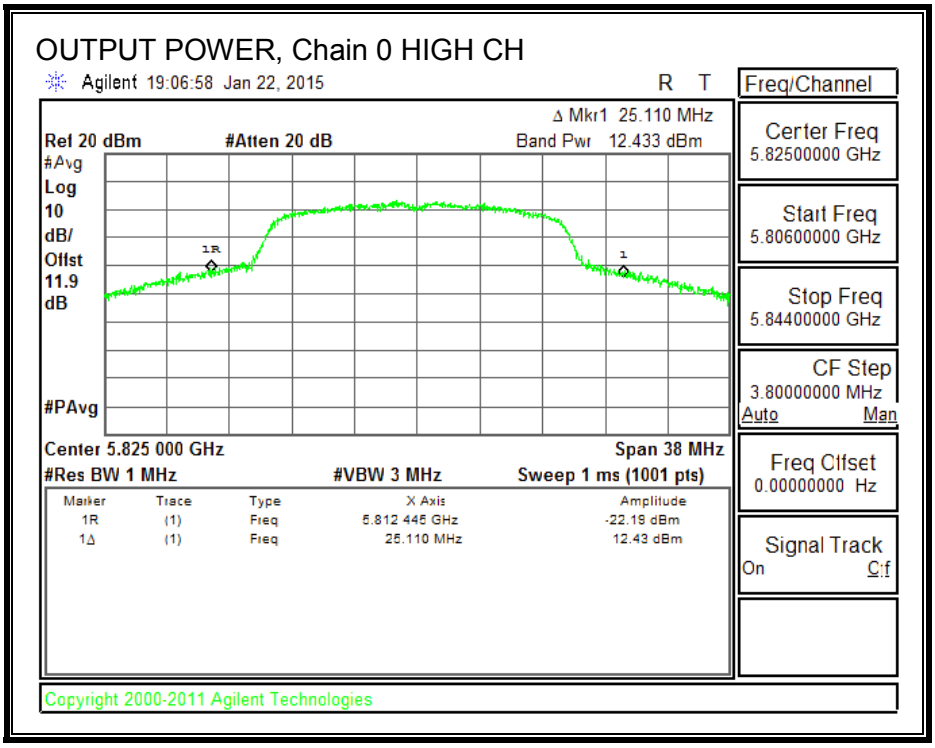

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8.12.4. MAXIMUM POWER SPECTRAL DENSITY (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	4.00	30.00
Mid	5785	4.00	30.00
High	5825	4.00	30.00

Duty Cycle CF (dB)	3.00	**Included in Calculations of Corr'd PSD**

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	-3.30	-0.30	30.00	-30.30
Mid	5785	0.50	3.50	30.00	-26.50
High	5825	0.50	3.50	30.00	-26.50

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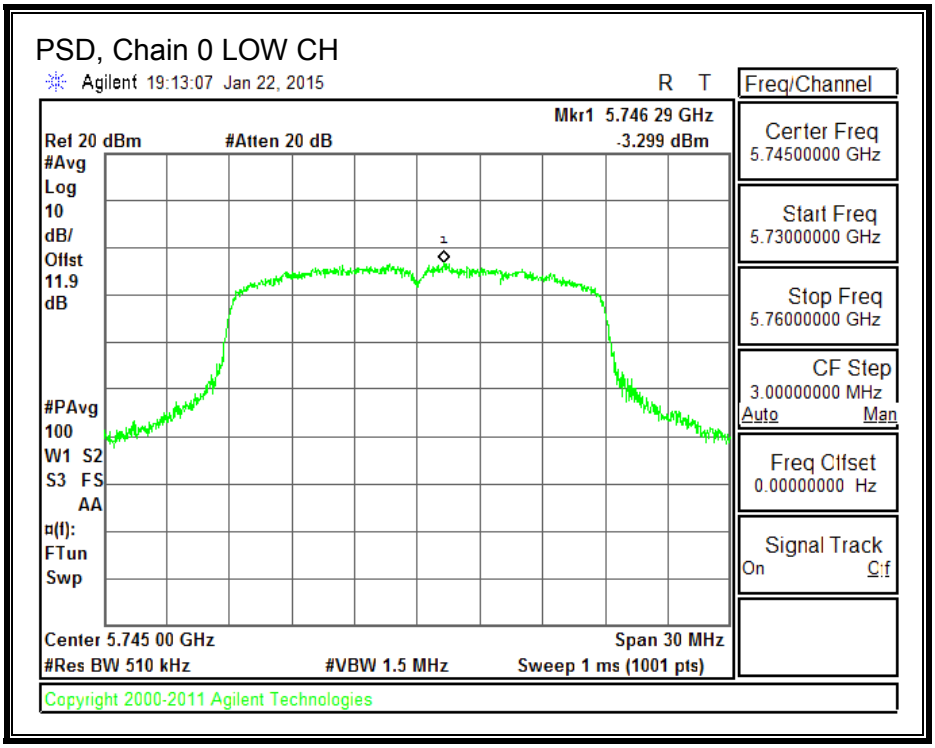
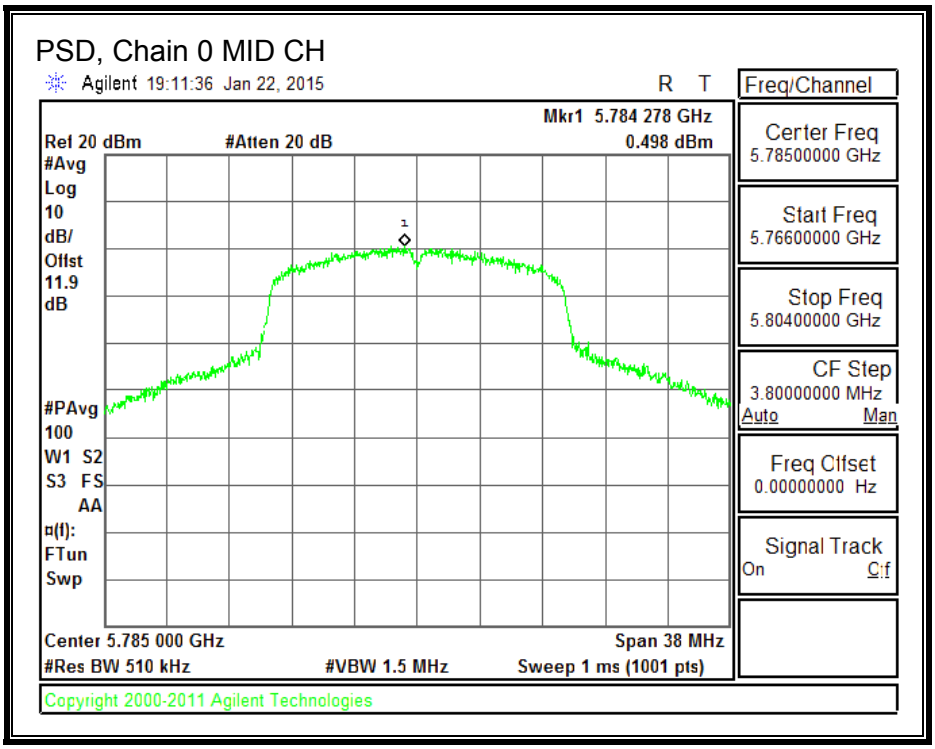
PSD, Chain 0





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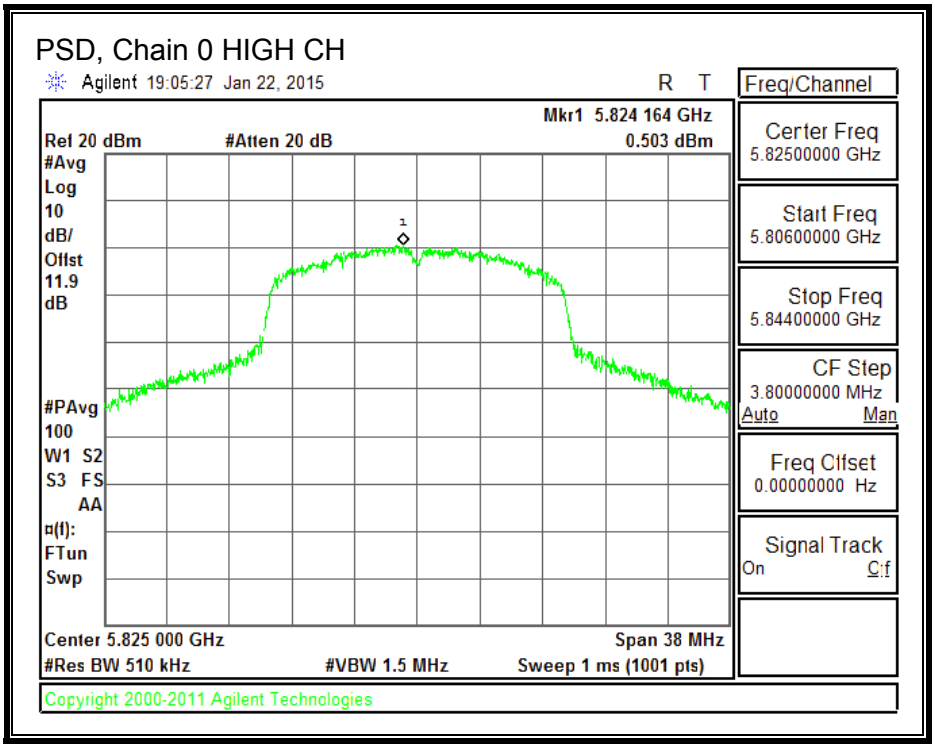

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8.13. 802.11n HT40 MODE IN THE 5.8 GHz BAND

8.13.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	28.850	0.5
High	5795	32.500	0.5

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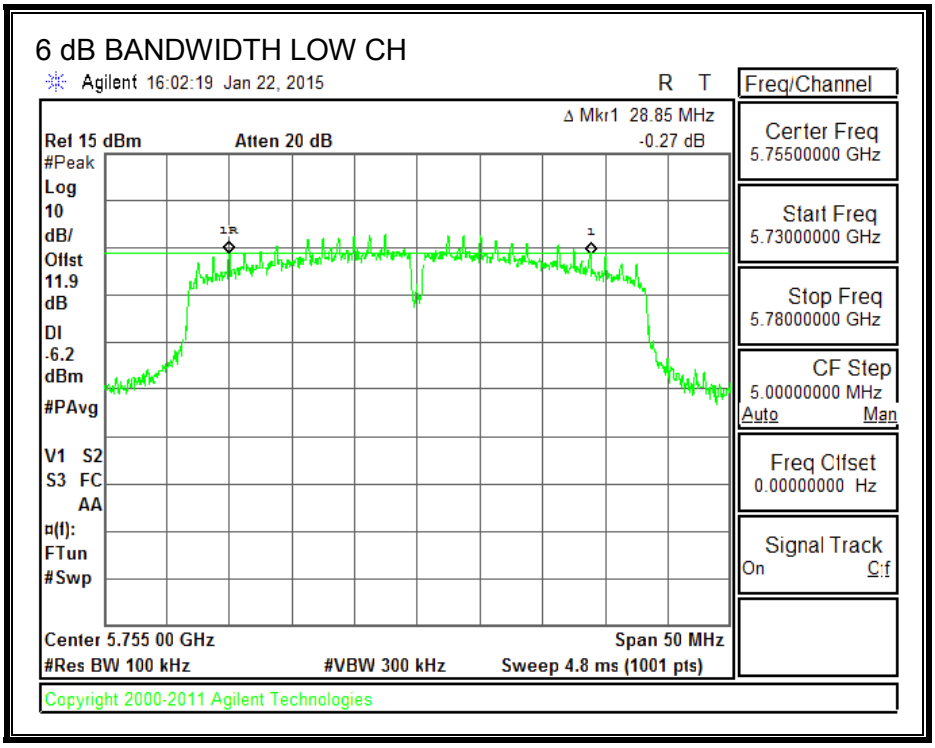
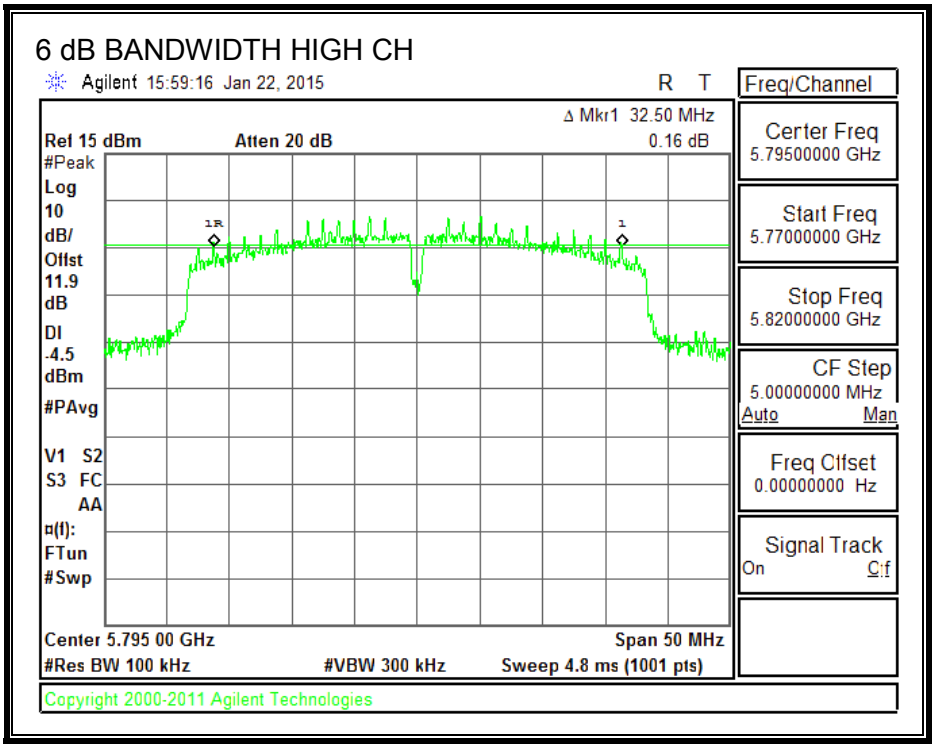
6 dB BANDWIDTH





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8.13.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	35.8613
High	5795	36.4206

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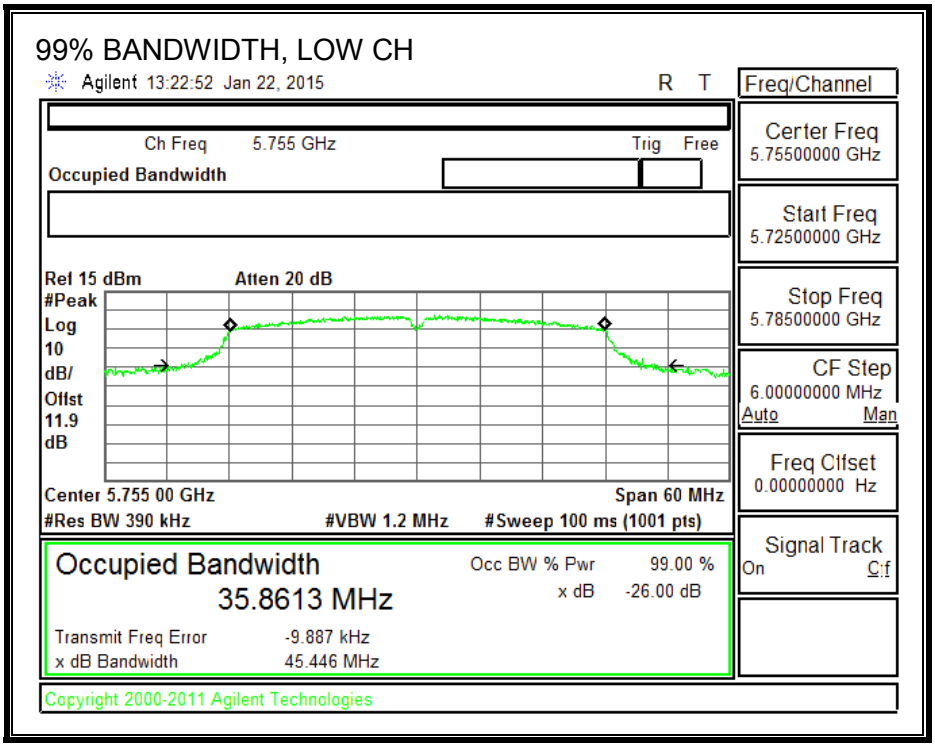
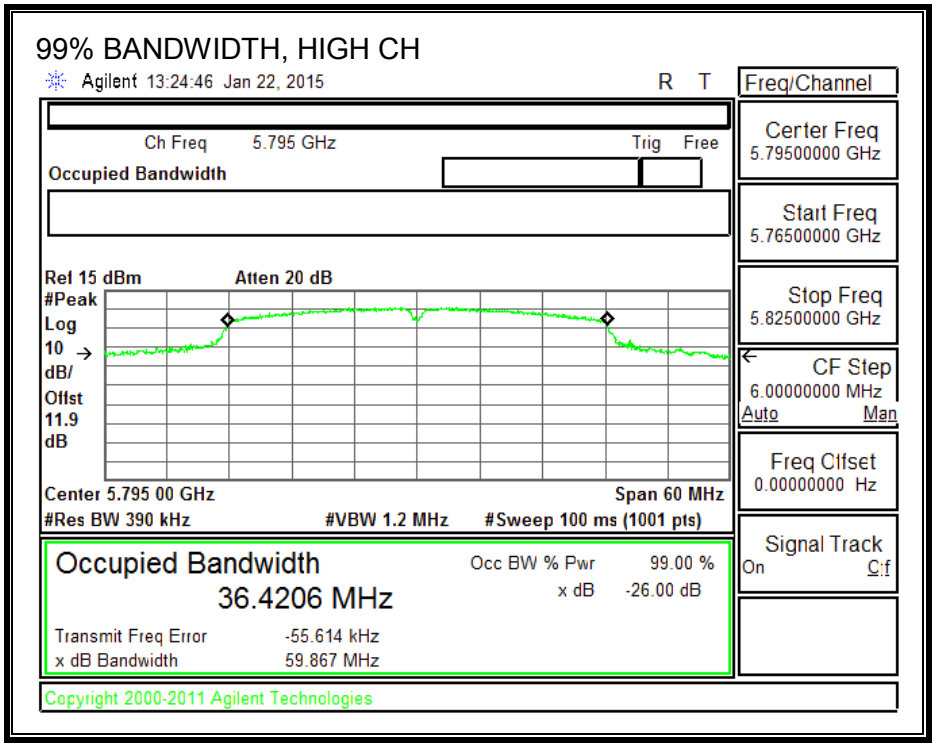
99% BANDWIDTH





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8.13.3. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	4.00	30.00
High	5795	4.00	30.00

Duty Cycle CF (dB)	2.96	Included in Calculations of Corr'd Power

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	8.74	11.70	30.00	-18.30
High	5795	12.14	15.10	30.00	-14.90

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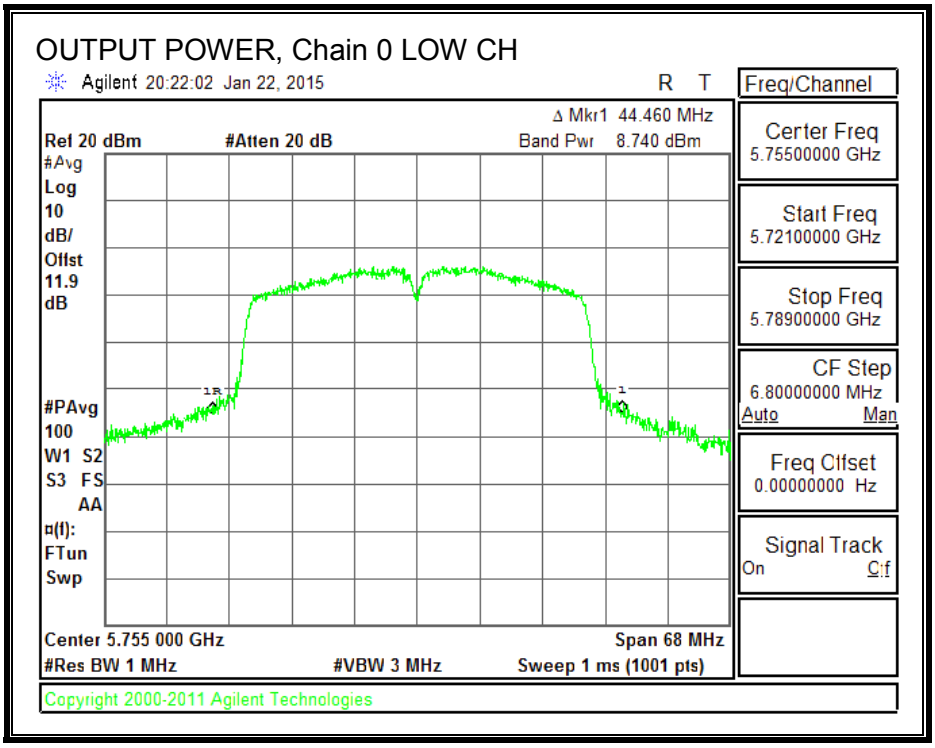
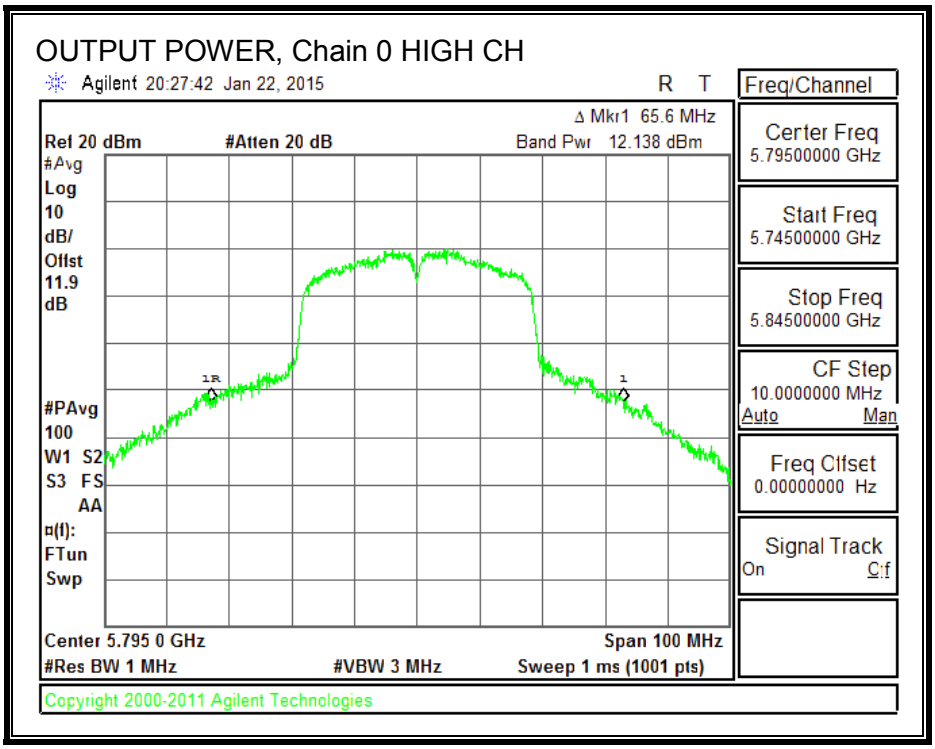
OUTPUT POWER, Chain 0





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8.13.4. MAXIMUM POWER SPECTRAL DENSITY (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	4.00	30.00
High	5795	4.00	30.00

Duty Cycle CF (dB)	2.96	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-6.44	-3.48	30.00	-33.48
High	5795	-3.20	-0.24	30.00	-30.24

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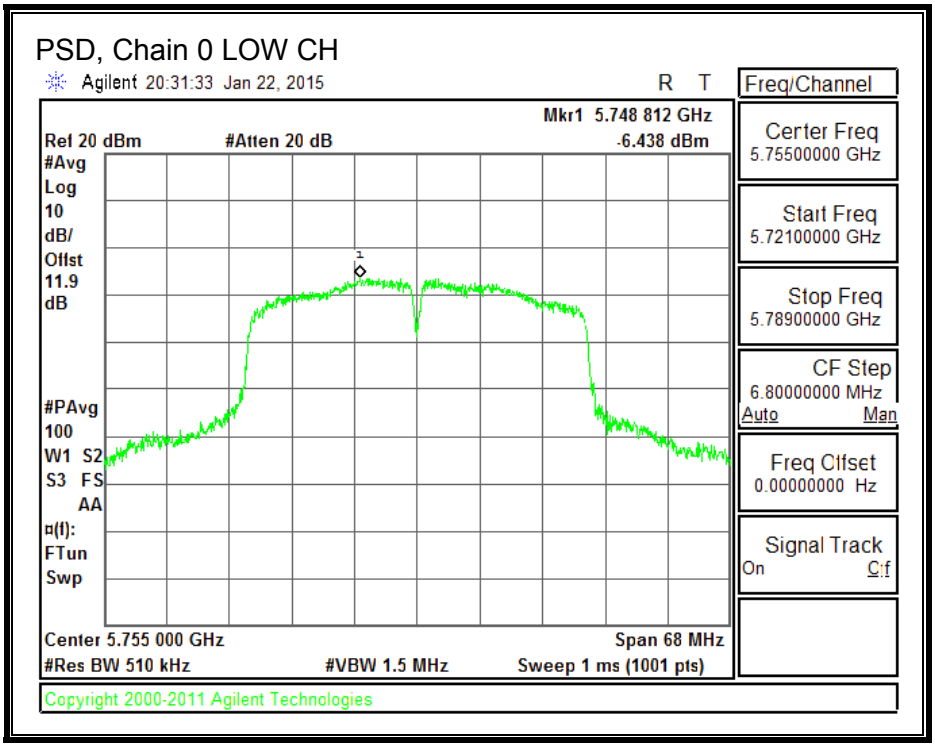
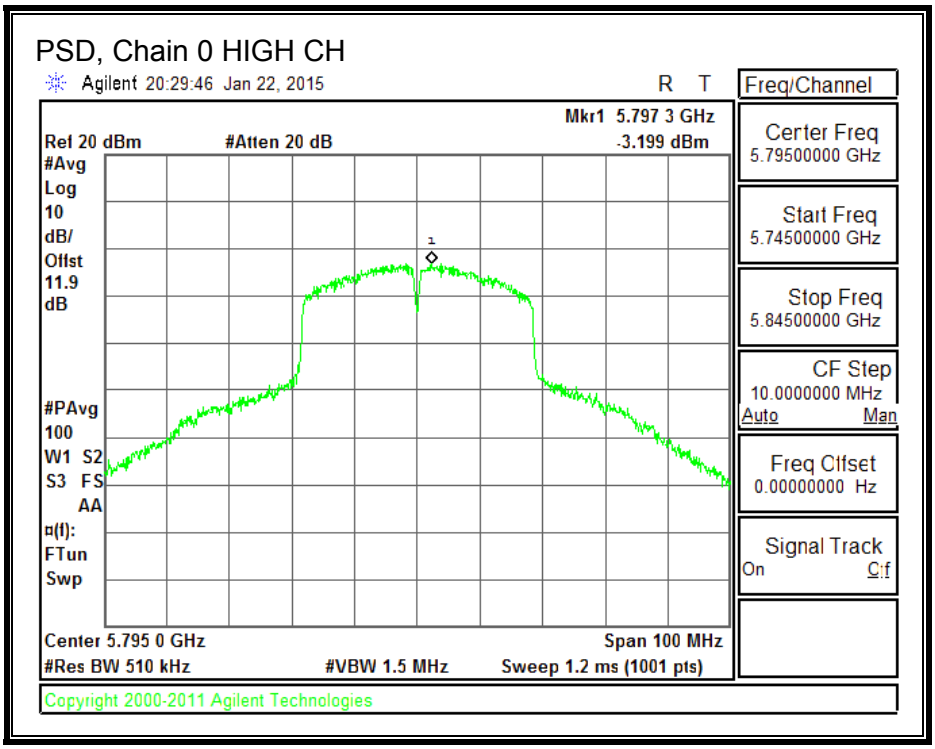
PSD, Chain 0





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9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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

