TEST REPORT

Report Number: 102241369MPK-013B
Project Number: G102241369
February 04, 2016

Testing performed on the
WiFi/BT Module Card
Model Number: 576253
FCC ID: 2AHLA-576253
IC: 4811A-576253

to
FCC Part 15, Subpart E
RSS-247 Issue 1

For

Bosch Automotive Service Solutions LLC

Test Performed by:	Test Authorized by:
Intertek	Bosch Automotive Service Solutions LLC
1365 Adams Court	655 Eisenhower Dr.
Menlo Park, CA 94025 USA	Owatonna, MN 55060 USA

Prepared by: _____ **Date:** February 04, 2016
Anderson Soungpanya

Reviewed by: _____ **Date:** February 04, 2016
Krishna K Vemuri

VERIFICATION OF COMPLIANCE
Report No. 102241369MPK-013B

Verification is hereby issued to the named APPLICANT and is VALID ONLY for the equipment identified hereon for use under the rules and regulations listed below.

Equipment Under Test:	WiFi/BT Module Card
Trade Name:	Bosch Automotive Service Solutions LLC
Model No.:	576253
Serial No.:	MPK1511100953-001
Applicant:	Bosch Automotive Service Solutions LLC
Contact:	Eric Vande Zande
Address:	655 Eisenhower Dr. Owatonna, MN 55060
Country	USA
Tel. Number:	(507) 455-4437
Email:	eric.vandezande@us.bosch.com
Applicable Regulation:	FCC Part 15, Subpart E RSS-247 Issue 1
Date of Test:	November 03, 2015 to January 13, 2016

We attest to the accuracy of this report:

Anderson Soungpanya
EMC Project Engineer

Krishna K Vemuri
EMC Senior Staff Engineer

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1.0 Introduction

1.1 Summary of Tests

Test	Reference FCC	Reference RSS-247	Result
26 dB Emission Band width and 99% Occupied Bandwidth	15.407(a)(1)(2)(3)	RSS-247, 6.2.1	Complies
Conducted Output Power	15.407(a)(1)(2)(3)	RSS-247, 6.2.1	Complies
Peak Power Spectral Density	15.407(a)(1)(2)(3)	RSS-247, 6.2.1	Complies
Undesirable Emissions	15.407(b)(1-8)	RSS-247, 6.2.1	Complies
Transmitter Radiated Emissions	15.407(b)(1-8) 15.209, 15.205	RSS-247, 6.2.1	Complies
Frequency stability	15.407(g)	RSS-Gen	Complies
Transmit power control (TPC)	15.407(h)(1)	RSS-247, 6.2.1	NA, EUT is less 250mW EIRP
Radar Detection Function of Dynamic Frequency Selection (DFS)	15.407(h)(2)	RSS-247, 6.3	Complies
Antenna Requirement	15.203	RSS-Gen	Complies. The EUT uses internal antenna and a unique connector

EUT receive date: October 19, 2015
EUT receive condition: The pre-production version of the EUT was received in good condition with no apparent damage. As declared by the Applicant, it is identical to the production units.
Test start date: November 03, 2015
Test completion date: January 13, 2016
The test results in this report pertain only to the item tested.

2.0 General Description

2.1 Product Description

Bosch Automotive Service Solutions LLC supplied the following description of the EUT:

This WiFi/BT Card is utilized in various automotive diagnostic equipment. One main function is for WiFi connections of the diagnostic equipment to WiFi Access Points. It may also be used to connect two diagnostic devices together in WiFi Direct mode. The BT is used to pair with Multi-Media equipment in vehicles for diagnostic purposes. It may also be used to pair with other BT devices as required.

The information about the 5GHz radio, installed in the model 576253, is presented below.

Applicant	Bosch Automotive Service Solutions LLC
Model No.	576253
FCC ID	2AHLA-576253
IC	4811A-576253
Use of Product	WIFI Module (Client without radar detection)
Rated RF Output	15.87 dBm
Frequency Range	5250 – 5350 MHz
Type of modulation	OFDM
Antenna(s) & Gain	YAGEO - ANTX150P111B24553; Internal Antenna, 3.4 dBi peak gain Taoglas Antenna Solution - FXP.840.07.0055B; Internal Antenna, 2.5 dBi peak gain
Manufacturer Name & Address	Bosch Automotive Service Solutions LLC 655 Eisenhower Dr. Owatonna, MN 55060 USA

The EUT supports the following configurations:

Number	Frequency, MHz	802.11 a/n/ac 20MHz Channels		802.11 n/ac 40MHz Channels		802.11 ac 80MHz Channels	
52	5260	√	X				
54	5270			√	X		
56	5280	√					
58	5290					√	X
60	5300	√	X				
62	5310			√	X		
64	5320	√	X				

List of channels:
√ - available
X - tested

2.2 Related Submittal(s) Grants

None.

2.3 Test Methodology

Antenna conducted measurements were performed according to the FCC documents “Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E” (789033 D02 General U-NII Test Procedures New Rules v01r01).

Both AC mains line-conducted and radiated emissions measurements were performed according to the procedures in ANSI C63.4. Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the **"Data Sheet"** of this Application.

All other measurements were made in accordance with the procedures in part 2 of CFR 47.

2.4 Test Facility

The test site used to collect the radiated data is site 1 (10-m semi-anechoic chamber). This test facility and site measurement data have been fully placed on file with the FCC, IC and A2LA accredited.

2.5 Measurement Uncertainty

Compliance with the limits was based on the results of the measurements and doesn’t take into account the measurement uncertainty.

Estimated Measurement Uncertainty

Measurement	Expanded Uncertainty (k=2)		
	0.15 MHz – 1 GHz	1 GHz – 6 GHz	> 6 GHz
RF Power and Power Density – antenna conducted	1.1 dB	1.5 dB	–
Unwanted emissions - antenna conducted	1.2 dB	1.7 dB	2.0 dB
Bandwidth – antenna conducted	50 Hz	100 Hz	–
Radiated emissions	4.2 dB	5.4 dB	
AC mains conducted emissions	2.4 dB	-	-

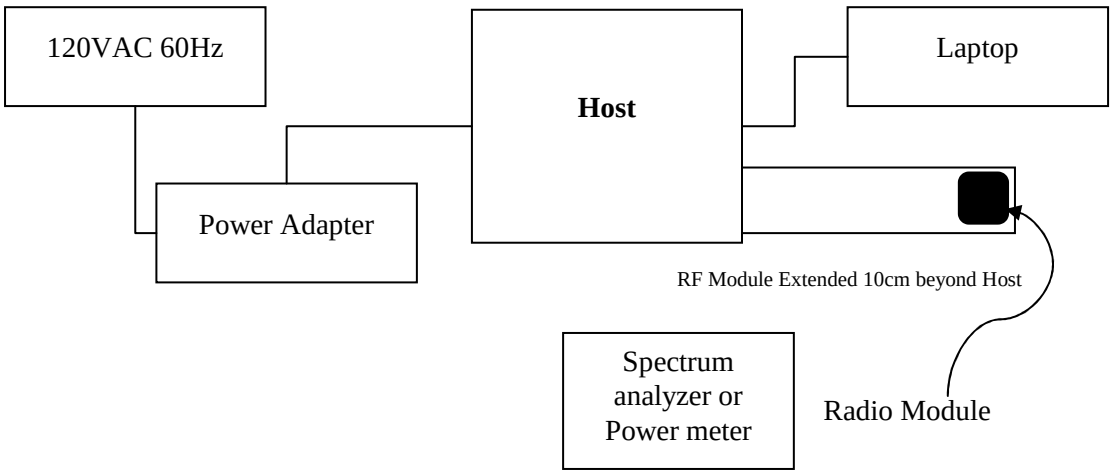
3.0 System Test Configuration

3.1 Support Equipment

Description	Manufacturer	Model No./ Part No.
Power Adapter	I.T.E Power Supply	PW172KB1500B02
Laptop	Acer	Aspire E1-571-6811

3.2 Block Diagram of Test Setup

Antenna was removed and co-axial connector with a cable was installed for Conducted Measurements. 50Ohm Load was used for Radiated Measurements.



S = Shielded	**F** = With Ferrite
U = Unshielded	**m** = Meter

3.3 Justification

Preliminary testing was performed for all modulation/data rate modes. The following modes, in which the highest power was detected, were selected for final measurements:

OFDM, 6MB/s – for 802.11a
OFDM, MCS0 – for 802.11n/ac 20MHz
OFDM, MCS0 – for 802.11n/ac 40MHz
OFDM, MCS0 – for 802.11ac 80MHz

3.4 Mode of Operation During Test

During transmitter testing, the transmitter was setup to transmit continuously using the RF power setting below. Their corresponding output power in dBm can be found in section 4.2 of this report.

Ch.	Freq.	802.11a	802.11n 20	802.11n 40	802.11ac 80
	MHz	Settings	Settings	Settings	Settings
52	5260	17	17	--	---
54	5270	--	--	15	---
58	5290	---	---	---	15
60	5300	17	17	----	---
62	5310	--	--	14	---
64	5320	16	16	---	---

3.5 Modifications required for Compliance

Intertek installed no modifications during compliance testing in order to bring the product into compliance.

3.6 Additions, deviations and exclusions from standards

No additions, deviations or exclusion have been made from standard.

4.0 Measurement Results

4.1 Emission Bandwidth and 99% Occupied Bandwidth

15.407(a)(1)(2)

4.1.1 Procedure

The Procedure, described in the FCC Publication 789033 D02 General U-NII Test Procedures New Rules v01r01, was used. Specifically Section C for Emission Bandwidth and Minimum Emission Bandwidth for the band 5.725-5.850 GHz. Section D was used for 99% Occupied Bandwidth.

The antenna port of the EUT was connected to the input of a spectrum analyzer (SA). For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier.

The Occupied bandwidth was measured using the build-in spectrum analyzer facility for 99% power bandwidth measurement.

Tested By:	Anderson Soungpanya
Test Date:	November 9, 2015

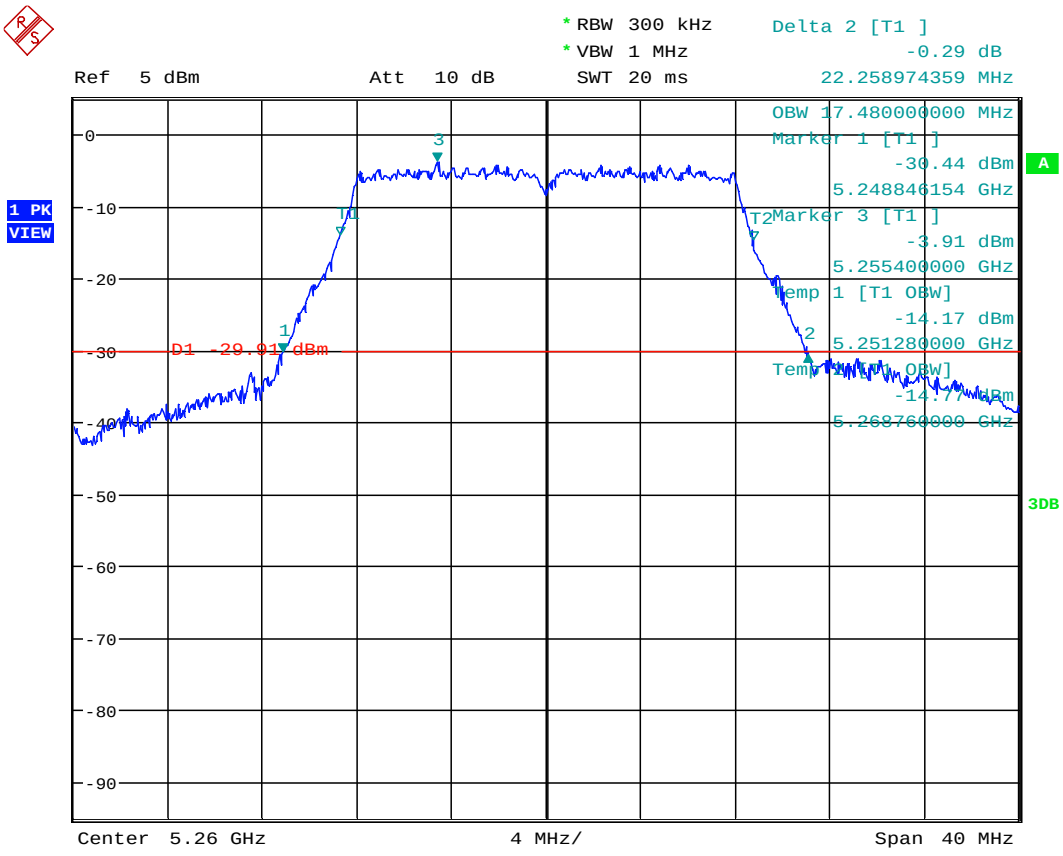
4.1.2 Test Result

Refer to the following plots for the test result:

Mode	Channel	Frequency, MHz	26-dB Bandwidth, MHz	Occupied Bandwidth, MHz	Plot #
802.11a	52	5260	22.259	17.480	1.1
	60	5300	21.859	17.400	1.2
	64	5320	22.051	17.500	1.3
802.11n 20MHz	52	5260	22.026	18.360	1.4
	60	5300	22.060	18.380	1.5
	64	5320	22.051	18.380	1.6
802.11n 40MHz	54	5270	40.593	36.610	1.7
	62	5310	40.606	36.575	1.8
802.11ac 80MHz	58	5290	82.115	75.880	1.9