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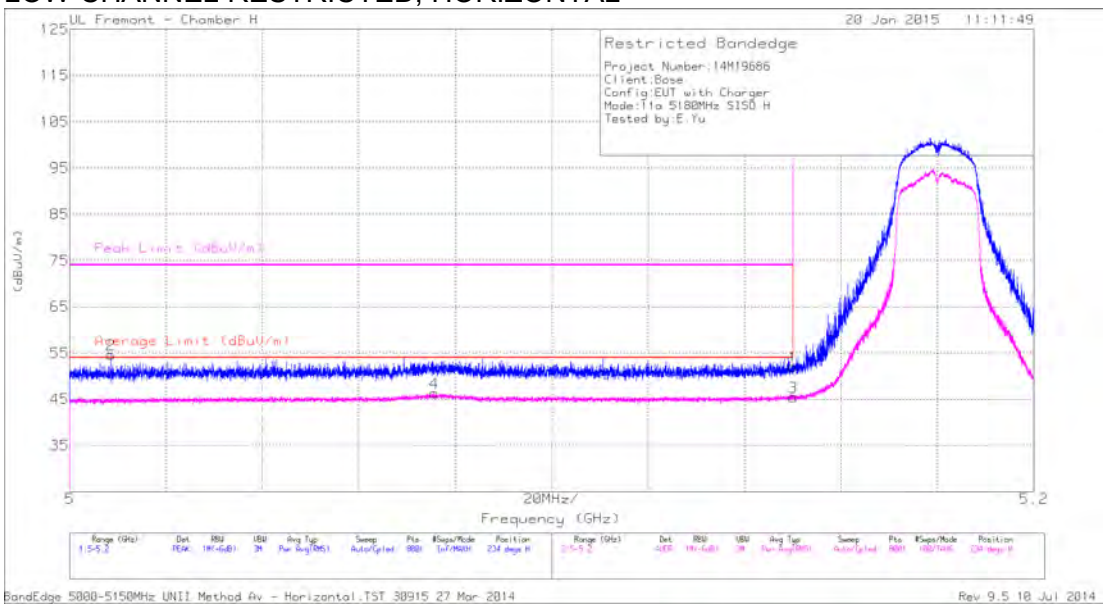
9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.150	40.29	PK	34.5	-22.8	0	51.99	-	-	74	-22.01	234	195	H
2	* 5.009	43.10	PK	34.3	-22.8	0	54.60	-	-	74	-19.40	234	195	H
3	* 5.150	30.78	RMS	34.5	-22.8	2.91	45.39	54	-8.61	-	-	234	195	H
4	* 5.076	31.81	RMS	34.4	-22.9	2.91	46.22	54	-7.78	-	-	234	195	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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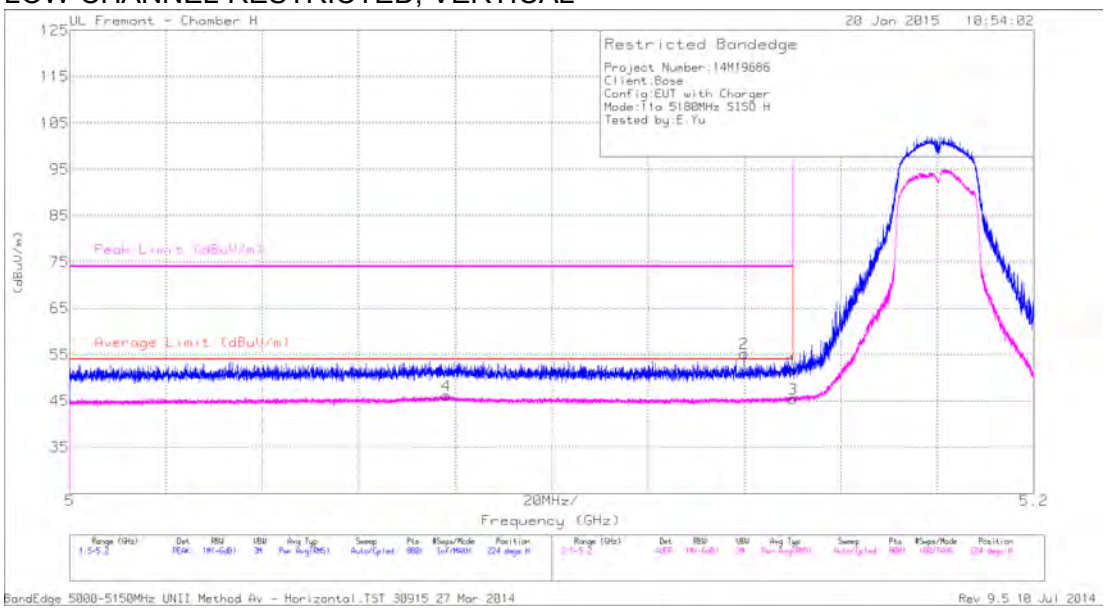
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.150	39.99	PK	34.5	-22.8	0	51.69	-	-	74	-22.31	224	194	H
2	* 5.140	43.50	PK	34.5	-22.8	0	55.20	-	-	74	-18.80	224	194	H
3	* 5.150	30.75	RMS	34.5	-22.8	2.91	45.36	54	-8.64	-	-	224	194	H
4	* 5.078	31.67	RMS	34.4	-22.9	2.91	46.08	54	-7.92	-	-	224	194	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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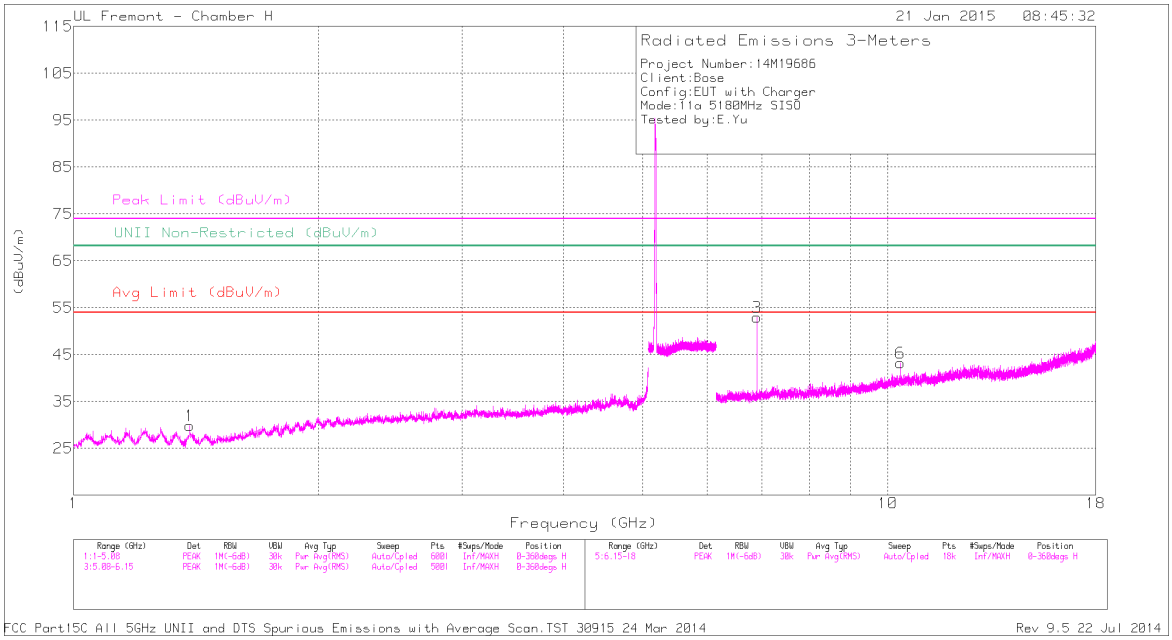
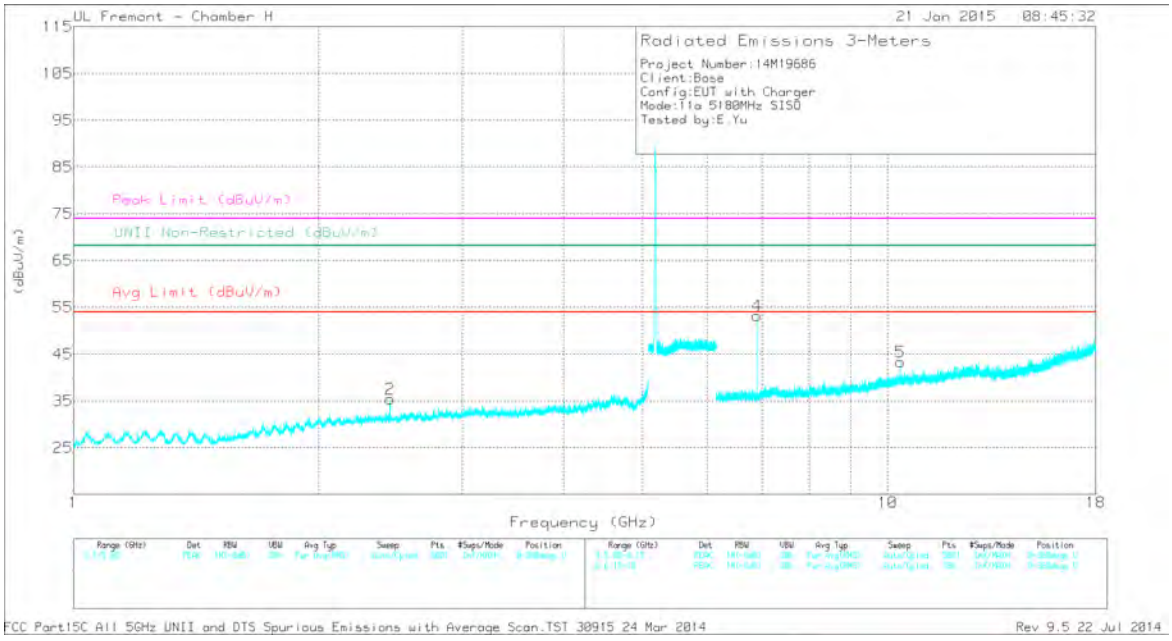
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.388	44.03	PK1	28.3	-35.1	0	37.23	-	-	74	-36.77	-	-	53	367	H
	* 1.391	31.75	AD1	28.3	-35.1	2.91	27.86	54	-26.14	-	-	-	-	53	367	H
2	2.449	42.15	PK1	32.1	-34.4	0	39.85	-	-	-	-	68.2	-28.35	32	227	V
3	6.907	53.11	PK1	35.8	-30.7	0	58.21	-	-	-	-	68.2	-9.99	192	265	H
4	6.907	51.74	PK1	35.8	-30.7	0	56.84	-	-	-	-	68.2	-11.36	84	215	V
5	10.359	41.48	PK1	37.5	-25.9	0	53.08	-	-	-	-	68.2	-15.12	92	246	V
6	10.36	40.59	PK1	37.5	-25.9	0	52.19	-	-	-	-	68.2	-16.01	152	243	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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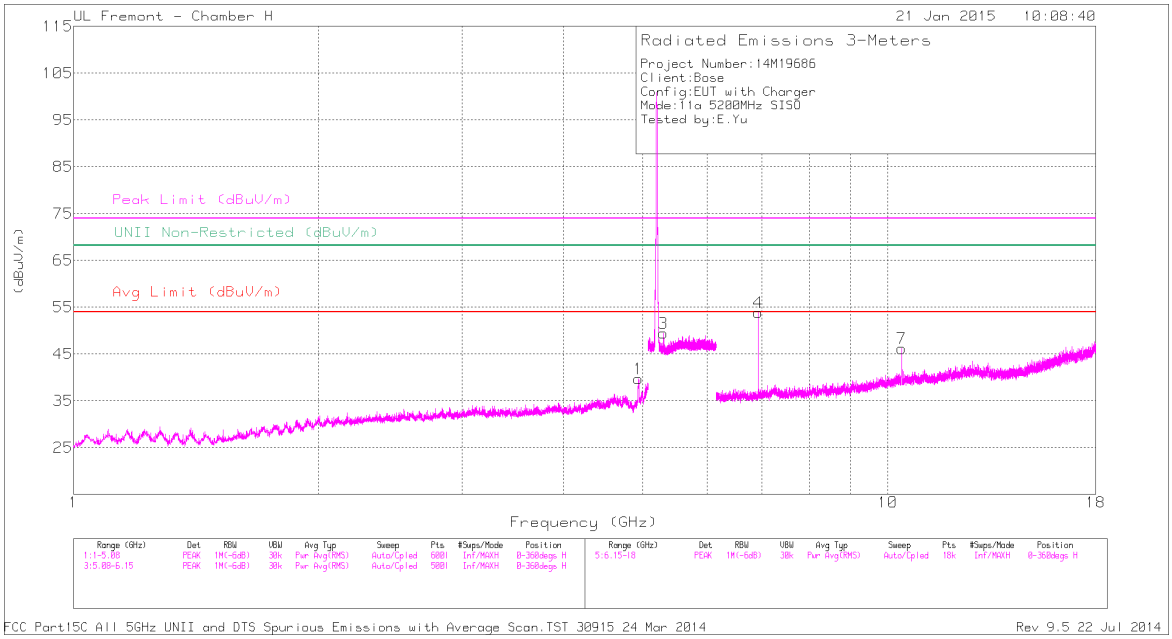
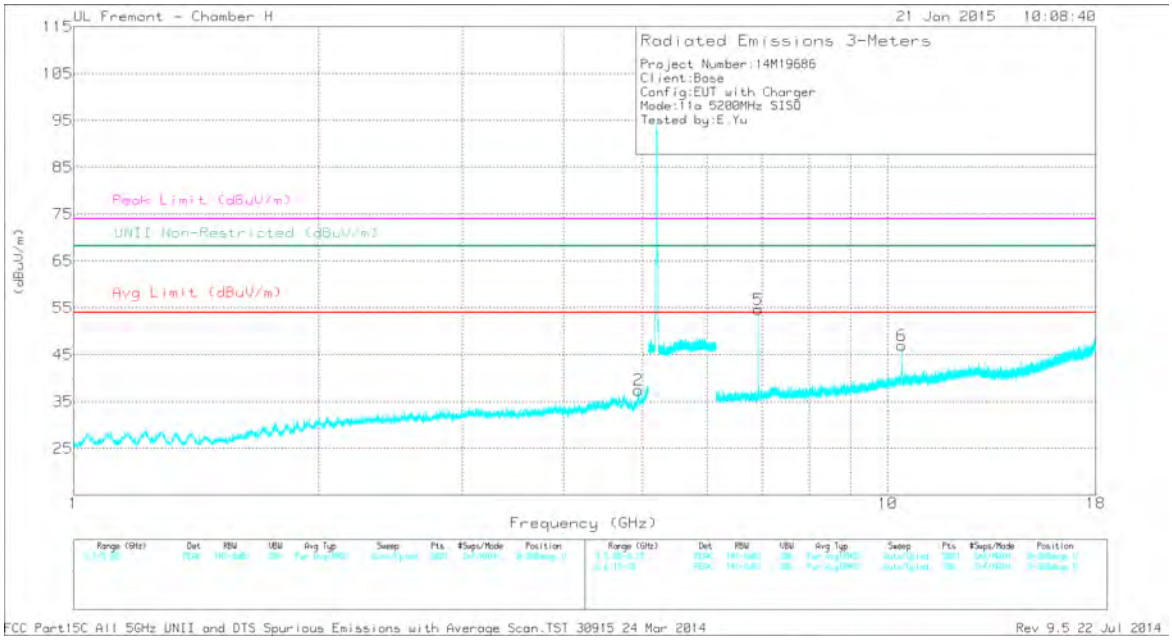
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.946	45.6	PK1	34.3	-31	0	48.9	-	-	74	-25.1	-	-	235	250	H
* 4.947	34.34	AD1	34.3	-31	2.91	40.55	54	-13.45	-	-	-	-	235	250	H
* 4.935	44.22	PK1	34.3	-30.9	0	47.62	-	-	74	-26.38	-	-	294	349	V
* 4.935	31.41	AD1	34.3	-30.9	2.91	37.75	54	-16.25	-	-	-	-	294	349	V
5.303	47.61	PK1	34.8	-22.7	0	59.71	-	-	-	-	68.2	-8.49	236	303	H
6.933	55.22	PK1	35.8	-30.7	0	60.32	-	-	-	-	68.2	-7.88	213	192	H
6.933	53.77	PK1	35.8	-30.7	0	58.87	-	-	-	-	68.2	-9.33	85	267	V
10.4	43.19	PK1	37.5	-25.8	0	54.89	-	-	-	-	68.2	-13.31	1	255	V
10.401	42.7	PK1	37.5	-25.8	0	54.4	-	-	-	-	68.2	-13.8	227	150	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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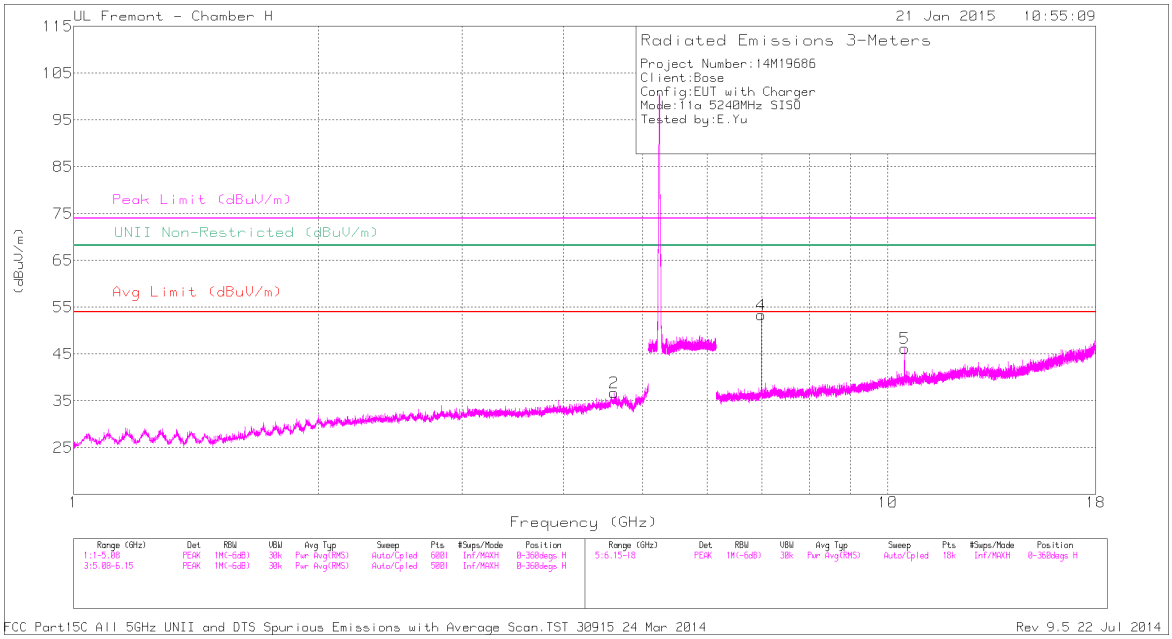
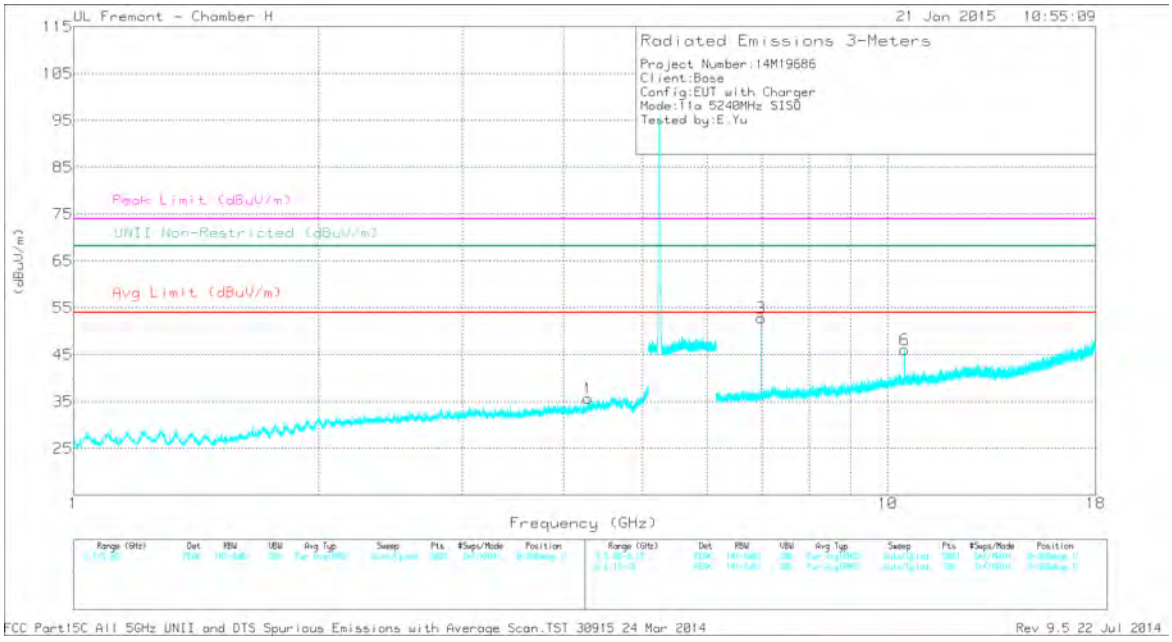
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.613	41.52	PK1	34.1	-31.7	0	43.92	-	-	74	-30.08	-	-	68	118	H
	* 4.613	30.21	AD1	34.1	-31.7	2.91	35.52	54	-18.48	-	-	-	-	132	202	H
1	* 4.282	41.36	PK1	33.6	-32	0	42.96	-	-	74	-31.04	-	-	76	202	V
	* 4.284	29.86	AD1	33.6	-32	2.91	34.37	54	-19.63	-	-	-	-	190	202	V
3	6.987	53.63	PK1	35.8	-29.9	0	59.53	-	-	-	-	68.2	-8.67	217	297	H
4	6.987	51.82	PK1	35.8	-29.9	0	57.72	-	-	-	-	68.2	-10.48	89	226	V
5	10.479	42.06	PK1	37.6	-25.8	0	53.86	-	-	-	-	68.2	-14.34	210	236	H
6	10.48	43.85	PK1	37.6	-25.8	0	55.65	-	-	-	-	68.2	-12.55	85	197	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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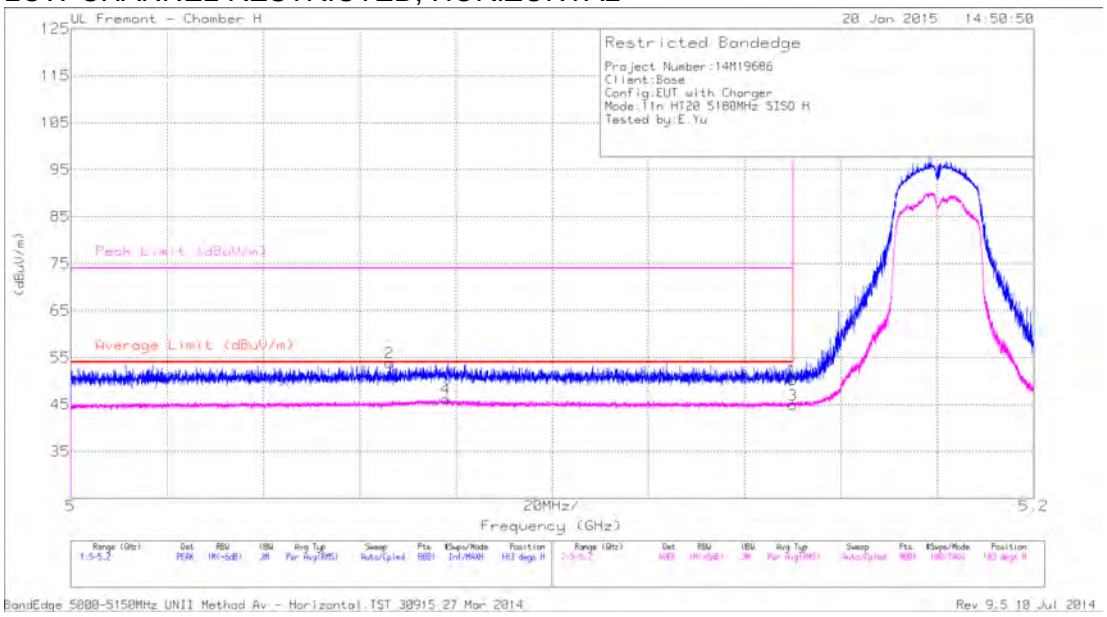
9.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.150	38.58	PK	34.5	-22.8	0	50.28	-	-	74	-23.72	183	270	H
2	* 5.066	42.43	PK	34.4	-22.9	0	53.93	-	-	74	-20.07	183	270	H
3	* 5.150	30.24	RMS	34.5	-22.8	3.00	44.94	54	-9.04	-	-	183	270	H
4	* 5.078	31.71	RMS	34.4	-22.9	3.00	46.21	54	-7.77	-	-	183	270	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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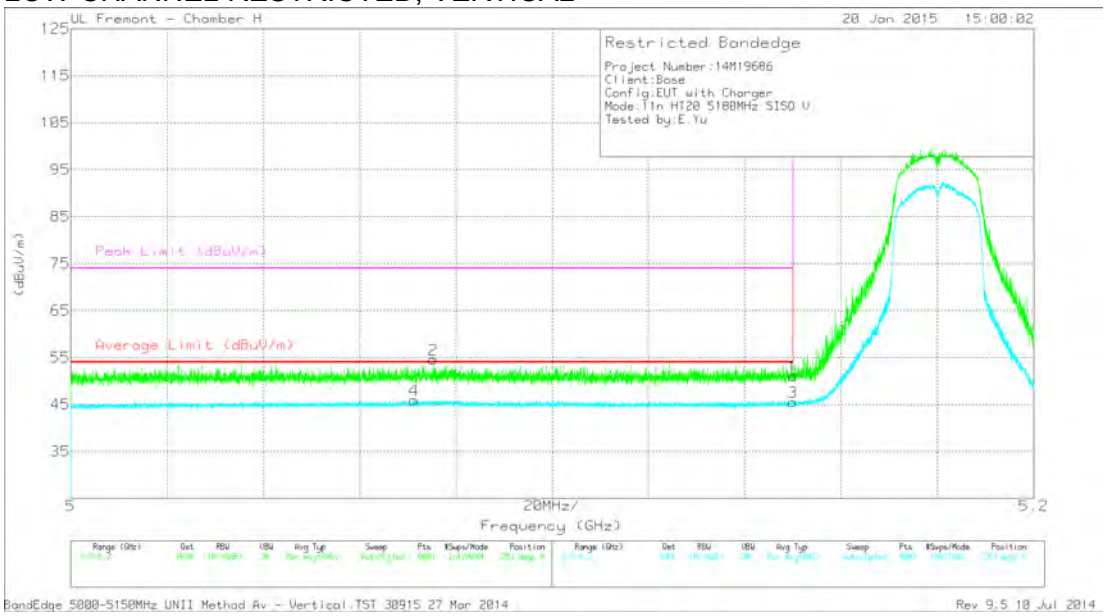
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.150	39.36	PK	34.5	-22.8	0	51.06	-	-	74	-22.94	253	289	V
2	* 5.075	43.11	PK	34.4	-22.9	0	54.61	-	-	74	-19.39	253	289	V
3	* 5.150	30.83	RMS	34.5	-22.8	3.00	45.53	54	-8.47	-	-	253	289	V
4	* 5.071	31.44	RMS	34.4	-22.9	3.00	45.94	54	-8.06	-	-	253	289	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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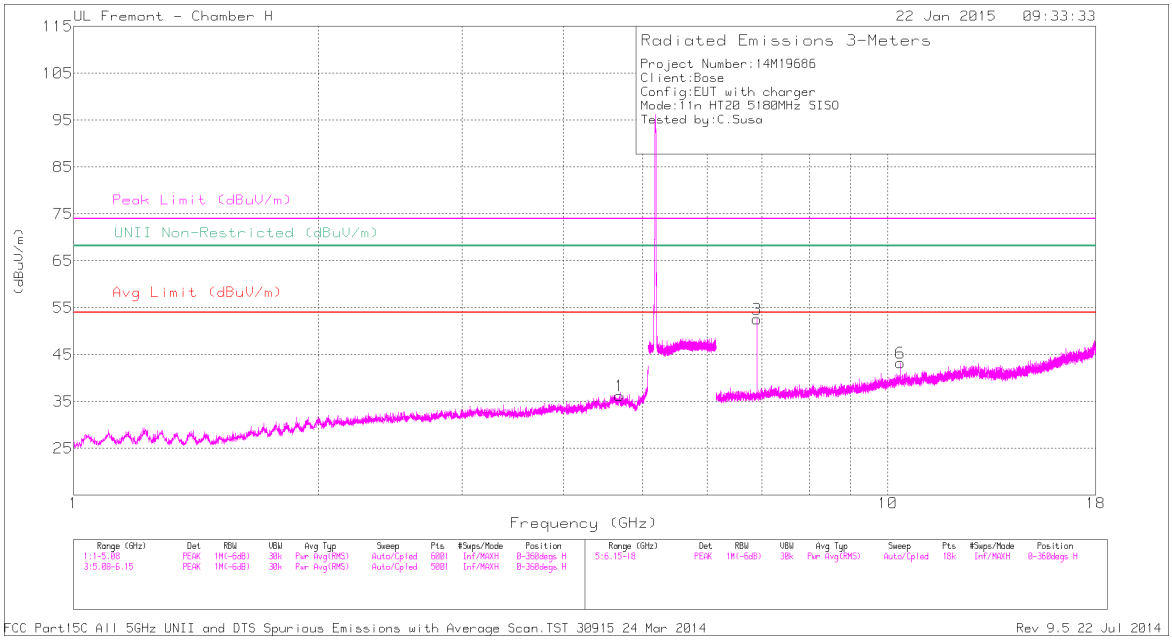
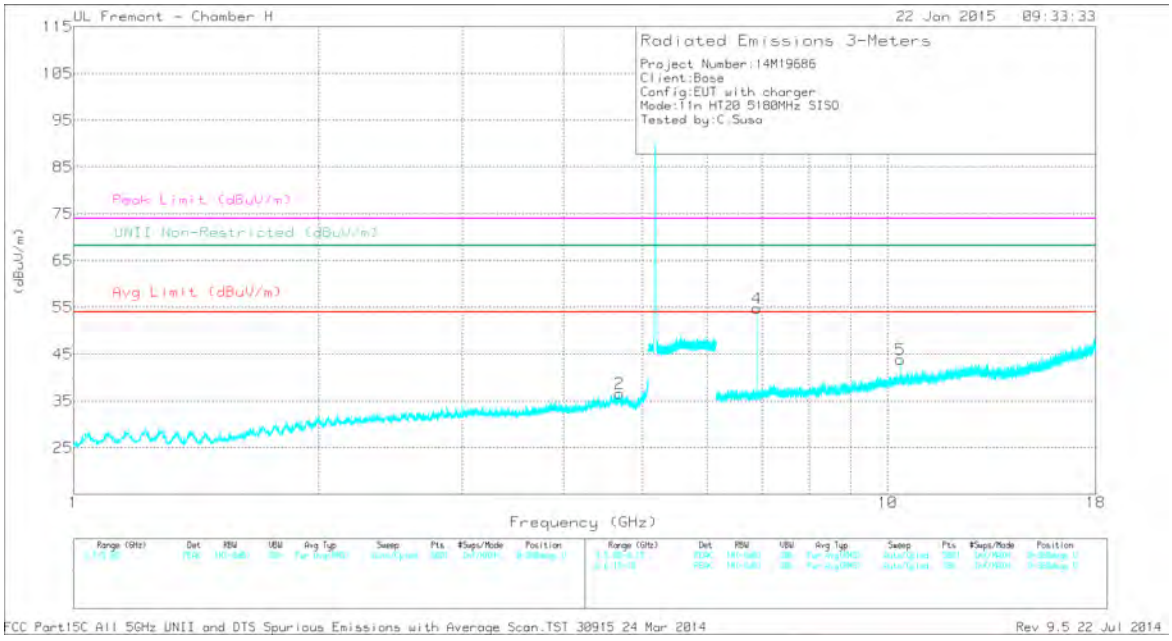
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.681	37.44	PK1	34.2	-32.1	0	39.54	-	-	74	-34.46	-	-	76	385	H
	* 4.683	30.47	AD1	34.2	-32.1	3.00	35.57	54	-18.43	-	-	-	-	76	385	H
2	* 4.683	41.93	PK1	34.2	-32.1	0	44.03	-	-	74	-29.97	-	-	316	192	V
	* 4.681	30.41	AD1	34.2	-32.1	3.00	35.51	54	-18.49	-	-	-	-	316	192	V
3	6.907	53.11	PK1	35.8	-30.7	0	58.21	-	-	-	-	68.2	-9.99	207	265	H
4	6.907	52.93	PK1	35.8	-30.7	0	58.03	-	-	-	-	68.2	-10.17	84	215	V
6	10.36	39.54	PK1	37.5	-25.9	0	51.14	-	-	-	-	68.2	-17.06	229	144	H
5	10.36	39.23	PK1	37.5	-25.9	0	50.83	-	-	-	-	68.2	-17.37	100	316	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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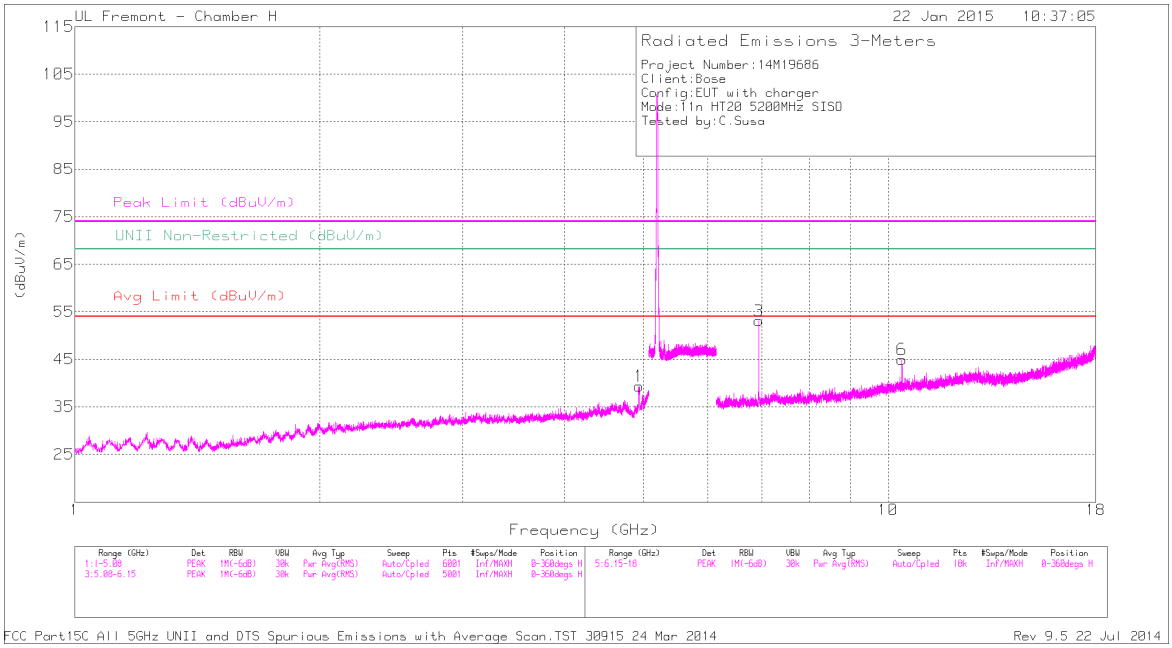
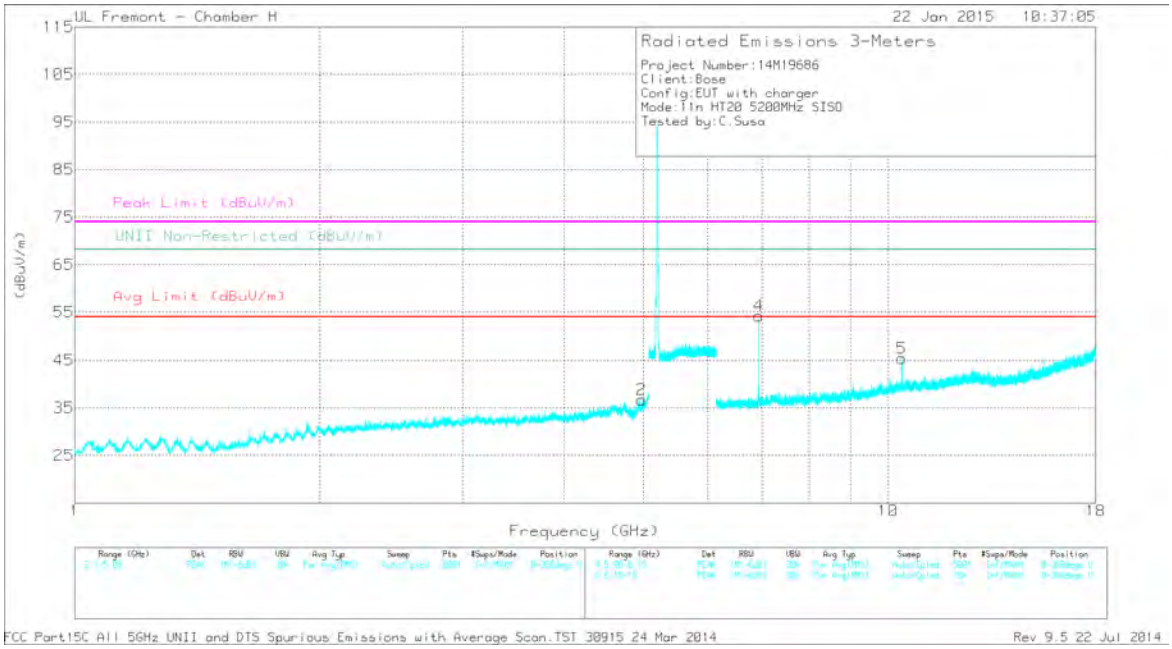
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.944	45.33	PK1	34.3	-31	0	48.63	-	-	74	-25.37	-	-	183	253	H
	* 4.945	32.96	AD1	34.3	-31	3.00	39.28	54	-14.74	-	-	-	-	183	253	H
2	* 4.978	40.49	PK1	34.3	-31	0	43.79	-	-	74	-30.21	-	-	33	209	V
	* 4.979	28.9	AD1	34.3	-31	3.00	35.22	54	-18.78	-	-	-	-	33	209	V
3	6.933	55.11	PK1	35.8	-30.7	0	60.21	-	-	-	-	68.2	-7.99	196	262	H
4	6.933	53.3	PK1	35.8	-30.7	0	58.4	-	-	-	-	68.2	-9.8	81	213	V
5	10.4	42.03	PK1	37.5	-25.8	0	53.73	-	-	-	-	68.2	-14.47	229	143	H
6	10.401	44.26	PK1	37.5	-25.8	0	55.96	-	-	-	-	68.2	-12.24	91	211	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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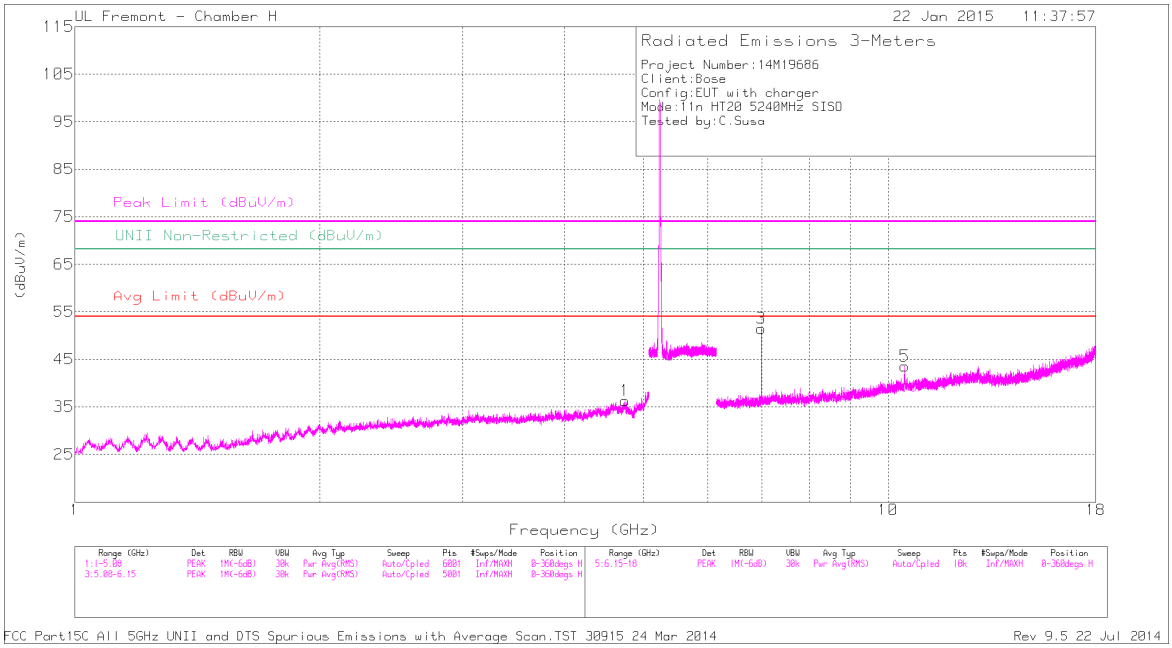
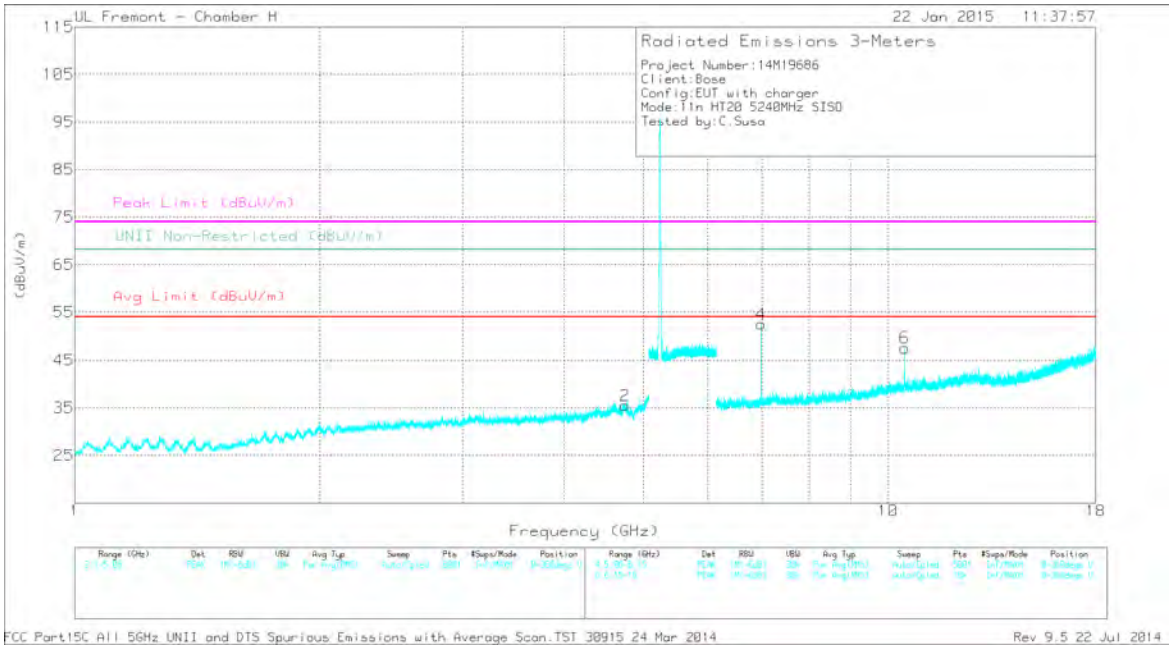
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.751	41.2	PK1	34.3	-31.8	0	43.7	-	-	74	-30.3	-	-	11	166	H
	* 4.751	29.46	AD1	34.3	-31.8	3.00	34.96	54	-19.04	-	-	-	-	11	166	H
2	* 4.749	40.58	PK1	34.3	-31.8	0	43.08	-	-	74	-30.92	-	-	184	337	V
	* 4.748	29.45	AD1	34.3	-31.8	3.00	34.95	54	-19.05	-	-	-	-	184	337	V
3	6.987	54.7	PK1	35.8	-29.9	0	60.6	-	-	-	-	68.2	-7.6	213	299	H
4	6.987	52.76	PK1	35.8	-29.9	0	58.66	-	-	-	-	68.2	-9.54	84	228	V
5	10.48	41.98	PK1	37.6	-25.8	0	53.78	-	-	-	-	68.2	-14.42	211	288	H
6	10.48	42.39	PK1	37.6	-25.8	0	54.19	-	-	-	-	68.2	-14.01	47	266	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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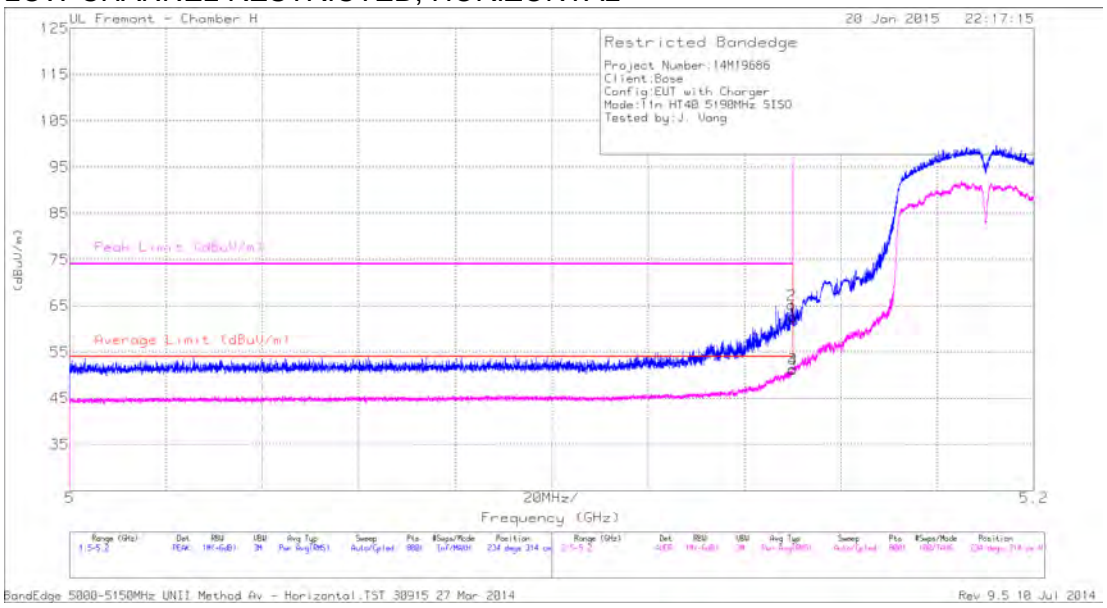
9.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.150	50.83	PK	34.5	-22.8	0	62.53	-	-	74	-11.47	234	314	H
2	* 5.150	53.48	PK	34.5	-22.8	0	65.18	-	-	74	-8.82	234	314	H
3	* 5.150	36.70	RMS	34.5	-22.8	2.96	51.40	54	-2.64	-	-	234	314	H
4	* 5.150	36.50	RMS	34.5	-22.8	2.96	51.20	54	-2.84	-	-	234	314	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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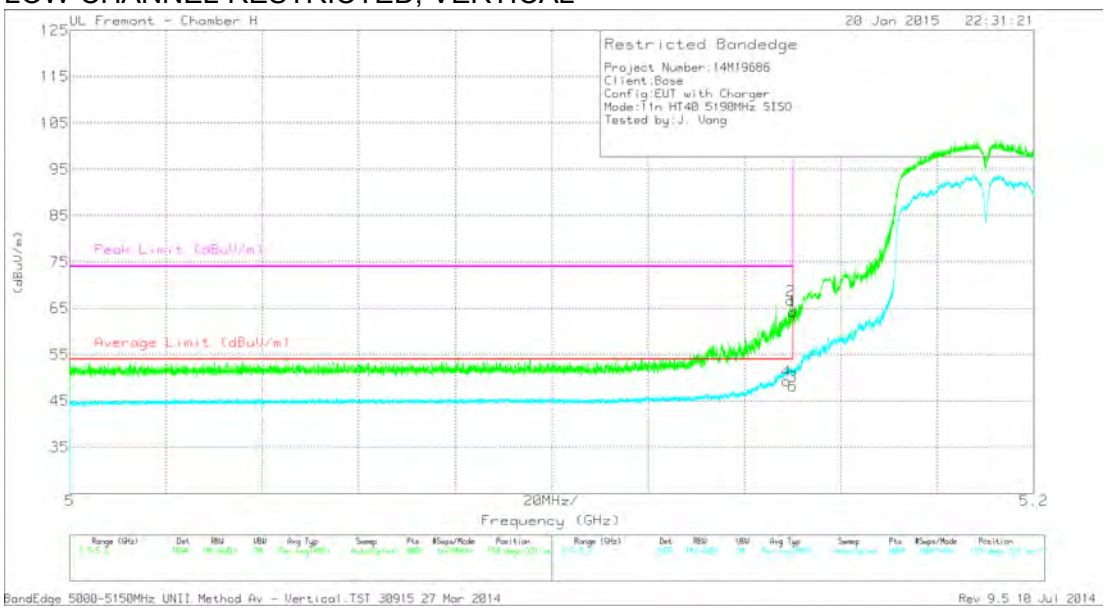
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.150	52.56	PK	34.5	-22.8	0	64.26	-	-	74	-9.74	159	321	V
2	* 5.150	55.02	PK	34.5	-22.8	0	66.72	-	-	74	-7.28	159	321	V
3	* 5.150	36.44	RMS	34.5	-22.8	2.96	51.14	54	-2.90	-	-	159	321	V
4	* 5.149	37.64	RMS	34.5	-22.8	2.96	52.34	54	-1.70	-	-	159	321	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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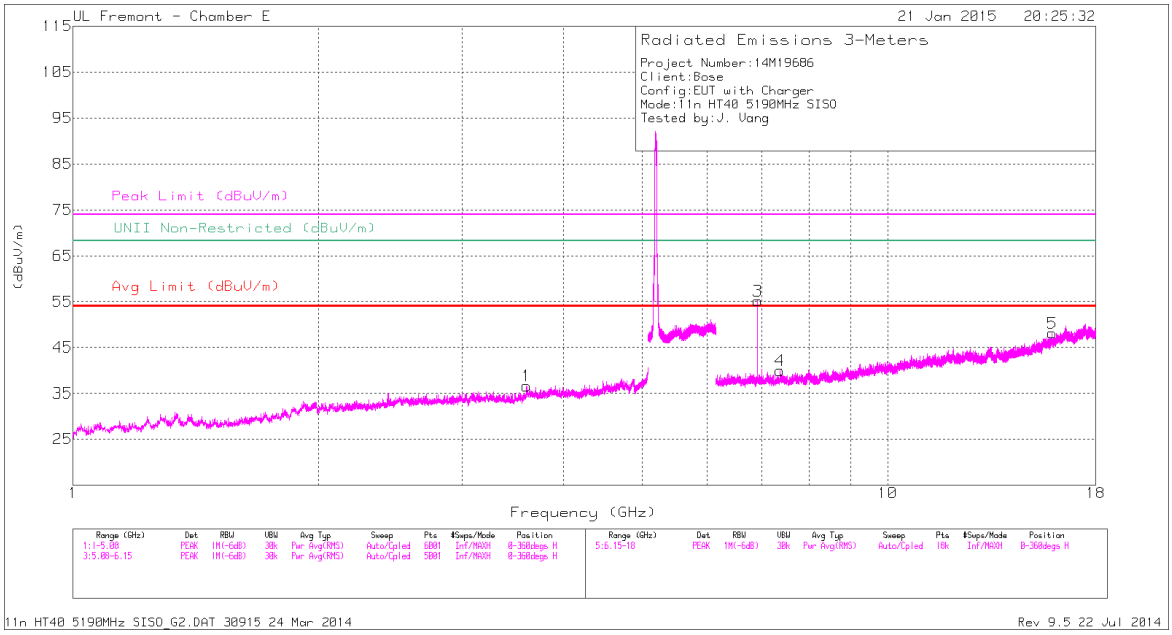
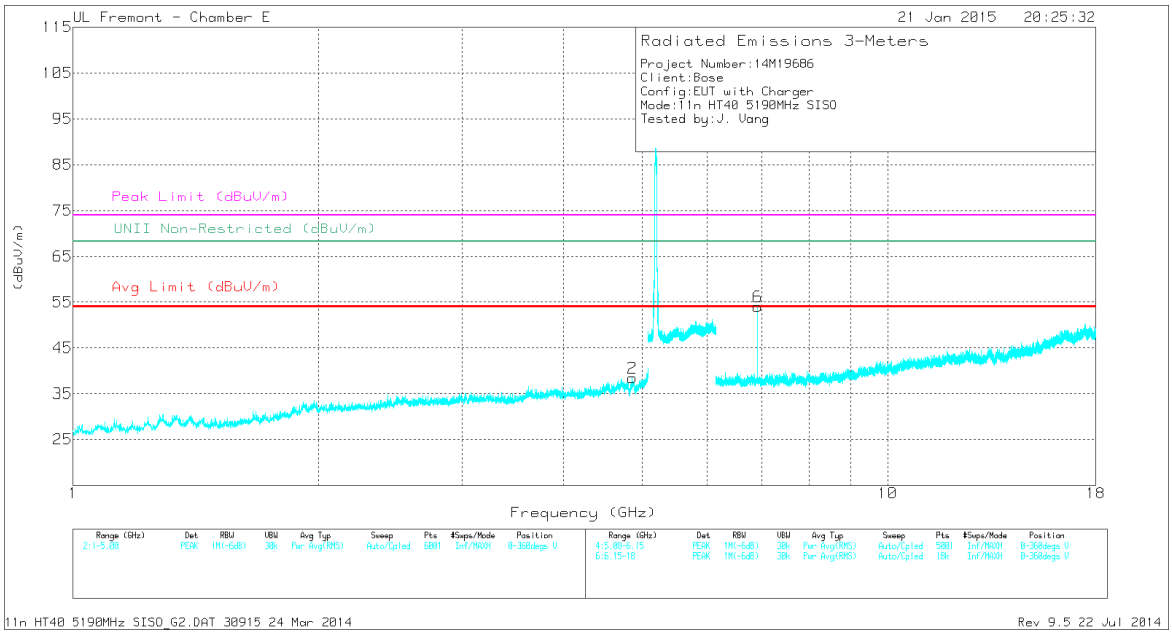
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.604	41.32	PK1	33.1	-31.1	0	43.32	-	-	74	-30.68	-	-	41	106	H
* 3.602	29.86	AD1	33.1	-31.2	2.96	34.72	54	-19.28	-	-	-	-	41	106	H
* 4.858	41.07	PK1	34.1	-30.4	0	44.77	-	-	74	-29.23	-	-	300	394	V
* 4.856	29.87	AD1	34.1	-30.5	2.96	36.43	54	-17.57	-	-	-	-	300	394	V
* 7.372	38.46	PK1	35.7	-27	0	47.16	-	-	74	-26.84	-	-	328	384	H
* 7.374	26.75	AD1	35.7	-27	2.96	38.41	54	-15.59	-	-	-	-	328	384	H
* 15.907	36.53	PK1	40.5	-22.3	0	54.73	-	-	74	-19.27	-	-	258	104	H
* 15.907	25.47	AD1	40.5	-22.3	2.96	46.63	54	-7.37	-	-	-	-	258	104	H
6.92	51.33	PK1	35.9	-28.4	0	58.83	-	-	-	-	68.2	-9.37	38	177	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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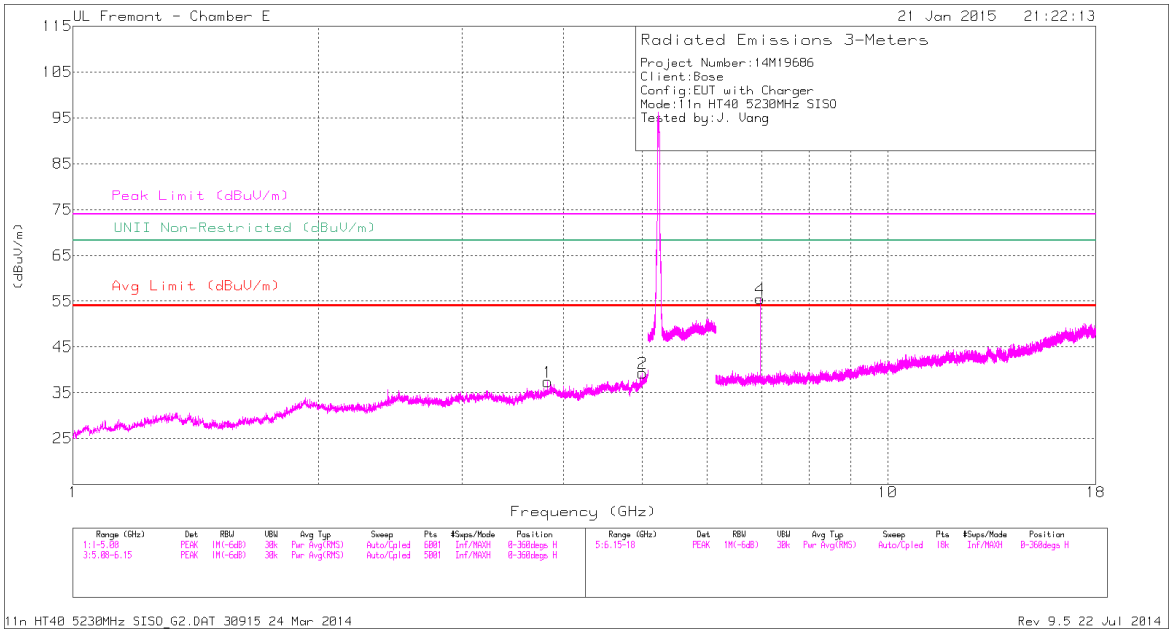
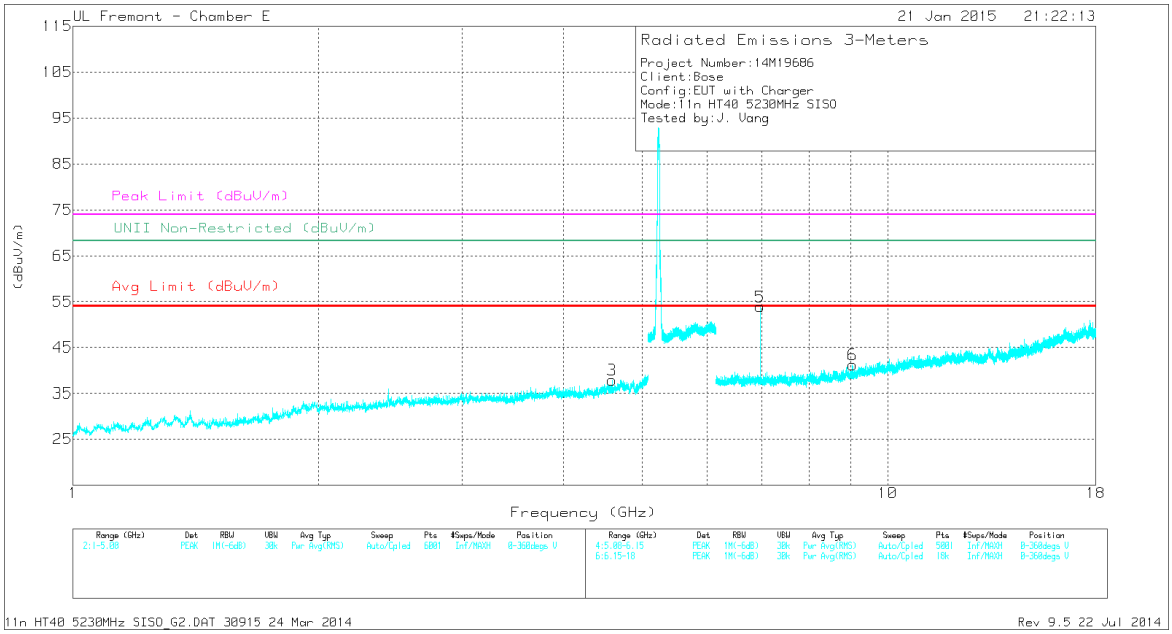
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.822	41.68	PK1	33.4	-31.7	0	43.38	-	-	74	-30.62	-	-	161	154	H
* 3.823	30.14	AD1	33.4	-31.7	2.96	34.8	54	-19.2	-	-	-	-	161	154	H
* 4.997	40.14	PK1	34.1	-29.1	0	45.14	-	-	74	-28.86	-	-	21	148	H
* 4.999	29.21	AD1	34.1	-29.1	2.96	37.17	54	-16.83	-	-	-	-	21	148	H
* 4.585	42.23	PK1	34.1	-30.9	0	45.43	-	-	74	-28.57	-	-	75	118	V
* 4.586	29.88	AD1	34.1	-30.9	2.96	36.04	54	-17.96	-	-	-	-	75	118	V
* 9.049	37.55	PK1	36.4	-26.1	0	47.85	-	-	74	-26.15	-	-	216	273	V
* 9.05	26.1	AD1	36.4	-26.1	2.96	39.36	54	-14.64	-	-	-	-	216	273	V
6.973	51.64	PK1	35.9	-28.3	0	59.24	-	-	-	-	68.2	-8.96	43	176	H
6.973	49.89	PK1	35.9	-28.3	0	57.49	-	-	-	-	68.2	-10.71	66	201	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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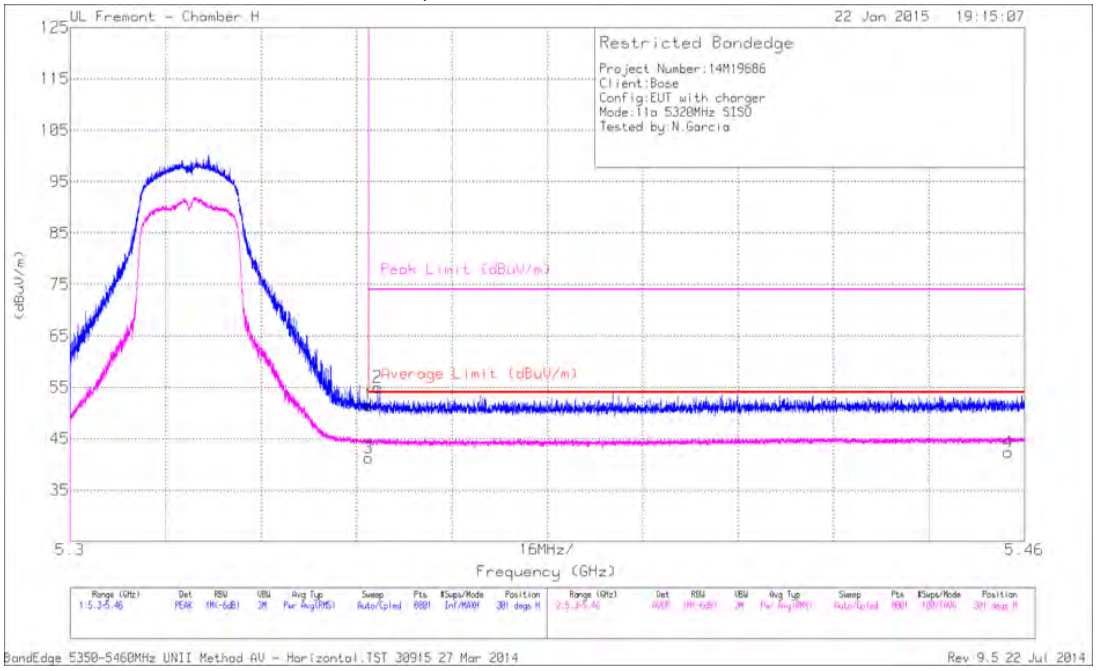
9.2.4. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.35	PK	34.9	-22.7	0	51.55	-	-	74	-22.45	301	328	H
2	* 5.352	42.79	PK	34.9	-22.7	0	54.99	-	-	74	-19.01	301	328	H
3	* 5.35	29.1	RMS	34.9	-22.7	3.01	44.31	54	-9.69	-	-	301	328	H
4	* 5.457	29.89	RMS	35	-22.5	3.01	45.4	54	-8.6	-	-	301	328	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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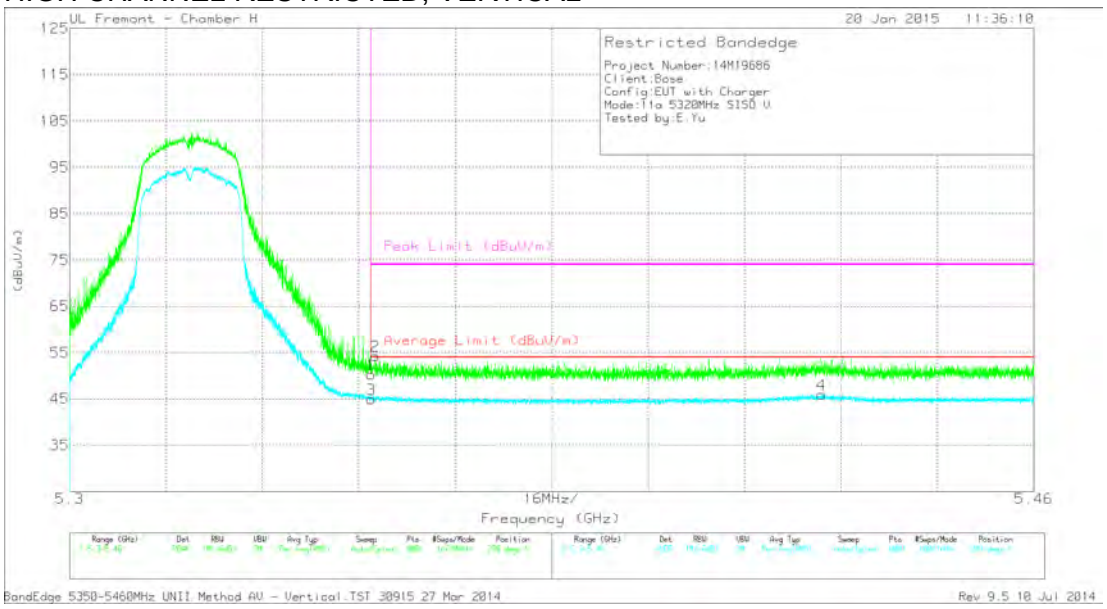
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.350	38.09	PK	34.9	-22.7	0	50.29	-	-	74	-23.71	299	267	V
2	* 5.351	42.09	PK	34.9	-22.7	0	54.29	-	-	74	-19.71	299	267	V
3	* 5.350	29.78	RMS	34.9	-22.7	2.91	44.98	54	-9.07	-	-	299	267	V
4	* 5.425	30.49	RMS	35.0	-22.5	2.91	45.84	54	-8.06	-	-	299	267	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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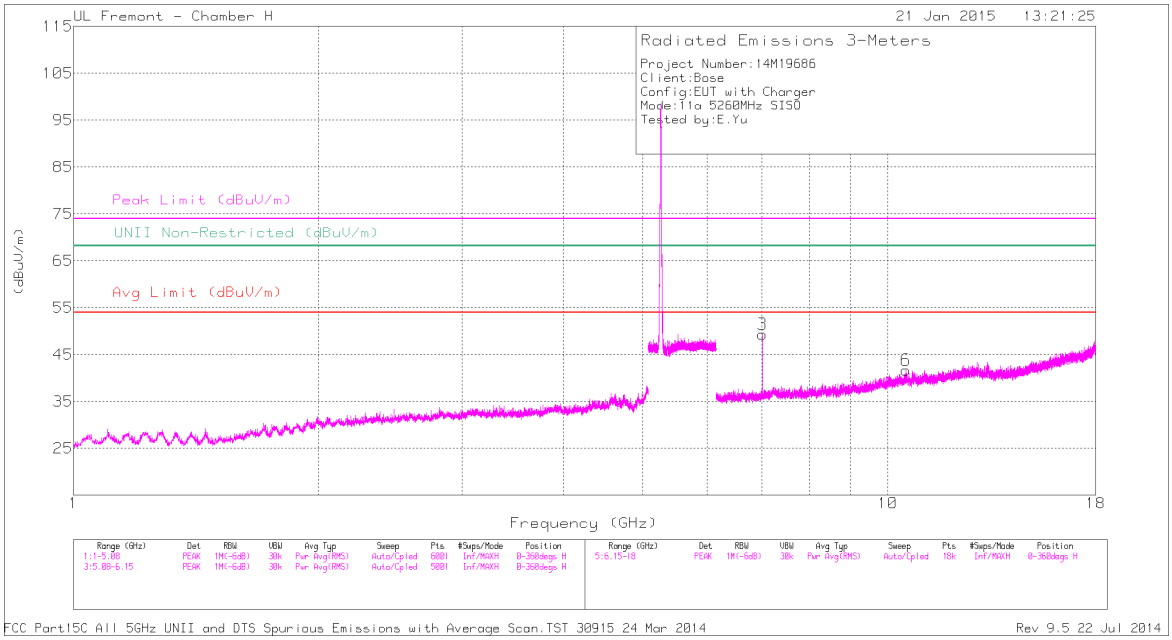
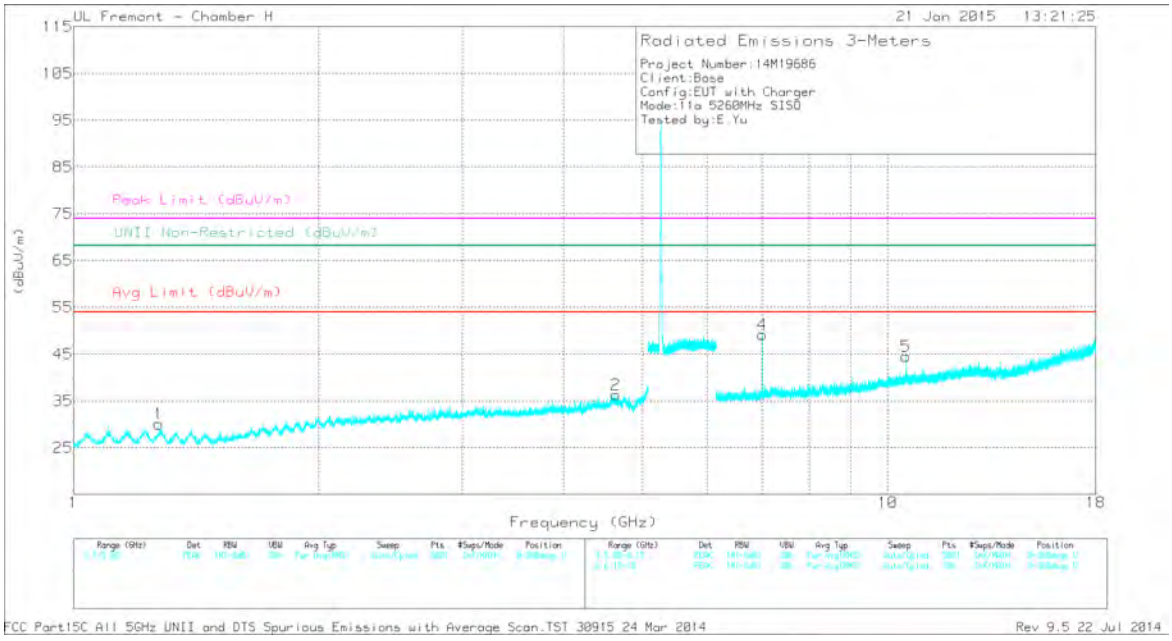
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.274	43.51	PK1	28.9	-35.6	0	36.81	-	-	74	-37.19	-	-	280	237	V
	* 1.274	31.71	AD1	28.9	-35.6	2.91	27.91	54	-26.09	-	-	-	-	280	237	V
2	* 4.633	41.47	PK1	34.2	-32.1	0	43.57	-	-	74	-30.43	-	-	342	325	V
	* 4.632	30.07	AD1	34.2	-32.1	2.91	35.07	54	-18.93	-	-	-	-	342	325	V
3	7.013	49.79	PK1	35.8	-29.6	0	55.99	-	-	-	-	68.2	-12.21	208	298	H
4	7.013	48.12	PK1	35.8	-29.6	0	54.32	-	-	-	-	68.2	-13.88	77	228	V
5	10.52	40.48	PK1	37.6	-25.6	0	52.48	-	-	-	-	68.2	-15.72	92	265	V
6	10.521	39.12	PK1	37.6	-25.6	0	51.12	-	-	-	-	68.2	-17.08	227	225	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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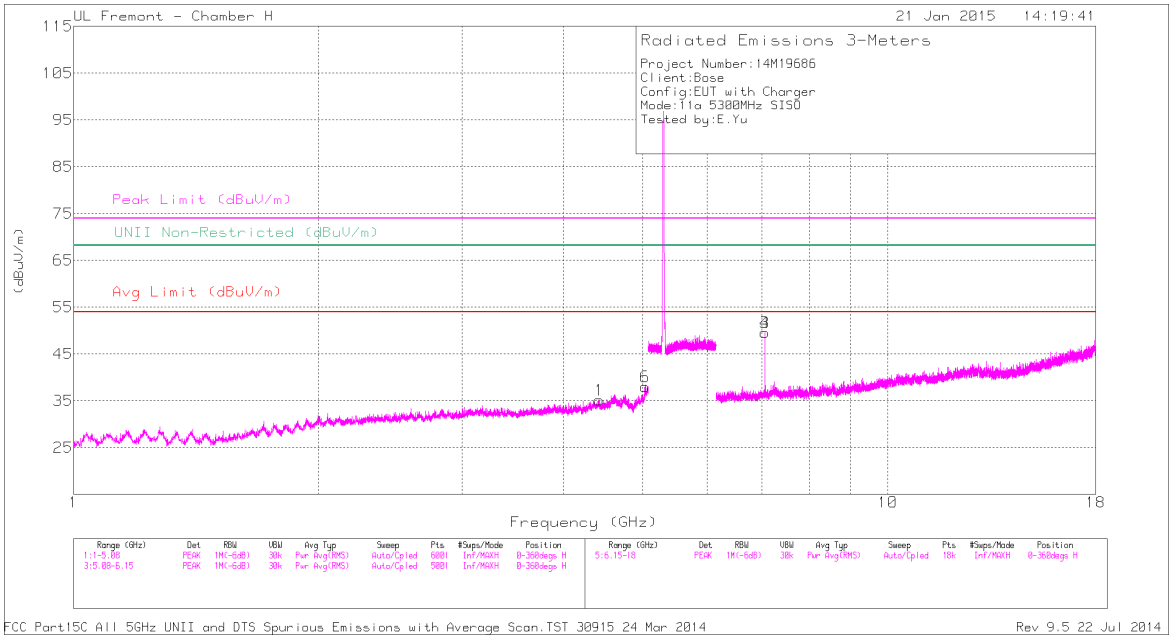
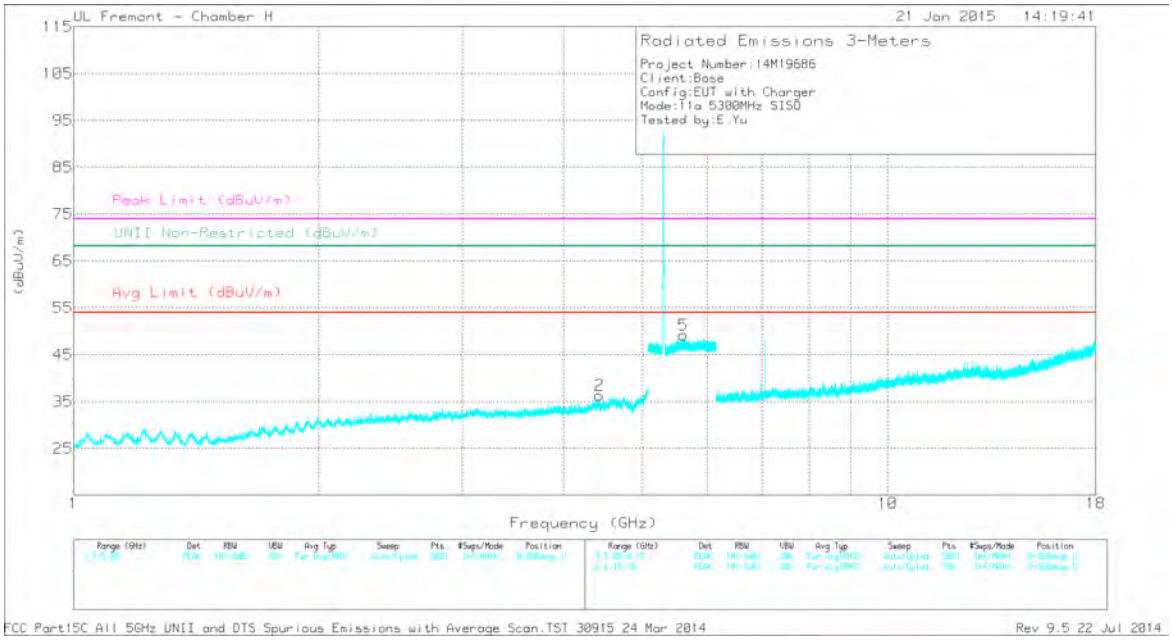
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 5.031	43.3	PK1	34.3	-30.9	0	46.7	-	-	74	-27.3	-	-	197	302	H
	* 5.03	31.55	AD1	34.3	-30.9	2.91	37.86	54	-16.14	-	-	-	-	197	302	H
1	4.42	41.46	PK1	33.8	-32	0	43.26	-	-	-	-	68.2	-24.94	259	130	H
2	4.422	40.53	PK1	33.8	-32	0	42.33	-	-	-	-	68.2	-25.87	189	315	V
5	5.615	43.03	PK1	35.1	-22.5	0	55.63	-	-	-	-	68.2	-12.57	32	118	V
3	7.067	49.41	PK1	35.9	-30	0	55.31	-	-	-	-	68.2	-12.89	212	291	H
4	7.067	49.4	PK1	35.9	-30	0	55.3	-	-	-	-	68.2	-12.9	207	314	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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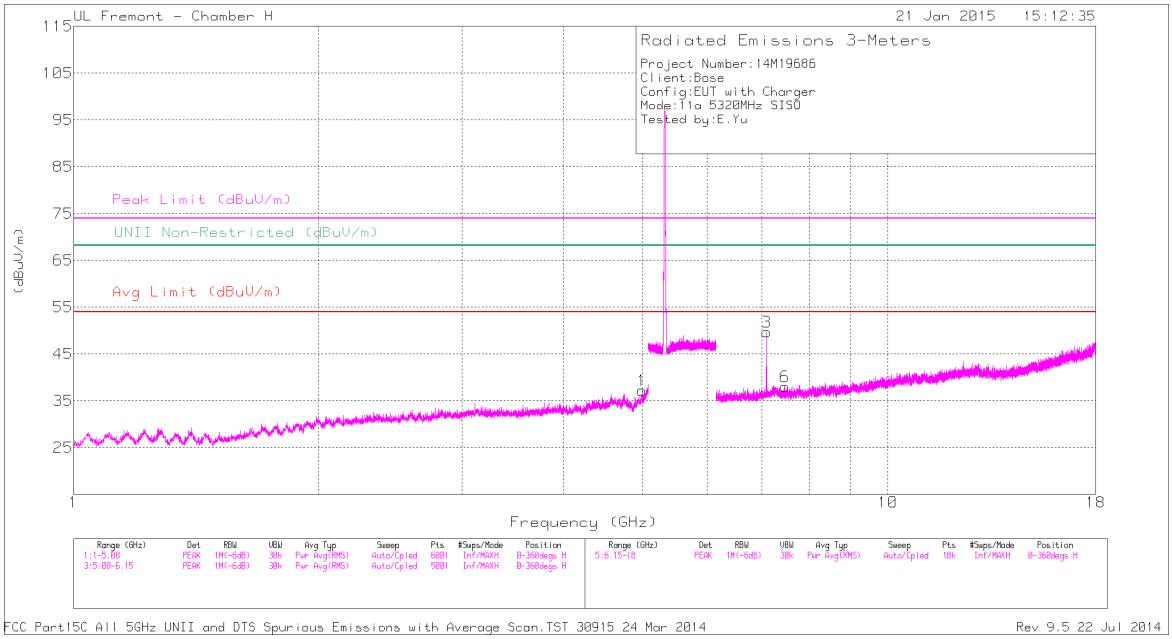
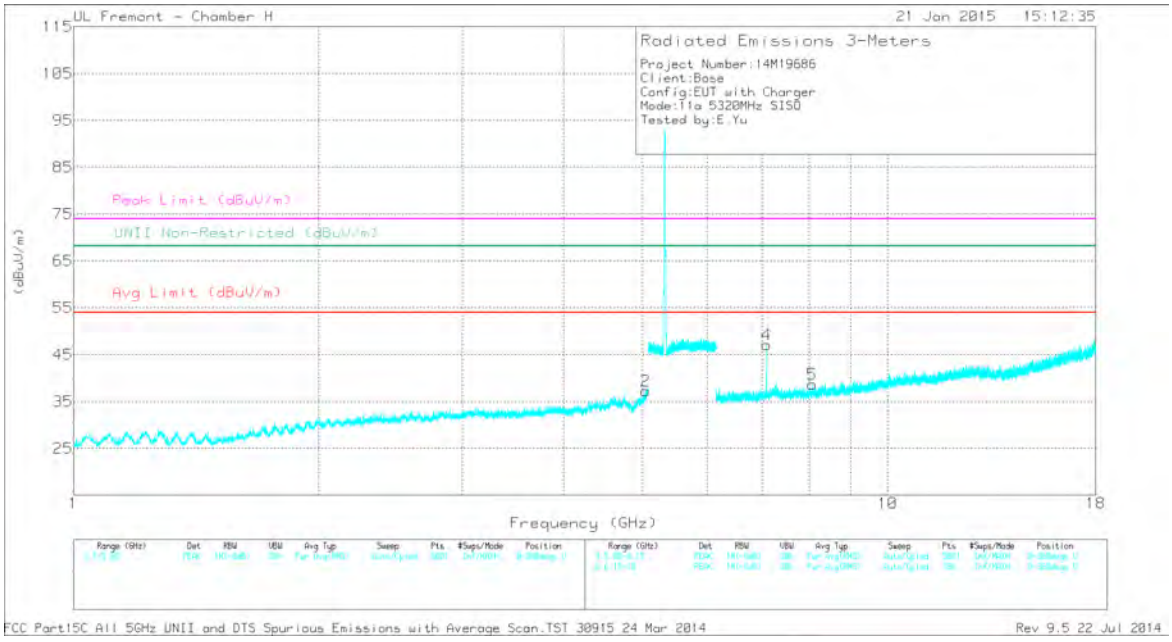
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.993	42.09	PK1	34.3	-31.3	0	45.09	-	-	74	-28.91	-	-	236	303	H
	* 4.992	30.08	AD1	34.3	-31.3	2.91	36.09	54	-18.01	-	-	-	-	236	303	H
2	* 5.039	40.69	PK1	34.4	-30.5	0	44.59	-	-	74	-29.41	-	-	62	156	V
	* 5.036	29.39	AD1	34.4	-30.7	2.91	36.1	54	-18	-	-	-	-	62	156	V
6	* 7.474	38.02	PK1	36.1	-29.6	0	44.52	-	-	74	-29.48	-	-	64	204	H
	* 7.474	26.89	AD1	36.1	-29.6	2.91	36.4	54	-17.7	-	-	-	-	64	204	H
5	* 8.072	38.14	PK1	36	-28.2	0	45.94	-	-	74	-28.06	-	-	109	183	V
	* 8.073	26.5	AD1	36	-28.2	2.91	37.31	54	-16.79	-	-	-	-	109	183	V
3	7.093	48.75	PK1	35.9	-30	0	54.65	-	-	-	-	68.2	-13.55	213	312	H
4	7.093	47.28	PK1	35.9	-30	0	53.18	-	-	-	-	68.2	-15.02	90	239	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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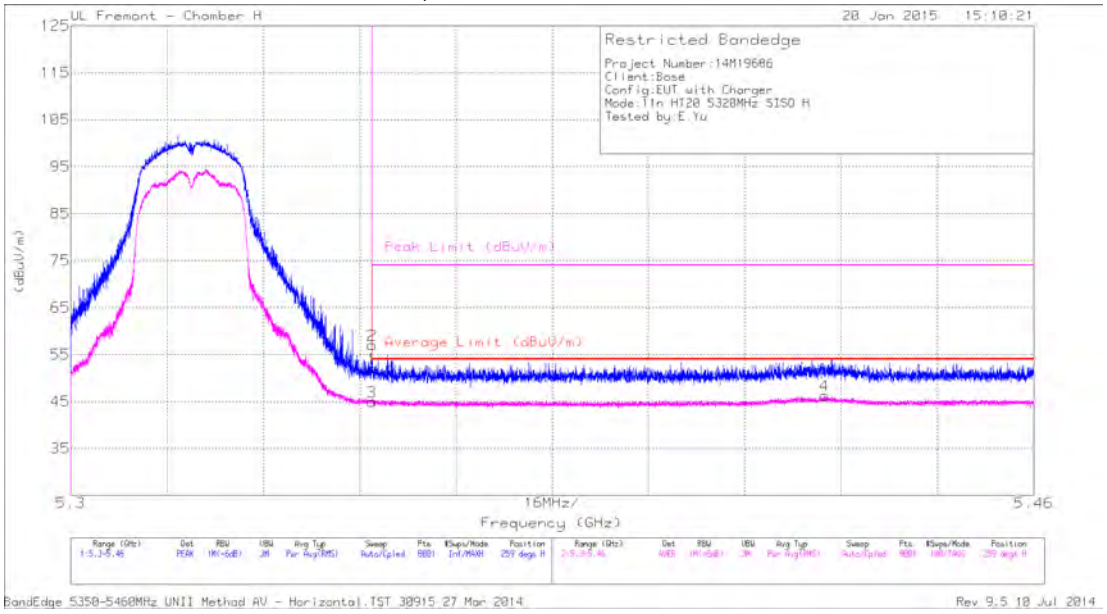
9.2.5. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.350	39.84	PK	34.9	-22.7	0	52.04	-	-	74	-21.96	259	267	H
2	* 5.350	44.84	PK	34.9	-22.7	0	57.04	-	-	74	-16.96	259	267	H
3	* 5.350	29.71	RMS	34.9	-22.7	3.00	44.91	54	-9.09	-	-	259	267	H
4	* 5.425	30.74	RMS	35.0	-22.5	3.00	46.24	54	-7.76	-	-	259	267	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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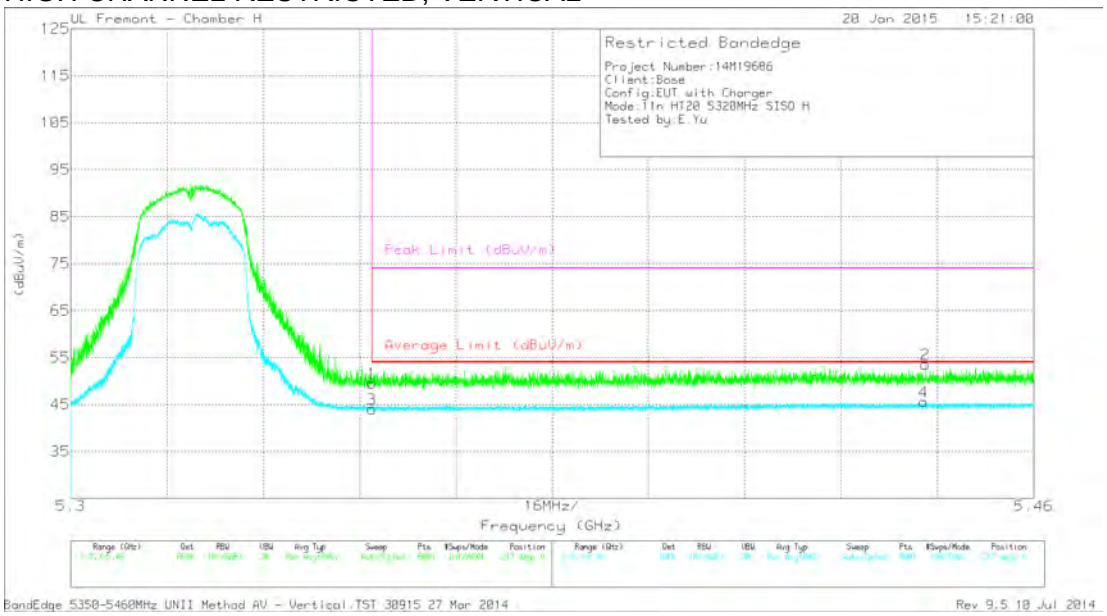
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.350	37.30	PK	34.9	-22.7	0	49.50	-	-	74	-24.50	217	246	V
2	* 5.442	41.08	PK	35.0	-22.5	0	53.58	-	-	74	-20.42	217	246	V
3	* 5.350	28.85	RMS	34.9	-22.7	3.0	44.05	54	-9.95	-	-	217	246	V
4	* 5.442	30.08	RMS	35.0	-22.5	3.0	45.58	54	-8.42	-	-	217	246	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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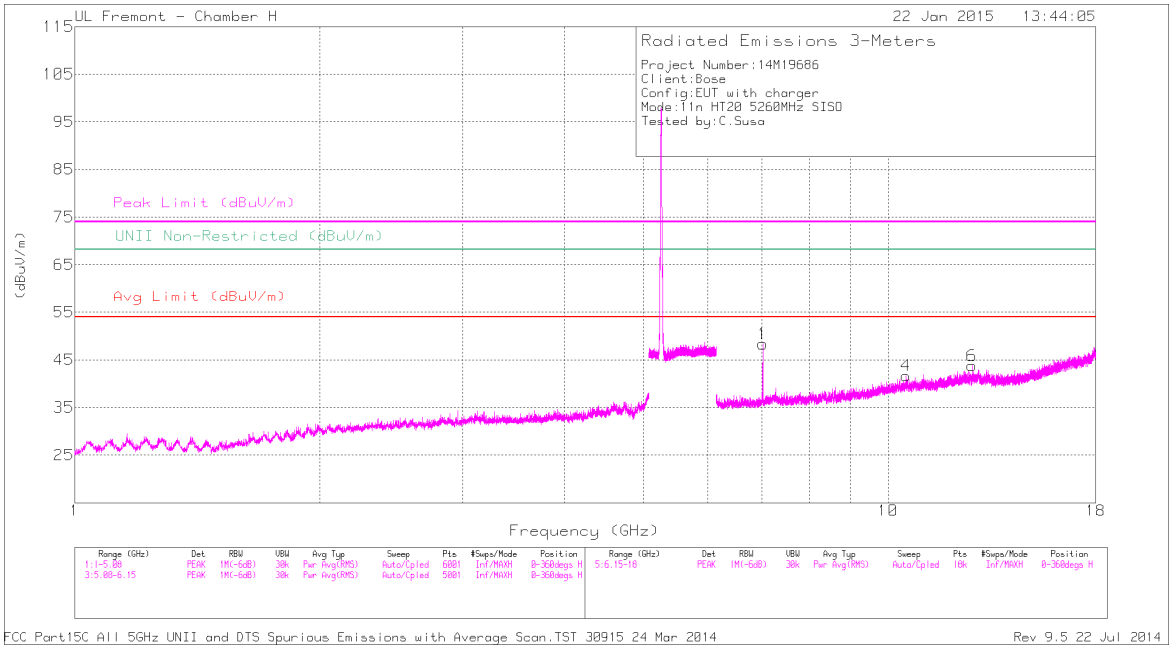
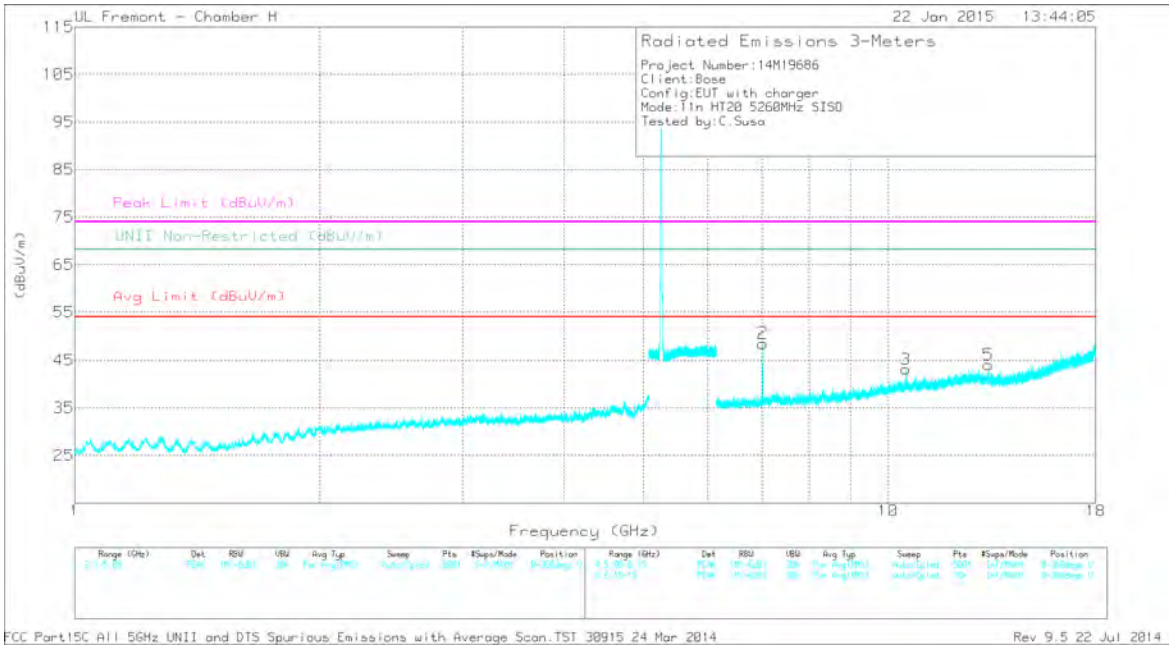
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.013	50.50	PK1	35.8	-29.6	0	56.70	-	-	-	-	68.2	-11.50	213	297	H
2	7.013	47.93	PK1	35.8	-29.6	0	54.13	-	-	-	-	68.2	-14.07	75	229	V
3	10.520	40.45	PK1	37.6	-25.6	0	52.45	-	-	-	-	68.2	-15.75	88	239	V
4	10.520	37.94	PK1	37.6	-25.6	0	49.94	-	-	-	-	68.2	-18.26	228	138	H
5	* 13.284	35.80	PK1	39.1	-25.2	0	49.70	-	-	74	-24.30	-	-	234	200	V
	* 13.281	24.89	AD1	39.1	-25.2	3.0	41.79	54	-12.21	-	-	-	-	234	200	V
6	* 12.681	35.55	PK1	39.2	-25.0	0	49.75	-	-	74	-24.25	-	-	19	133	H
	* 12.681	24.32	AD1	39.2	-25.0	3.0	41.54	54	-12.48	-	-	-	-	19	133	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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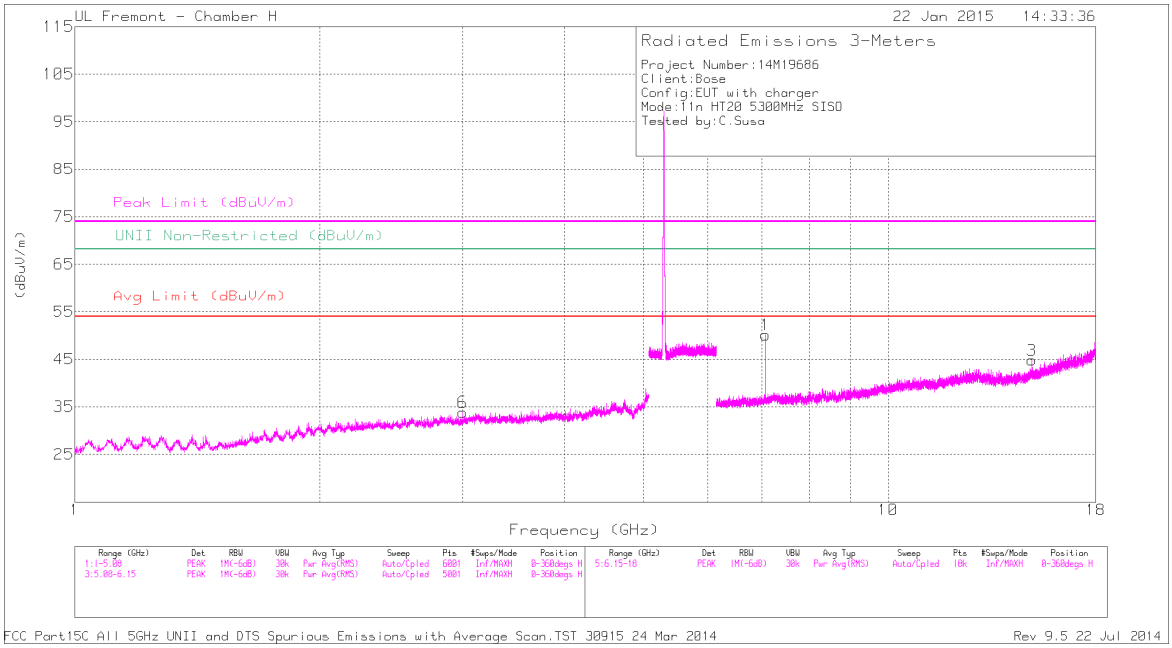
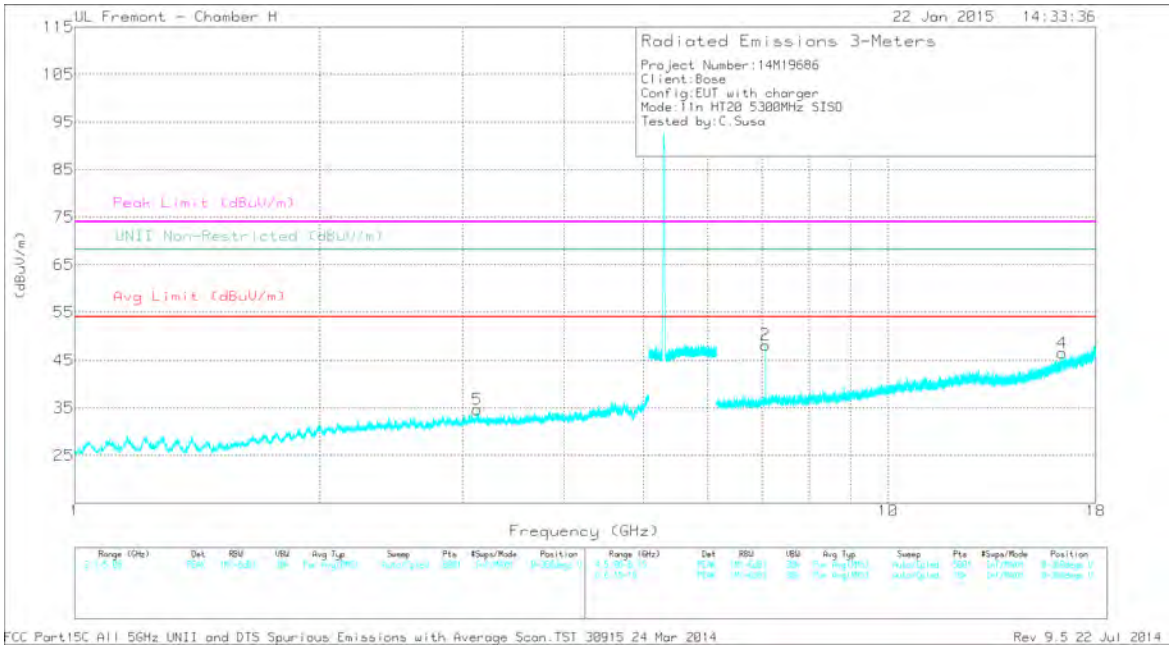
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.067	48.29	PK1	35.9	-30.0	0	54.19	-	-	-	-	68.2	-14.01	207	319	H
2	7.067	47.07	PK1	35.9	-30.0	0	52.97	-	-	-	-	68.2	-15.23	294	289	V
3	15.025	35.70	PK1	40.6	-25.7	0	50.60	-	-	-	-	68.2	-17.60	120	147	H
4	16.361	34.74	PK1	41.5	-23.9	0	52.34	-	-	-	-	68.2	-15.86	324	204	V
5	3.127	42.41	PK1	32.9	-32.7	0	42.61	-	-	-	-	68.2	-25.59	271	151	V
6	3.001	42.12	PK1	32.8	-34.0	0	40.92	-	-	-	-	68.2	-27.28	71	329	H

PK1 - KDB789033 Method: Peak

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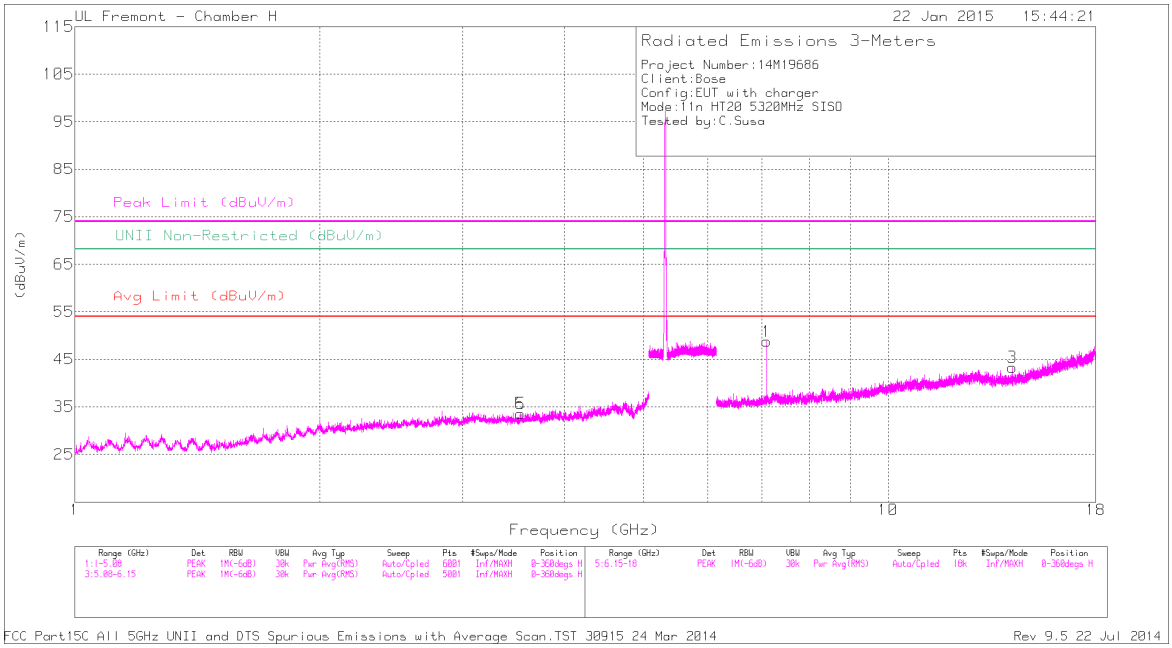
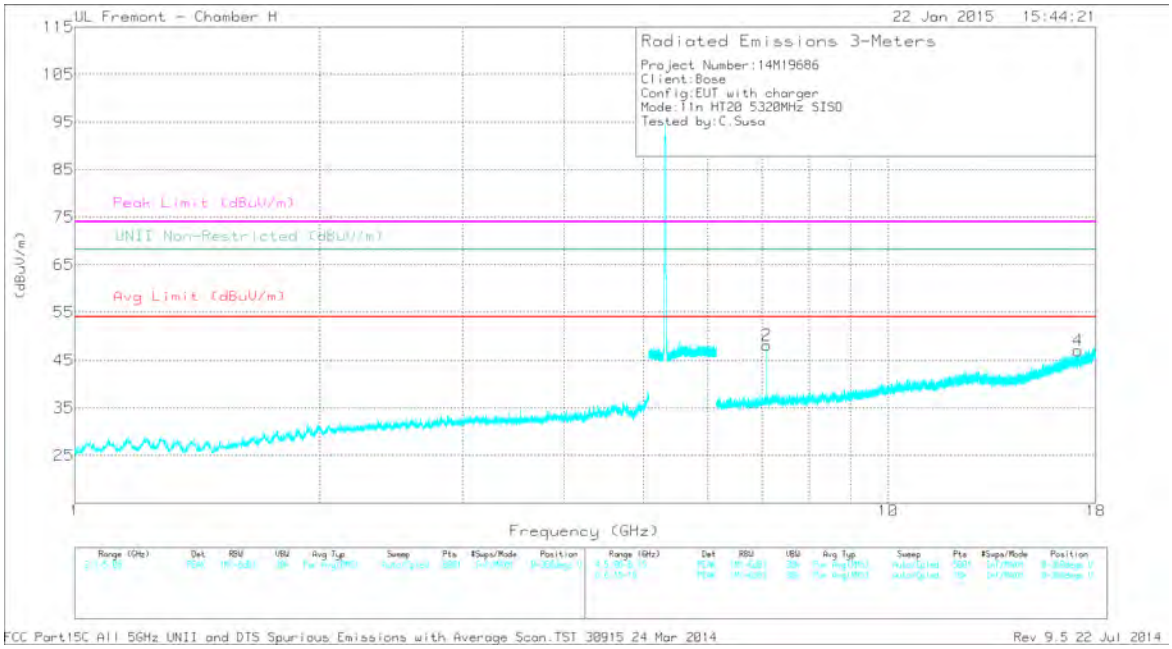
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.093	48.7	PK1	35.9	-30.0	0	54.60	-	-	-	-	68.2	-13.60	216	312	H
2	7.093	47.77	PK1	35.9	-30.0	0	53.67	-	-	-	-	68.2	-14.53	83	257	V
3	14.213	35.97	PK1	39.4	-26.4	0	48.97	-	-	-	-	68.2	-19.23	22	315	H
4	17.128	35.03	PK1	42.2	-23.3	0	53.93	-	-	-	-	68.2	-14.27	137	199	V
5	* 3.530	41.84	PK1	32.8	-33.4	0	41.24	-	-	74	-32.76	-	-	248	266	H
	* 3.530	29.76	AD1	32.8	-33.4	3.0	32.18	54	-21.84	-	-	-	-	248	266	H
6	* 3.531	41.75	PK1	32.9	-33.5	0	41.15	-	-	74	-32.85	-	-	112	276	H
	* 3.533	29.77	AD1	32.9	-33.5	3.0	32.19	54	-21.83	-	-	-	-	112	276	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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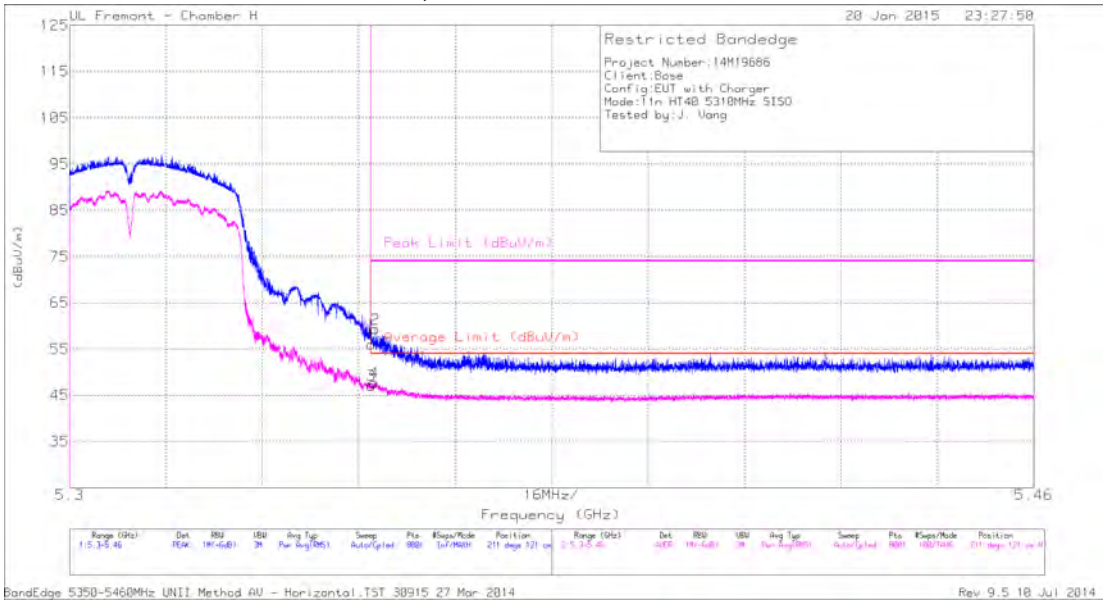
9.2.6. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.350	43.78	PK	34.9	-22.7	0	55.98	-	-	74	-18.02	211	121	H
2	* 5.351	47.15	PK	34.9	-22.7	0	59.35	-	-	74	-14.65	211	121	H
3	* 5.350	31.95	RMS	34.9	-22.7	2.96	47.11	54	-6.89	-	-	211	121	H
4	* 5.351	32.57	RMS	34.9	-22.7	2.96	47.73	54	-6.27	-	-	211	121	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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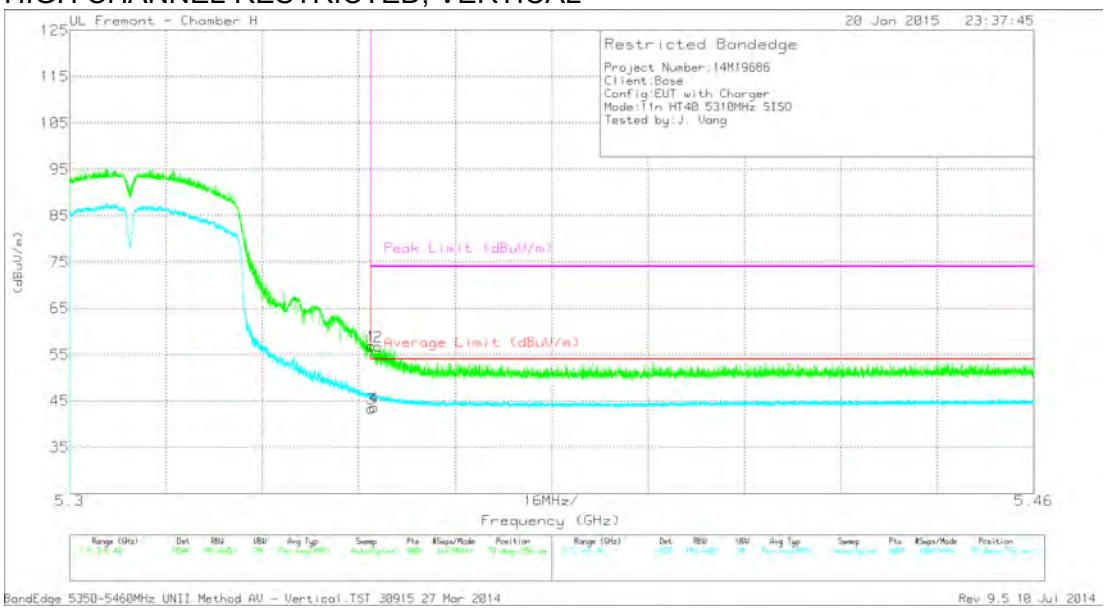
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.350	44.65	PK	34.9	-22.7	0	56.85	-	-	74	-17.15	78	256
2	* 5.351	44.56	PK	34.9	-22.7	0	56.76	-	-	74	-17.24	78	256
3	* 5.350	31.13	RMS	34.9	-22.7	2.96	46.29	54	-7.71	-	-	78	256
4	* 5.351	31.39	RMS	34.9	-22.7	2.96	46.55	54	-7.45	-	-	78	256