Plot 1. 1

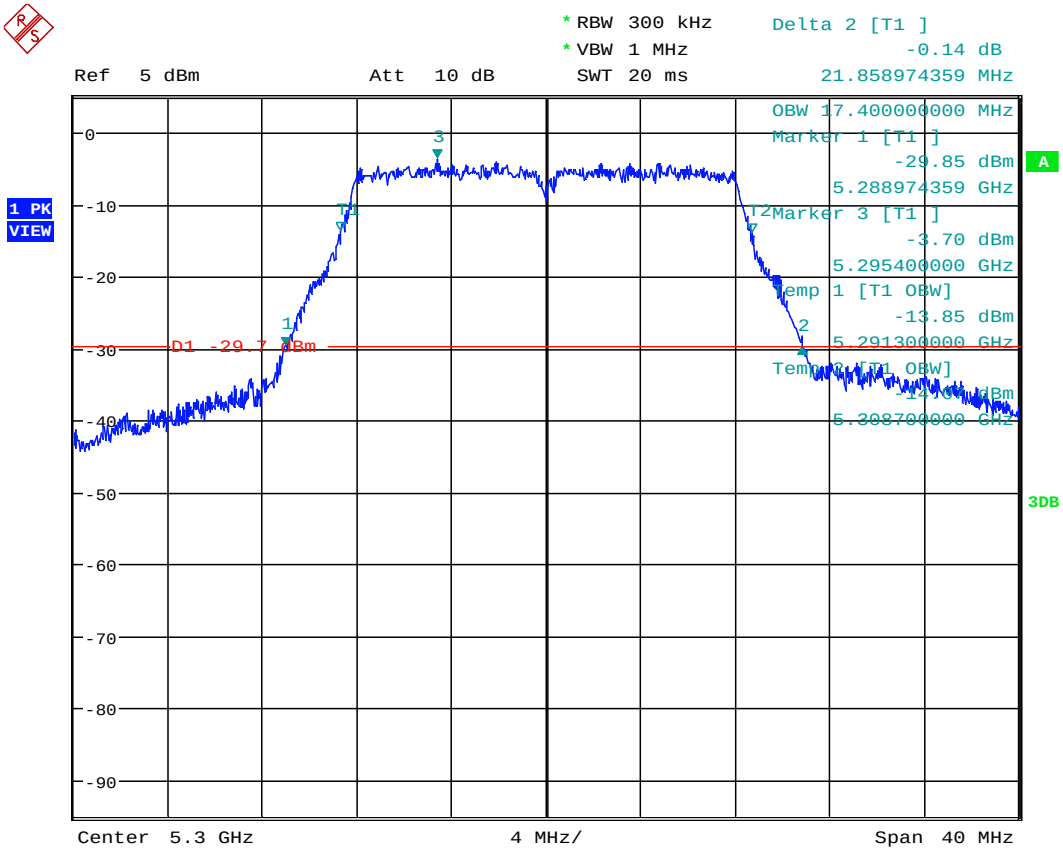
802.11a 5260MHz



Date: 9.NOV.2015 08:19:35

Plot 1. 2

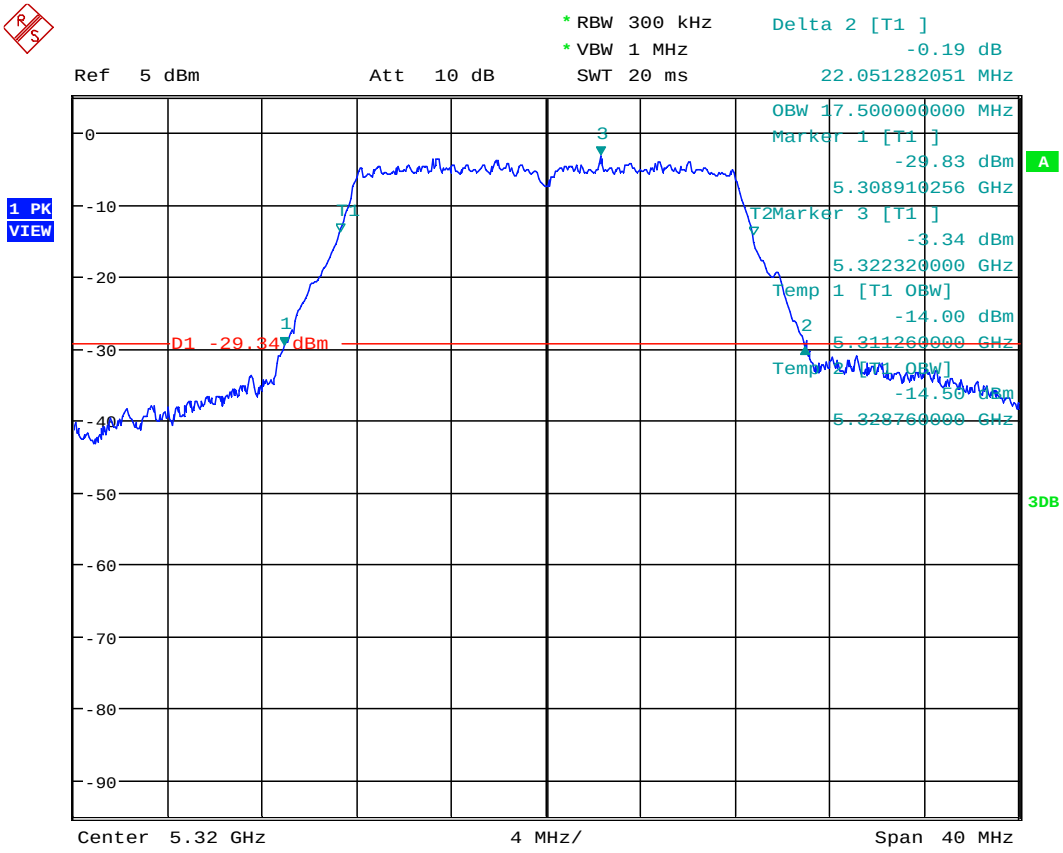
802.11a 5300MHz



Date: 9.NOV.2015 08:34:18

Plot 1. 3

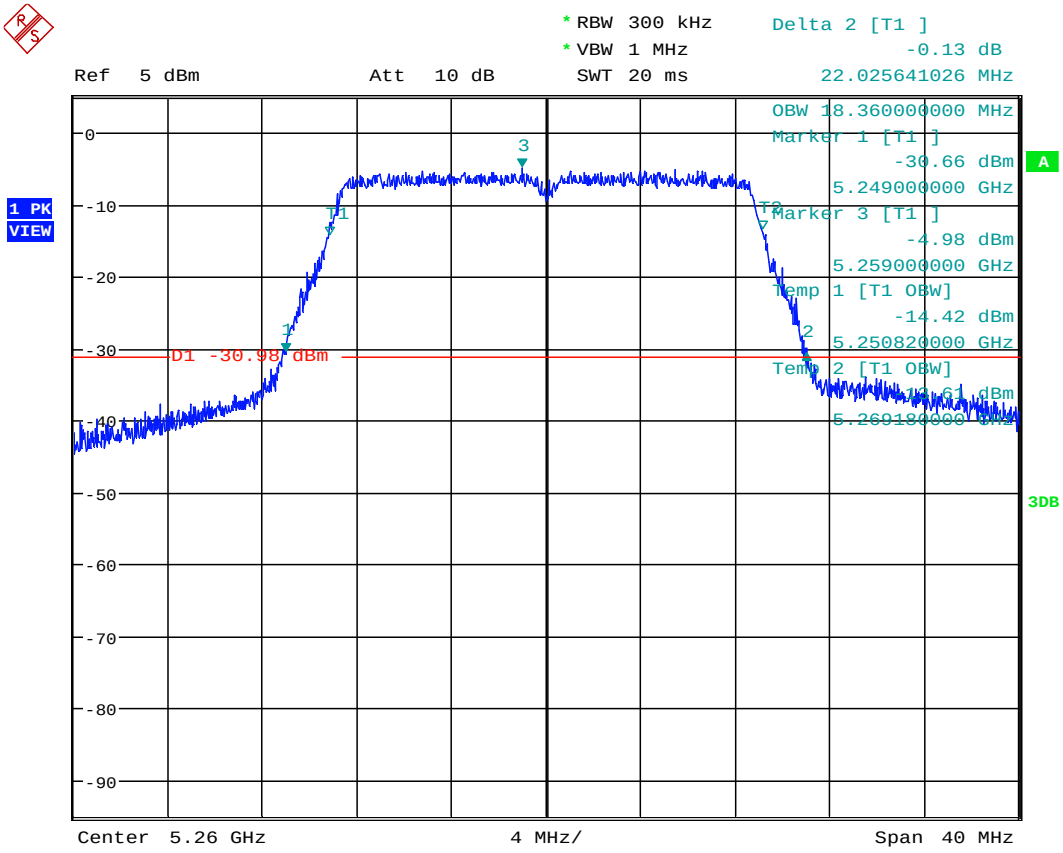
802.11a 5320MHz



Date: 9.NOV.2015 08:38:18

Plot 1. 4

802.11n 20MHz, 5260MHz



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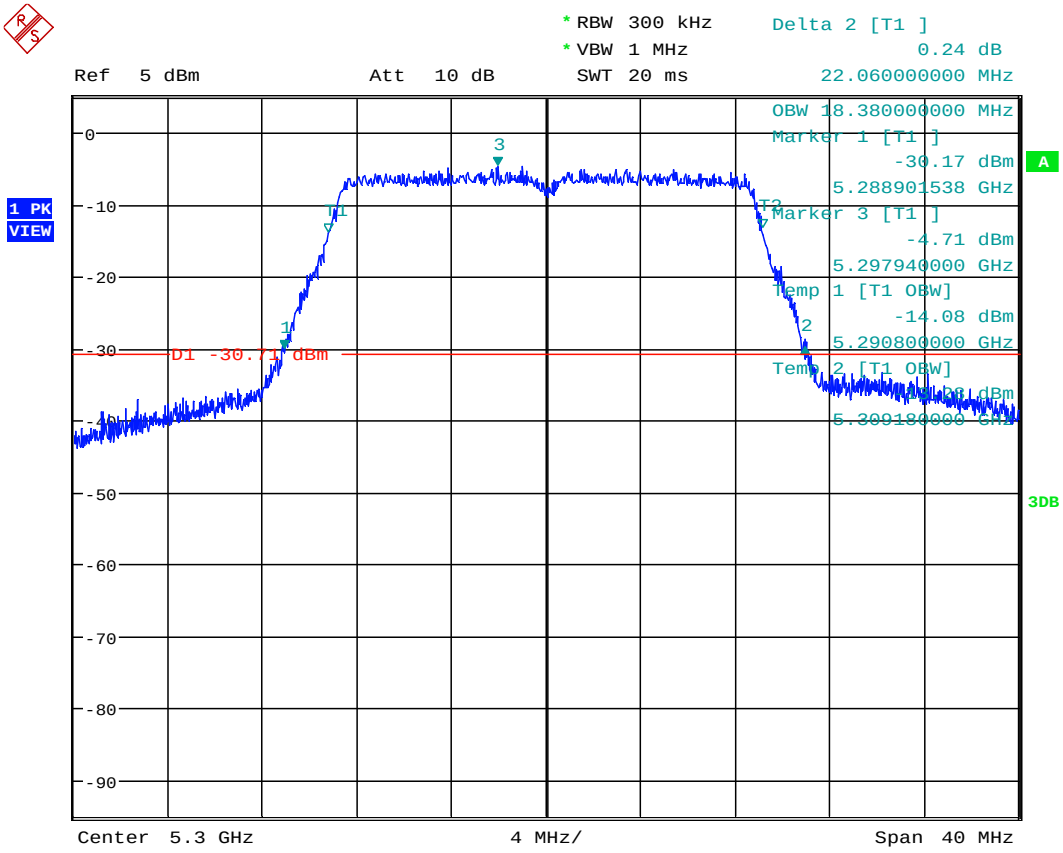
Plot 1. 5

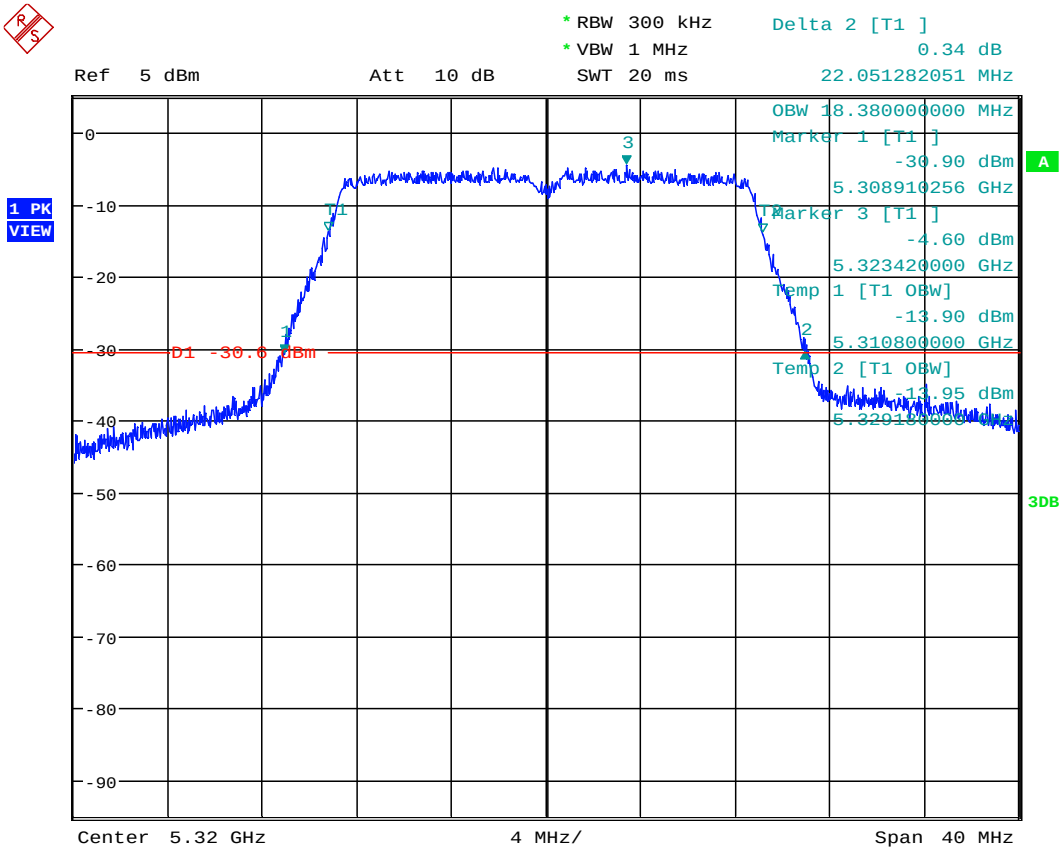
802.11n 20MHz, 5300MHz



Date: 9.NOV.2015 10:02:36

Plot 1. 6

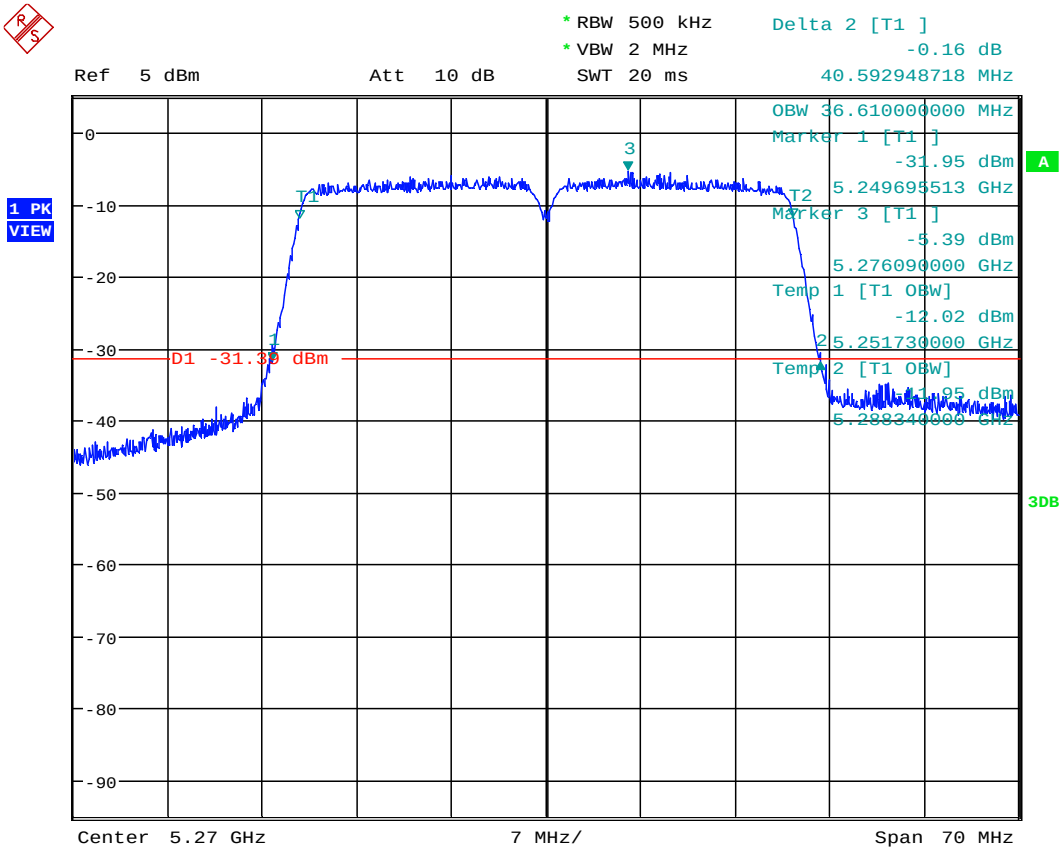
802.11n 20MHz, 5320MHz



Date: 9.NOV.2015 10:01:10

Plot 1. 7

802.11n 40MHz, 5270MHz



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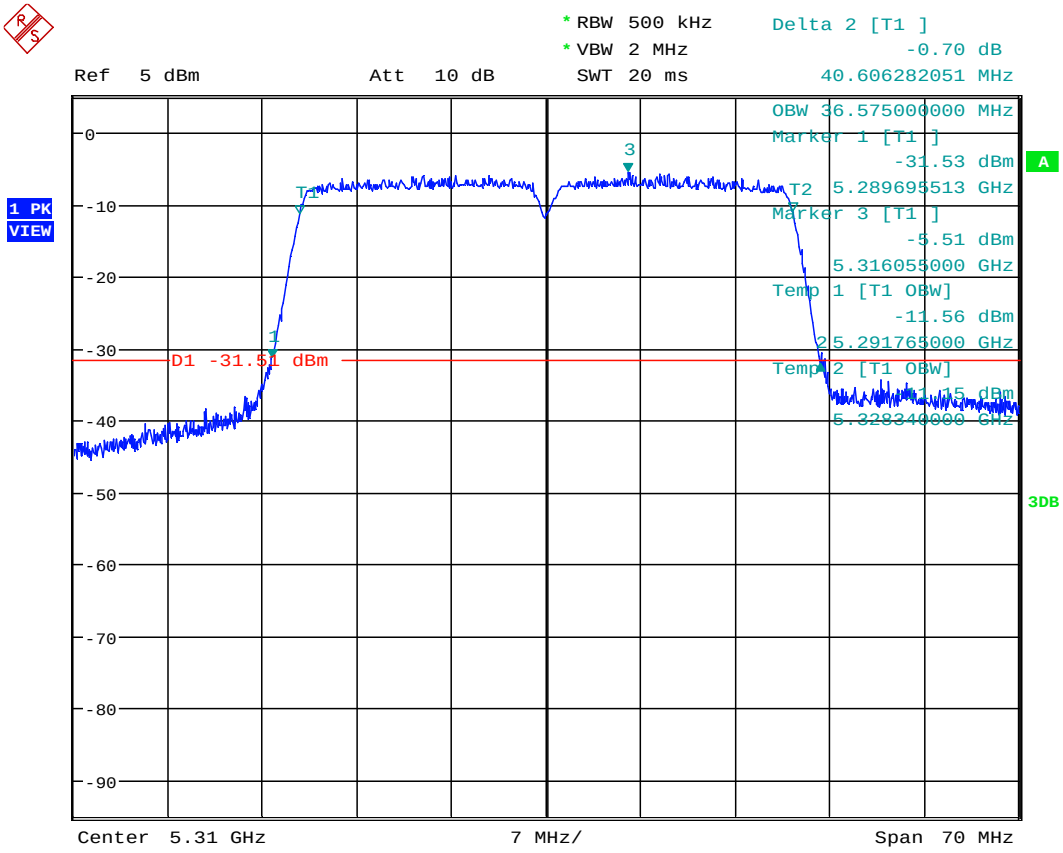
Plot 1. 8

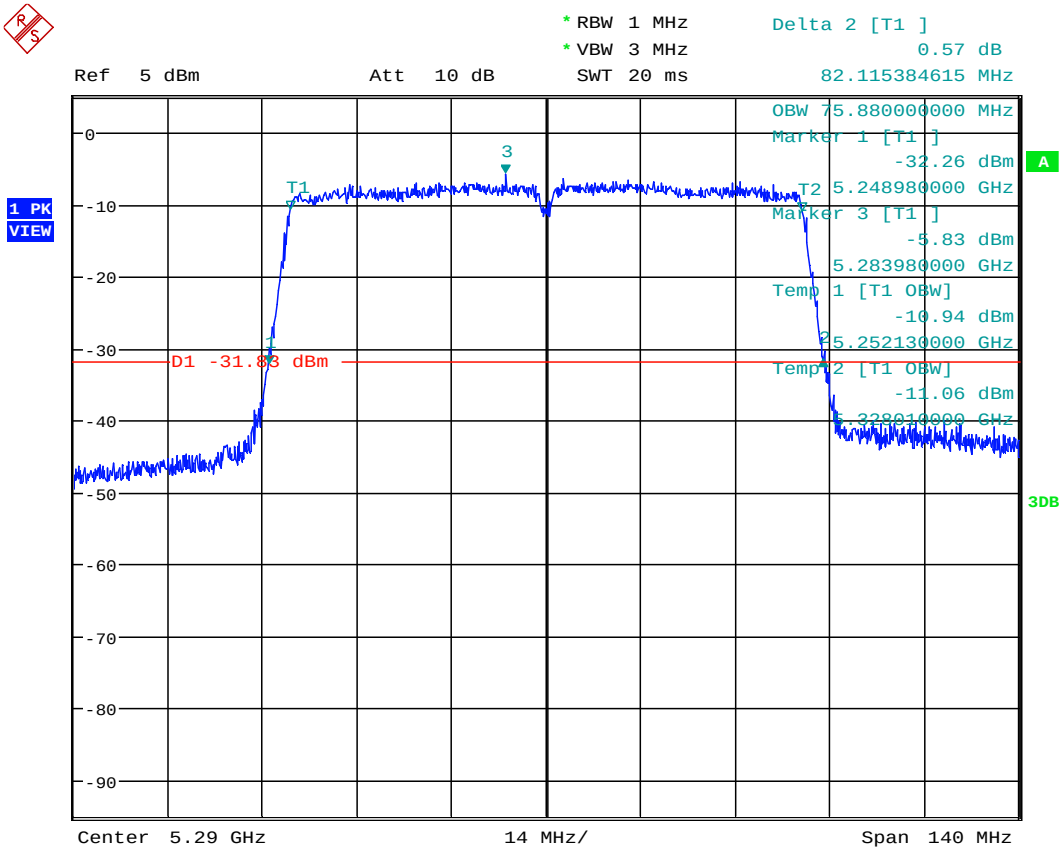
802.11n 40MHz, 5310MHz



Date: 9.NOV.2015 12:51:14

Plot 1. 9

802.11ac 80MHz, 5290MHz



Date: 9.NOV.2015 13:12:29

4.2 Maximum Conducted Output Power
FCC Rule 15.407(a)(1)(iv)

4.2.1 Requirement