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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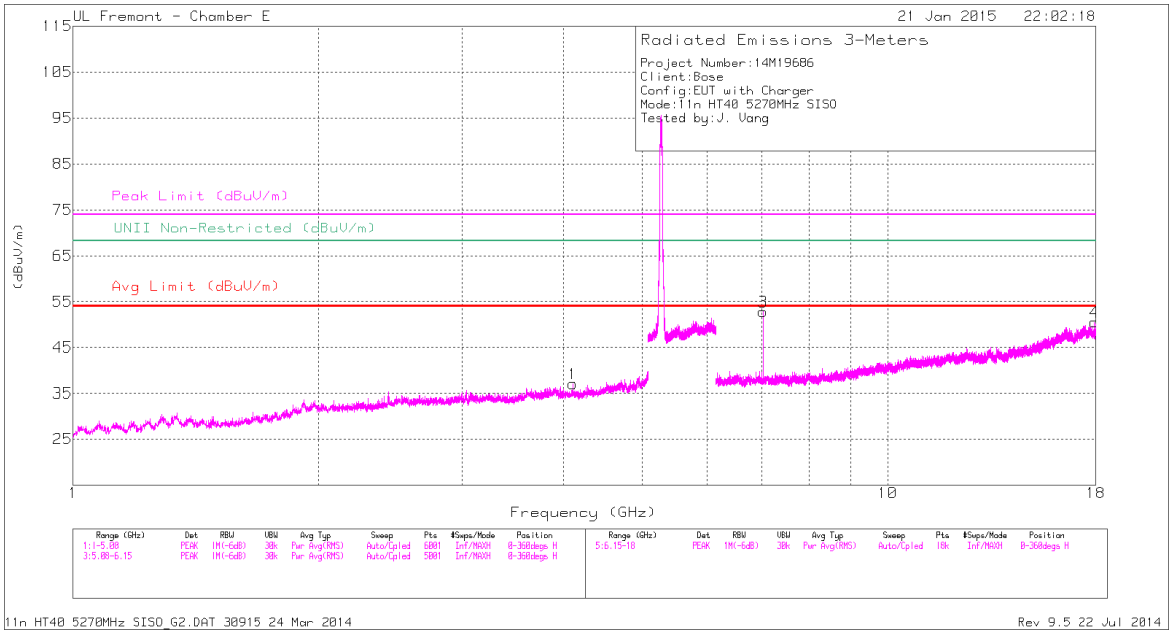
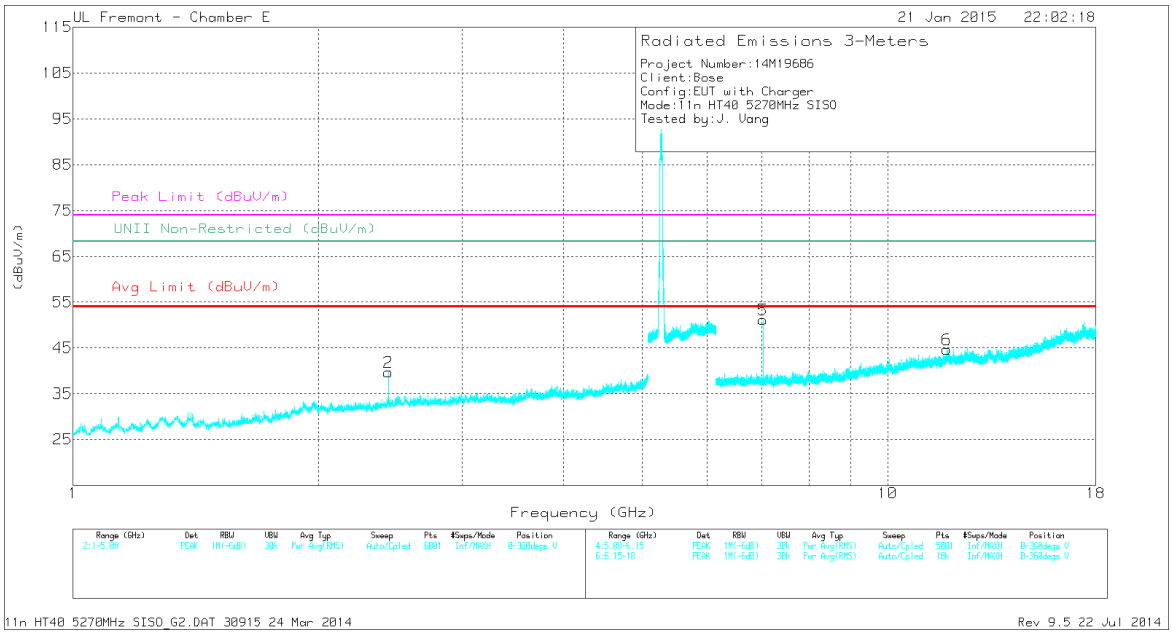
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.106	41.64	PK1	33.5	-31.1	0	44.04	-	-	74	-29.96	-	-	28	314	H
	* 4.106	29.78	AD1	33.5	-31.1	2.96	35.14	54	-18.86	-	-	-	-	28	314	H
2	2.438	46.28	PK1	32.2	-33.1	0	45.38	-	-	-	-	68.2	-22.82	91	346	V
3	7.027	49.33	PK1	35.9	-28.5	0	56.73	-	-	-	-	68.2	-11.47	34	145	H
4	* 17.933	35.38	PK1	41.0	-19.9	0	56.48	-	-	74	-17.52	-	-	17	255	H
	* 17.933	24.00	AD1	41.0	-20.0	2.96	47.96	54	-6.04	-	-	-	-	17	255	H
5	7.027	48.77	PK1	35.9	-28.5	0	56.17	-	-	-	-	68.2	-12.03	69	241	V
6	* 11.820	36.45	PK1	38.5	-23.2	0	51.75	-	-	74	-22.25	-	-	314	296	V
	* 11.819	24.93	AD1	38.5	-23.2	2.96	43.19	54	-10.81	-	-	-	-	314	296	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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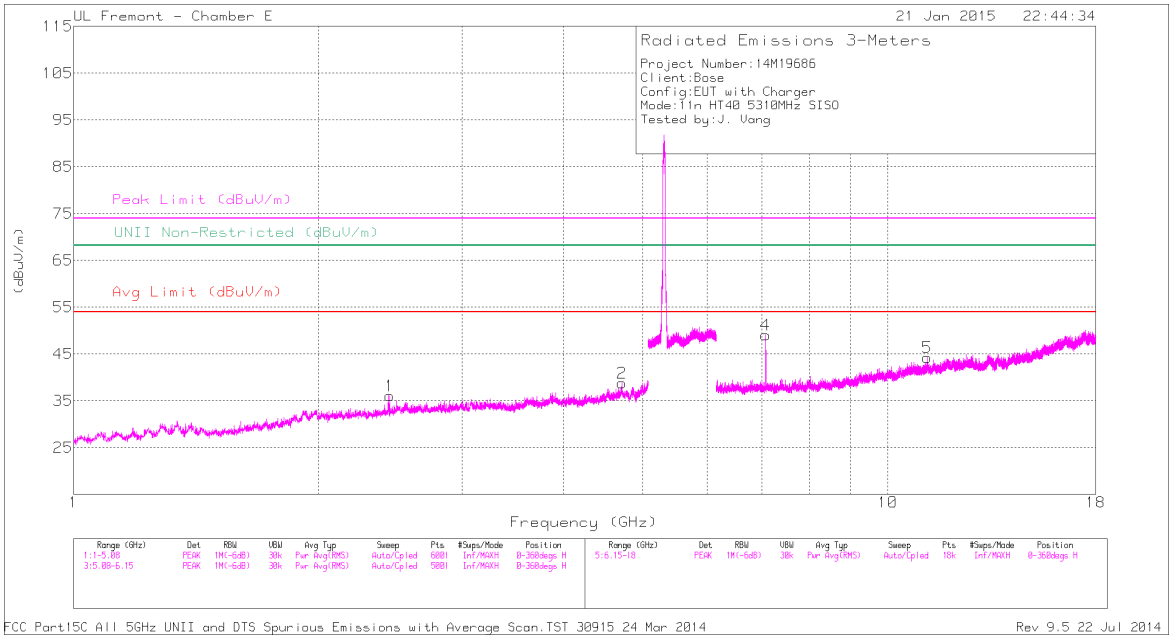
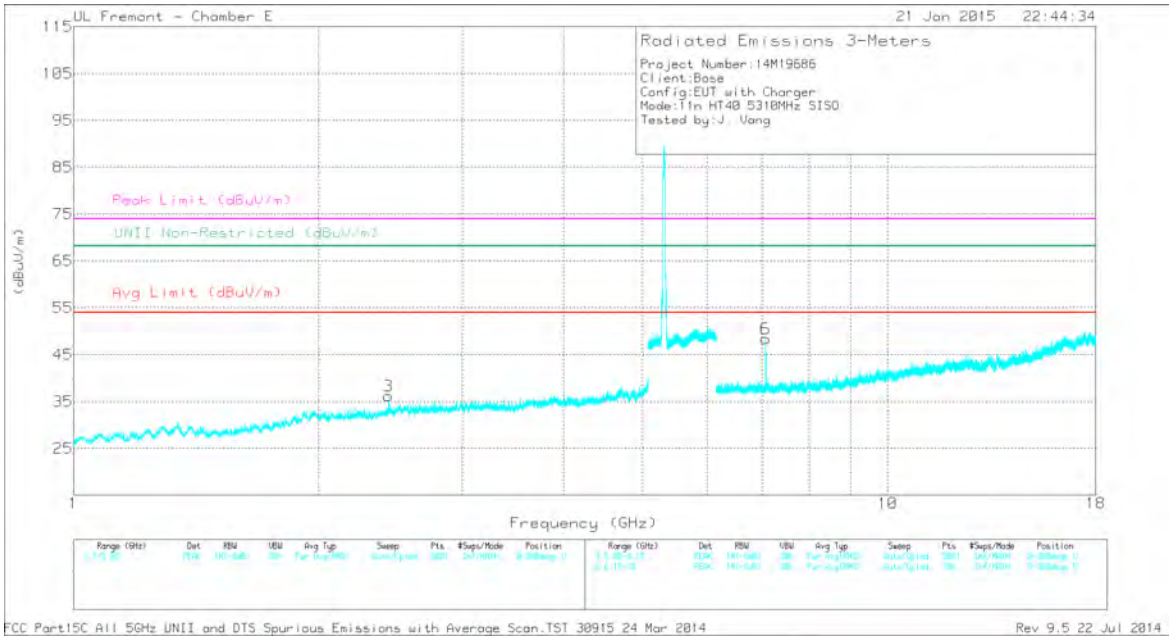
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.445	42.30	PK1	32.2	-33.0	0	41.50	-	-	-	-	68.2	-26.70	85	271	H
2	* 4.714	41.79	PK1	34.2	-30.4	0	45.59	-	-	74	-28.41	-	-	181	304	H
	* 4.711	30.63	AD1	34.2	-30.3	2.96	37.49	54	-16.51	-	-	-	-	181	304	H
3	2.437	44.25	PK1	32.2	-33.1	0	43.35	-	-	-	-	68.2	-24.85	82	176	V
4	7.080	46.49	PK1	35.8	-28.4	0	53.89	-	-	-	-	68.2	-14.31	39	158	H
5	* 11.169	36.91	PK1	37.9	-23.8	0	51.01	-	-	74	-22.99	-	-	228	368	H
	* 11.172	24.91	AD1	37.9	-23.7	2.96	42.07	54	-11.93	-	-	-	-	228	368	H
6	7.08	45.24	PK1	35.8	-28.4	0	52.64	-	-	-	-	68.2	-15.56	57	204	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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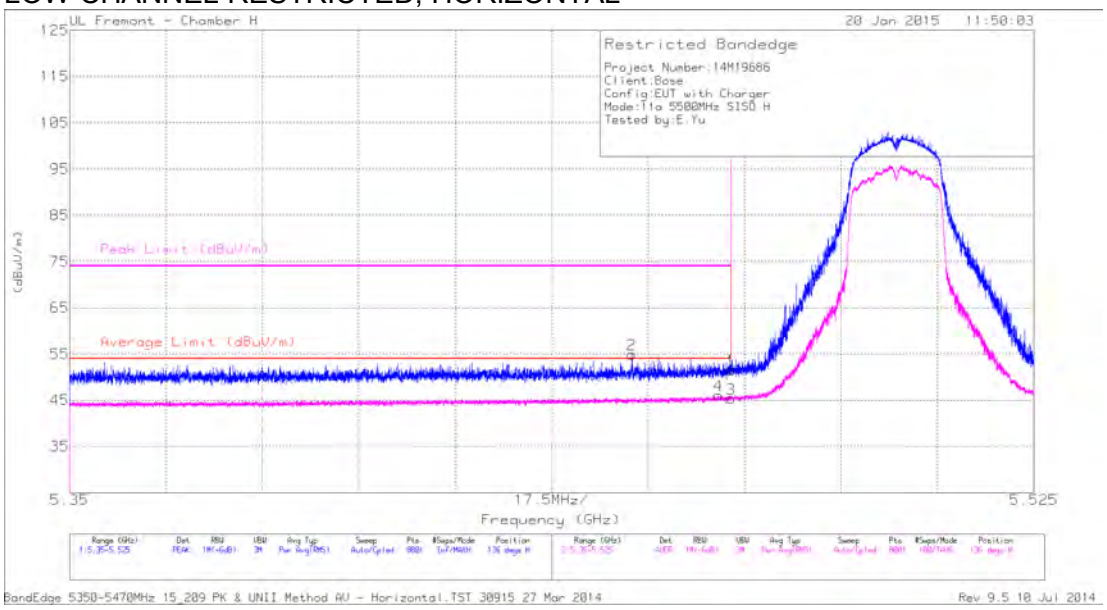
9.2.7. TX ABOVE 1 GHz 802.11a MODE IN THE 5.6 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.470	38.87	PK	35.1	-22.4	0	51.57	-	-	74	-22.43	136	285	H
2	* 5.452	42.36	PK	35.0	-22.5	0	54.86	-	-	74	-19.14	136	285	H
3	5.470	29.63	RMS	35.1	-22.4	2.91	45.24	54	-8.76	-	-	136	285	H
4	5.468	30.42	RMS	35.0	-22.4	2.91	46.13	54	-8.07	-	-	136	285	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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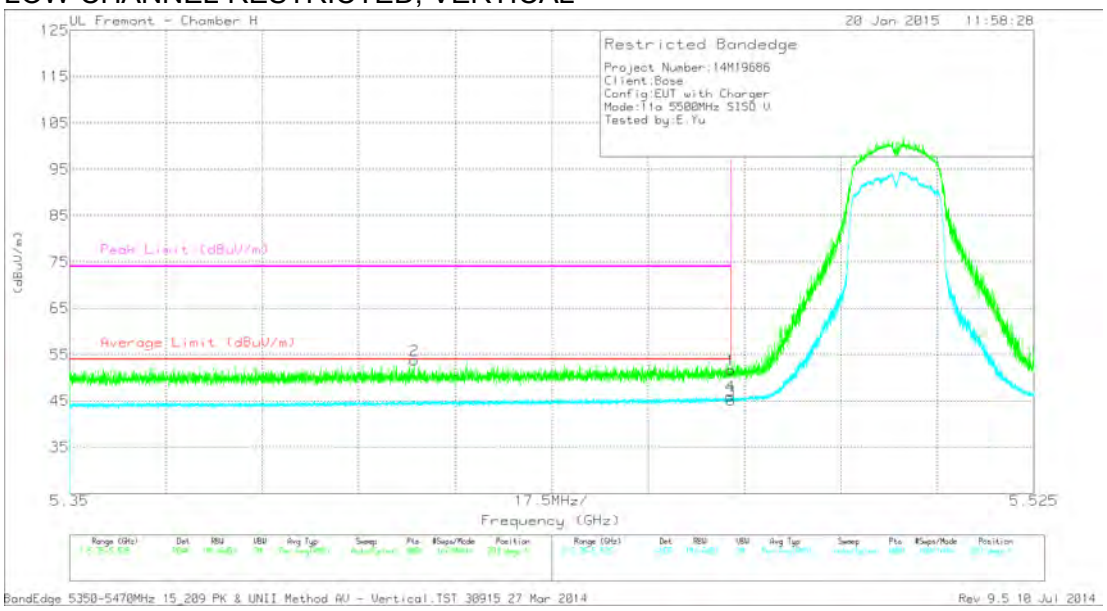
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.470	39.00	PK	35.1	-22.4	0	51.70	-	-	74	-22.30	283	309	V
2	* 5.413	41.27	PK	35.0	-22.5	0	53.77	-	-	74	-20.23	283	309	V
3	5.470	29.37	RMS	35.1	-22.4	2.91	44.98	54	-9.02	-	-	283	309	V
4	5.470	30.30	RMS	35.1	-22.4	2.91	45.91	54	-8.09	-	-	283	309	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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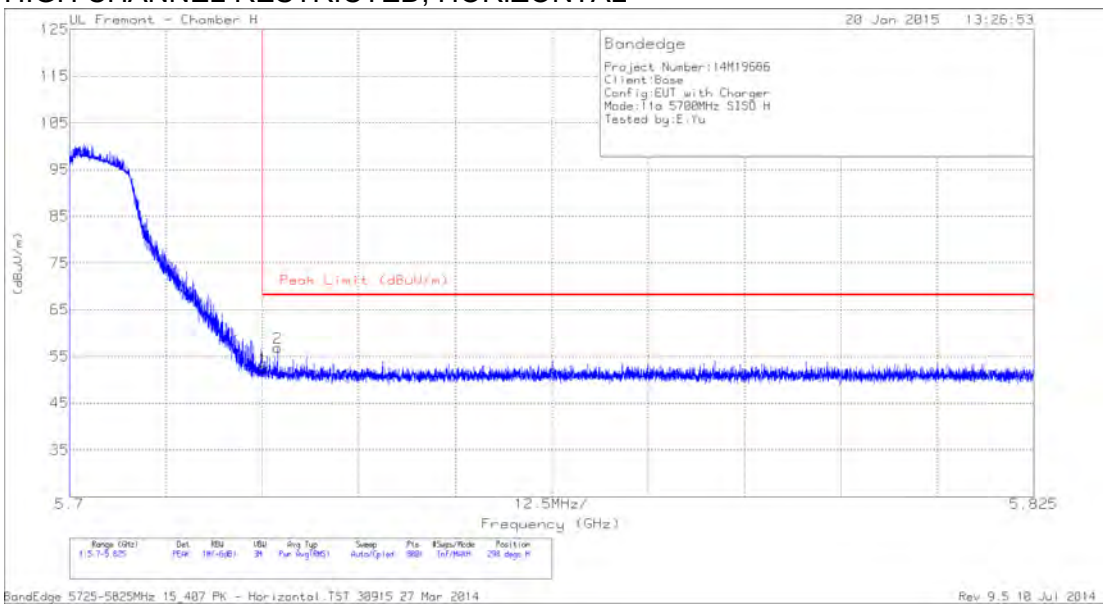
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.95	PK	35.0	-22.4	52.55	68.2	-15.65	298	290	H
2	5.727	44.31	PK	35.0	-22.4	56.91	68.2	-11.29	298	290	H

PK - Peak detector

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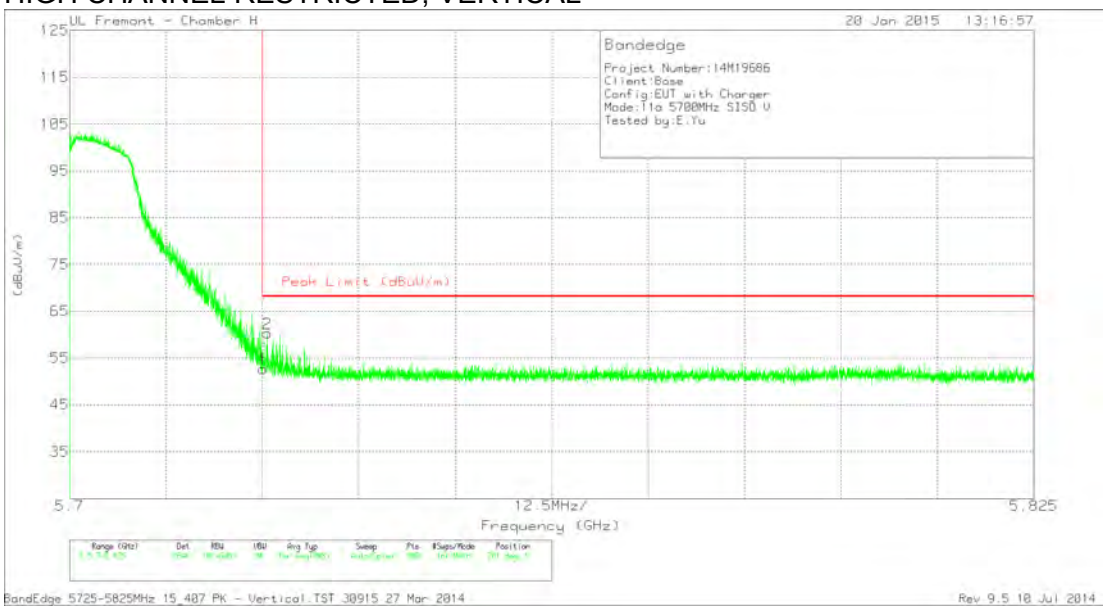
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.14	PK	35	-22.4	0	52.74	68.2	-15.46	281	314	V
2	5.726	47.75	PK	35	-22.4	0	60.35	68.2	-7.85	281	314	V

PK - Peak detector

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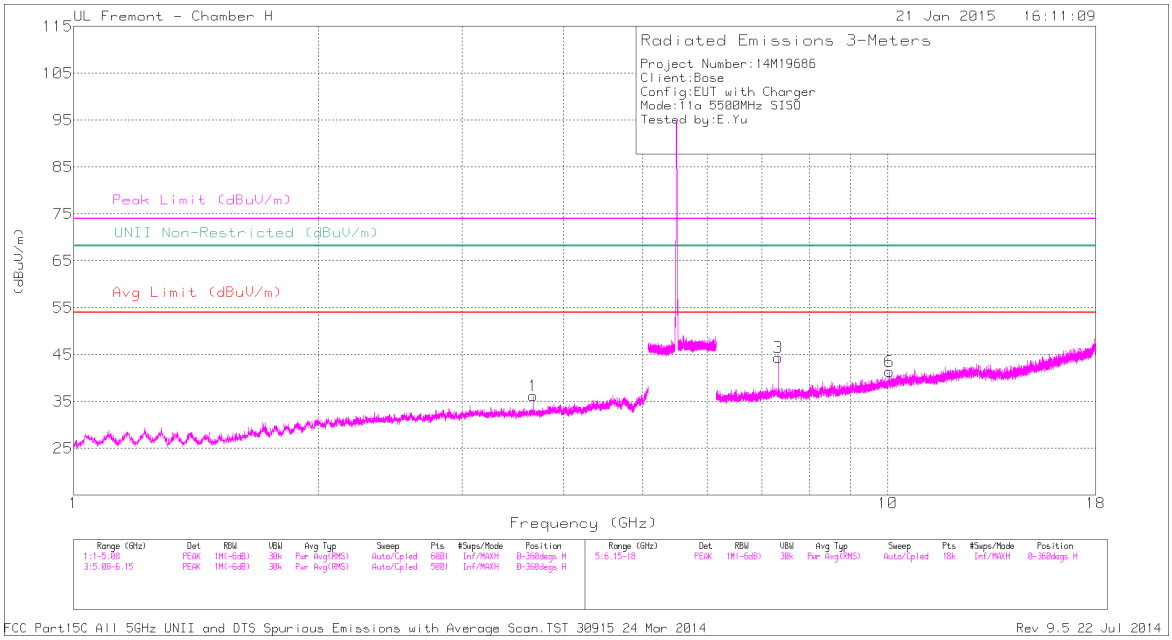
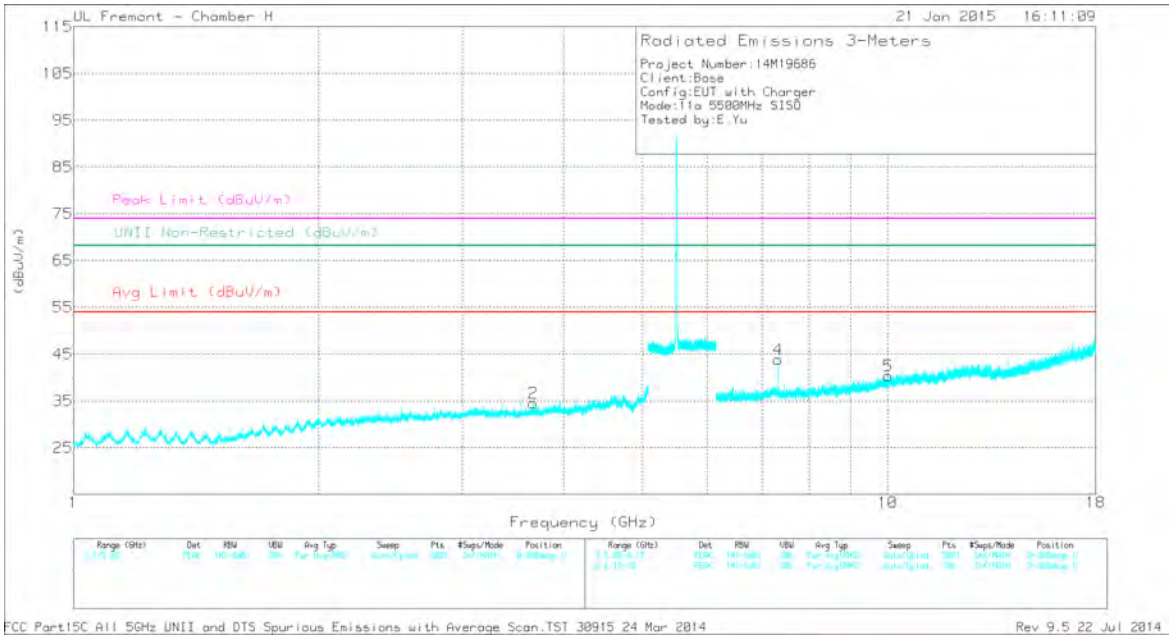
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.667	43.88	PK1	33.1	-32.5	0	44.48	-	-	74	-29.52	-	-	114	270	H
	* 3.667	35.48	AD1	33.1	-32.5	2.91	38.99	54	-15.01	-	-	-	-	114	270	H
2	* 3.667	43.27	PK1	33.1	-32.5	0	43.87	-	-	74	-30.13	-	-	61	306	V
	* 3.667	34.44	AD1	33.1	-32.5	2.91	37.95	54	-16.05	-	-	-	-	61	306	V
3	* 7.333	42.95	PK1	36.2	-29.9	0	49.25	-	-	74	-24.75	-	-	241	288	H
	* 7.333	35.69	AD1	36.2	-29.9	2.91	44.90	54	-9.10	-	-	-	-	241	288	H
4	* 7.333	43.45	PK1	36.2	-29.9	0	49.75	-	-	74	-24.25	-	-	71	260	V
	* 7.333	35.91	AD1	36.2	-29.9	2.91	45.12	54	-8.88	-	-	-	-	71	260	V
5	10.020	36.53	PK1	37.3	-26.0	0	47.83	-	-	-	-	68.2	-20.37	346	383	V
6	10.055	36.28	PK1	37.3	-25.9	0	47.68	-	-	-	-	68.2	-20.52	343	188	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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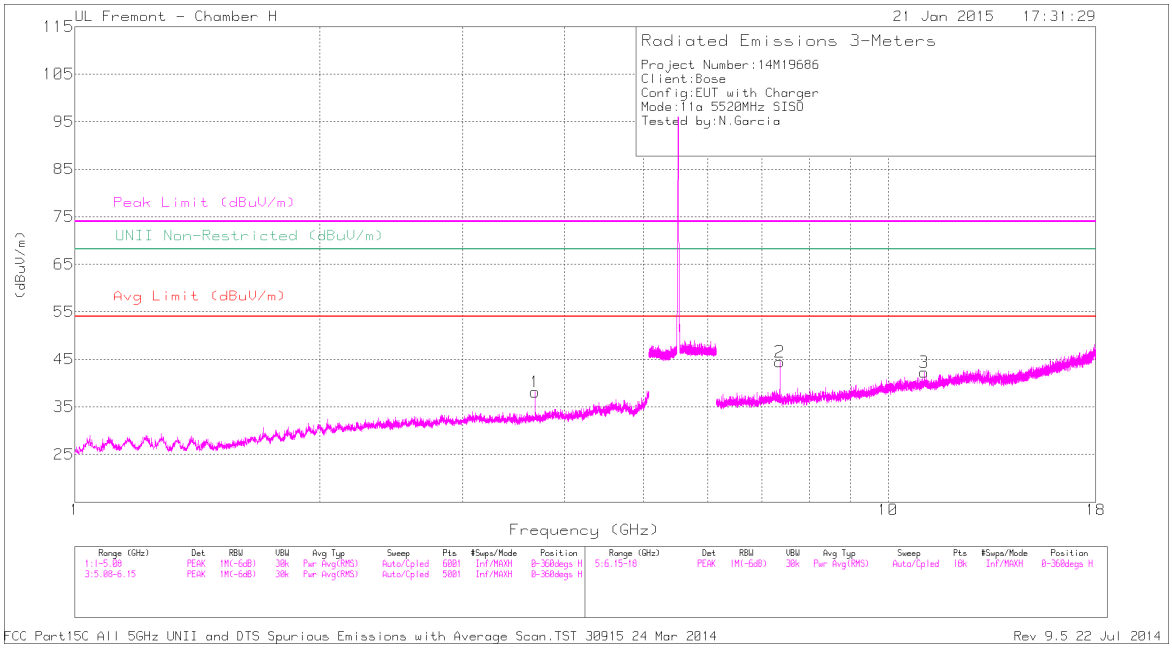
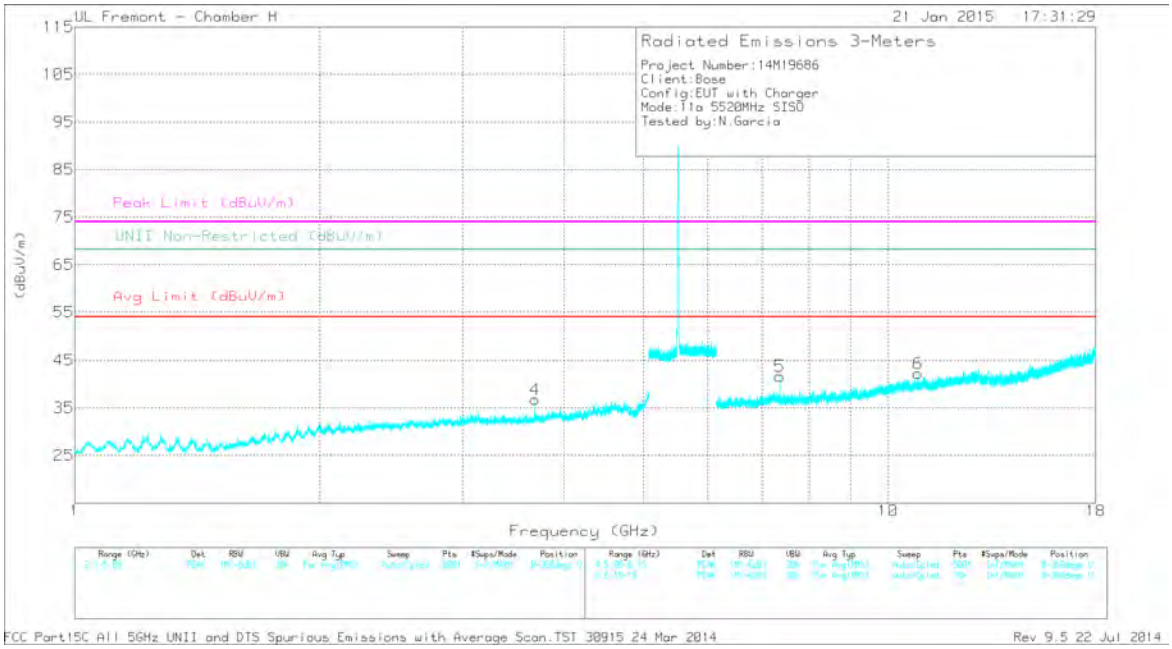
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.680	44.11	PK1	33.1	-32.3	0	44.91	-	-	74	-29.09	-	-	116	270	H
	* 3.680	35.98	AD1	33.1	-32.3	2.91	39.69	54	-14.31	-	-	-	-	116	270	H
2	* 7.360	43.64	PK1	36.2	-30.0	0	49.84	-	-	74	-24.16	-	-	234	159	H
	* 7.360	35.40	AD1	36.2	-30.0	2.91	44.51	54	-9.49	-	-	-	-	234	159	H
3	* 11.078	35.73	PK1	37.8	-25.0	0	48.53	-	-	74	-25.47	-	-	81	136	H
	* 11.077	24.54	AD1	37.8	-25.0	2.91	40.25	54	-13.75	-	-	-	-	81	136	H
4	* 3.680	44.60	PK1	33.1	-32.3	0	45.40	-	-	74	-28.6	-	-	56	308	V
	* 3.680	35.61	AD1	33.1	-32.3	2.91	39.32	54	-14.68	-	-	-	-	56	308	V
5	* 7.360	43.04	PK1	36.2	-30.0	0	49.24	-	-	74	-24.76	-	-	305	288	V
	* 7.360	35.08	AD1	36.2	-30.0	2.91	44.19	54	-9.81	-	-	-	-	305	288	V
6	* 10.886	36.05	PK1	37.7	-25.8	0	47.95	-	-	74	-26.05	-	-	318	116	V
	* 10.889	24.90	AD1	37.7	-25.8	2.91	39.71	54	-14.29	-	-	-	-	318	116	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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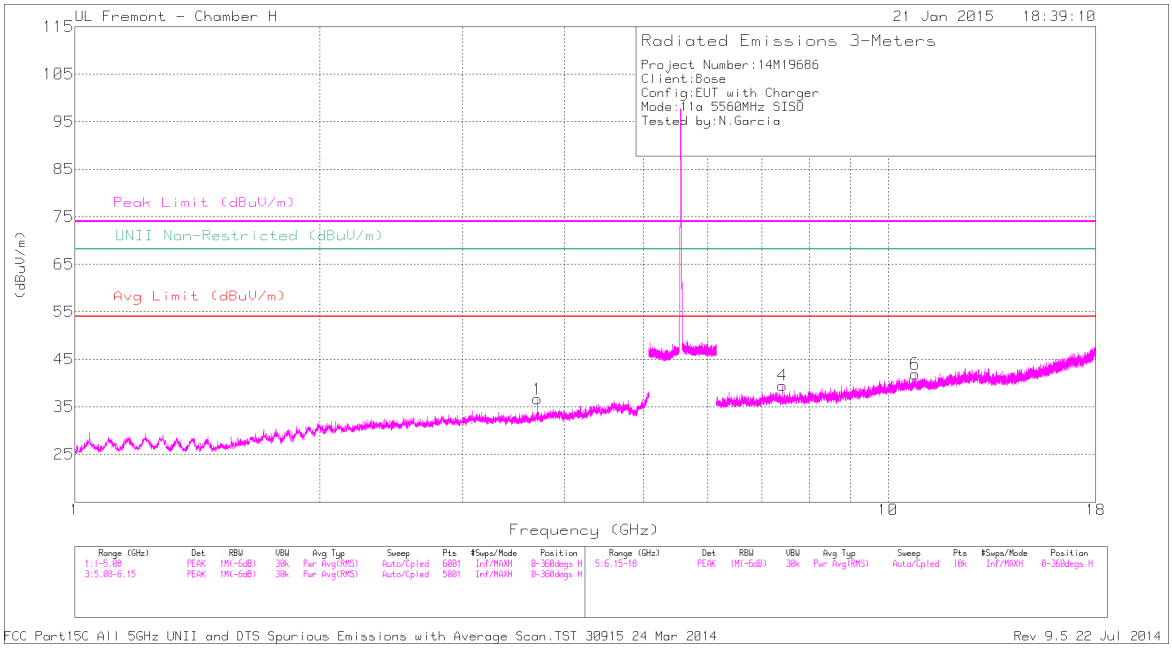
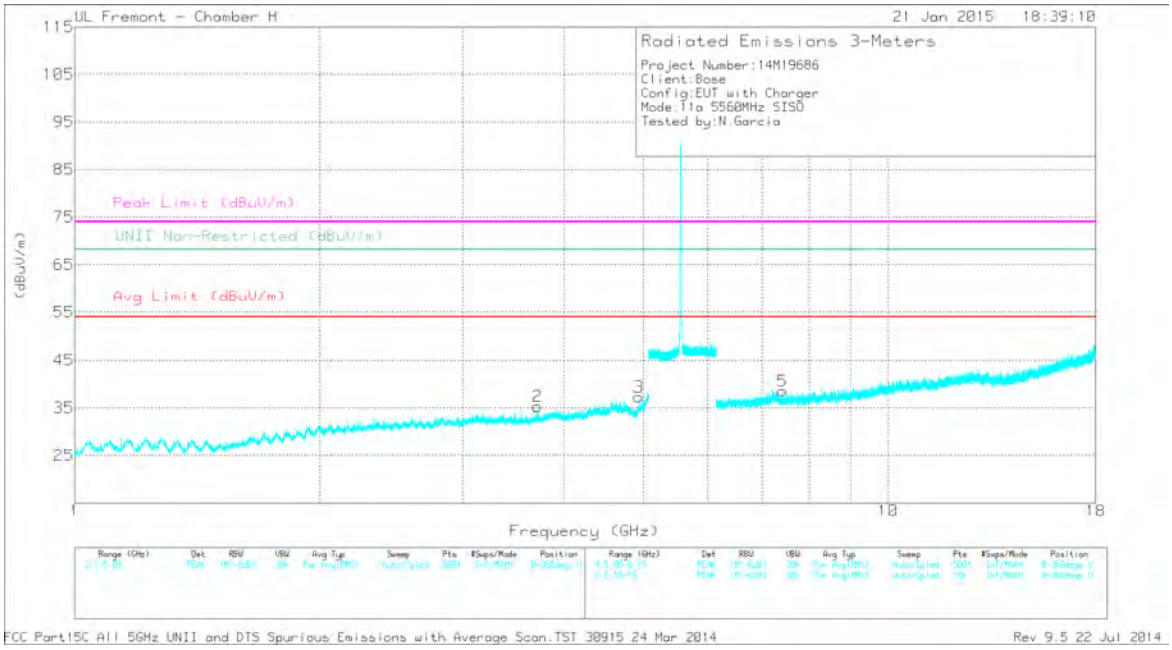
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.707	42.87	PK1	33.1	-32.5	0	43.47	-	-	74	-30.53	-	-	31	270	H
	* 3.707	32.73	AD1	33.1	-32.5	2.91	36.24	54	-17.76	-	-	-	-	31	270	H
2	* 3.707	43.50	PK1	33.1	-32.4	0	44.20	-	-	74	-29.80	-	-	72	304	V
	* 3.707	34.91	AD1	33.1	-32.4	2.91	38.52	54	-15.48	-	-	-	-	72	304	V
3	* 4.938	40.12	PK1	34.3	-30.9	0	43.52	-	-	74	-30.48	-	-	146	223	V
	* 4.935	28.45	AD1	34.3	-30.9	2.91	34.76	54	-19.24	-	-	-	-	146	223	V
4	* 7.413	41.60	PK1	36.1	-30.0	0	47.70	-	-	74	-26.30	-	-	236	306	H
	* 7.413	31.24	AD1	36.1	-30.0	2.91	40.45	54	-13.75	-	-	-	-	236	306	H
5	* 7.414	39.80	PK1	36.1	-30.0	0	45.90	-	-	74	-28.10	-	-	117	312	V
	* 7.413	28.86	AD1	36.1	-30.0	2.91	37.87	54	-16.13	-	-	-	-	117	312	V
6	* 10.796	35.08	PK1	37.6	-24.6	0	48.08	-	-	74	-25.92	-	-	291	120	H
	* 10.798	24.23	AD1	37.6	-24.6	2.91	40.14	54	-13.86	-	-	-	-	291	120	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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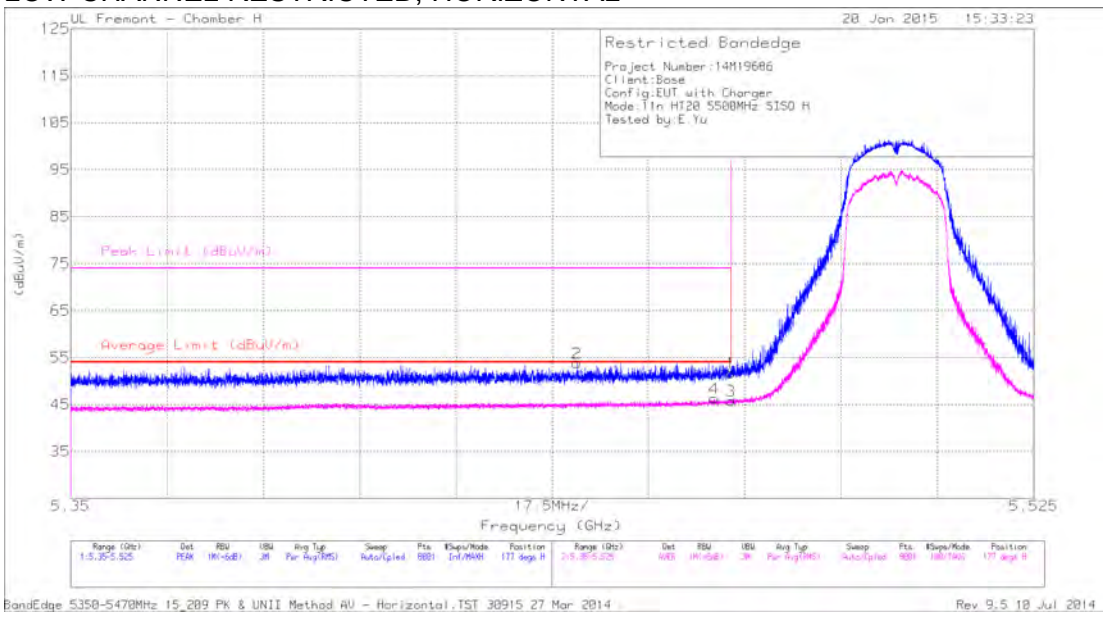
9.2.8. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.6 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.470	39.01	PK	35.1	-22.4	0	51.71	-	-	74	-22.29	177	217	H
2	* 5.442	41.35	PK	35.0	-22.5	0	53.85	-	-	74	-20.15	177	217	H
3	5.470	30.11	RMS	35.1	-22.4	3.00	45.81	54	-8.19	-	-	177	217	H
4	5.467	30.70	RMS	35.0	-22.4	3.00	46.30	54	-7.70	-	-	177	217	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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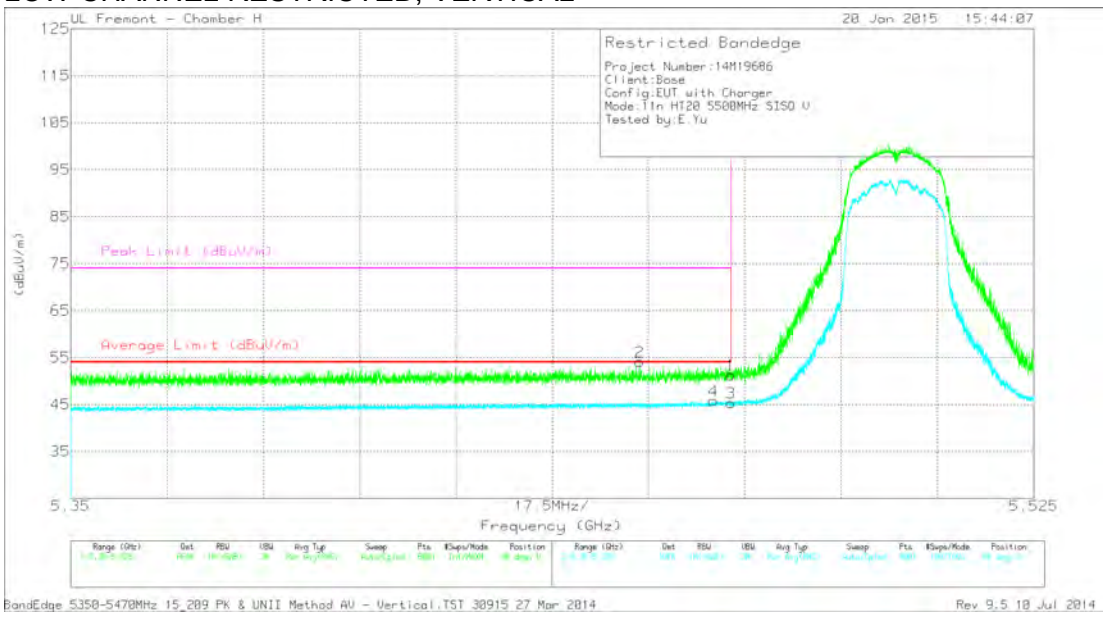
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.470	38.56	PK	35.1	-22.4	0	51.26	-	-	74	-22.74	86	259	V
2	* 5.453	41.59	PK	35.0	-22.5	0	54.09	-	-	74	-19.91	86	259	V
3	5.470	29.66	RMS	35.1	-22.4	3.0	45.38	54	-8.64	-	-	86	259	V
4	5.467	30.19	RMS	35.0	-22.4	3.0	45.81	54	-8.21	-	-	86	259	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector
RMS - RMS detection

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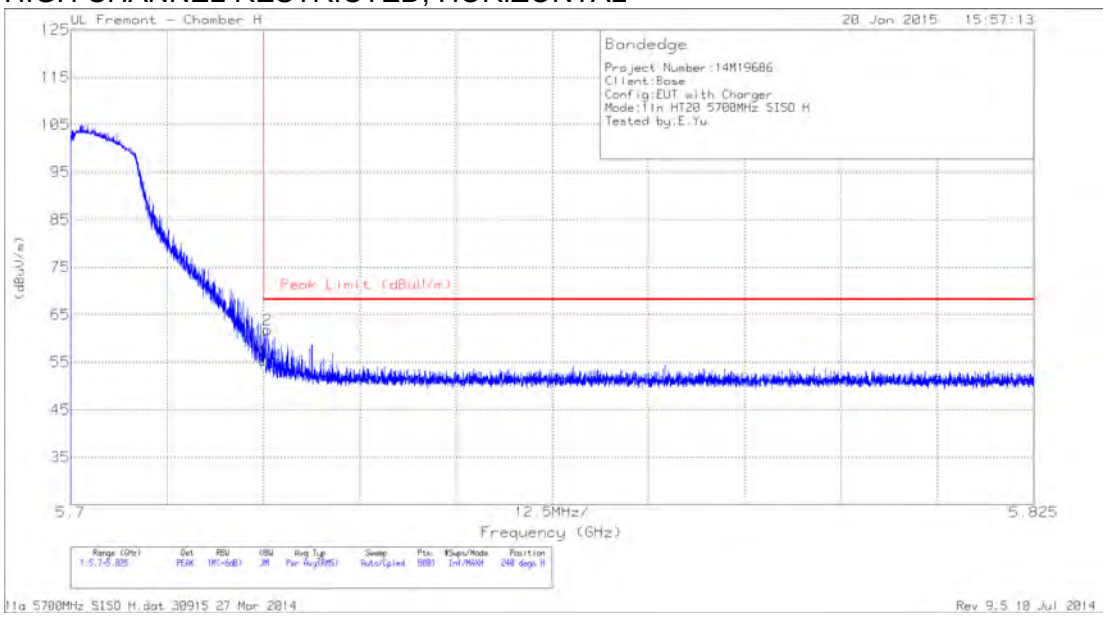
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	42.73	PK	35	-22.4	0	55.33	68.2	-12.87	240	318	H
2	5.726	49.24	PK	35	-22.4	0	61.84	68.2	-6.36	240	318	H

PK - Peak detector

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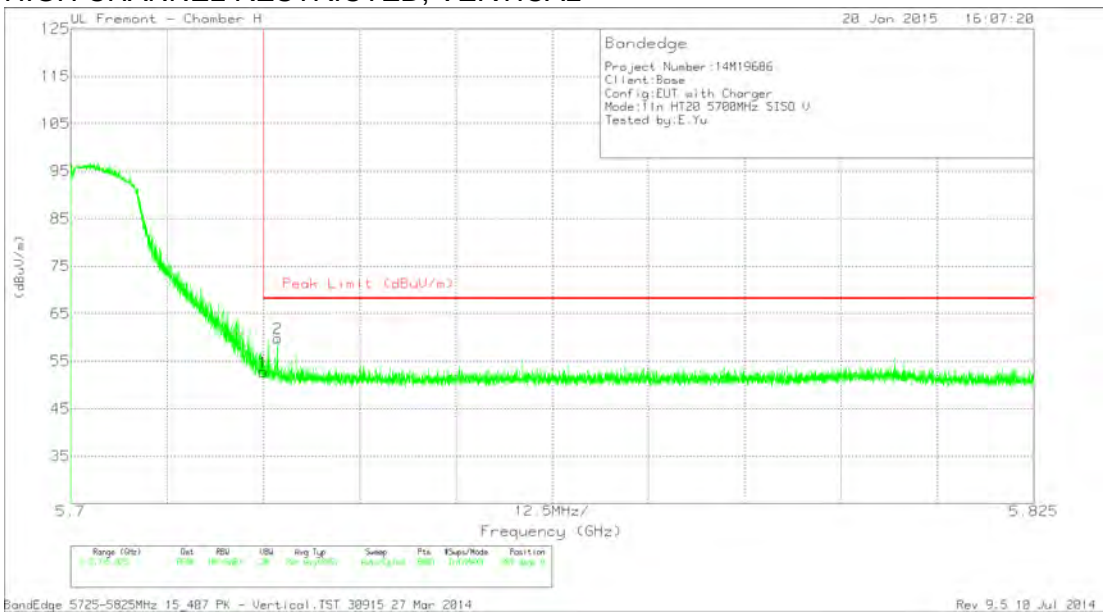
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.19	PK	35	-22.4	0	52.79	68.2	-15.41	269	338	V
2	5.727	47.22	PK	35	-22.4	0	59.82	68.2	-8.38	269	338	V

PK - Peak detector

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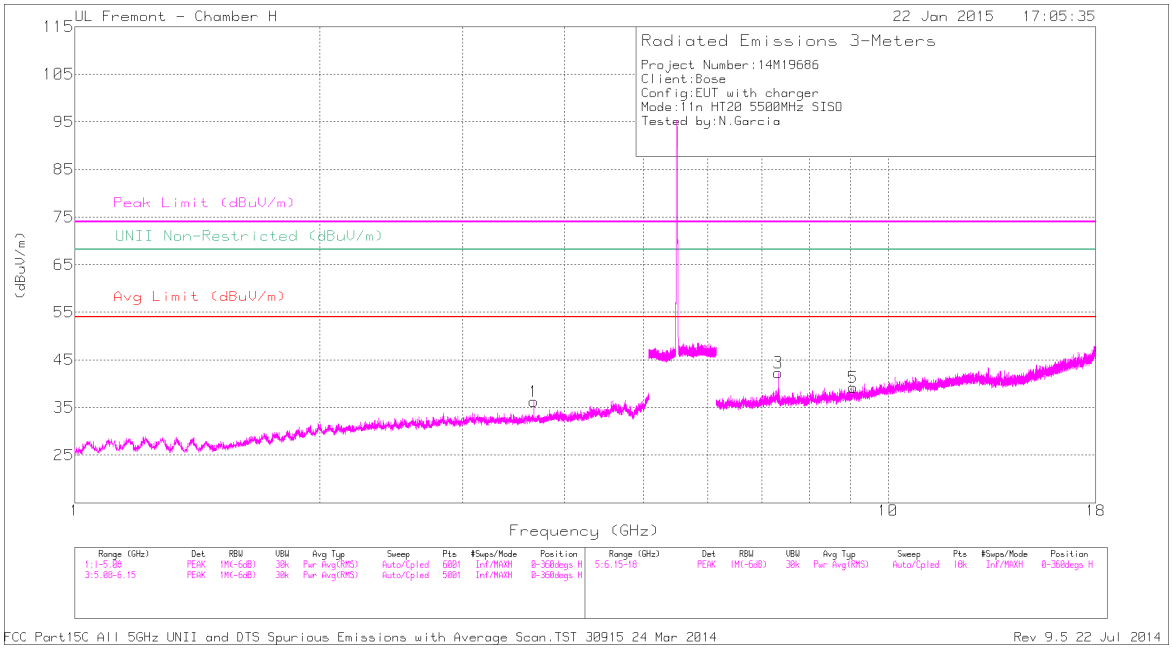
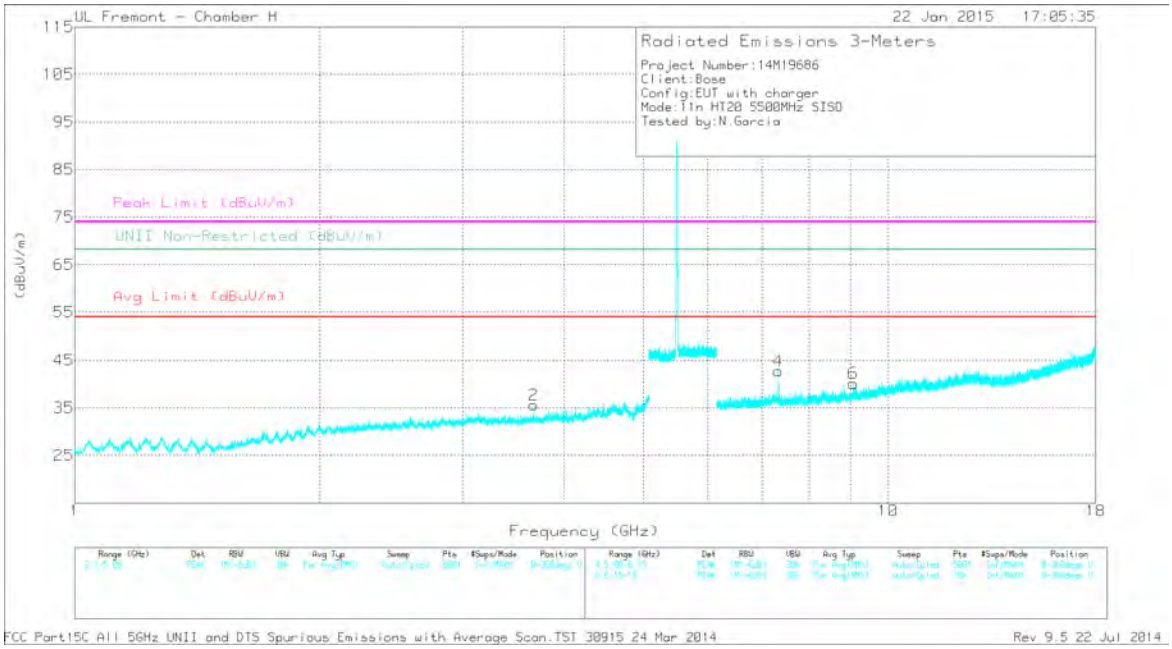
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.666	42.38	PK1	33.1	-32.5	0	42.98	-	-	74	-31.02	-	-	263	196	H
	* 3.667	32.96	AD1	33.1	-32.5	3.0	36.56	54	-17.44	-	-	-	-	263	196	H
2	* 3.667	42.78	PK1	33.1	-32.5	0	43.38	-	-	74	-30.62	-	-	59	310	V
	* 3.667	34.08	AD1	33.1	-32.5	3.0	37.68	54	-16.32	-	-	-	-	59	310	V
3	* 7.334	43.51	PK1	36.2	-29.9	0	49.81	-	-	74	-24.19	-	-	242	270	H
	* 7.333	35.63	AD1	36.2	-29.9	3.0	44.93	54	-9.07	-	-	-	-	242	270	H
4	* 7.333	43.24	PK1	36.2	-29.9	0	49.54	-	-	74	-24.46	-	-	73	262	V
	* 7.333	35.54	AD1	36.2	-29.9	3.0	44.84	54	-9.16	-	-	-	-	73	262	V
5	* 9.054	37.12	PK1	36.4	-27.0	0	46.52	-	-	74	-27.48	-	-	141	202	H
	* 9.051	25.68	AD1	36.4	-27.1	3.0	37.98	54	-16.00	-	-	-	-	141	202	H
6	* 9.064	37.08	PK1	36.5	-26.8	0	46.78	-	-	74	-27.22	-	-	104	225	V
	* 9.064	25.60	AD1	36.5	-26.8	3.0	38.30	54	-15.70	-	-	-	-	104	225	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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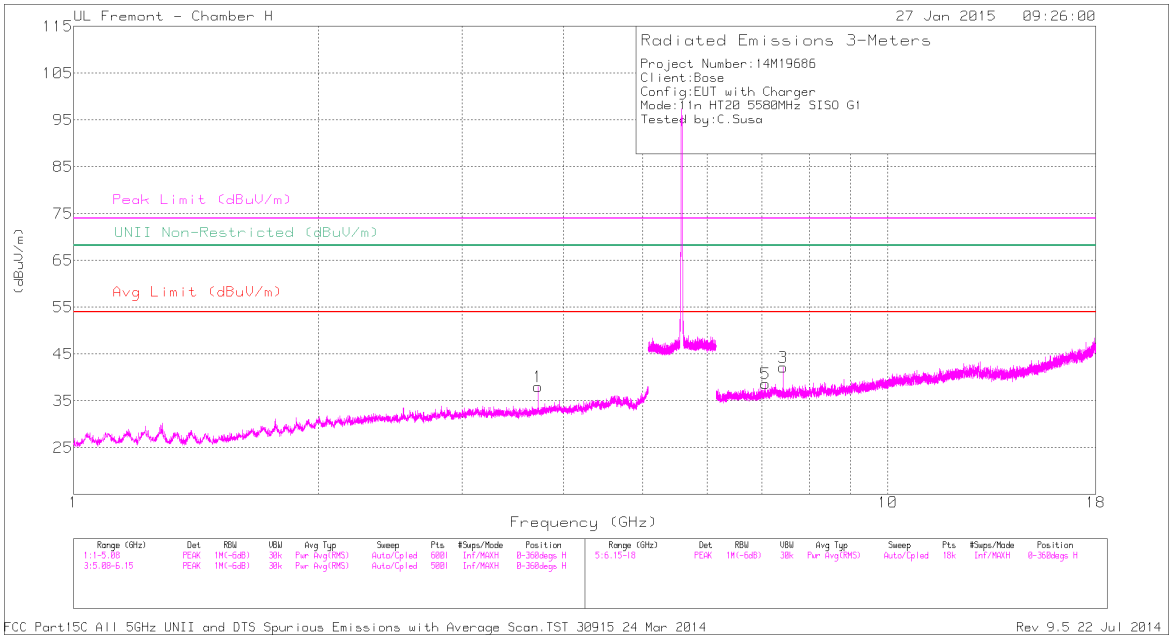
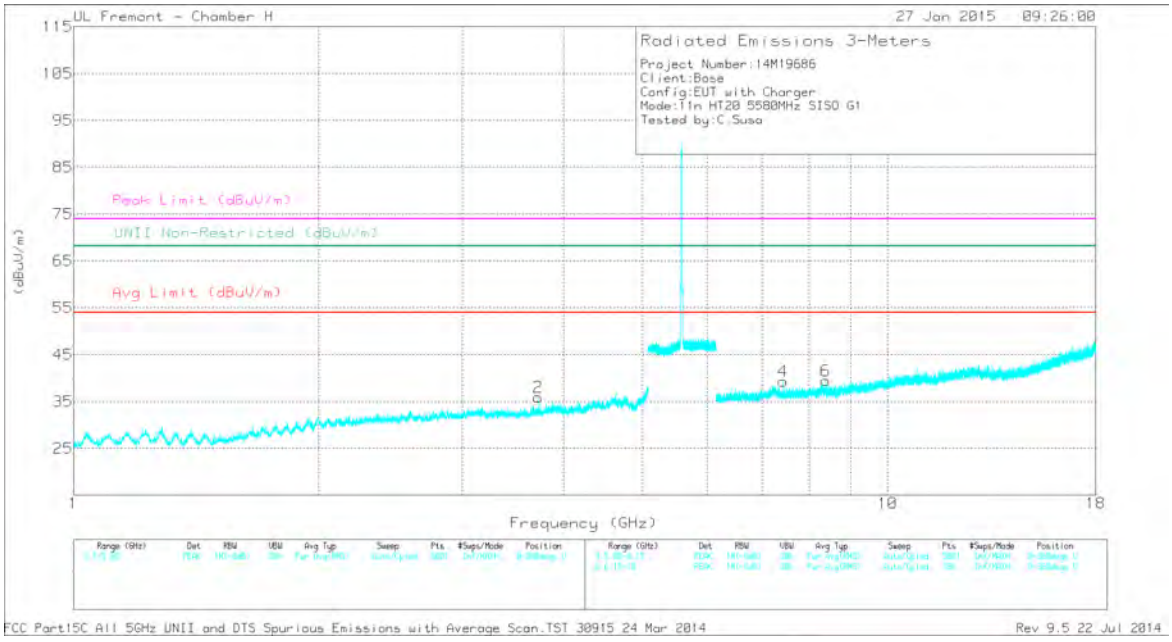
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.720	44.44	PK1	33.2	-32.7	0	44.94	-	-	74	-29.06	-	-	88	309	H
	* 3.720	35.59	AD1	33.2	-32.7	3.0	39.09	54	-14.91	-	-	-	-	88	309	H
2	* 3.720	44.08	PK1	33.2	-32.7	0	44.58	-	-	74	-29.42	-	-	54	300	V
	* 3.720	35.08	AD1	33.2	-32.7	3.0	38.60	54	-15.42	-	-	-	-	54	300	V
3	* 7.440	42.21	PK1	36.1	-29.8	0	48.51	-	-	74	-25.49	-	-	212	287	H
	* 7.440	34.10	AD1	36.1	-29.8	3.0	43.40	54	-10.60	-	-	-	-	212	287	H
4	* 7.440	40.61	PK1	36.1	-29.8	0	46.91	-	-	74	-27.09	-	-	311	355	V
	* 7.440	31.62	AD1	36.1	-29.8	3.0	40.92	54	-13.08	-	-	-	-	311	355	V
5	7.069	39.71	PK1	35.9	-29.9	0	45.71	-	-	-	-	68.2	-22.49	123	362	H
6	* 8.382	38.04	PK1	36.1	-28.0	0	46.14	-	-	74	-27.86	-	-	150	302	V
	* 8.384	26.51	AD1	36.1	-28.0	3.0	37.61	54	-16.39	-	-	-	-	150	302	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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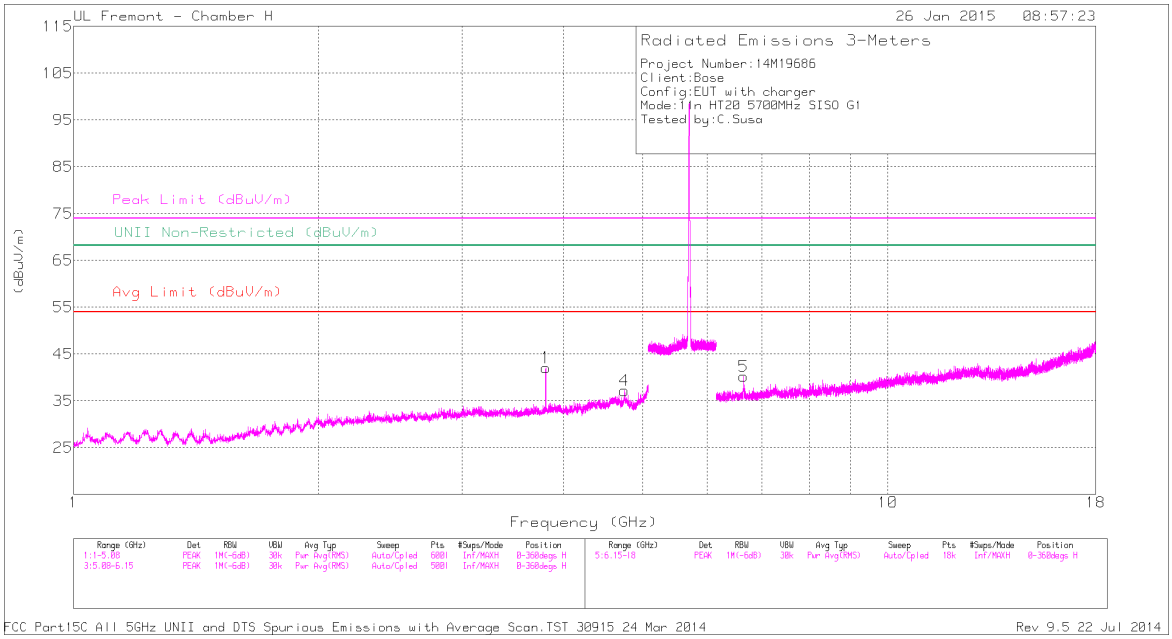
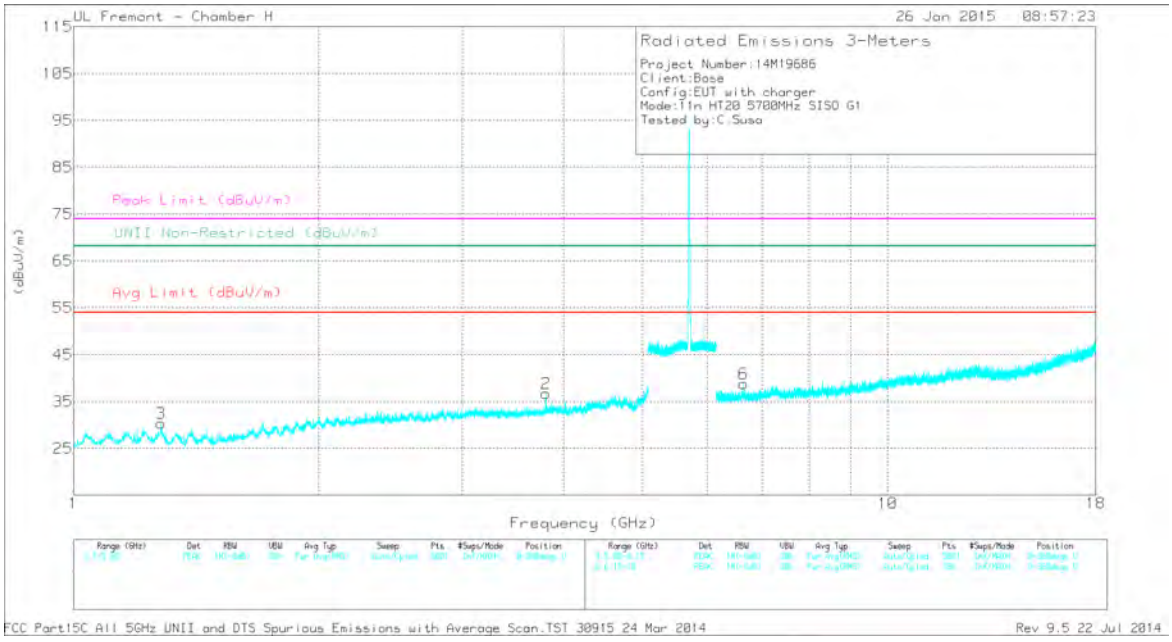
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.800	47.72	PK1	33.3	-32.8	0	48.22	-	-	74	-25.78	-	-	180	251	H
	* 3.800	40.52	AD1	33.3	-32.8	3.0	44.02	54	-9.98	-	-	-	-	180	251	H
2	* 3.800	46.96	PK1	33.3	-32.8	0	47.46	-	-	74	-26.54	-	-	62	332	V
	* 3.800	39.83	AD1	33.3	-32.8	3.0	43.33	54	-10.67	-	-	-	-	62	332	V
3	* 1.281	43.76	PK1	28.8	-35.7	0	36.86	-	-	74	-37.14	-	-	259	147	V
	* 1.281	32.10	AD1	28.8	-35.7	3.0	28.20	54	-25.80	-	-	-	-	259	147	V
4	* 4.750	43.02	PK1	34.3	-31.8	0	45.52	-	-	74	-28.48	-	-	90	248	H
	* 4.750	32.15	AD1	34.3	-31.8	3.0	37.65	54	-16.35	-	-	-	-	90	248	H
5	6.650	44.89	PK1	35.7	-30.1	0	50.49	-	-	-	-	68.2	-17.71	194	285	H
6	6.650	42.84	PK1	35.7	-30.1	0	48.44	-	-	-	-	68.2	-19.76	77	212	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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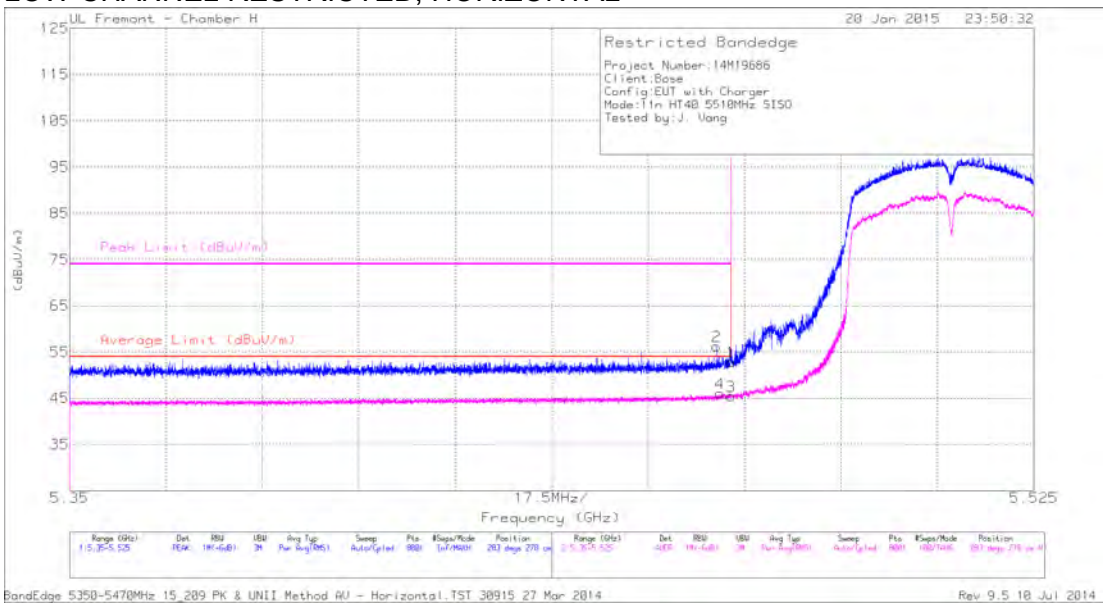
9.2.9. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.6 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.470	40.16	PK	35.1	-22.4	0	52.86	-	-	74	-21.14	283	278	H
2	5.467	43.63	PK	35.0	-22.4	0	56.23	-	-	74	-17.77	283	278	H
3	5.470	29.80	RMS	35.1	-22.4	2.96	45.46	54	-8.54	-	-	283	278	H
4	5.468	30.50	RMS	35.0	-22.4	2.96	46.06	54	-7.94	-	-	283	278	H

PK - Peak detector
RMS - RMS detection

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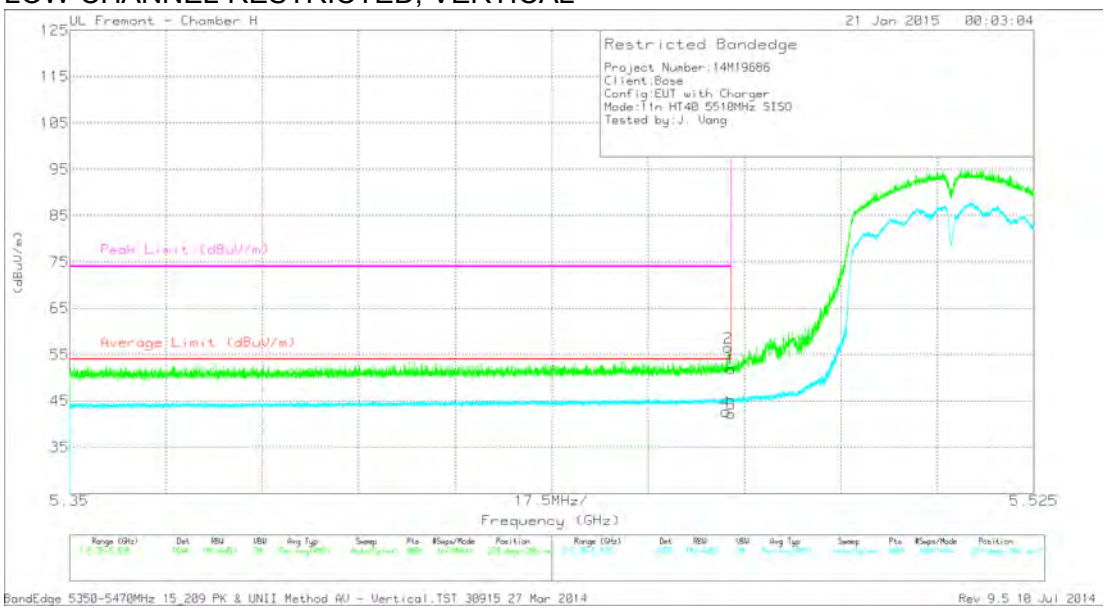
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.470	39.24	PK	35.1	-22.4	0	51.94	-	-	74	-22.06	229	306	V
2	5.469	43.79	PK	35.1	-22.4	0	56.49	-	-	74	-17.51	229	306	V
3	5.470	29.50	RMS	35.1	-22.4	2.96	45.16	54	-8.84	-	-	229	306	V
4	5.469	29.96	RMS	35.1	-22.4	2.96	45.62	54	-8.38	-	-	229	306	V

PK - Peak detector
RMS - RMS detection

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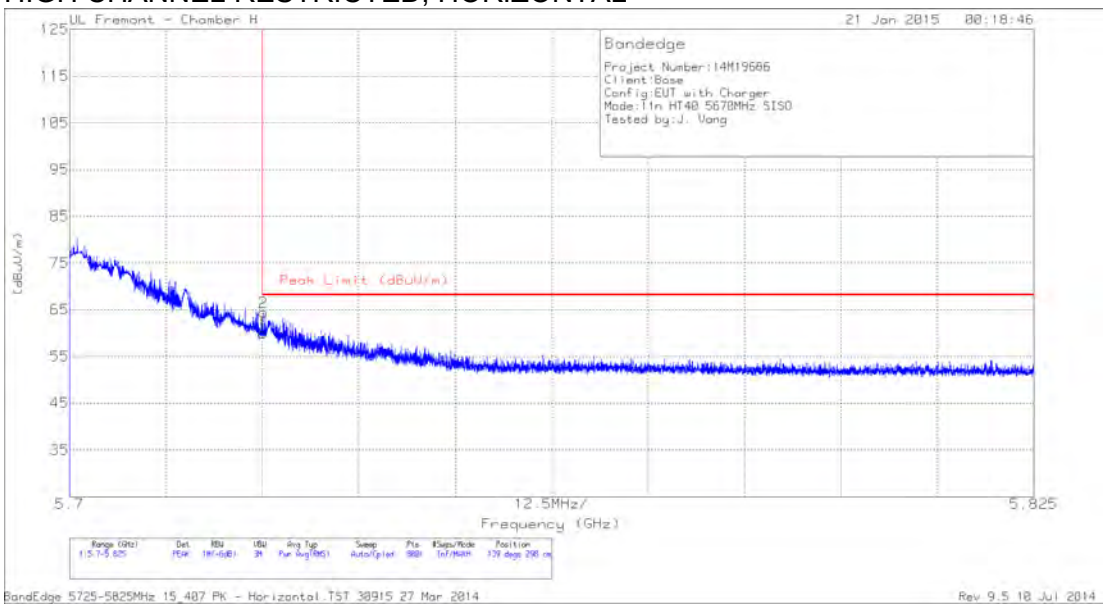
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	47.40	PK	35	-22.4	0	60.00	68.2	-8.20	139	298	H
2	5.725	51.84	PK	35	-22.4	0	64.44	68.2	-3.76	139	298	H

PK - Peak detector

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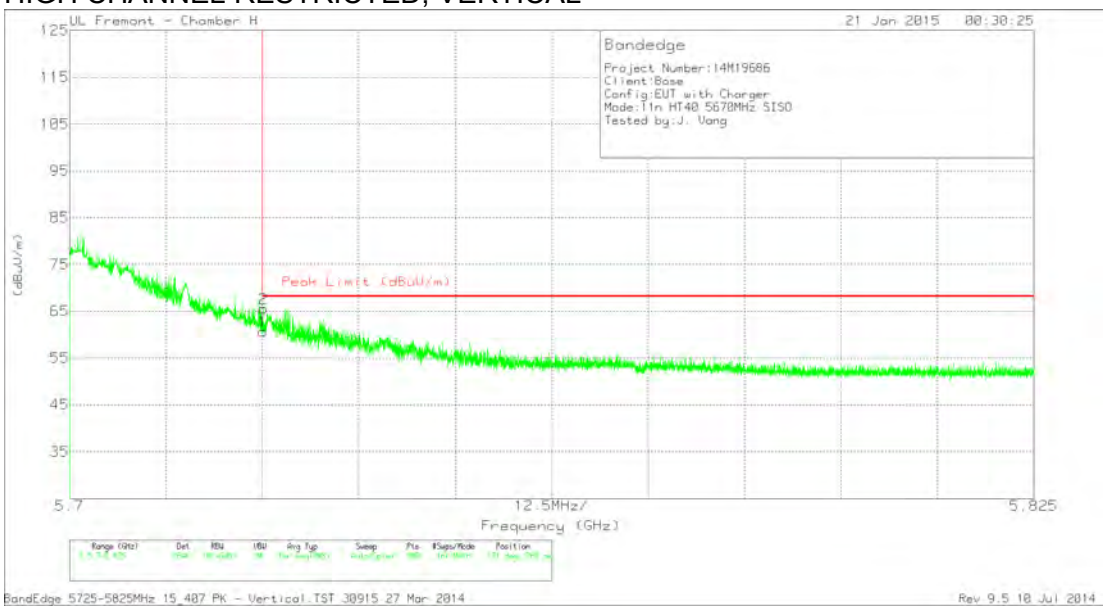
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	48.08	PK	35	-22.4	0	60.68	68.2	-7.52	171	269	V
2	5.725	53.03	PK	35	-22.4	0	65.63	68.2	-2.57	171	269	V

PK - Peak detector

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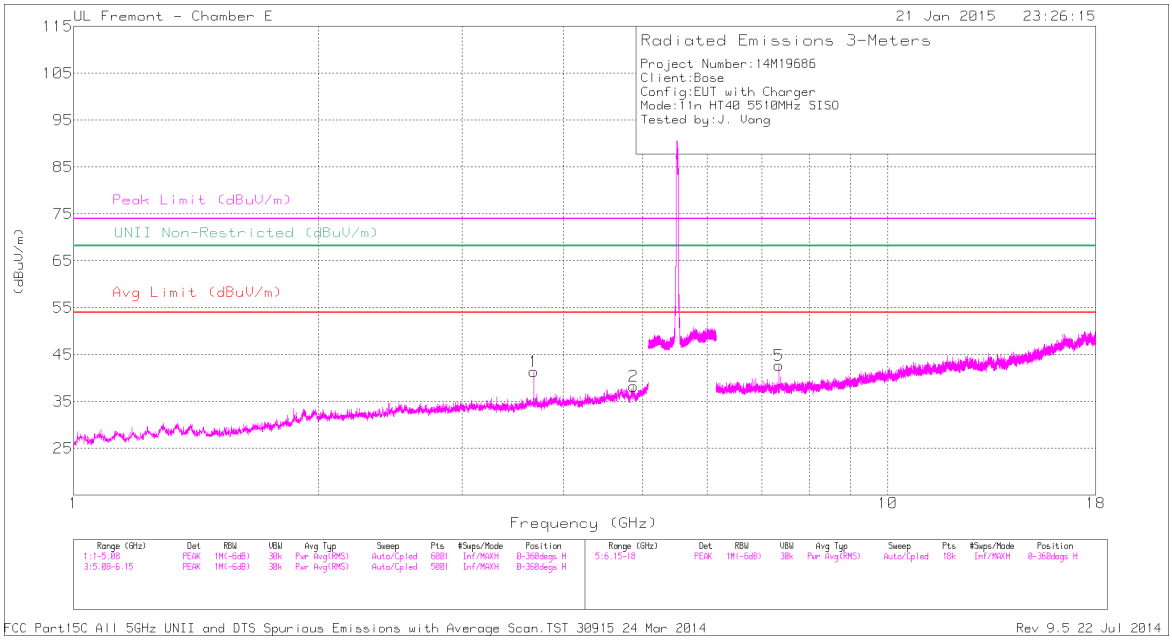
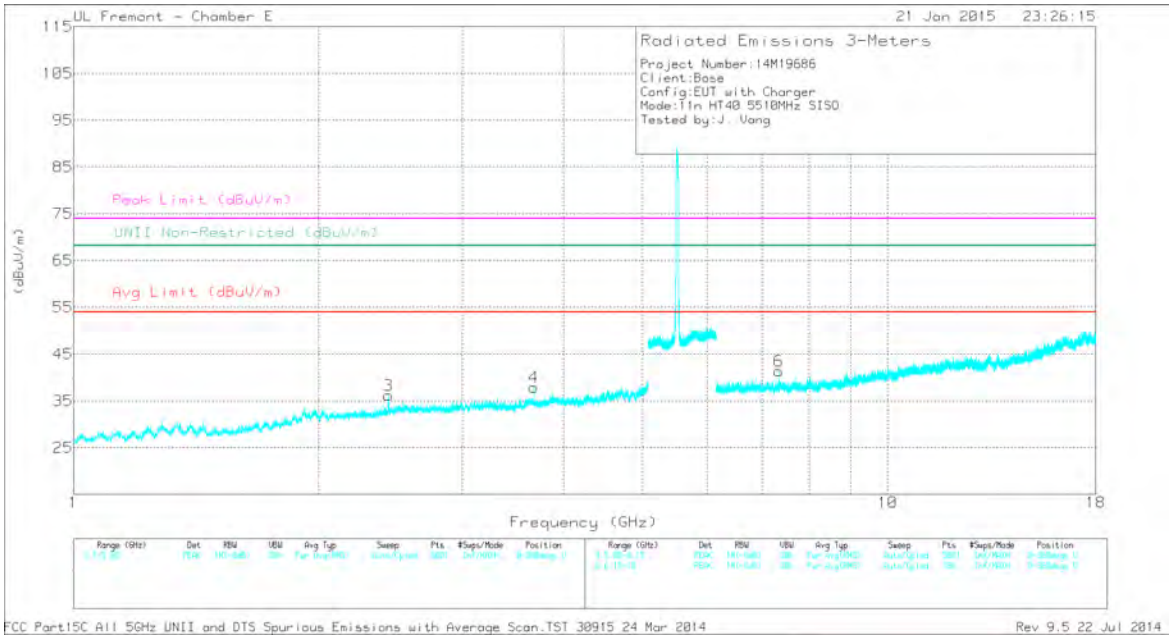
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.674	45.54	PK1	33.3	-31.1	0	47.74	-	-	74	-26.26	-	-	46	265	H
	* 3.673	38.12	AD1	33.3	-31.1	2.96	43.28	54	-10.72	-	-	-	-	46	265	H
2	* 4.867	41.10	PK1	34.1	-30.1	0	45.10	-	-	74	-28.9	-	-	176	285	H
	* 4.869	30.28	AD1	34.1	-30.1	2.96	37.24	54	-16.76	-	-	-	-	176	285	H
3	2.434	44.98	PK1	32.1	-33.1	0	43.98	-	-	-	-	68.2	-24.22	301	113	V
4	* 3.673	43.81	PK1	33.3	-31.1	0	46.01	-	-	74	-27.99	-	-	106	235	V
	* 3.673	34.29	AD1	33.3	-31.1	2.96	39.45	54	-14.55	-	-	-	-	106	235	V
5	* 7.347	40.85	PK1	35.7	-27.5	0	49.05	-	-	74	-24.95	-	-	299	304	H
	* 7.347	32.57	AD1	35.7	-27.5	2.96	43.73	54	-10.27	-	-	-	-	299	304	H
6	* 7.346	39.70	PK1	35.7	-27.5	0	47.90	-	-	74	-26.10	-	-	57	219	V
	* 7.347	30.29	AD1	35.7	-27.5	2.96	41.45	54	-12.55	-	-	-	-	57	219	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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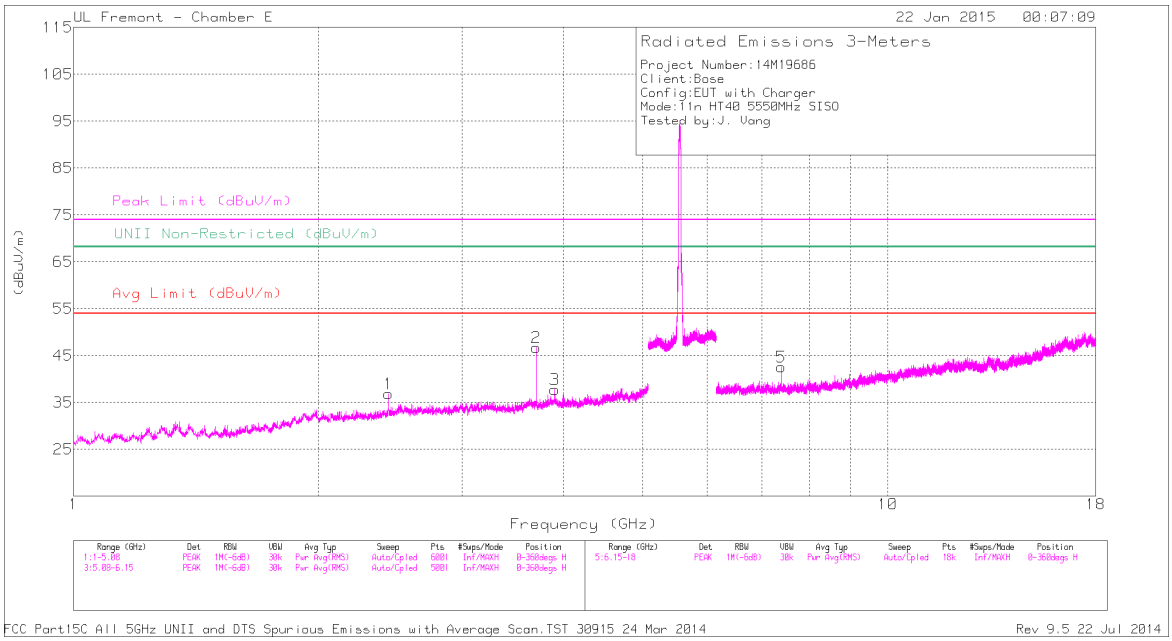
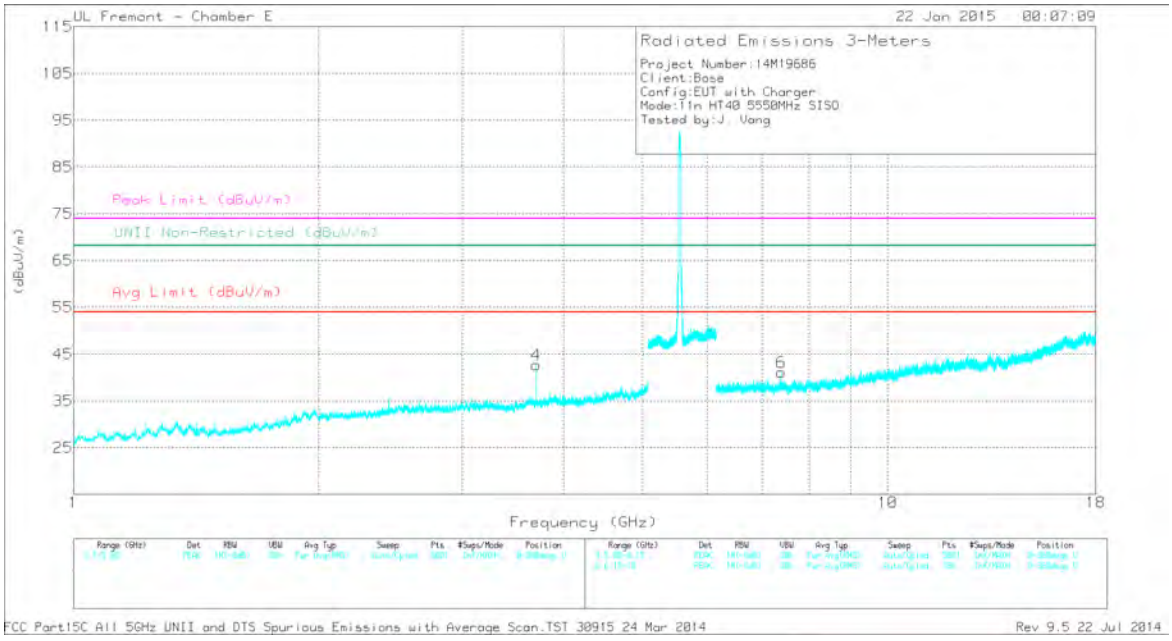
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.436	42.91	PK1	32.1	-33.1	0	41.91	-	-	-	-	68.2	-26.29	54	391	H
2	* 3.700	50.42	PK1	33.3	-31.6	0	52.12	-	-	74	-21.88	-	-	48	299	H
	* 3.700	44.77	AD1	33.3	-31.6	2.96	49.43	54	-4.57	-	-	-	-	48	299	H
3	* 3.898	40.56	PK1	33.6	-30.5	0	43.66	-	-	74	-30.34	-	-	242	375	H
	* 3.899	29.57	AD1	33.6	-30.5	2.96	35.63	54	-18.37	-	-	-	-	242	375	H
4	* 3.700	47.72	PK1	33.3	-31.6	0	49.42	-	-	74	-24.58	-	-	83	343	V
	* 3.700	40.96	AD1	33.3	-31.6	2.96	45.62	54	-8.38	-	-	-	-	83	343	V
5	* 7.400	41.06	PK1	35.7	-27.4	0	49.36	-	-	74	-24.64	-	-	47	145	H
	* 7.400	31.93	AD1	35.7	-27.4	2.96	43.19	54	-10.81	-	-	-	-	47	145	H
6	* 7.400	41.09	PK1	35.7	-27.4	0	49.39	-	-	74	-24.61	-	-	62	209	V
	* 7.400	31.70	AD1	35.7	-27.4	2.96	42.96	54	-11.04	-	-	-	-	62	209	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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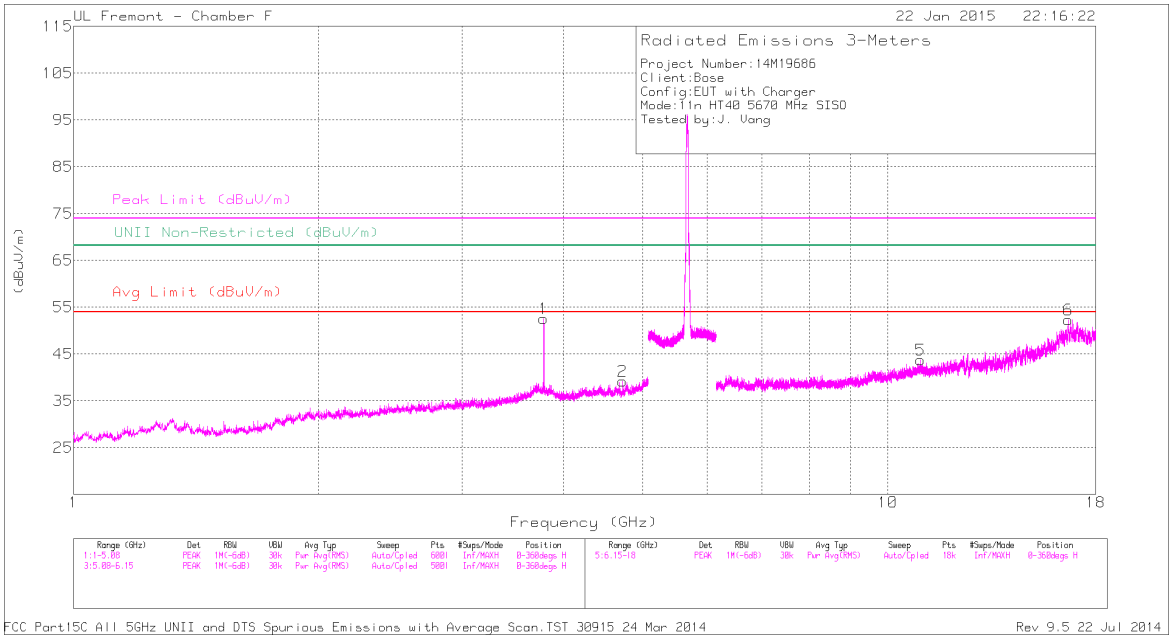
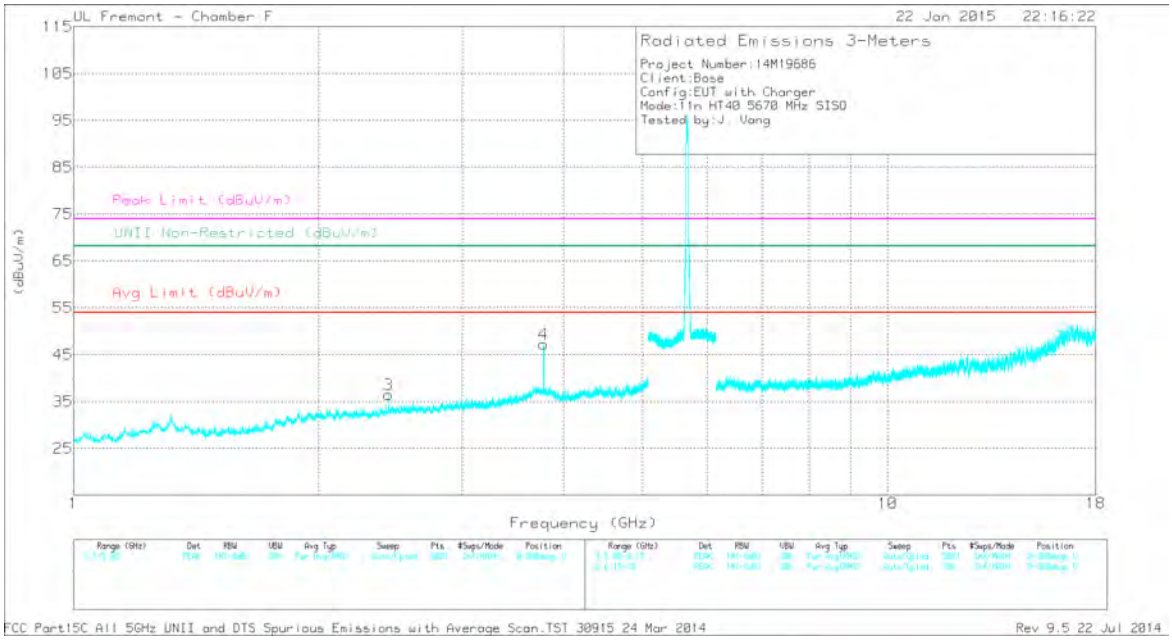
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.780	49.51	PK1	34.5	-29.8	0	54.21	-	-	74	-19.79	-	-	190	316	H
	* 3.780	44.06	AD1	34.5	-29.8	2.96	51.72	54	-2.28	-	-	-	-	190	316	H
2	* 4.725	39.94	PK1	34.1	-27.9	0	46.14	-	-	74	-27.86	-	-	188	181	H
	* 4.725	29.44	AD1	34.1	-27.9	2.96	38.60	54	-15.40	-	-	-	-	188	181	H
3	2.437	43.77	PK1	32.4	-30.9	0	45.27	-	-	-	-	68.2	-22.93	351	320	V
4	* 3.780	48.35	PK1	34.5	-29.8	0	53.05	-	-	74	-20.95	-	-	78	322	V
	* 3.780	42.56	AD1	34.5	-29.8	2.96	50.22	54	-3.78	-	-	-	-	78	322	V
5	* 10.964	33.74	PK1	38.1	-22.0	0	49.84	-	-	74	-24.16	-	-	300	235	H
	* 10.965	22.49	AD1	38.1	-22.0	2.96	41.55	54	-12.45	-	-	-	-	300	235	H
6	16.644	34.56	PK1	41.3	-17.1	0	58.76	-	-	-	-	68.2	-9.44	123	118	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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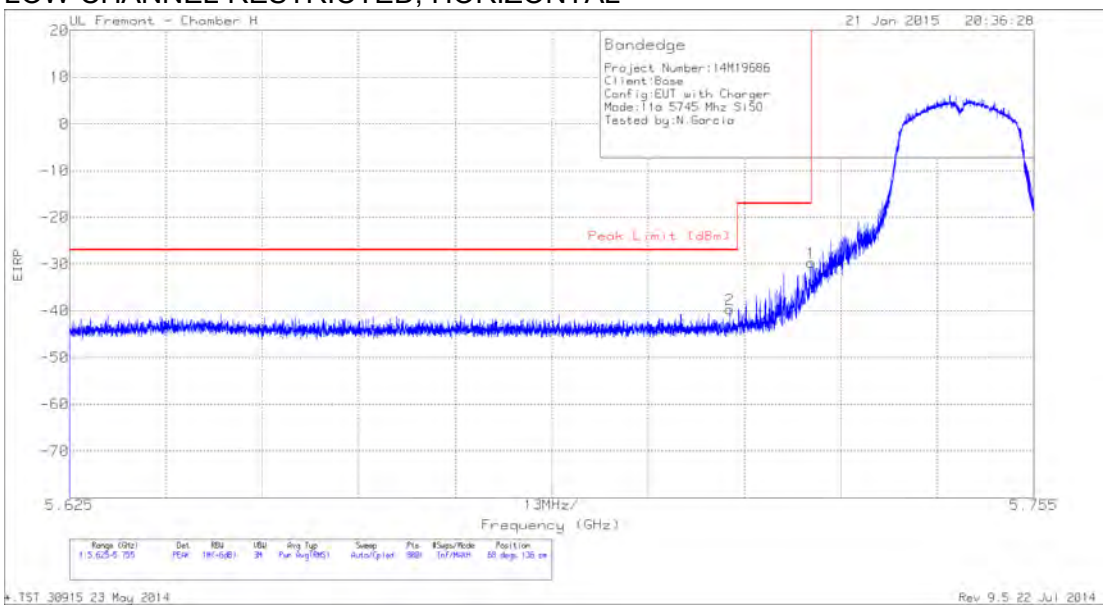
9.2.10. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-54.08	PK	35	-22.4	11.8	-29.68	-17	-12.68	68	136	H
2	5.714	-64.01	PK	35	-22.4	11.8	-39.61	-27	-12.61	68	136	H