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the 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.

4.2.2 Procedure

The Procedure, described in the FCC Publication 789033 D02 General U-NII Test Procedures New Rules v01r01, was used. Specifically Section E (2) (c) Method SA-1 Alternative for Maximum Conducted Output Power

The antenna port output of the EUT was connected to the input of a spectrum analyzer to measure the Maximum Conducted Transmitter Output Power.

Tested By:	Anderson Soungpanya
Test Date:	December 4-7, 2015

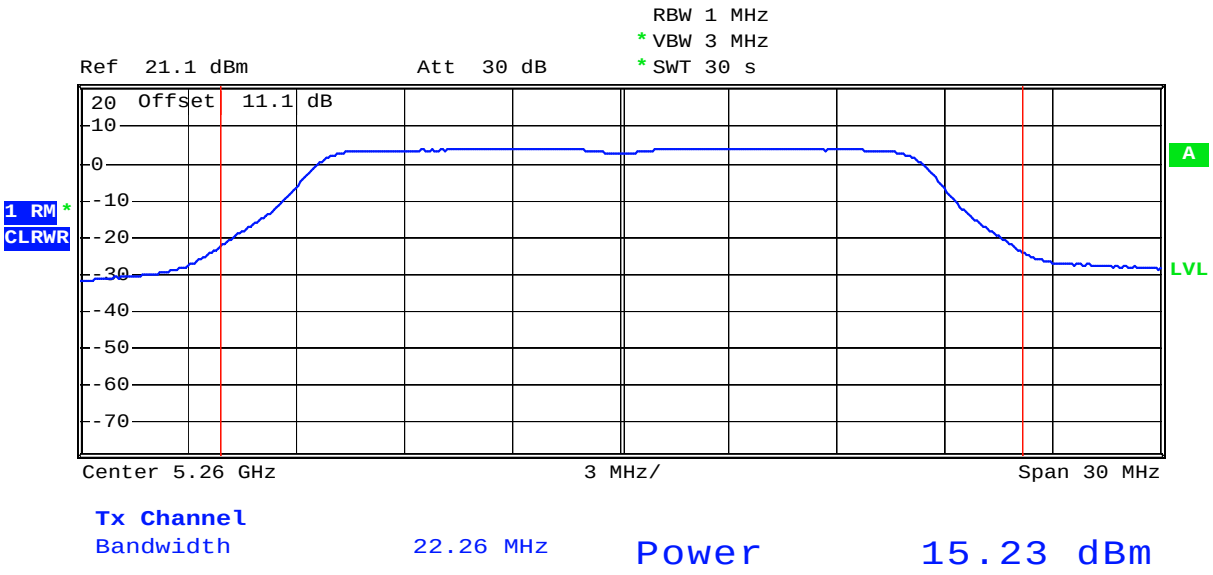
4.2.3 Test Results

Refer to the following plots for the test result:

Mode	Channel	Frequency, MHz	Conducted power (average) dBm	Conducted power Limit dBm	Plot #
802.11a	52	5260	15.23	24	2.1
	60	5300	15.13	24	2.2
	64	5320	14.96	24	2.3
802.11n 20MHz	52	5260	15.17	24	2.4
	60	5300	15.87	24	2.5
	64	5320	14.89	24	2.6
802.11n 40MHz	54	5270	12.96	24	2.7
	62	5310	12.79	24	2.8
802.11ac 80MHz	58	5290	11.69	24	2.9

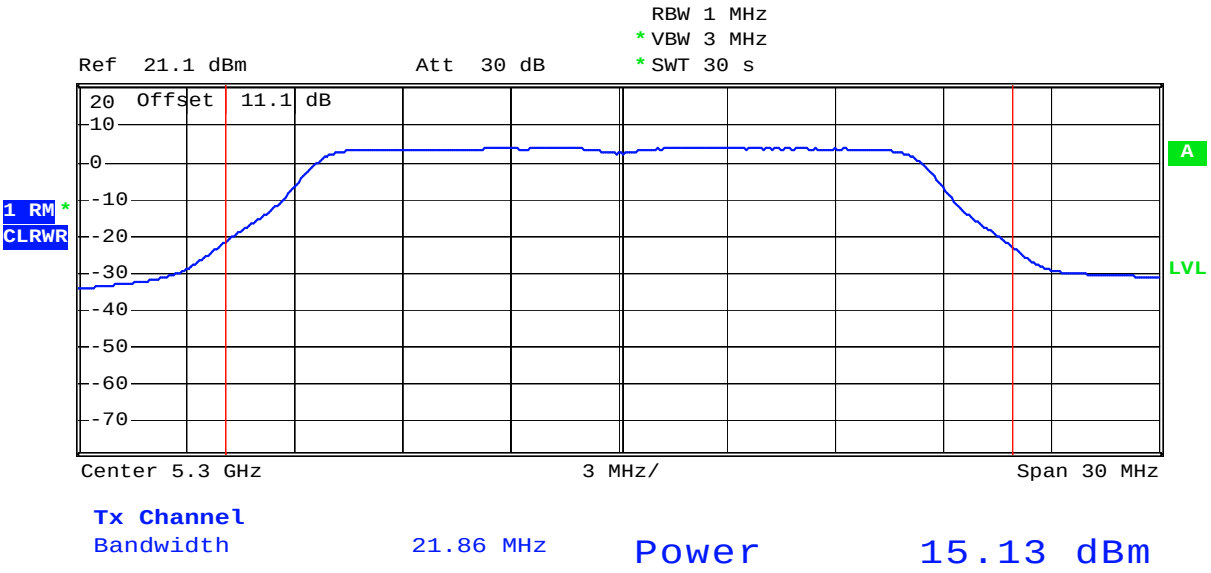
Plot 2. 1

802.11a, 5260MHz



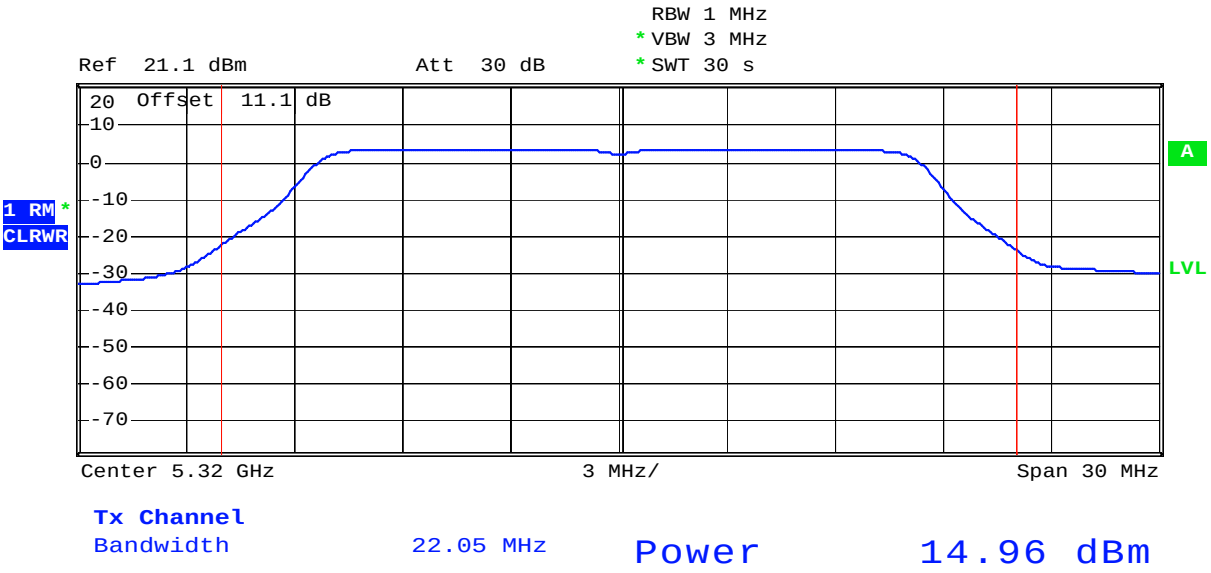
Plot 2. 2

802.11a, 5300MHz



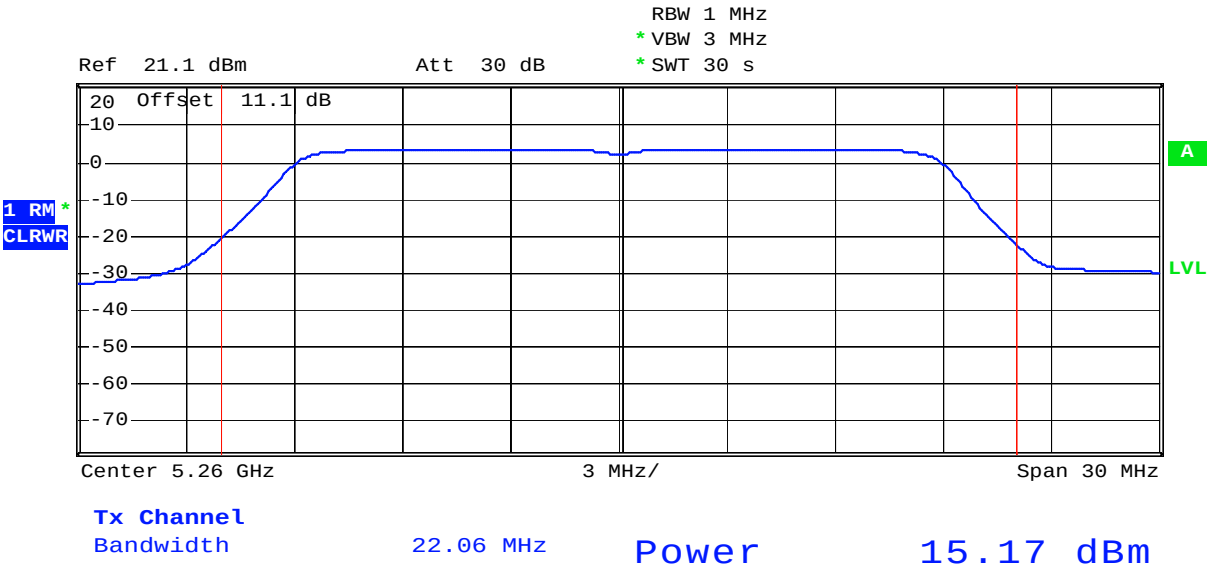
Plot 2. 3

802.11a, 5320MHz



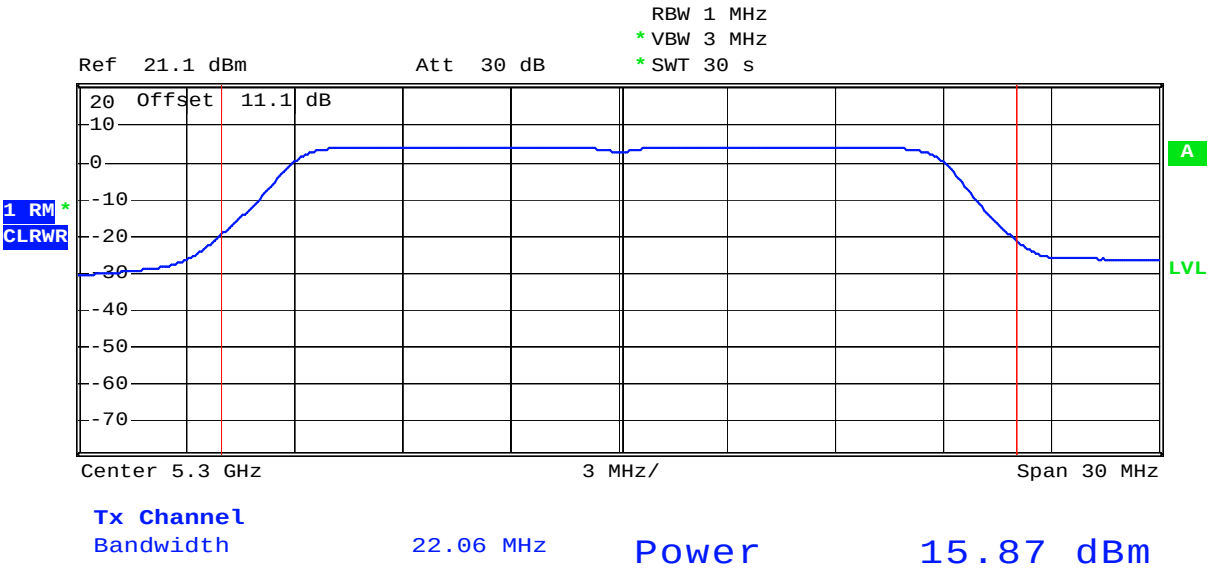