PK - Peak detector

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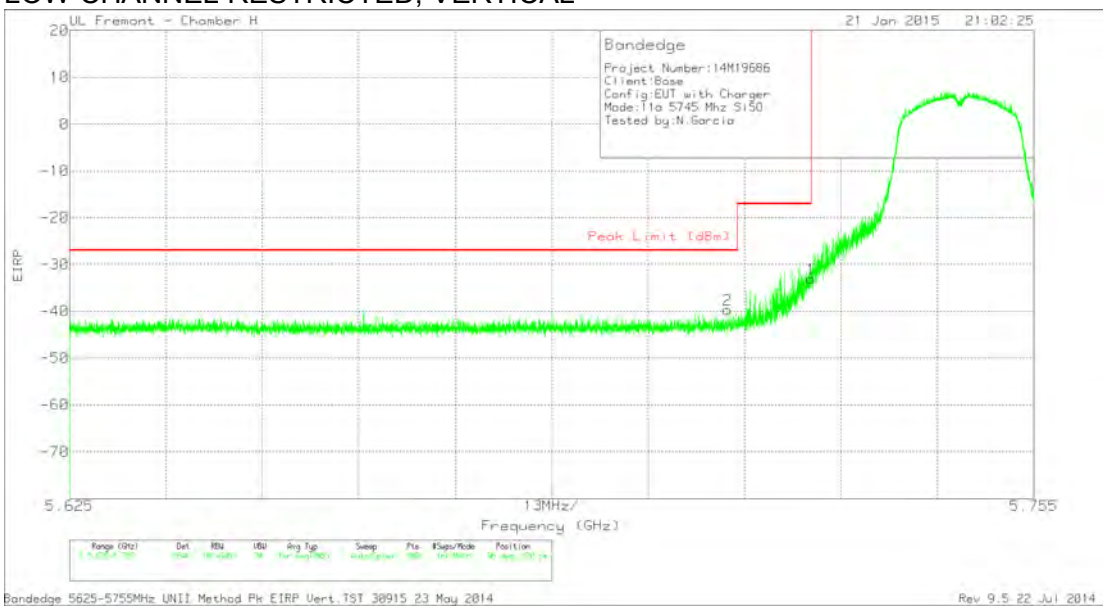
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-57.43	PK	35	-22.4	11.8	-33.03	-17	-16.03	96	220	V
2	5.714	-64.03	PK	35	-22.4	11.8	-39.63	-27	-12.63	96	220	V

PK - Peak detector

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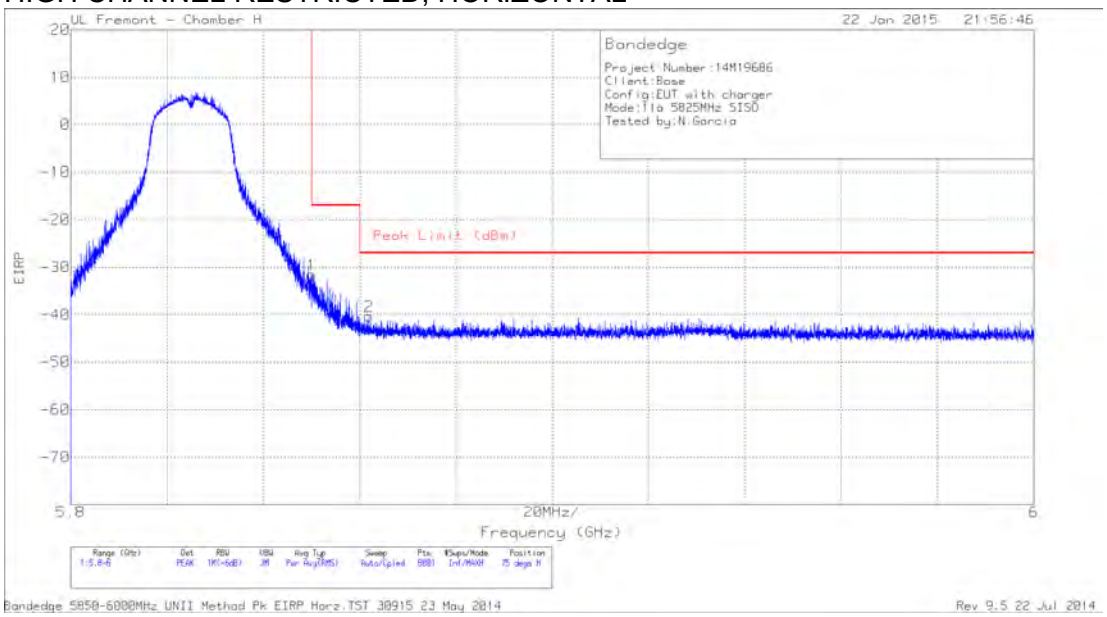
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.850	-56.26	PK	35.1	-22.2	11.8	0	-31.56	-17	-14.56	75	115	H
2	5.862	-65.01	PK	35.1	-22.2	11.8	0	-40.31	-27	-13.31	75	115	H

PK - Peak detector

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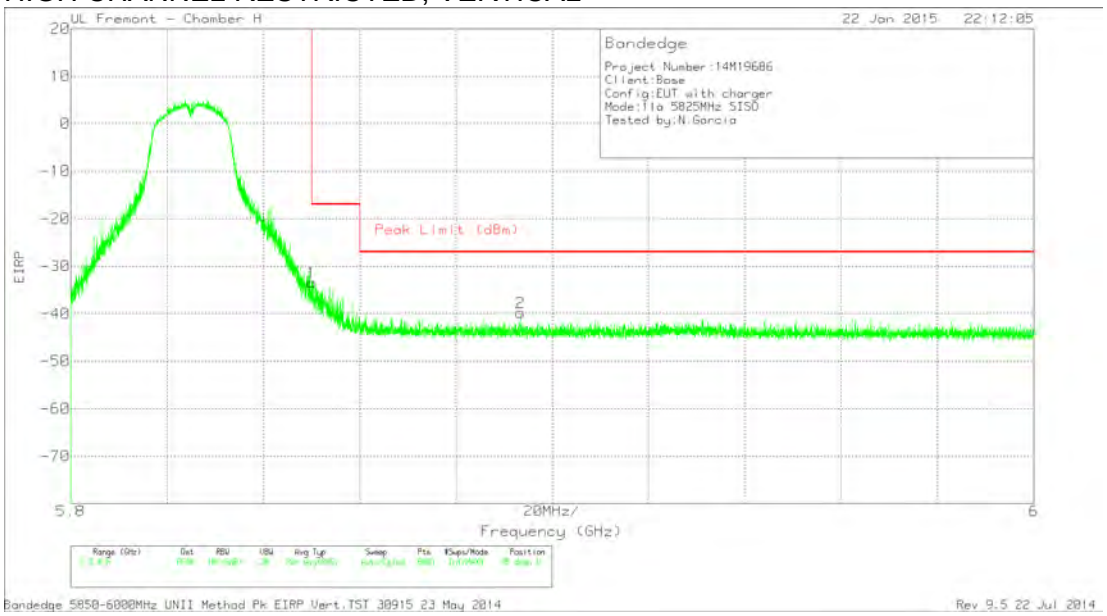
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.850	-58.11	PK	35.1	-22.2	11.8	0	-33.41	-17	-16.41	85	181	V
2	5.893	-64.38	PK	35.1	-22.3	11.8	0	-39.78	-27	-12.78	85	181	V

PK - Peak detector

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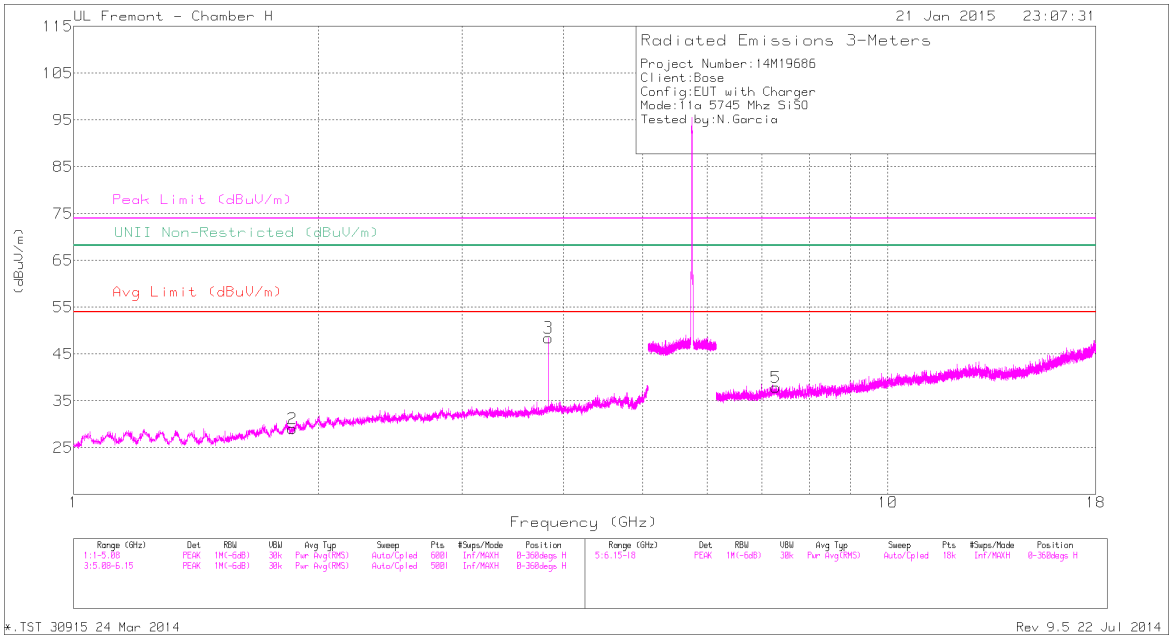
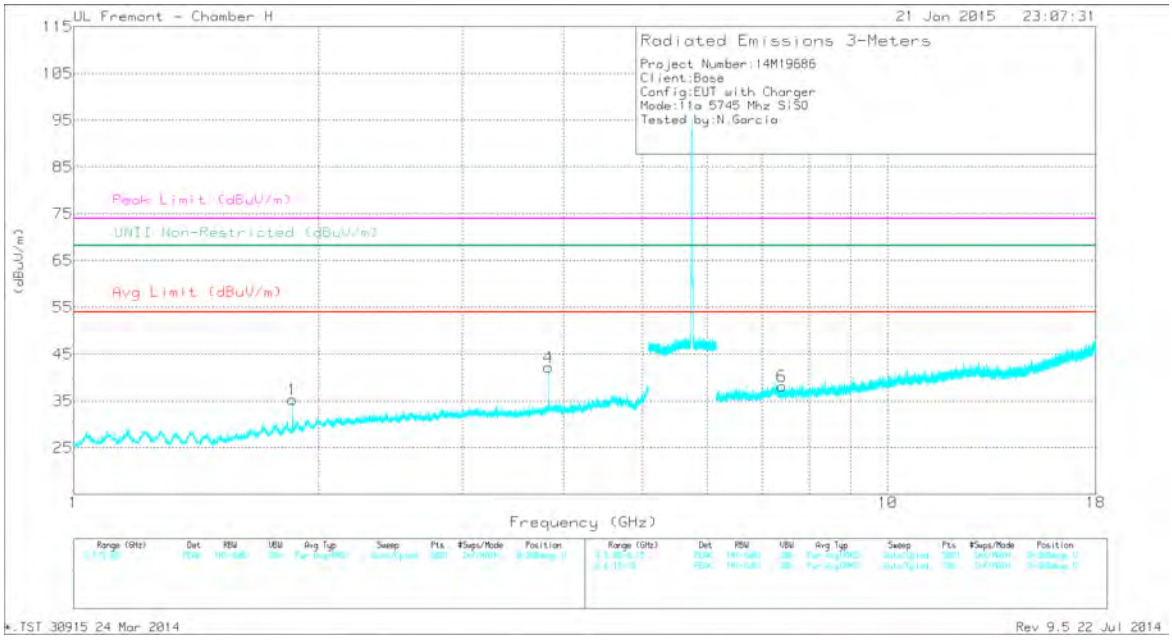
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.859	42.36	PK1	30.4	-35.0	0	37.76	-	-	-	-	68.2	-30.44	204	333	V
2	1.860	42.54	PK1	30.4	-35.0	0	37.94	-	-	-	-	68.2	-30.26	25	355	H
3	* 3.830	53.46	PK1	33.3	-32.7	0	54.06	-	-	74	-19.94	-	-	217	280	H
	* 3.830	48.91	AD1	33.3	-32.7	2.91	52.42	54	-1.58	-	-	-	-	217	280	H
4	* 3.830	51.93	PK1	33.3	-32.7	0	52.53	-	-	74	-21.47	-	-	150	380	V
	* 3.830	46.82	AD1	33.3	-32.7	2.91	50.33	54	-3.67	-	-	-	-	150	380	V
5	* 7.284	40.42	PK1	36.2	-29.5	0	47.12	-	-	74	-26.88	-	-	137	354	H
	* 7.285	28.14	AD1	36.2	-29.5	2.91	37.75	54	-16.25	-	-	-	-	137	354	H
6	* 7.412	39.03	PK1	36.1	-30.0	0	45.13	-	-	74	-28.87	-	-	140	295	V
	* 7.412	27.96	AD1	36.1	-30.0	2.91	36.97	54	-17.03	-	-	-	-	140	295	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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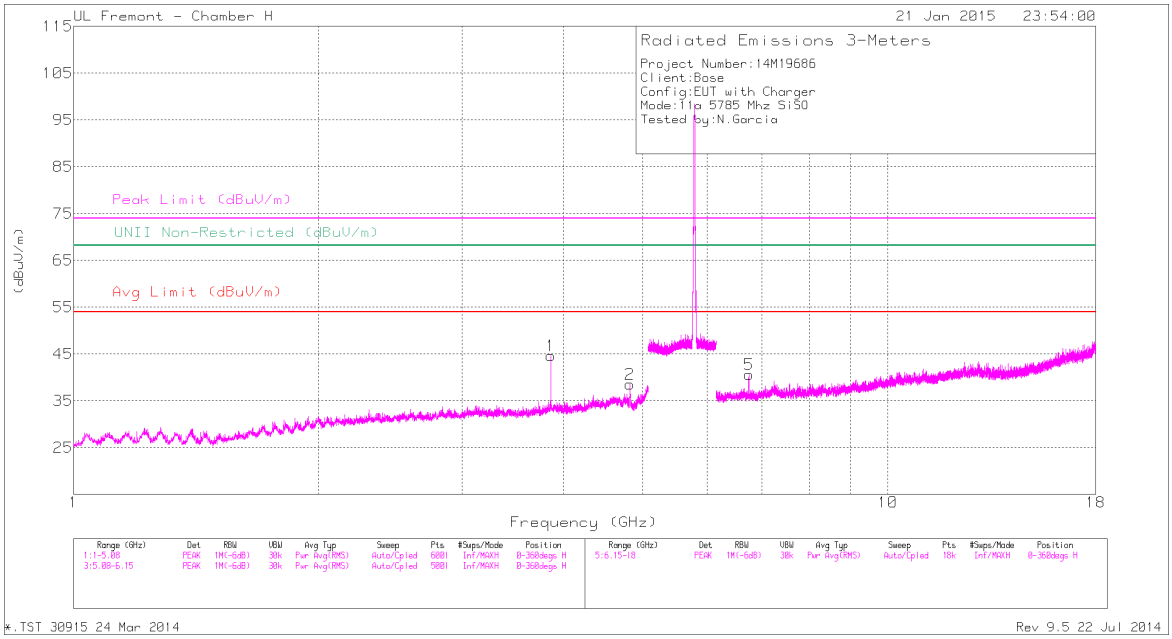
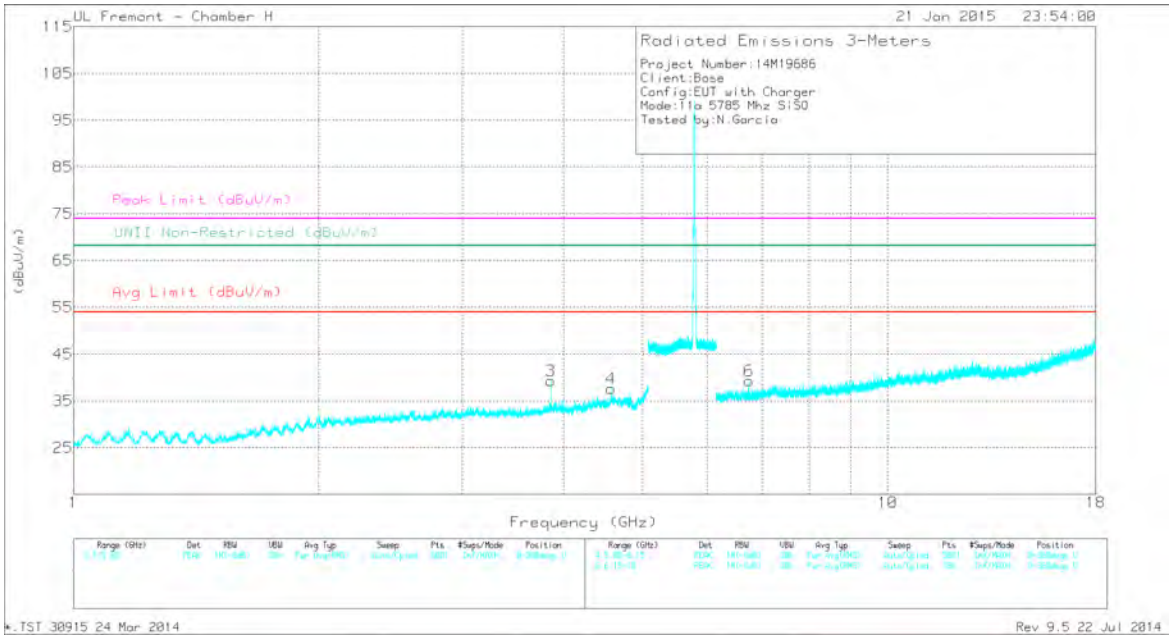
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.857	53.19	PK1	33.3	-32.8	0	53.69	-	-	74	-20.31	-	-	226	277	H
	* 3.857	45.84	AD1	33.3	-32.8	2.91	49.25	54	-4.75	-	-	-	-	226	277	H
2	* 4.82	45.46	PK1	34.3	-31.9	0	47.86	-	-	74	-26.14	-	-	90	308	H
	* 4.821	33.74	AD1	34.3	-31.9	2.91	39.05	54	-14.95	-	-	-	-	90	308	H
3	* 3.857	44.32	PK1	33.3	-32.8	0	44.82	-	-	74	-29.18	-	-	90	308	V
	* 3.857	34.36	AD1	33.3	-32.8	2.91	37.77	54	-16.23	-	-	-	-	90	308	V
4	* 4.575	41.51	PK1	34.1	-31.8	0	43.81	-	-	74	-30.19	-	-	353	163	V
	* 4.575	30.11	AD1	34.1	-31.8	2.91	35.32	54	-18.68	-	-	-	-	353	163	V
5	6.749	44.57	PK1	35.8	-30.7	0	49.67	-	-	-	-	68.2	-18.53	330	296	H
	6.749	32.47	AD1	35.8	-30.7	2.91	40.58	-	-	-	-	-	-	330	296	H
6	6.749	43.81	PK1	35.8	-30.7	0	48.91	-	-	-	-	68.2	-19.29	100	205	V
	6.749	32.55	AD1	35.8	-30.7	2.91	40.66	-	-	-	-	-	-	100	205	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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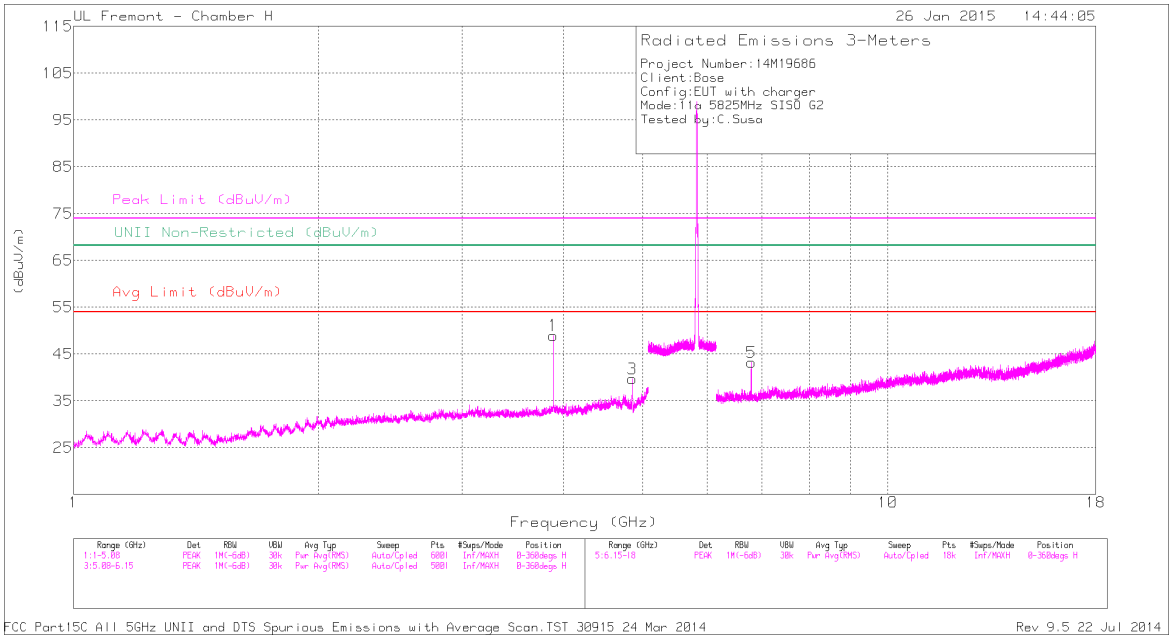
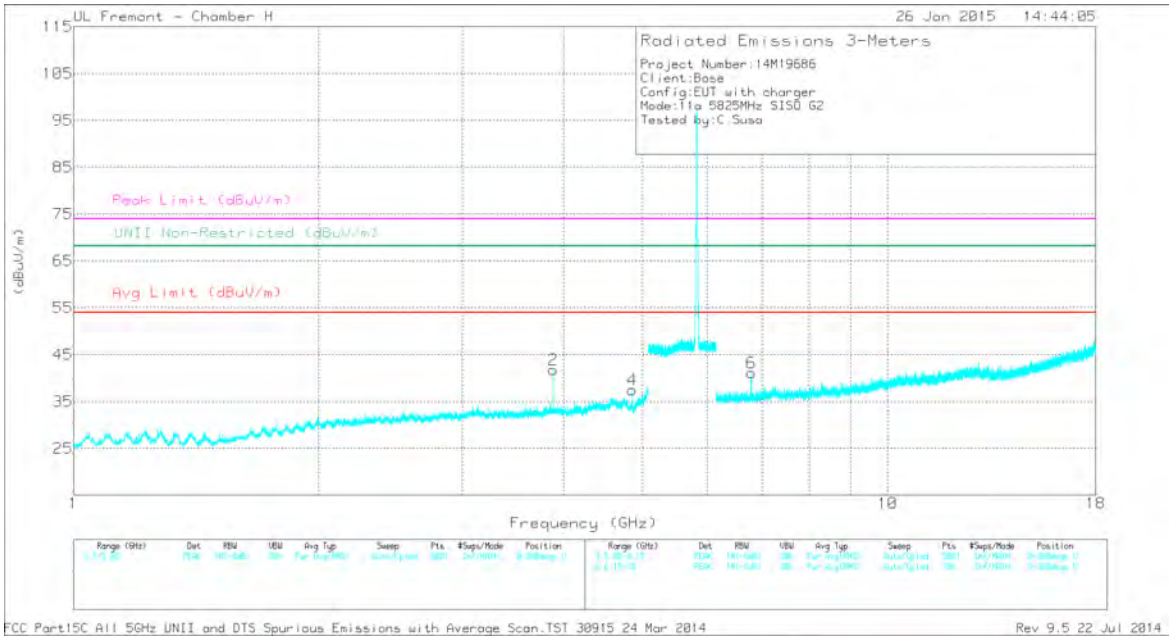
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.883	54.68	PK1	33.4	-32.8	0	55.28	-	-	74	-18.72	-	-	220	275	H
	* 3.883	49.32	AD1	33.4	-32.8	2.91	52.83	54	-1.17	-	-	-	-	220	275	H
2	* 3.883	53.76	PK1	33.4	-32.8	0	54.36	-	-	74	-19.64	-	-	108	319	V
	* 3.883	48.21	AD1	33.4	-32.8	2.91	51.72	54	-2.28	-	-	-	-	108	319	V
3	* 4.853	46.09	PK1	34.3	-31.5	0	48.89	-	-	74	-25.11	-	-	175	100	H
	* 4.854	34.56	AD1	34.3	-31.5	2.91	40.47	54	-13.73	-	-	-	-	175	100	H
4	* 4.853	45.73	PK1	34.3	-31.5	0	48.53	-	-	74	-25.47	-	-	129	302	V
	* 4.854	35.08	AD1	34.3	-31.5	2.91	40.79	54	-13.21	-	-	-	-	129	302	V
5	6.795	46.62	PK1	35.8	-30.2	0	52.22	-	-	-	-	68.2	-15.98	78	148	H
6	6.796	45.53	PK1	35.8	-30.1	0	51.23	-	-	-	-	68.2	-16.97	98	191	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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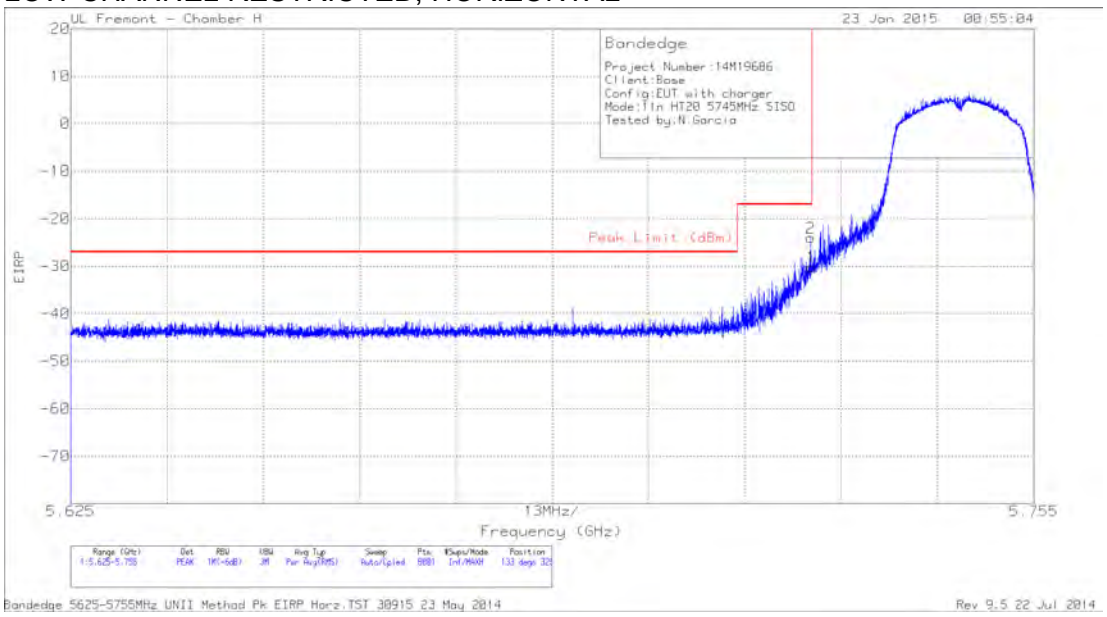
9.2.11. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-54.52	PK	35	-22.4	11.8	-30.12	-17	-13.12	133	325	H
2	5.725	-48.39	PK	35	-22.4	11.8	-23.99	-17	-6.99	133	325	H

PK - Peak detector

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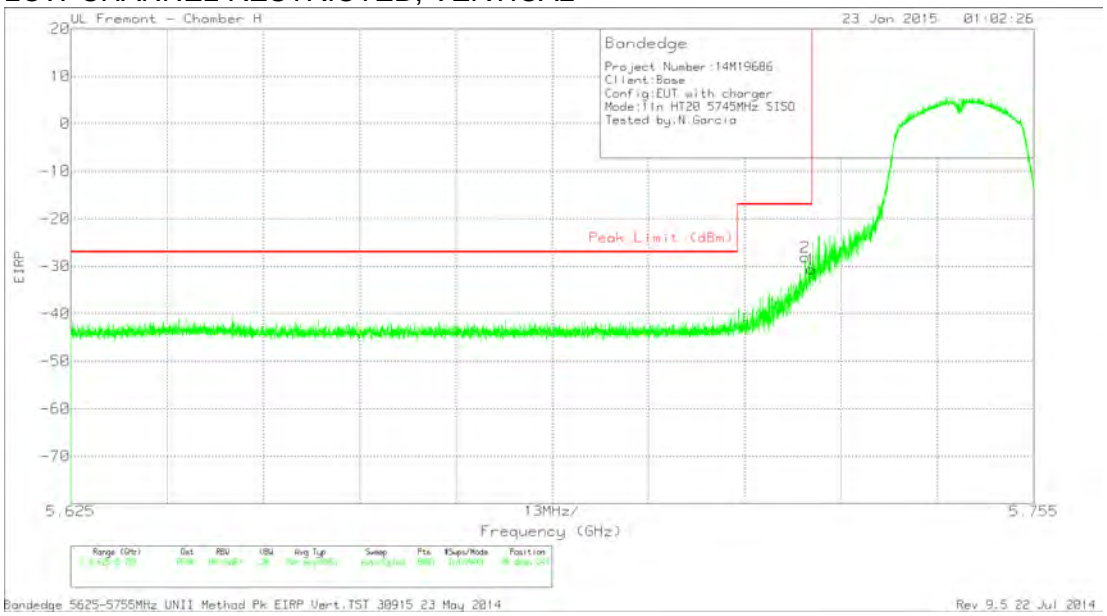
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-55.03	PK	35	-22.4	11.8	-30.63	-17	-13.63	86	241	V
2	5.724	-52.46	PK	35	-22.4	11.8	-28.06	-17	-11.06	86	241	V

PK - Peak detector

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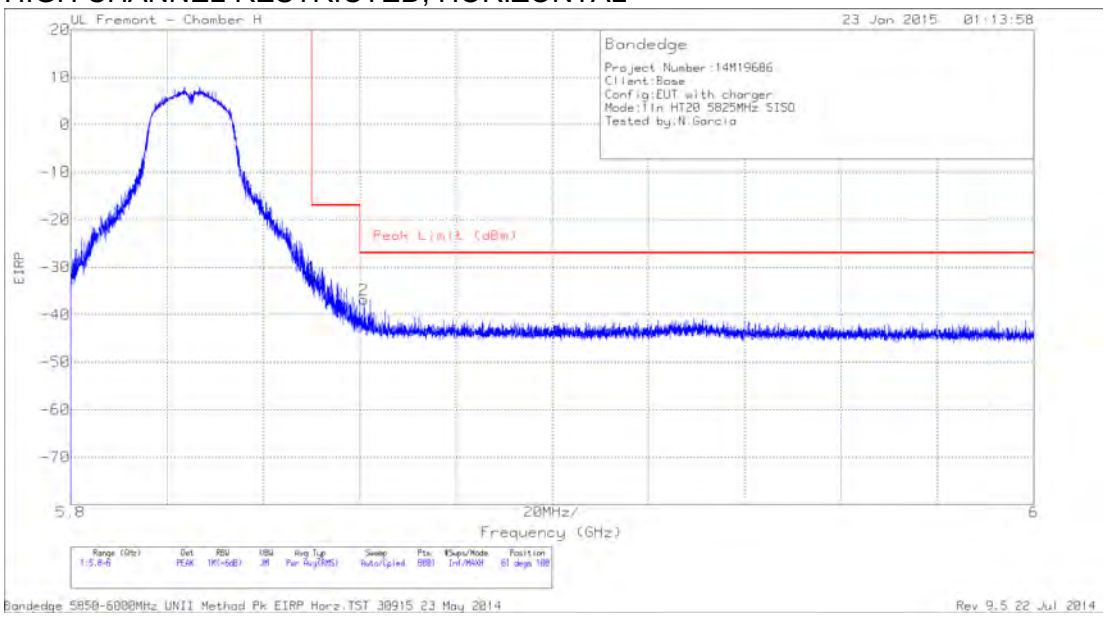
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.850	-56.90	PK	35.1	-22.2	11.8	-32.20	-17	-15.2	61	100	H
2	5.861	-61.49	PK	35.1	-22.2	11.8	-36.79	-27	-9.79	61	100	H

PK - Peak detector

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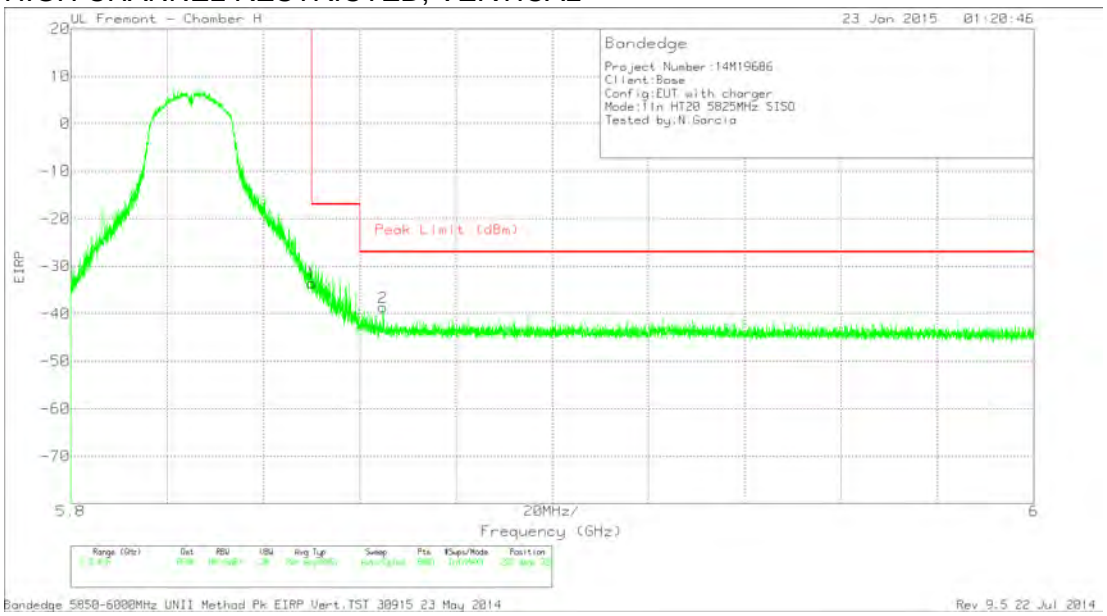
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.850	-58.23	PK	35.1	-22.2	11.8	-33.53	-17	-16.53	222	329	V
2	5.865	-63.36	PK	35.1	-22.2	11.8	-38.66	-27	-11.66	222	329	V

PK - Peak detector

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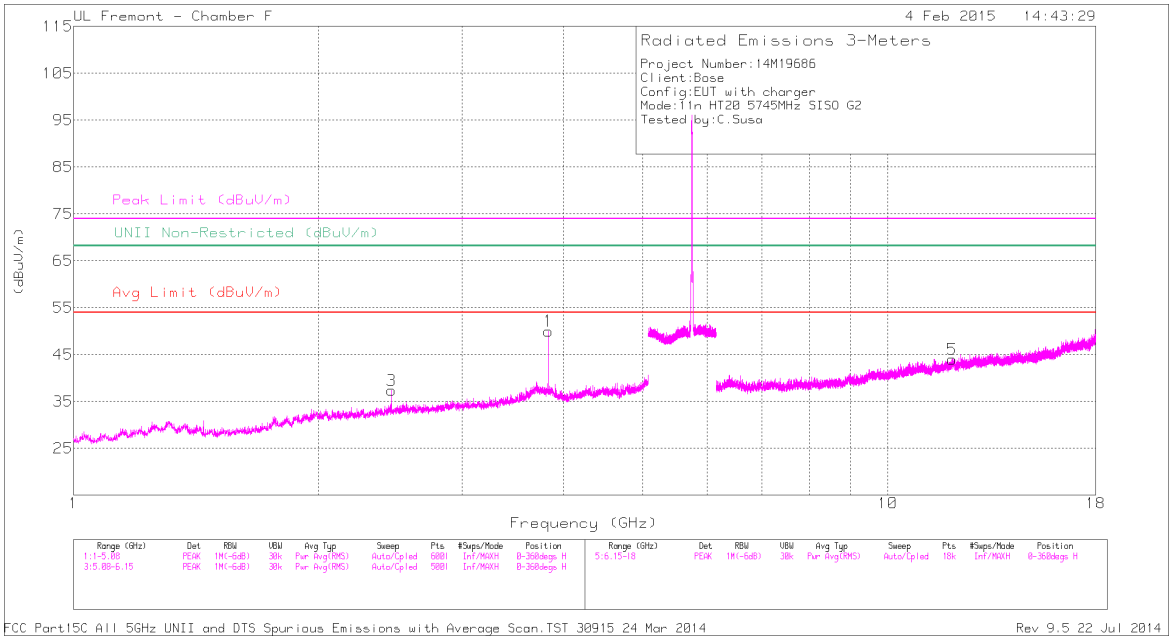
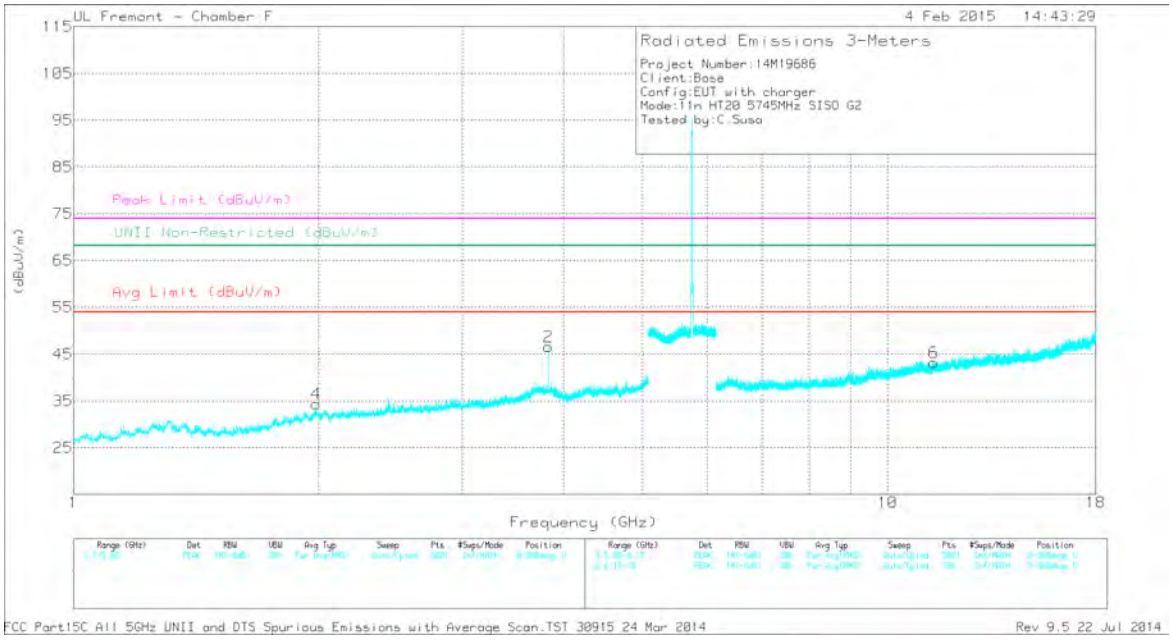
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.83	47.69	PK1	34.3	-29	0	52.99	-	-	74	-21.01	-	-	191	267	H
	* 3.83	42.35	AD1	34.3	-29	3.0	50.56	54	-3.44	-	-	-	-	191	267	H
3	2.454	39.75	PK1	32.4	-30.4	0	41.75	-	-	-	-	68.2	-26.45	266	155	H
2	* 3.83	38.25	PK1	34.3	-29	0	43.55	-	-	74	-30.45	-	-	266	155	V
	* 3.828	27.42	AD1	34.3	-29	3.0	35.63	54	-18.37	-	-	-	-	266	155	V
4	1.984	40.2	PK1	31.6	-30.7	0	41.1	-	-	-	-	68.2	-27.1	184	197	V
5	* 12	34.79	PK1	39	-22	0	51.79	-	-	74	-22.21	-	-	151	175	H
	* 12.001	23.53	AD1	39	-22	3.0	43.44	54	-10.56	-	-	-	-	151	175	H
6	* 11.395	33.86	PK1	38.2	-21.3	0	50.76	-	-	74	-23.24	-	-	142	201	V
	* 11.393	22.78	AD1	38.2	-21.3	3.0	42.79	54	-11.41	-	-	-	-	142	201	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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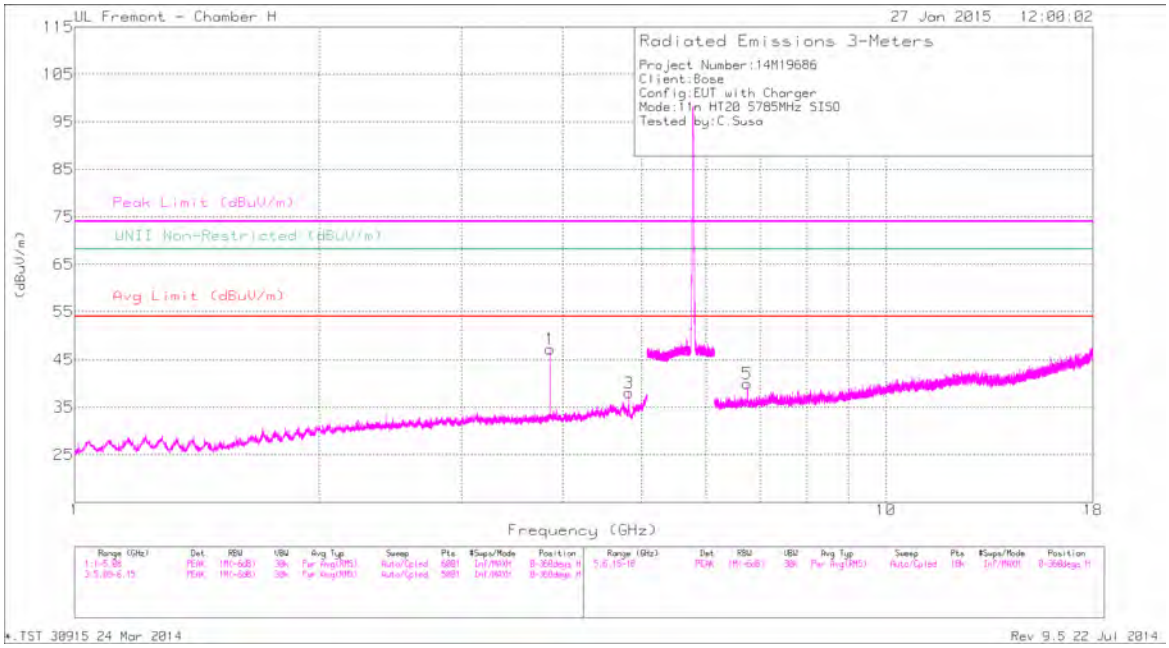
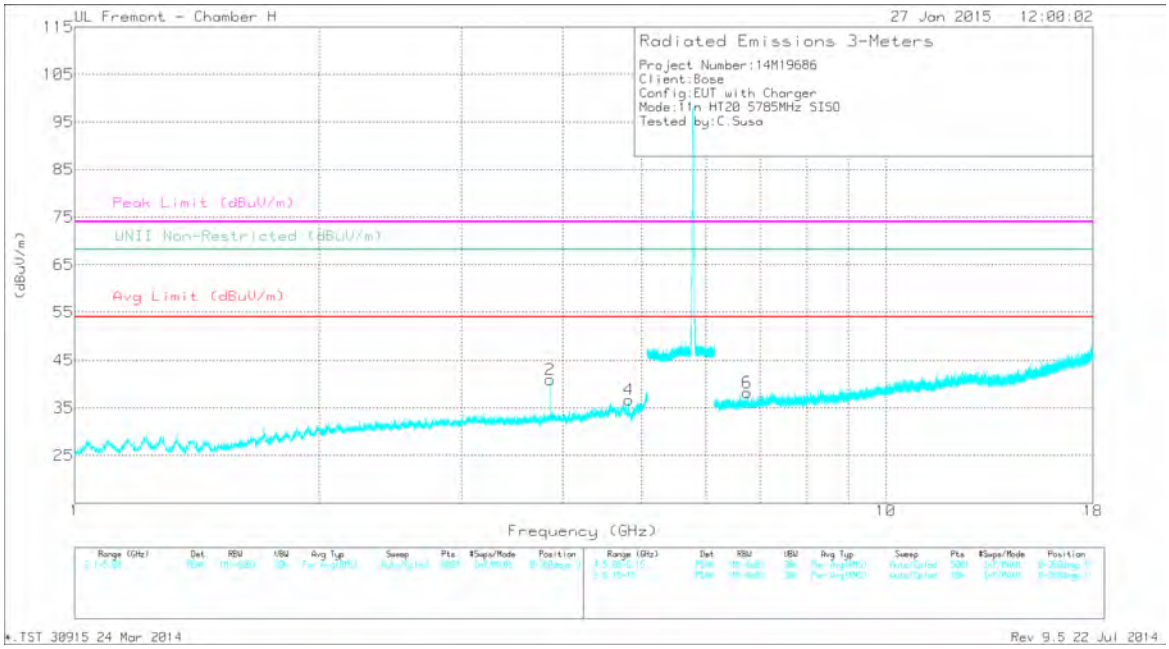
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.857	54.48	PK1	33.3	-32.8	0	54.98	-	-	74	-19.02	-	-	223	277	H
	* 3.857	49	AD1	33.3	-32.8	3.0	52.50	54	-1.50	-	-	-	-	223	277	H
3	* 4.821	45.63	PK1	34.3	-31.9	0	48.03	-	-	74	-25.97	-	-	100	275	H
	* 4.821	34.42	AD1	34.3	-31.9	3.0	39.82	54	-14.18	-	-	-	-	100	275	H
2	* 3.857	52.5	PK1	33.3	-32.8	0	53	-	-	74	-21	-	-	152	370	V
	* 3.857	46.47	AD1	33.3	-32.8	3.0	49.99	54	-4.03	-	-	-	-	152	370	V
4	* 4.821	44.44	PK1	34.3	-31.9	0	46.84	-	-	74	-27.16	-	-	125	274	V
	* 4.821	33.26	AD1	34.3	-31.9	3.0	38.68	54	-15.34	-	-	-	-	125	274	V
5	6.747	44.12	PK1	35.8	-30.7	0	49.22	-	-	-	-	68.2	-18.98	327	276	H
6	6.749	42.99	PK1	35.8	-30.7	0	48.09	-	-	-	-	68.2	-20.11	106	244	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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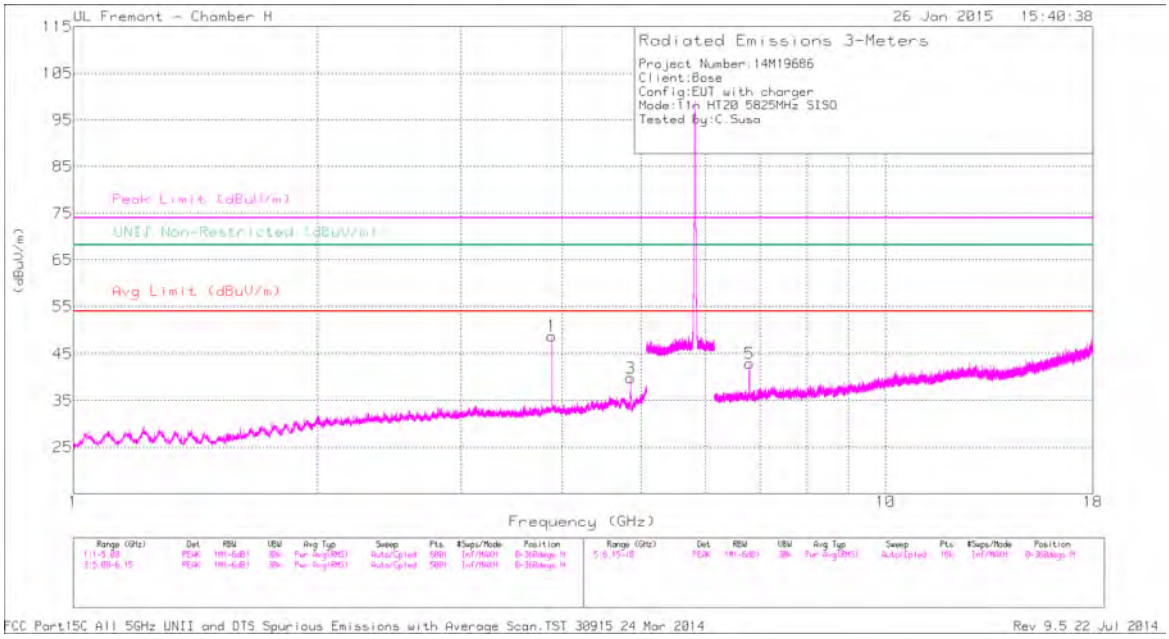
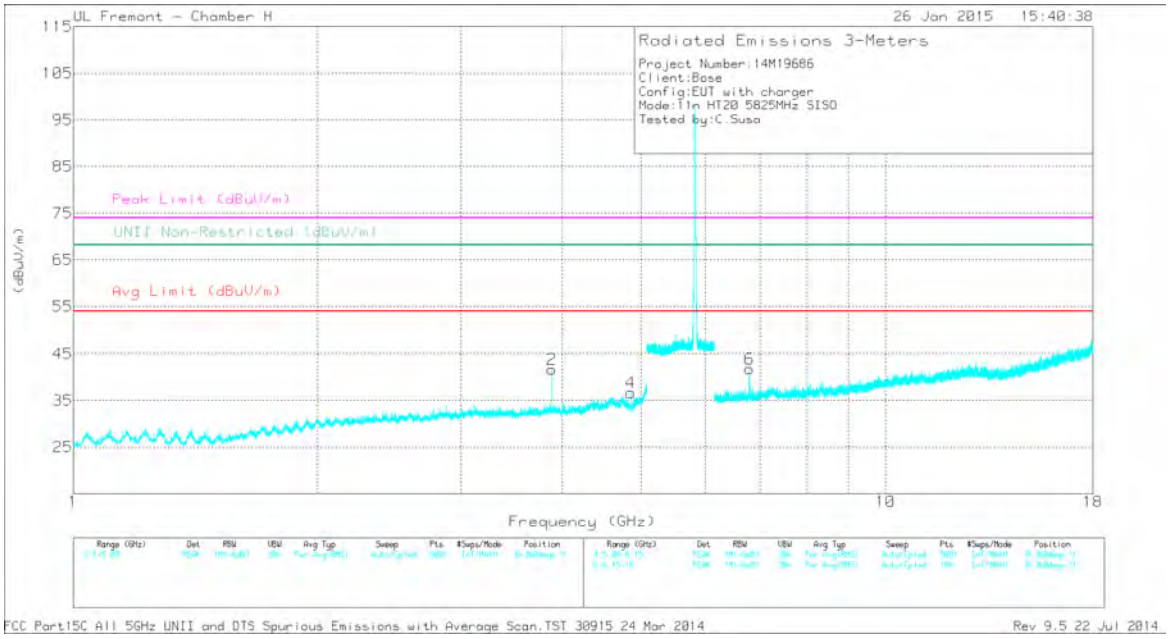
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.883	54.87	PK1	33.4	-32.8	0	55.47	-	-	74	-18.53	-	-	222	276	H
	* 3.883	48.97	AD1	33.4	-32.8	3.0	52.57	54	-1.43	-	-	-	-	222	276	H
3	* 4.854	46.11	PK1	34.3	-31.5	0	48.91	-	-	74	-25.09	-	-	228	167	H
	* 4.854	35.8	AD1	34.3	-31.5	3.0	41.60	54	-12.40	-	-	-	-	228	167	H
2	* 3.883	53.49	PK1	33.4	-32.8	0	54.09	-	-	74	-19.91	-	-	105	320	V
	* 3.883	47.45	AD1	33.4	-32.8	3.0	51.05	54	-2.95	-	-	-	-	105	320	V
4	* 4.854	45.62	PK1	34.3	-31.5	0	48.42	-	-	74	-25.58	-	-	123	270	V
	* 4.854	35.38	AD1	34.3	-31.5	3.0	41.18	54	-12.82	-	-	-	-	123	270	V
5	6.796	45.96	PK1	35.8	-30.1	0	51.66	-	-	-	-	68.2	-16.54	75	160	H
6	6.796	46.27	PK1	35.8	-30.1	0	51.97	-	-	-	-	68.2	-16.23	97	242	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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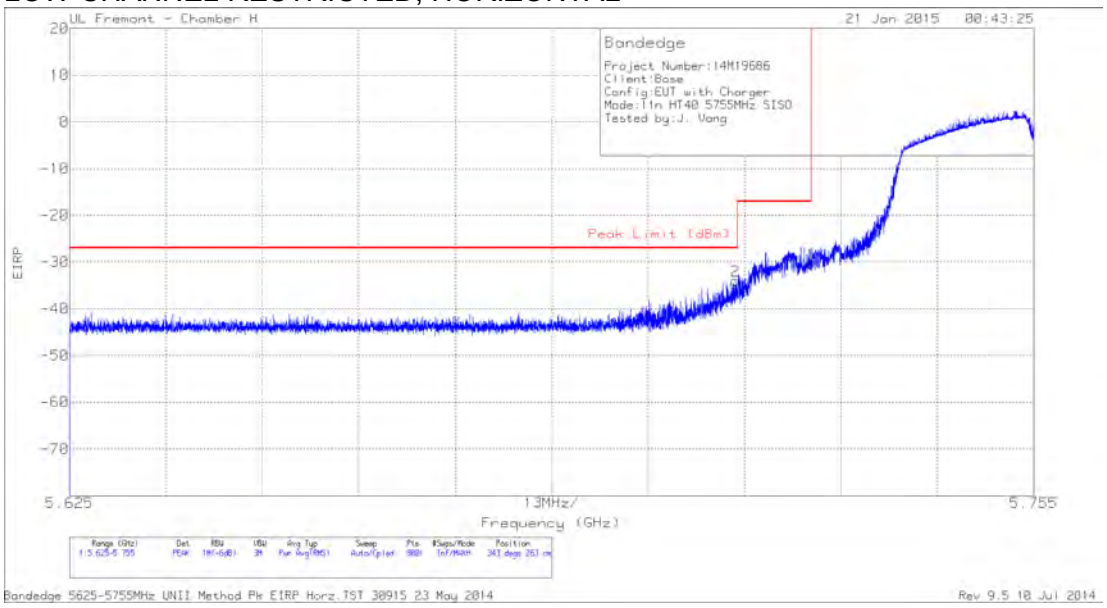
9.2.12. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-54.68	PK	35	-22.4	11.8	-30.28	-17	-13.28	343	263	H
2	5.715	-58.35	PK	35	-22.4	11.8	-33.95	-27	-6.95	343	263	H

PK - Peak detector

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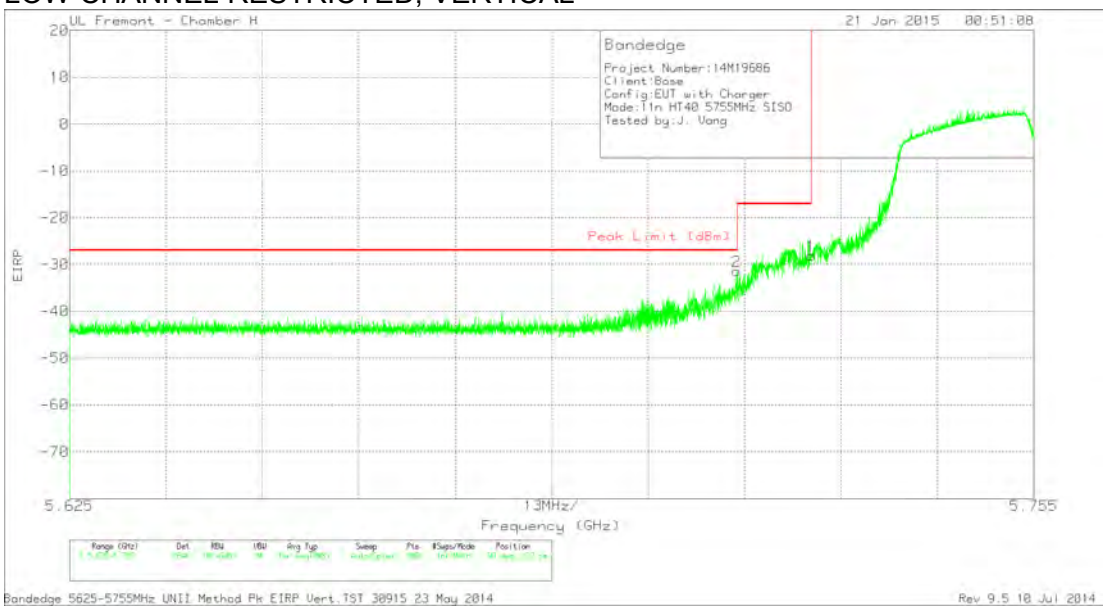
LOW CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-52.47	PK	35	-22.4	11.8	-28.07	-17	-11.07	99	222	V
2	5.715	-55.77	PK	35	-22.4	11.8	-31.37	-27	-4.37	99	222	V

PK - Peak detector

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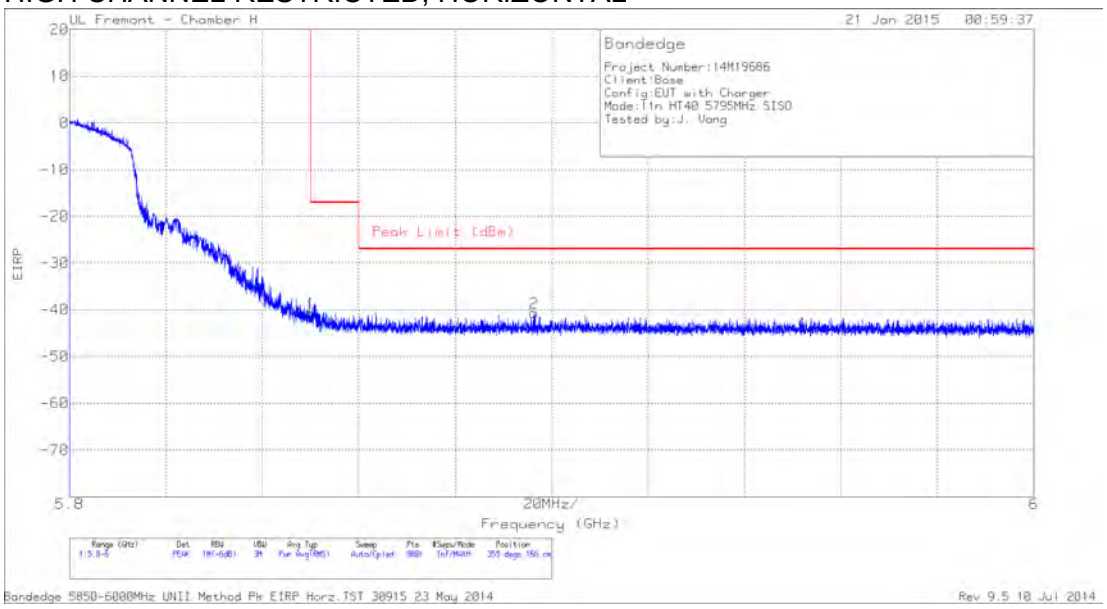
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL RESTRICTED, HORIZONTAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.850	-65.38	PK	35.1	-22.2	11.8	-40.68	-17	-23.68	355	166	H
2	5.896	-65.34	PK	35.1	-22.2	11.8	-40.64	-27	-13.64	355	166	H

PK - Peak detector

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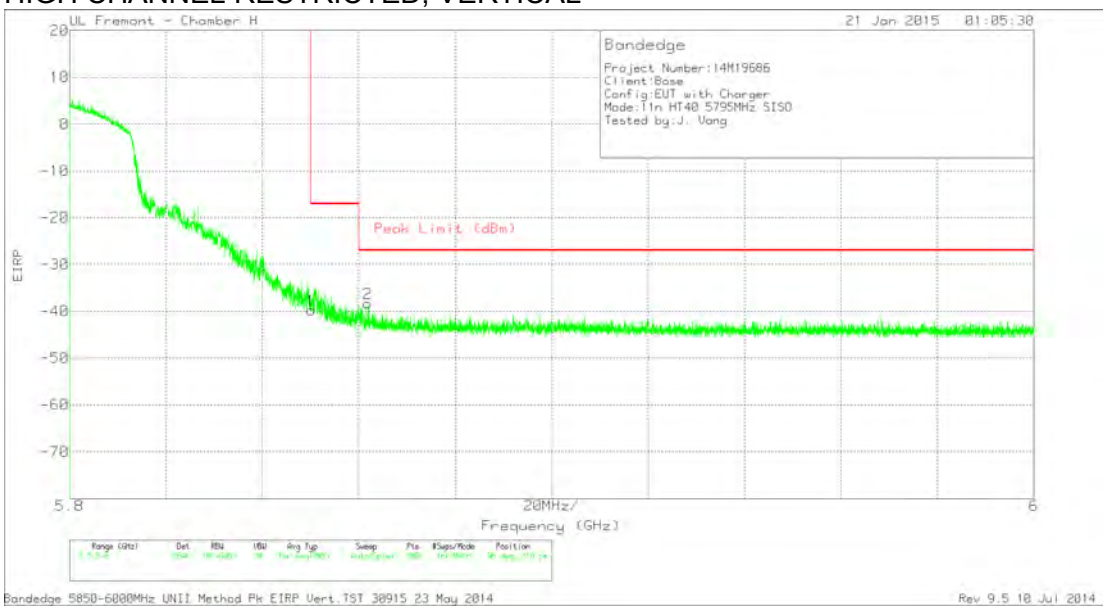
HIGH CHANNEL RESTRICTED, VERTICAL



DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.850	-64.44	PK	35.1	-22.2	11.8	-39.74	-17	-22.74	96	218	V
2	5.862	-62.95	PK	35.1	-22.2	11.8	-38.25	-27	-11.25	96	218	V

PK - Peak detector

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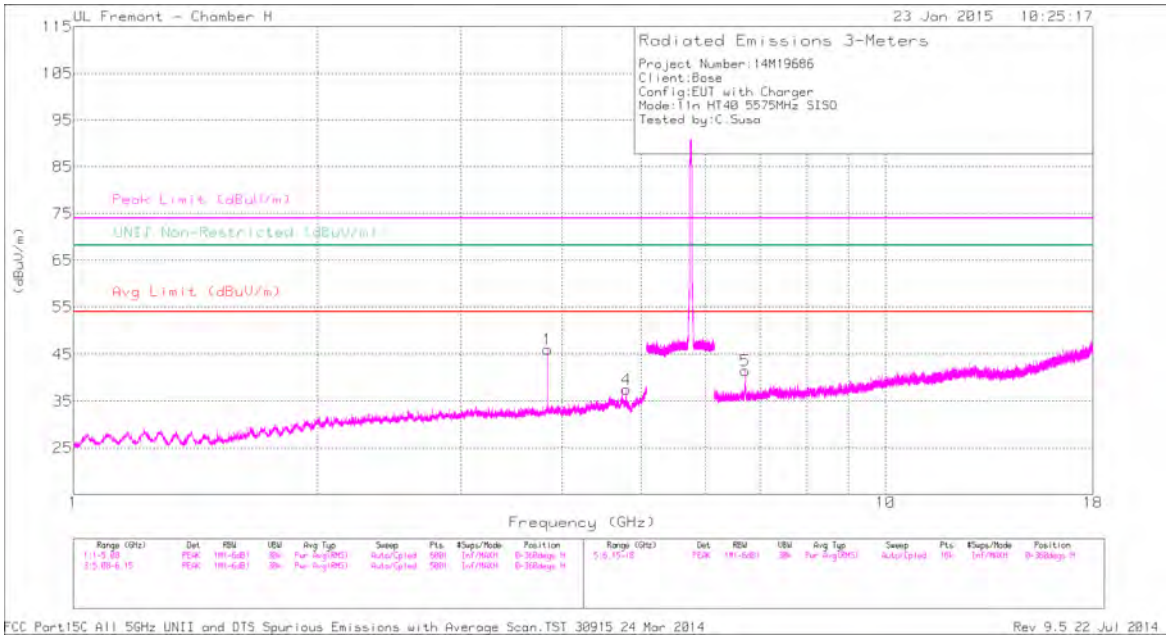
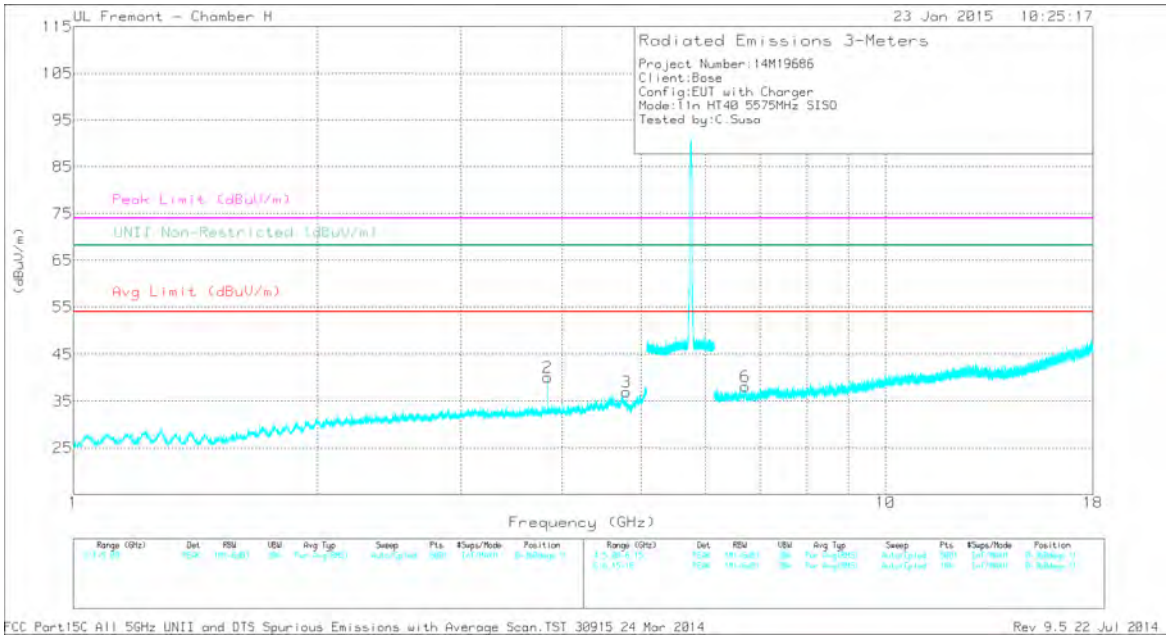
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.837	51.49	PK1	33.3	-32.9	0	51.89	-	-	74	-22.11	-	-	218	280	H
	* 3.837	46.33	AD1	33.3	-32.9	2.96	49.69	54	-4.31	-	-	-	-	218	280	H
4	* 4.796	43.92	PK1	34.3	-32.1	0	46.12	-	-	74	-27.88	-	-	93	277	H
	* 4.796	34.74	AD1	34.3	-32.1	2.96	39.90	54	-14.10	-	-	-	-	93	277	H
2	* 3.837	50.79	PK1	33.3	-32.9	0	51.19	-	-	74	-22.81	-	-	148	384	V
	* 3.837	45.05	AD1	33.3	-32.9	2.96	48.41	54	-5.59	-	-	-	-	148	384	V
3	* 4.795	43.65	PK1	34.3	-32.1	0	45.85	-	-	74	-28.15	-	-	131	275	V
	* 4.796	33.35	AD1	34.3	-32.1	2.96	38.51	54	-15.49	-	-	-	-	131	275	V
5	6.714	43.8	PK1	35.8	-30.6	0	49	-	-	-	-	68.2	-19.2	77	162	H
	6.714	34.07	AD1	35.8	-30.6	2.96	42.28	-	-	-	-	-	-	77	162	H
6	6.714	43.88	PK1	35.8	-30.6	0	49.08	-	-	-	-	68.2	-19.12	92	246	V
	6.714	33.97	AD1	35.8	-30.6	2.96	42.18	-	-	-	-	-	-	92	246	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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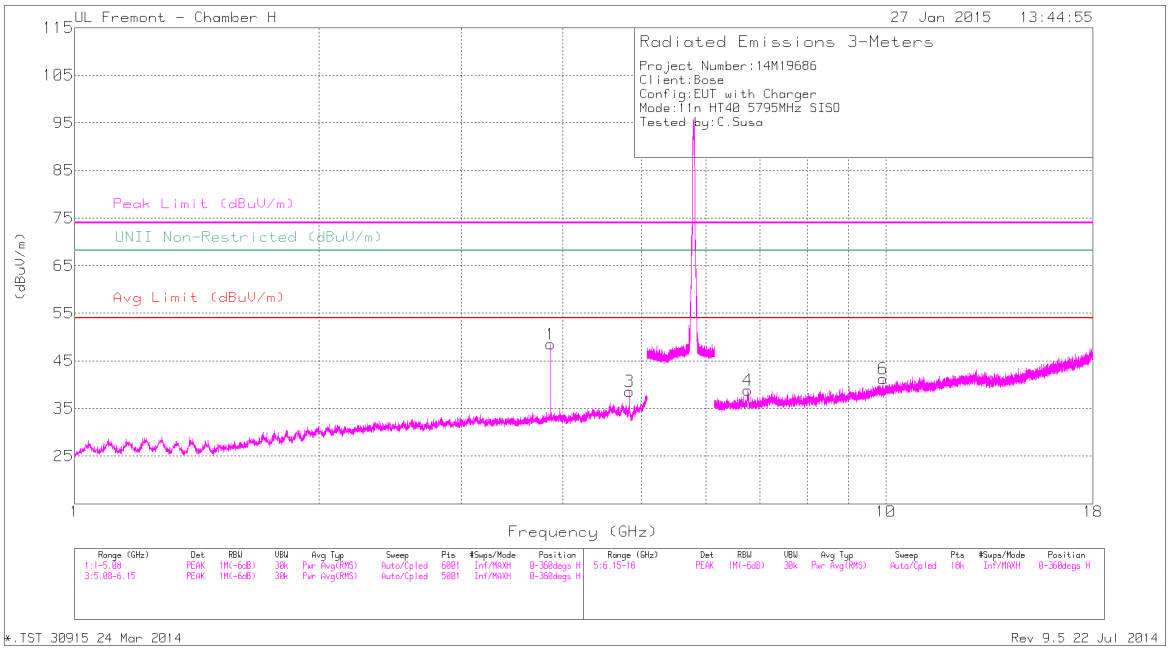
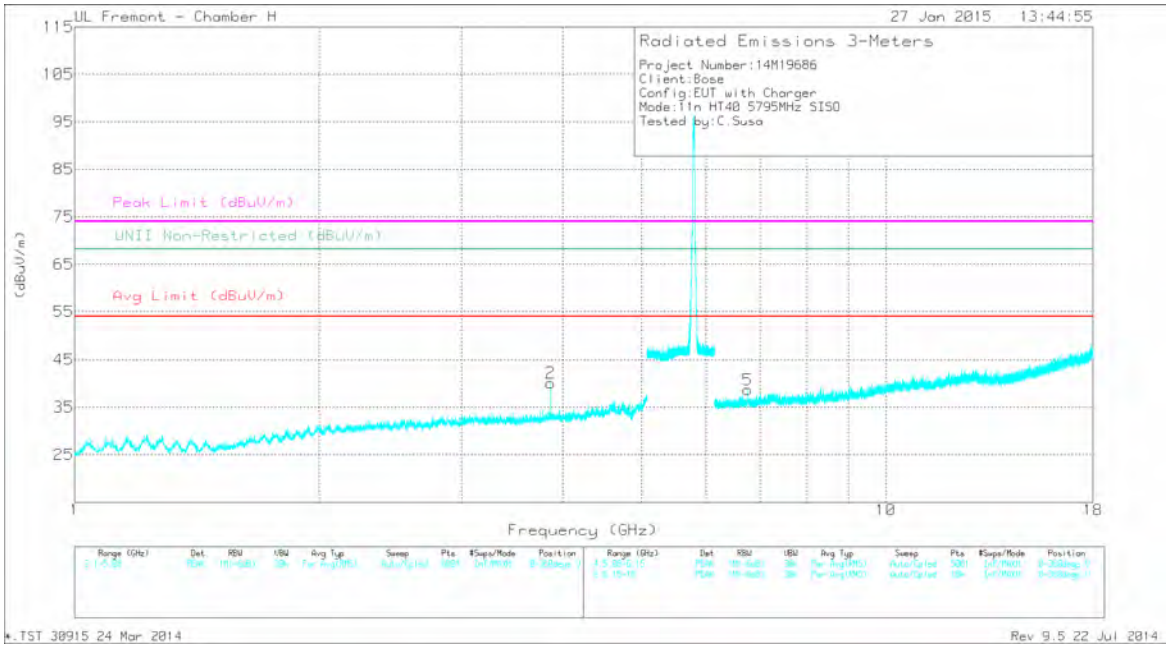
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.863	54.31	PK1	33.3	-32.8	0	54.81	-	-	74	-19.19	-	-	222	278	H
	* 3.863	48.67	AD1	33.3	-32.8	2.96	52.13	54	-1.87	-	-	-	-	222	278	H
3	* 4.829	42.23	PK1	34.3	-31.7	0	44.83	-	-	74	-29.17	-	-	184	265	H
	* 4.829	32.1	AD1	34.3	-31.7	2.96	37.66	54	-16.34	-	-	-	-	184	265	H
2	* 3.863	51.57	PK1	33.3	-32.8	0	52.07	-	-	74	-21.93	-	-	135	254	V
	* 3.863	45.38	AD1	33.3	-32.8	2.96	48.84	54	-5.16	-	-	-	-	135	254	V
4	6.761	42.23	PK1	35.8	-30.5	0	47.53	-	-	-	-	68.2	-20.67	329	232	H
5	6.761	42.16	PK1	35.8	-30.5	0	47.46	-	-	-	-	68.2	-20.74	103	230	V
6	9.92	36.38	PK1	37.2	-26.2	0	47.38	-	-	-	-	68.2	-20.82	23	399	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

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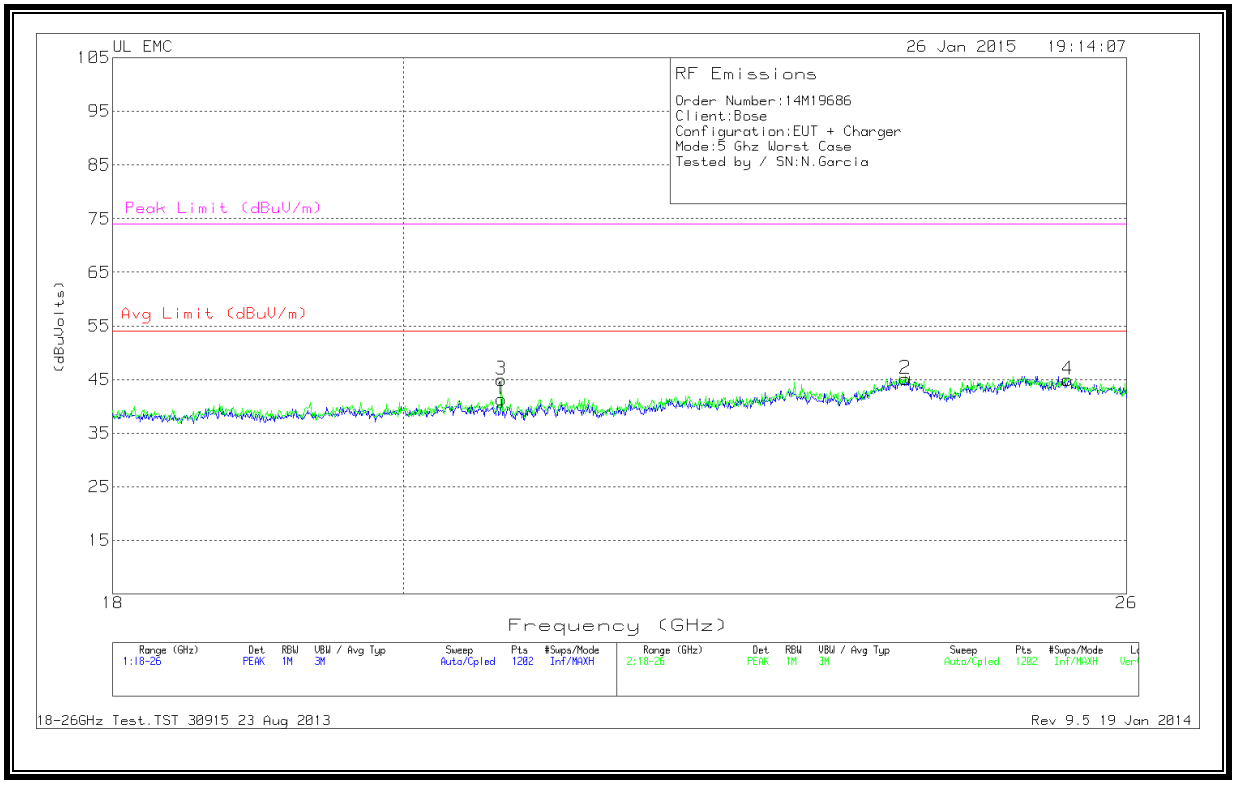
9.3. WORST-CASE 18-26GHz

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION)



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	20.724	41.93	PK	33.1	-24.2	-9.5	41.33	54	-12.66	74	-32.66
2	23.995	43.17	PK	34.2	-22.7	-9.5	45.16	54	-8.83	74	-28.83
3	20.724	45.6	PK	33.1	-24.2	-9.5	45.00	54	-9.00	74	-29.00
4	25.45	42.5	PK	34.6	-22.6	-9.5	45.00	54	-9.00	74	-29.00

PK - Peak detector

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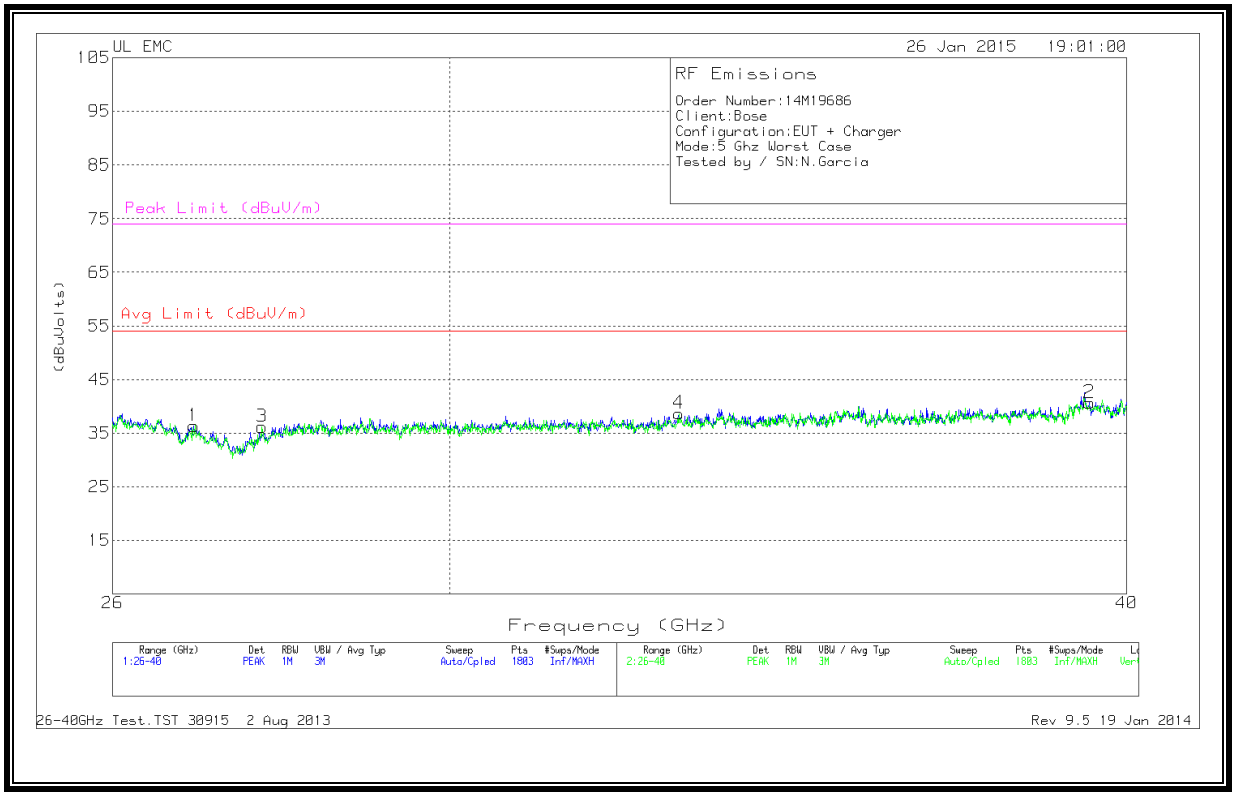
9.4. WORST-CASE 26-40 GHz

SPURIOUS EMISSIONS 26 TO 40 MHz (WORST-CASE CONFIGURATION)



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	26.909	45.03	PK	35.4	-34.6	-9.5	36.33	54	-17.66	74	-37.66
2	39.371	49.47	PK	38.0	-37.3	-9.5	40.66	54	-13.33	74	-33.33
3	27.701	44.47	PK	35.8	-34.6	-9.5	36.16	54	-17.83	74	-37.83
4	33.07	48.37	PK	36.8	-37.0	-9.5	38.66	54	-15.33	74	-35.33

PK - Peak detector

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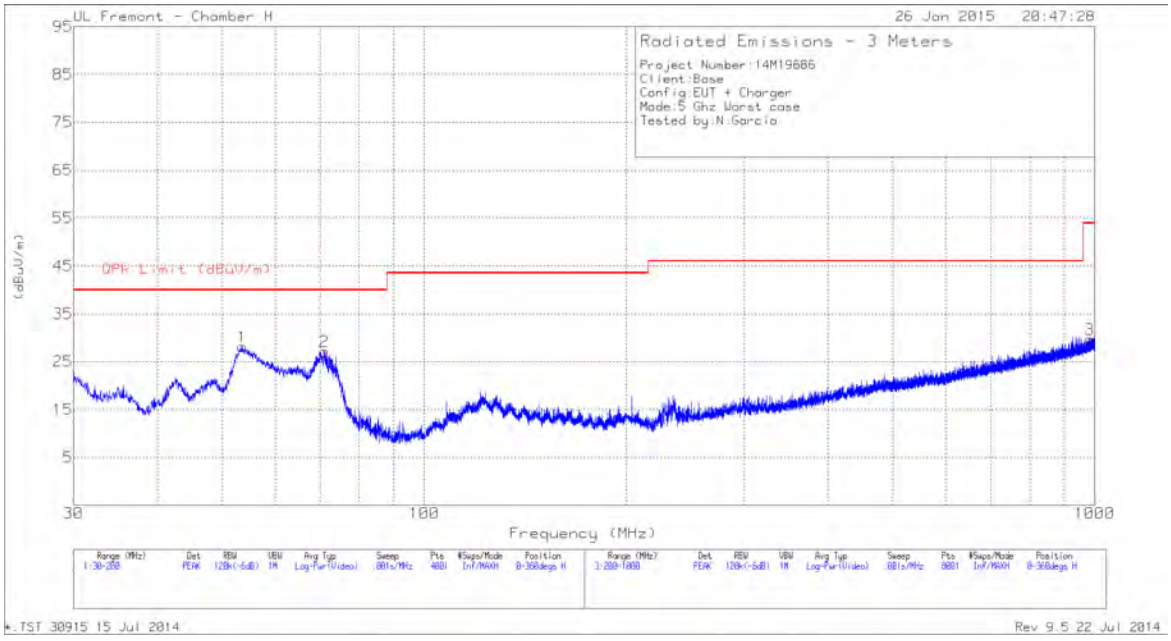
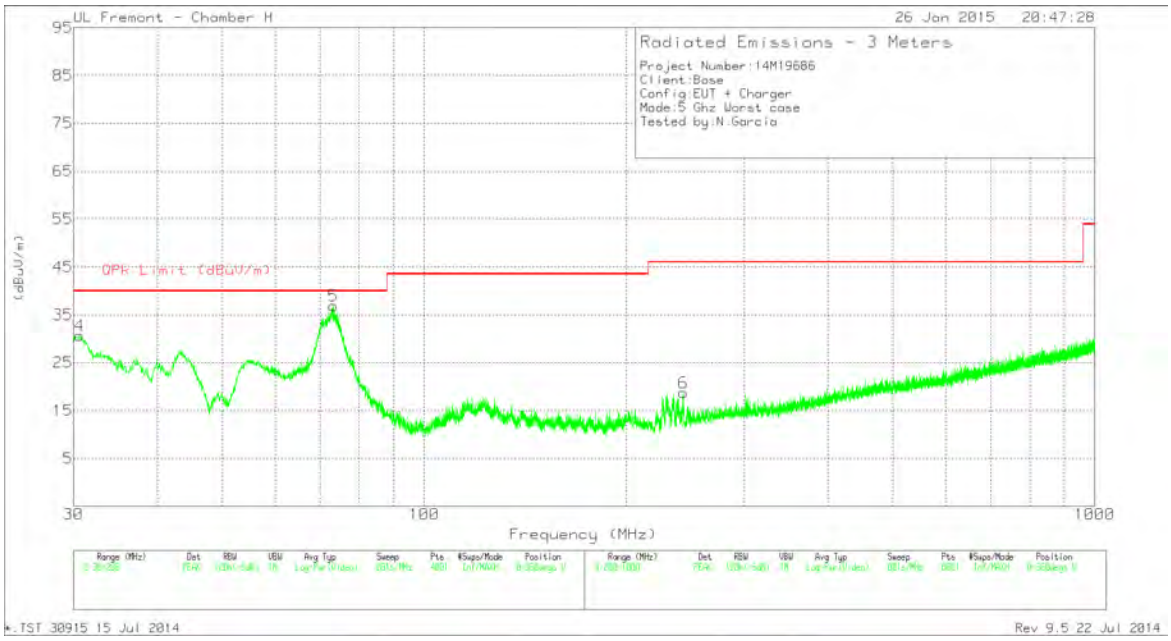
9.5. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



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DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	SS JB3 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	53.545	48.76	PK	10.1	-30.7	28.16	40	-11.84	0-360	401	H
2	71.055	46.31	PK	11.2	-30.4	27.11	40	-12.89	0-360	201	H
3	* 982.60	27.88	PK	26.1	-24.3	29.68	53.97	-24.29	0-360	201	H
4	30.595	38.03	PK	23.6	-30.9	30.73	40	-9.27	0-360	100	V
5	* 73.180	56.25	PK	11.1	-30.4	36.95	40	-3.05	0-360	100	V
6	* 243.60	32.99	PK	14.6	-28.9	18.69	46.02	-27.33	0-360	99	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	SS JB3 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 73.1086	50.76	QP	11.1	-30.4	31.46	40	-8.54	192	101	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
QP - Quasi-Peak detector

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10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

* Decreases with the logarithm of the frequency.