Plot 2. 4

802.11n 20MHz, 5260MHz



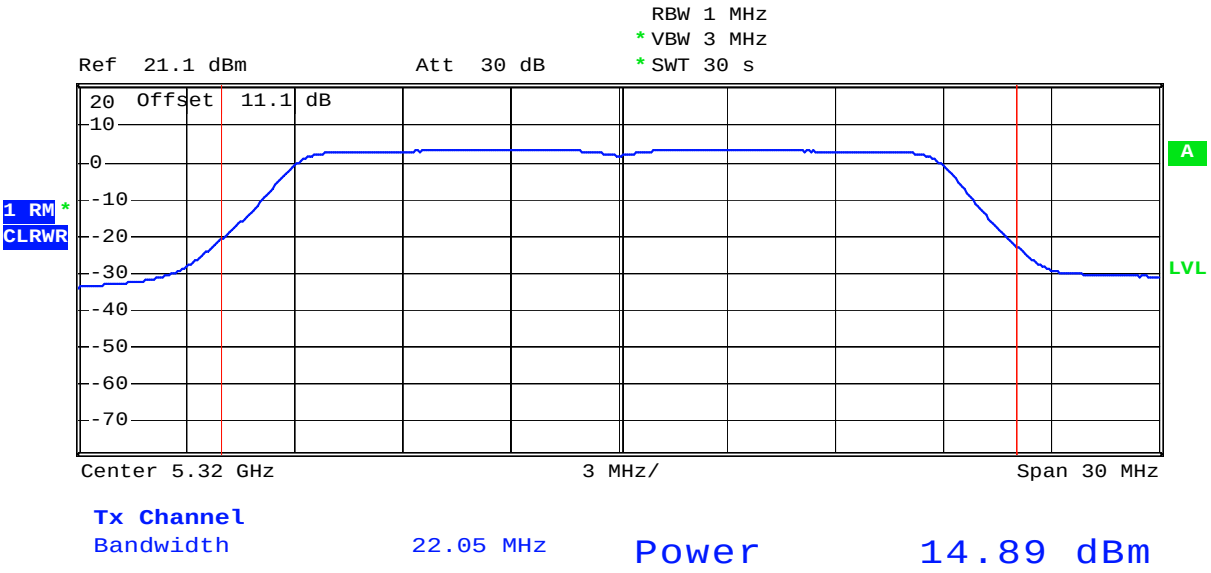
Plot 2. 5

H802.11n 20MHz, 5300MHz



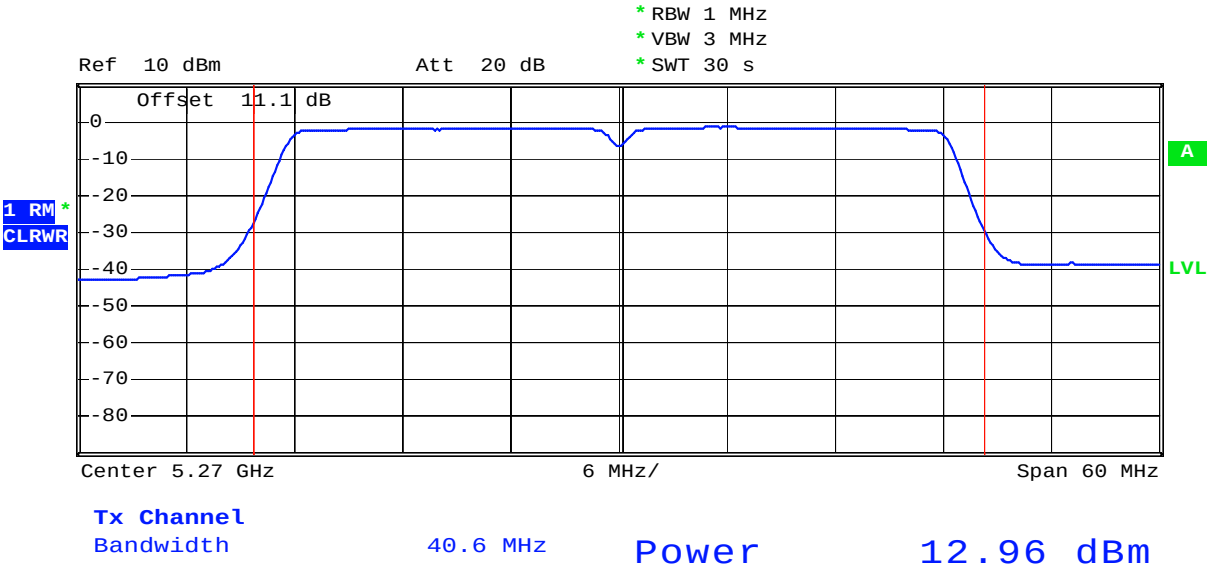
Plot 2. 6

802.11n 20MHz, 5320MHz



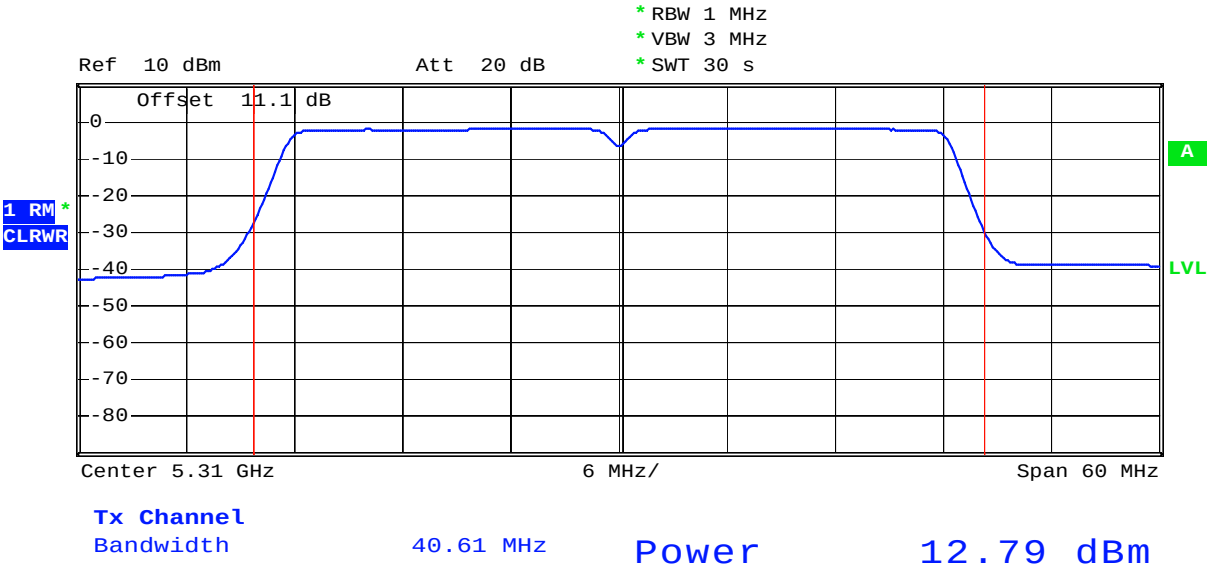
Plot 2. 7

802.11n 40MHz, 5270MHz



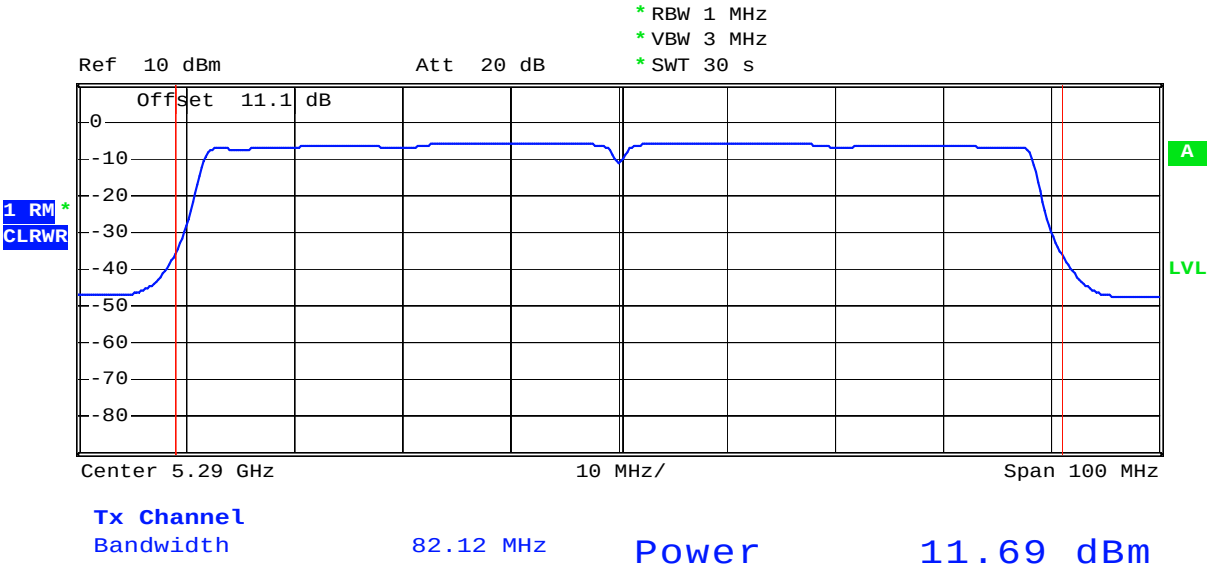
Plot 2. 8

802.11n 40MHz, 5310MHz



Plot 2. 9

H802.11ac 80MHz, 5290MHz



4.3 Peak Power Spectral Density
FCC Rule 15.407(a)(1)(iv)

4.3.1 Requirement

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the 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.

4.3.2 Procedure