RESULTS

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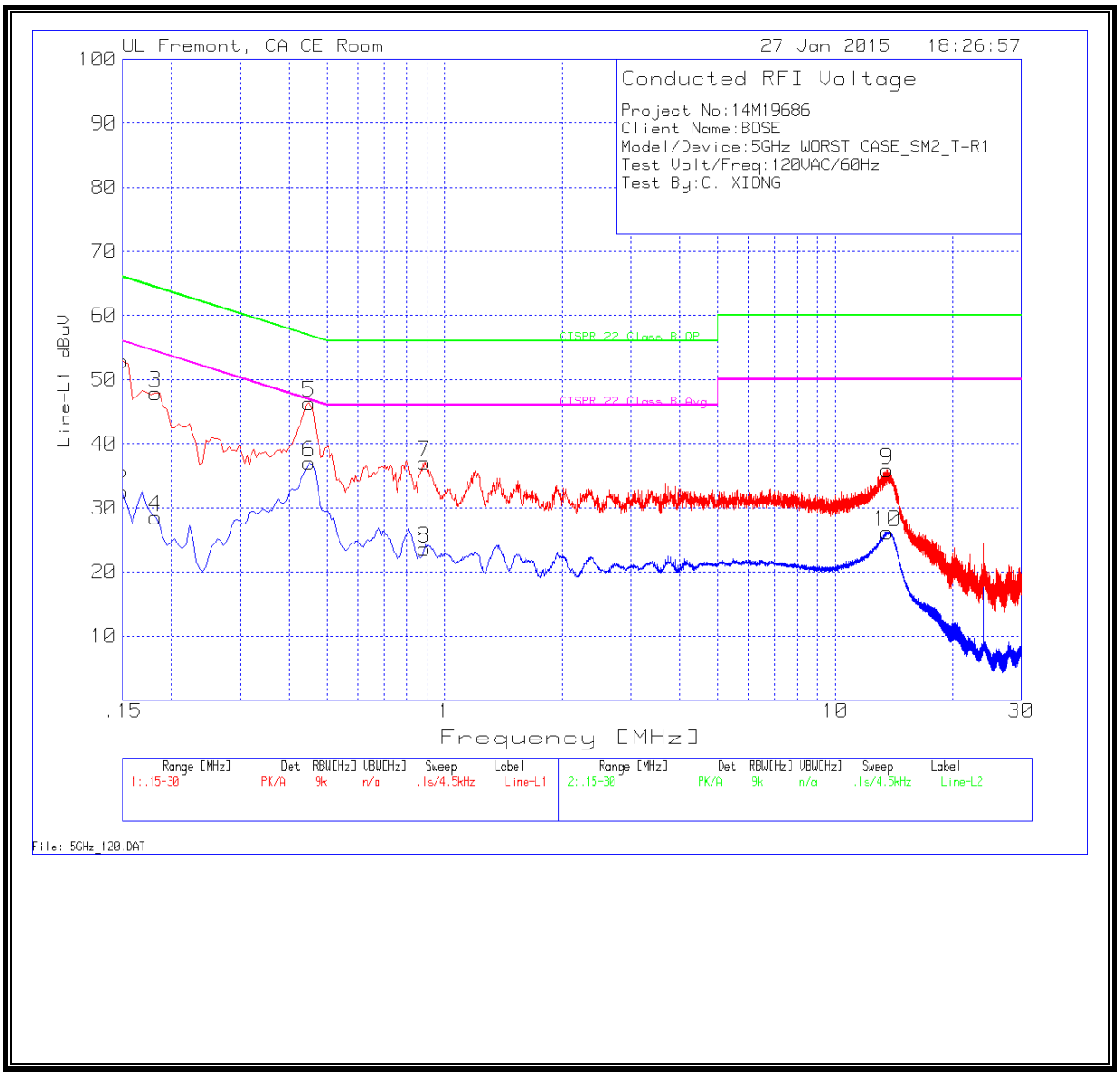
LINE 1 RESULTS



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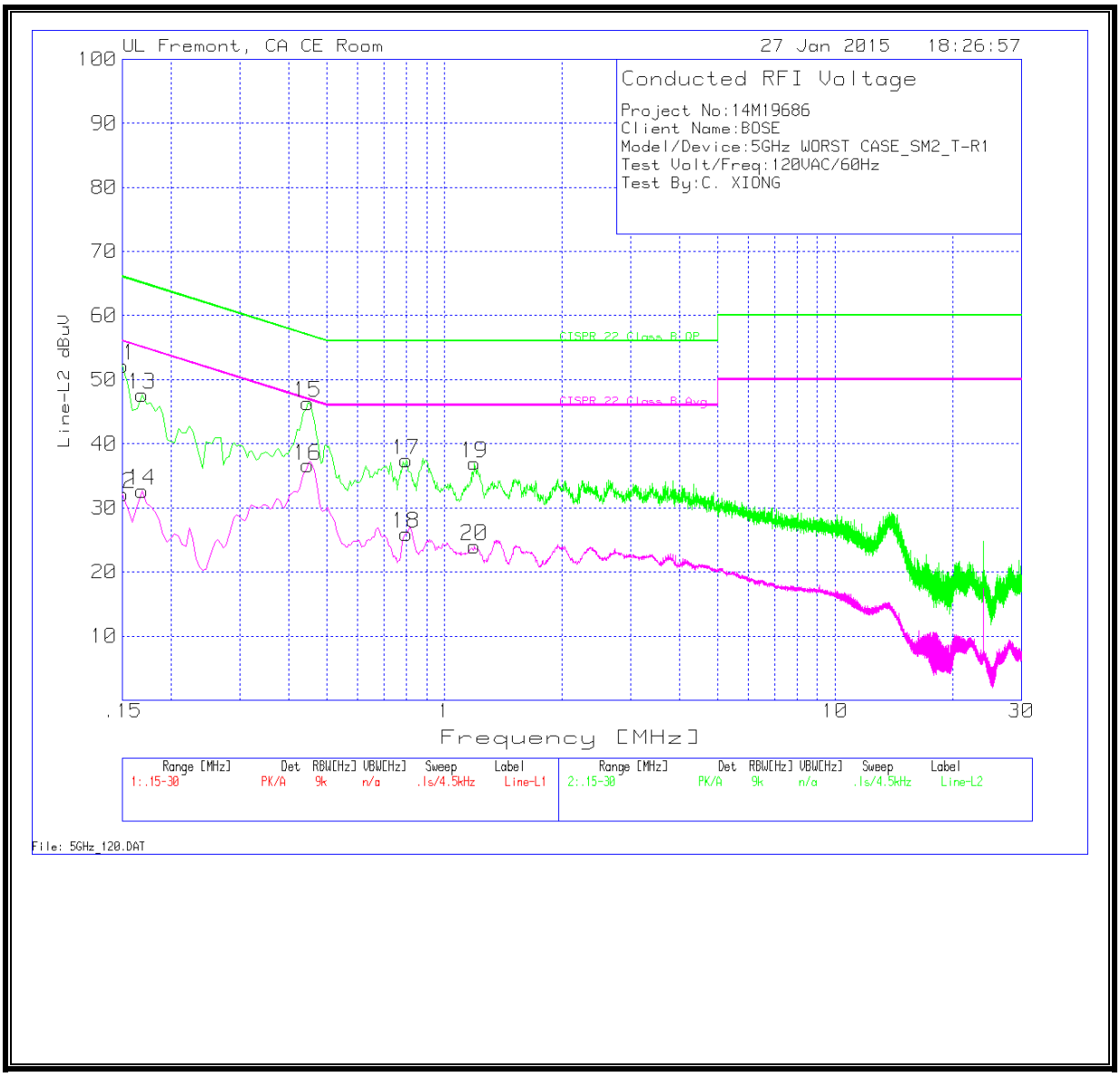
LINE 2 RESULTS



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Line-L1 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.150	51.56	PK	1.4	0	52.96	66.0	-13.04	-	-
2	.150	31.17	Av	1.4	0	32.57	-	-	56.0	-23.43
3	.1815	46.81	PK	1.1	0	47.91	64.4	-16.49	-	-
4	.1815	27.41	Av	1.1	0	28.51	-	-	54.4	-25.89
5	.4515	46.02	PK	0.4	0	46.42	56.8	-10.38	-	-
6	.4515	36.66	Av	0.4	0	37.06	-	-	46.8	-9.74
7	.888	36.82	PK	0.3	0	37.12	56.0	-18.88	-	-
8	.888	23.35	Av	0.3	0	23.65	-	-	46.0	-22.35
9	13.6005	35.54	PK	0.2	.2	35.94	60.0	-24.06	-	-
10	13.6005	25.87	Av	0.2	.2	26.27	-	-	50.0	-23.73

Line-L2 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
11	.150	50.64	PK	1.5	0	52.14	66.0	-13.86	-	-
12	.150	30.69	Av	1.5	0	32.19	-	-	56.0	-23.81
13	.168	46.37	PK	1.3	0	47.67	65.1	-17.43	-	-
14	.168	31.43	Av	1.3	0	32.73	-	-	55.1	-22.37
15	.447	46.02	PK	0.4	0	46.42	56.9	-10.48	-	-
16	.447	36.22	Av	0.4	0	36.62	-	-	46.9	-10.28
17	.798	37.10	PK	0.3	0	37.40	56.0	-18.60	-	-
18	.798	25.66	Av	0.3	0	25.96	-	-	46.0	-20.04
19	1.194	36.60	PK	0.3	.1	37.00	56.0	-19.00	-	-
20	1.194	23.60	Av	0.3	.1	24.00	-	-	46.0	-22.00

PK - Peak detector
Av - average detection

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11. DYNAMIC FREQUENCY SELECTION

11.1. OVERVIEW

11.1.1. LIMITS

INDUSTRY CANADA

IC RSS-210 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-210 Issue 8 A9.3

Note: For the band 5600–5650 MHz, no operation is permitted.

Until further notice, devices subject to this annex shall not be capable of transmitting in the band 5600–5650 MHz. This restriction is for the protection of Environment Canada weather radars operating in this band.

FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

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Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client **(without DFS)**	Client **(with DFS)**
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.		

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Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see notes)
E.I.R.P. ≥ 200 mill watt	-64 dBm
E.I.R.P. < 200 mill watt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 mill watt that do not meet power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna
Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.
Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds (See Note 1)
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. (See Note 3)

Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.
Note 2: The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

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Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: {(1/360) x (19 x 10^6 PRI_{usec})}	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the *Detection Bandwidth* test, *Channel Move Time*, and *Channel Closing Time* tests.

Table 6 – Long Pulse Radar Test Signal

Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30

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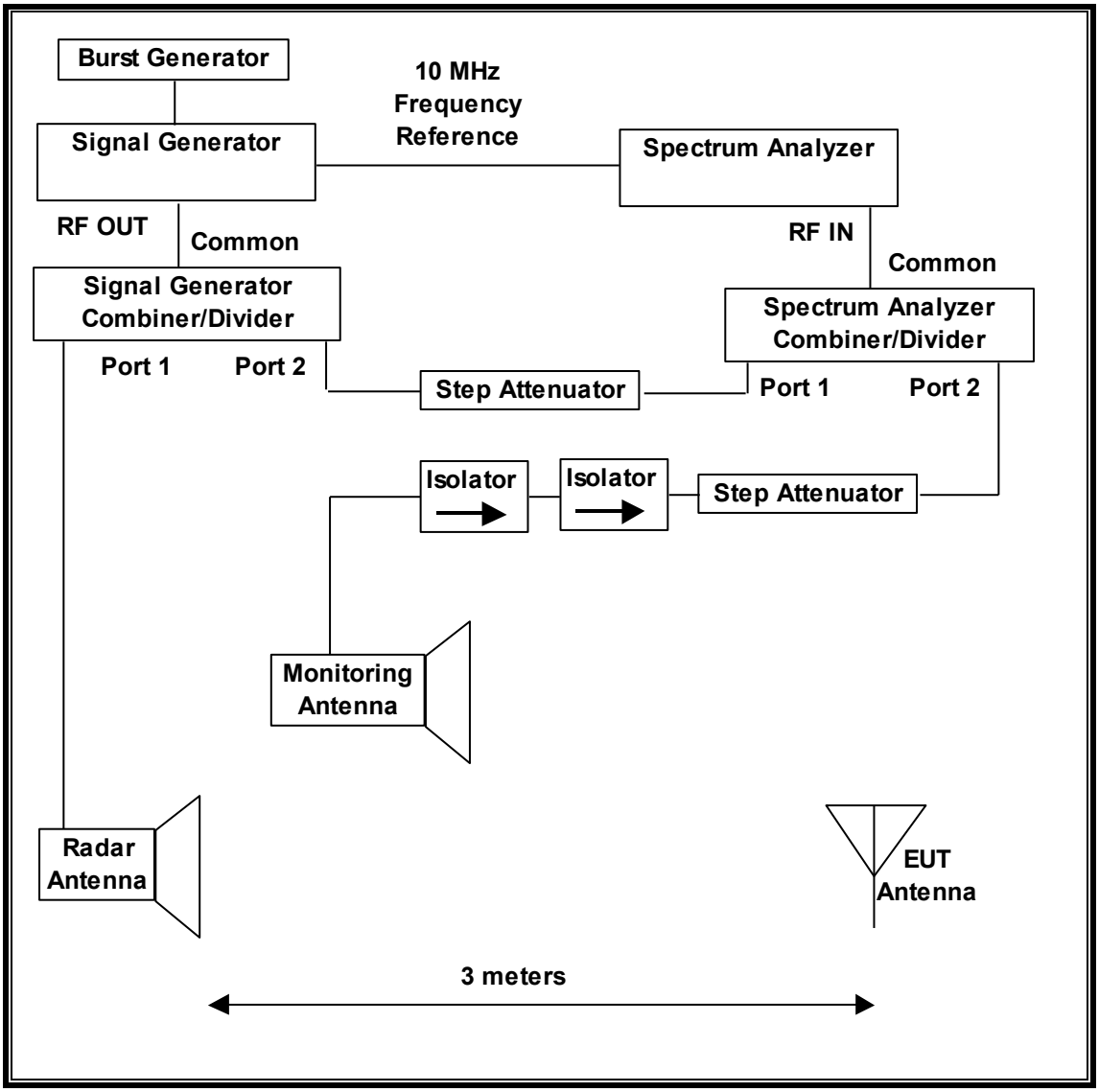
11.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



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SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 1, 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

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ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset Number**	**Cal Due**
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	09/05/15
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	09/03/15

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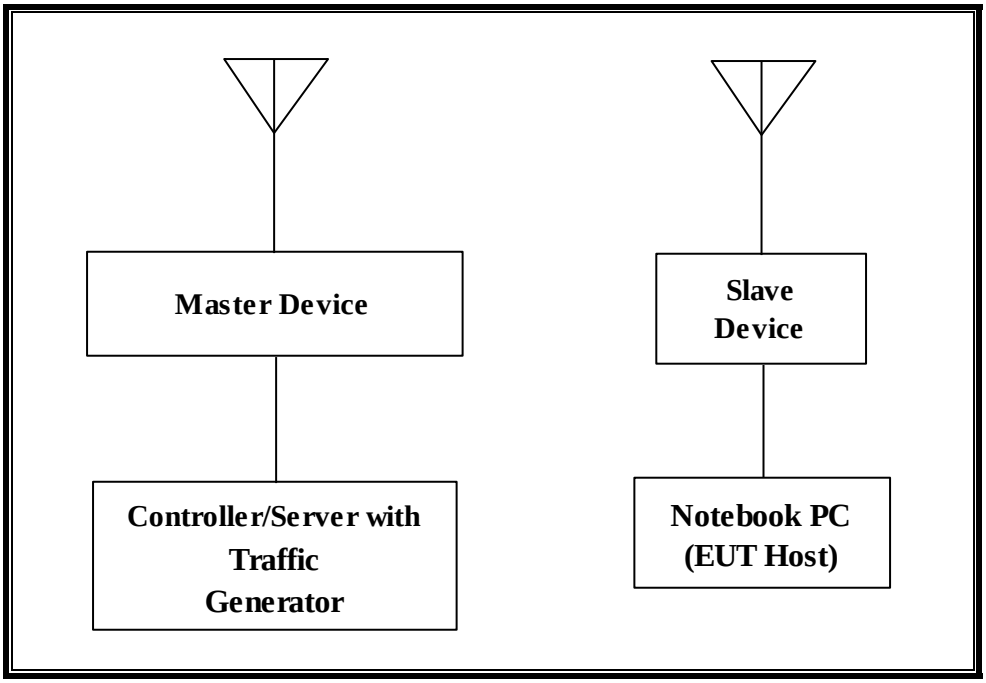
11.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter (EUT)	Bose	S024RU1700100	No Serial Number	DoC
Notebook PC (EUT Host)	Dell	P38G	7F17VZ1	DoC
AC Adapter (Host PC)	Lite On Technology	LA90PM130	CN-06C3W2-72438-371-0951-A00	DoC
802.11ac Access Point	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller/Server)	Lenovo	Type 20B7-S0A200	PF-02JN9J 14/06	DoC
AC Adapter (Controller/Server PC)	Lenovo	ADLX65NLC2A	11S45N0259Z1ZS974 594A9	DoC

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47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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11.1.4. DESCRIPTION OF EUT

For FCC and IC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges, excluding the 5600-5650 MHz range.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 18.04 dBm EIRP in the 5250-5350 MHz band and 18.69 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of 4 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is –64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is –64 + 1 = -63 dBm.

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses one transmitter/receiver chain, each connected to an antenna to perform radiated tests.

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.2 software package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11a/n architecture. Two nominal channel bandwidths are implemented: 20 MHz and 40 MHz.

The software installed in the access point is AP3G2-K9W7-M Version 15.2(4)JB4.

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UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a Cisco Access Point, FCC ID: LDK102087. The minimum antenna gain for the Master Device is 6 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is –64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is –64 + 1 = -63 dBm.

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

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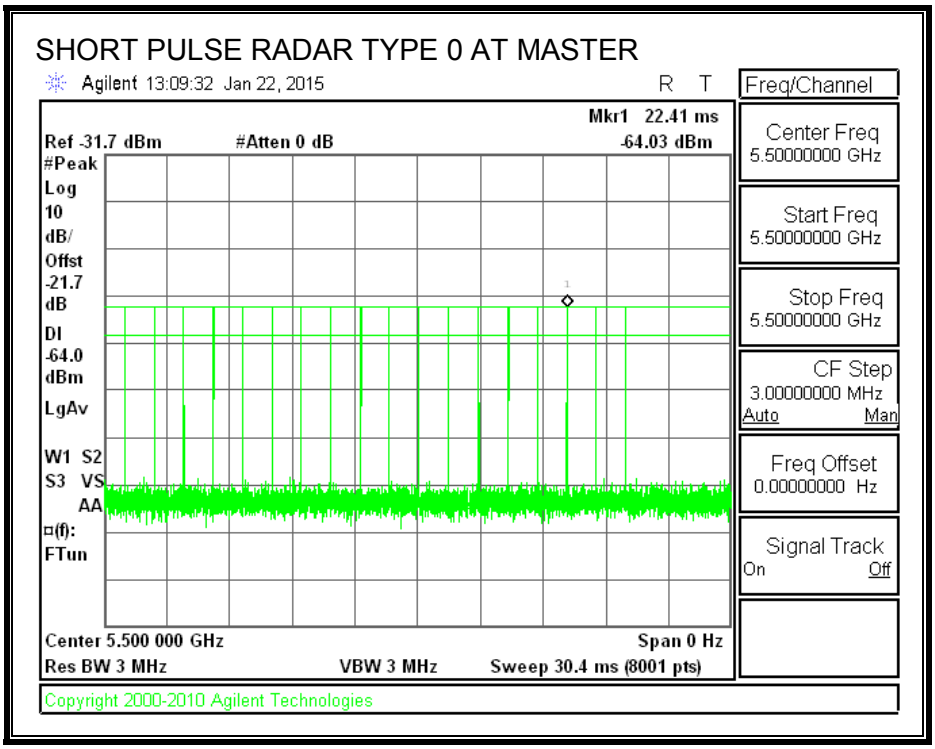
11.2. RESULTS FOR 20 MHz BANDWIDTH

11.2.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5500 MHz.

11.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



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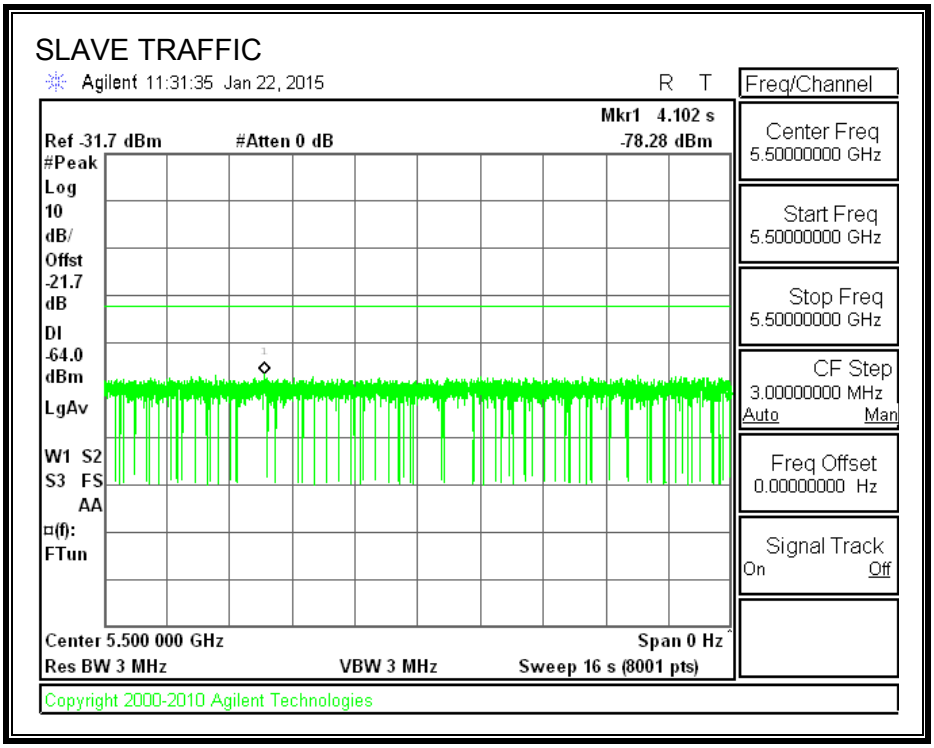
TRAFFIC



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11.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Channel Move Time (sec)	Limit (sec)
0.092	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

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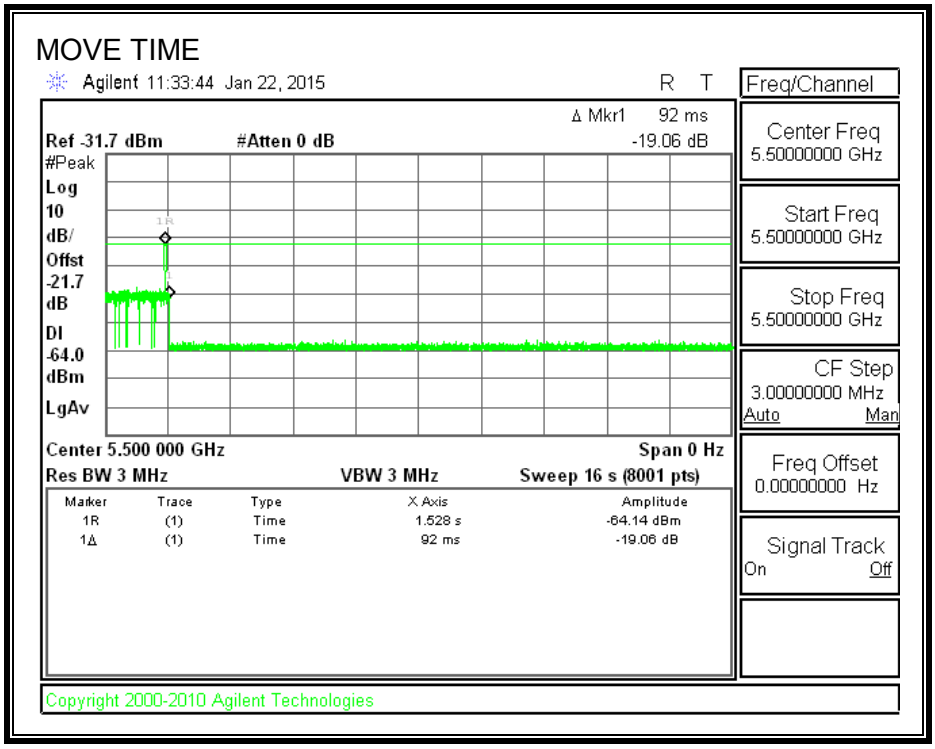
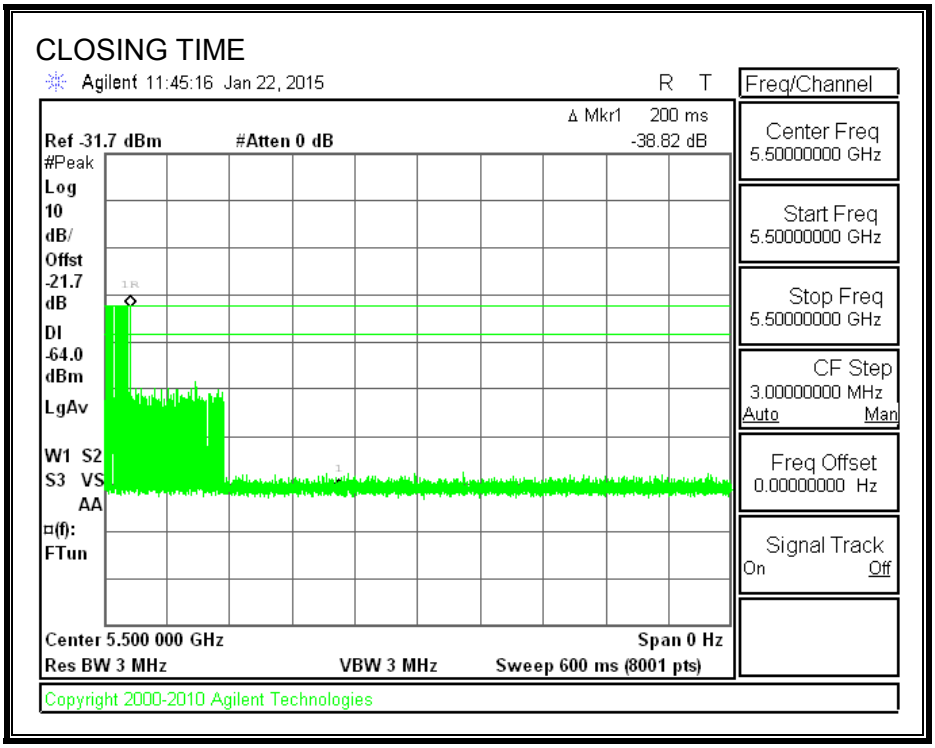
MOVE TIME



CHANNEL CLOSING TIME



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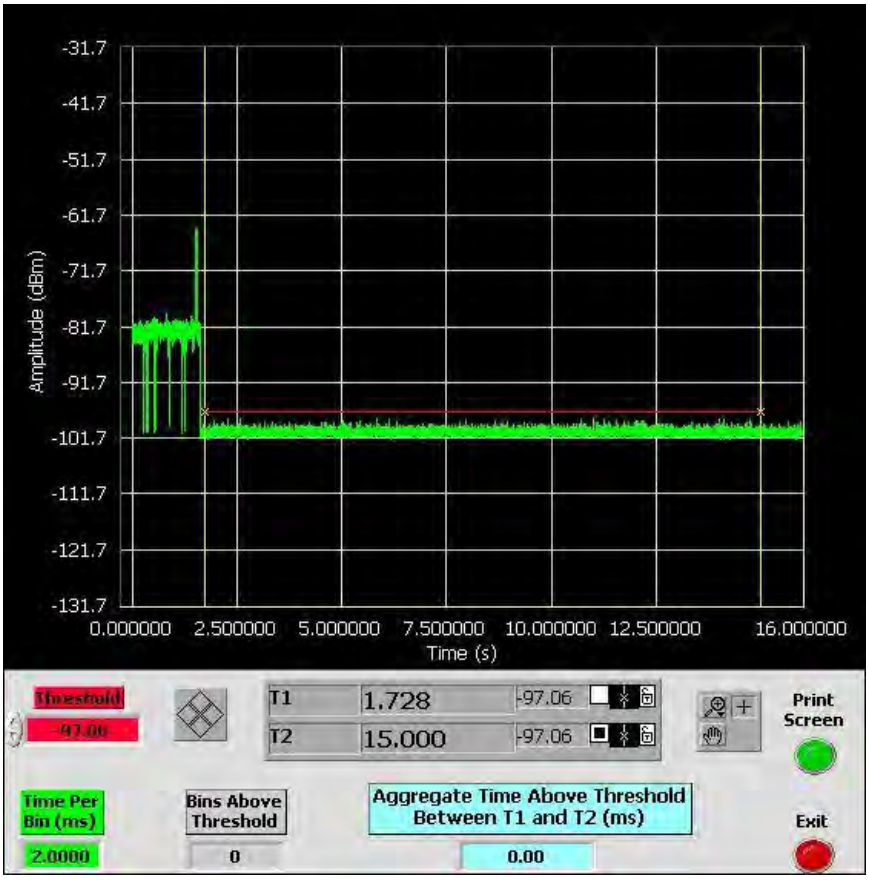
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



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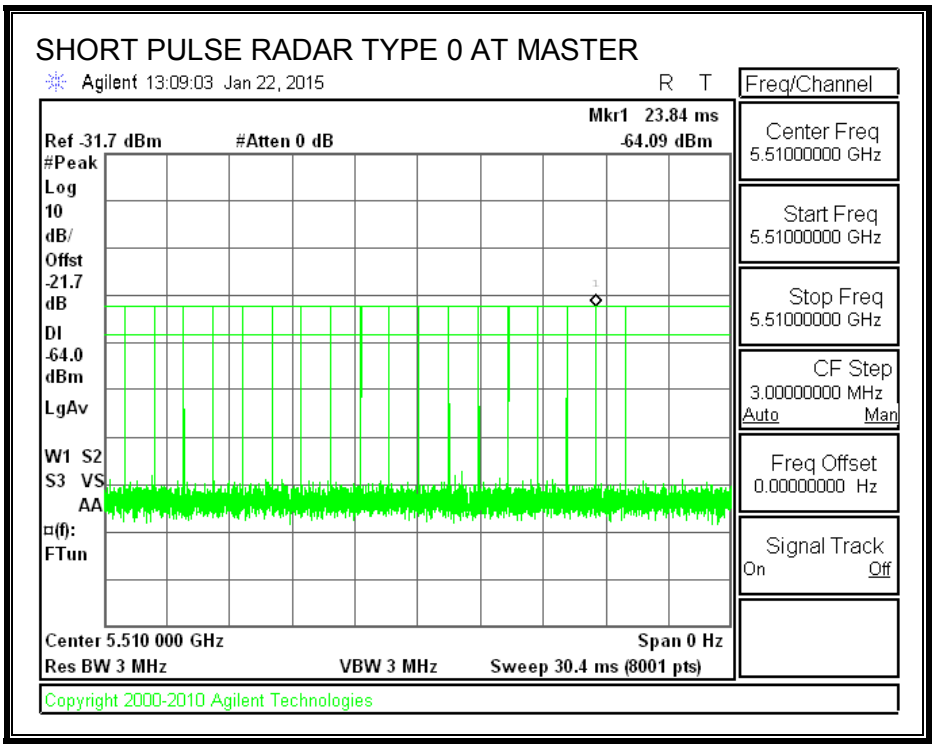
11.3. RESULTS FOR 40 MHz BANDWIDTH

11.3.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5510 MHz.

11.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



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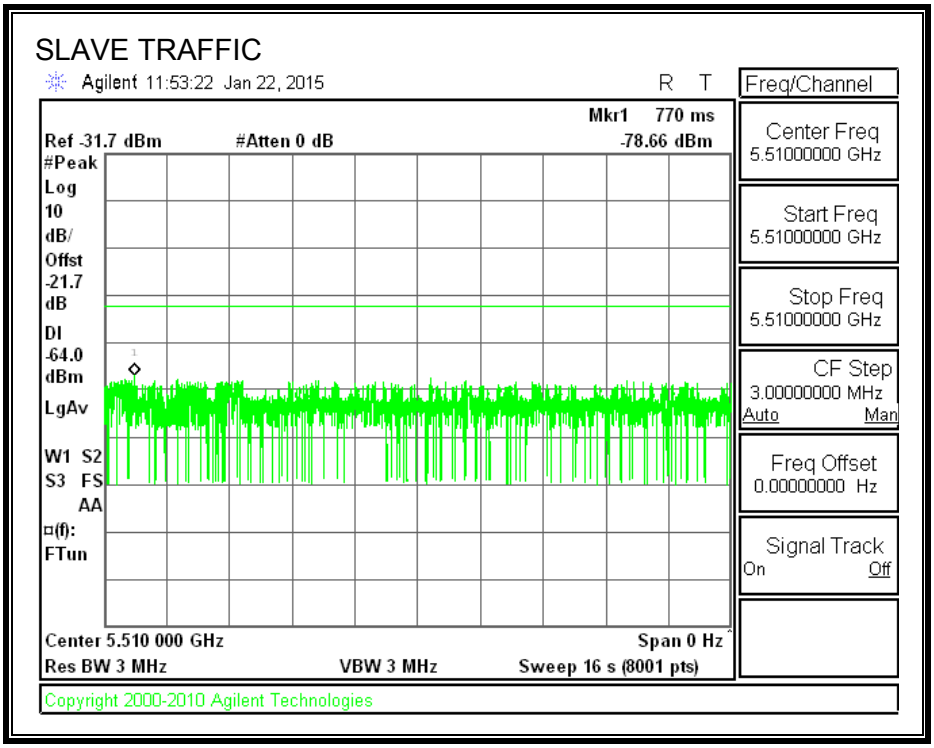
TRAFFIC



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11.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Channel Move Time (sec)	Limit (sec)
0.050	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

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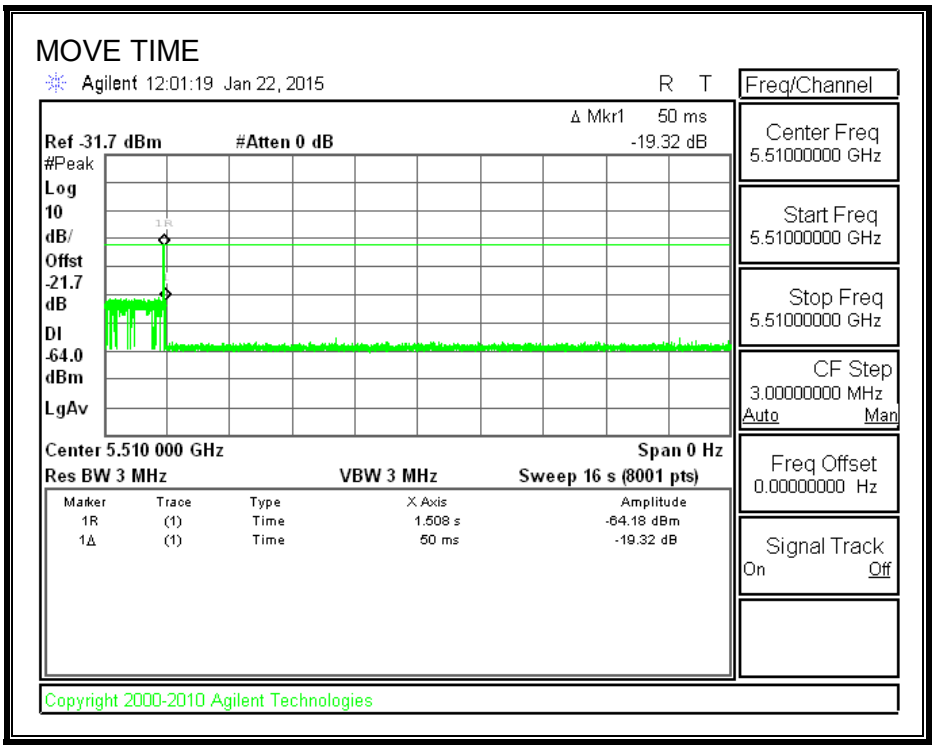
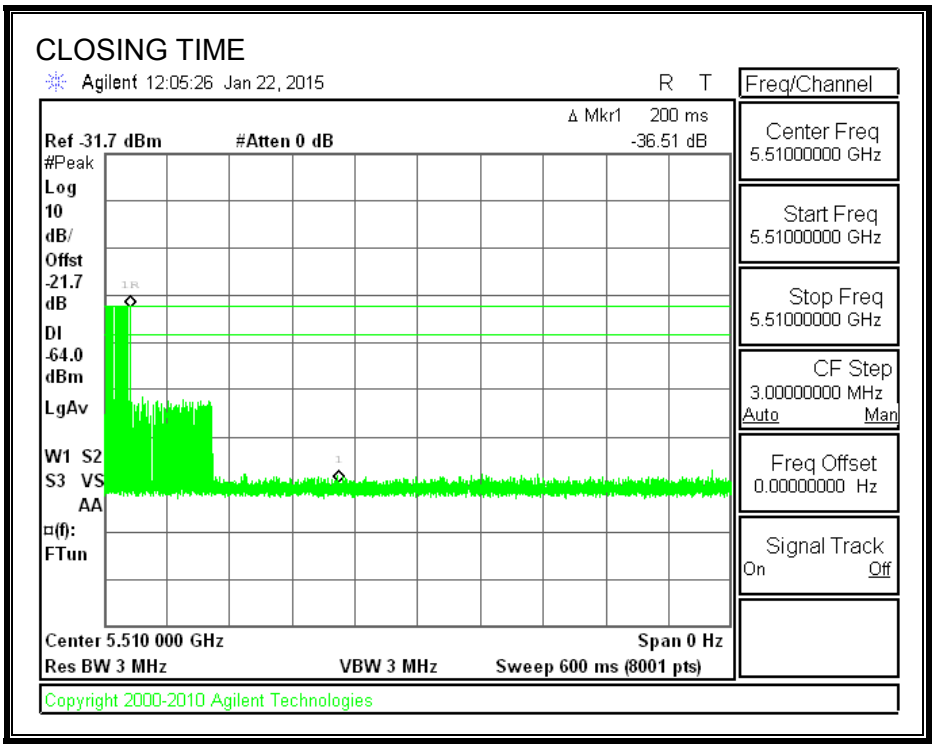
MOVE TIME



CHANNEL CLOSING TIME



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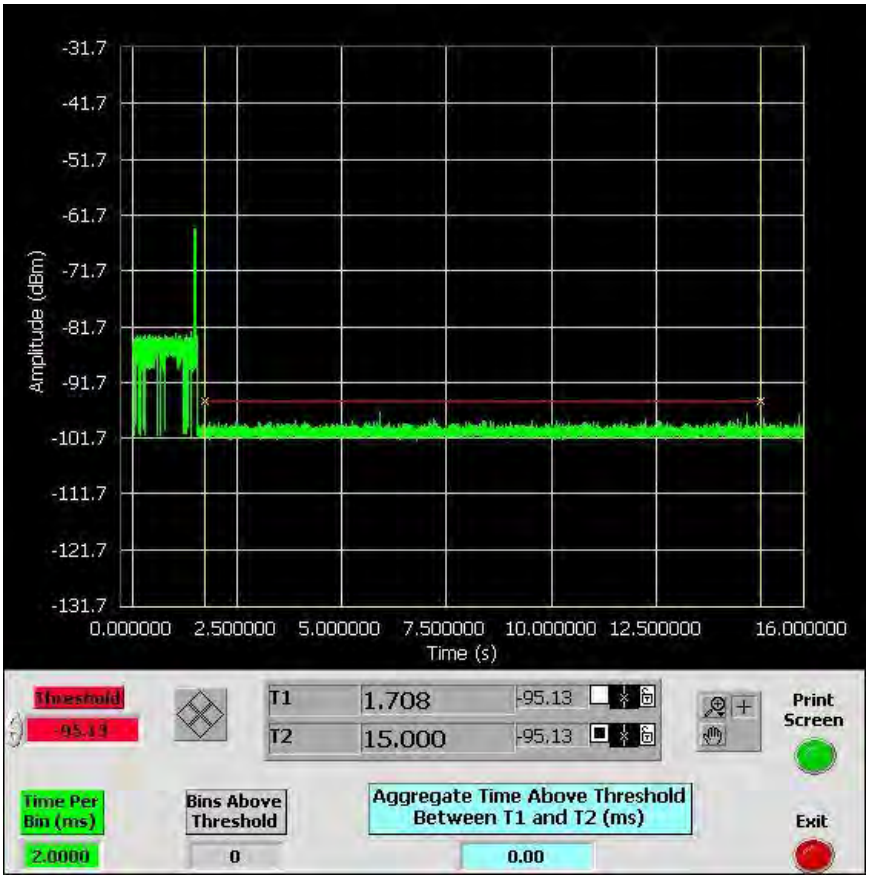
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



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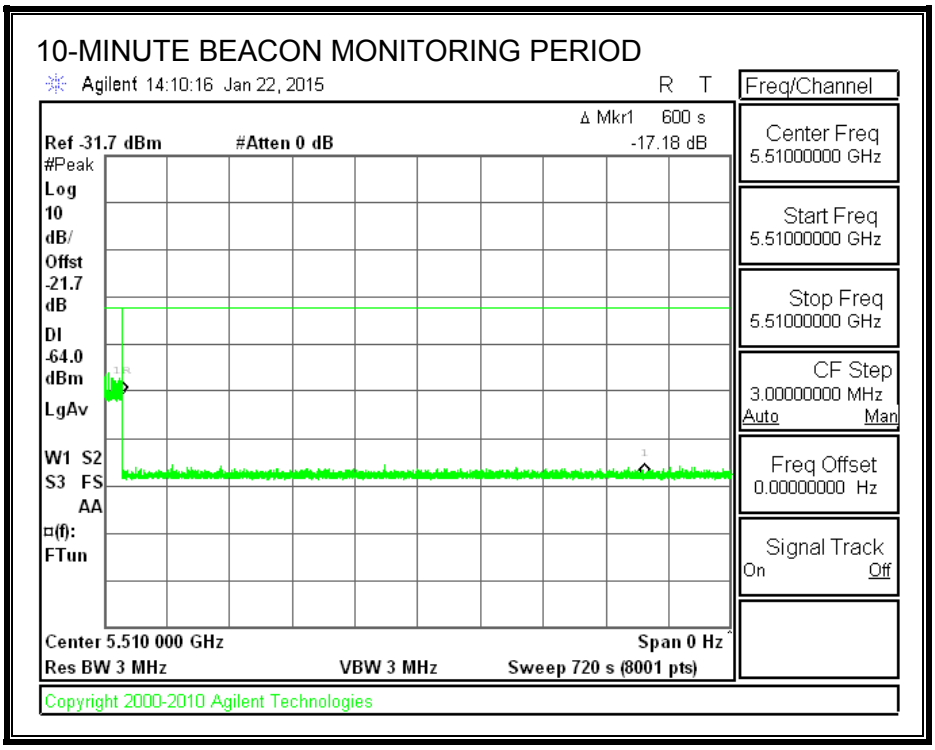
11.3.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.



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