Each antenna port of the EUT was connected to the input of a spectrum analyzer to measure the Peak Power Spectral Density (PPSD) and recorded.

The Procedure, described in the FCC Publication 789033 D02 General U-NII Test Procedures New Rules v01r01, was used. Specifically procedure from Section F was utilized for Maximum Power Spectral Density (PSD).

Tested By:	Anderson Soungpanya
Test Date:	December 7, 2015

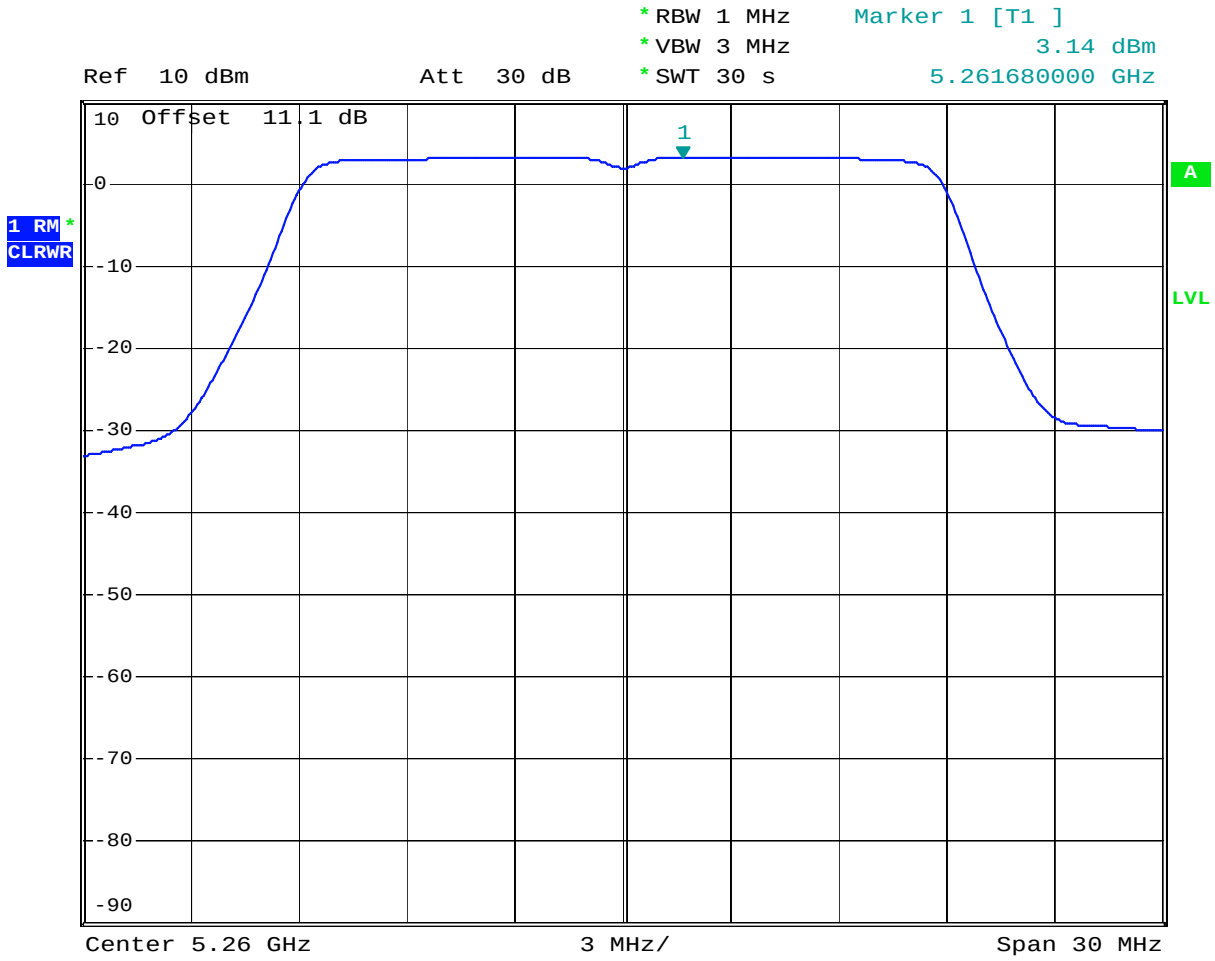
4.3.3 Test Result

Refer to the following plots for the test result:

Mode	Channel	Frequency, MHz	PSD(Peak) dBm	PSD Limit dBm	Plot #
802.11a	52	5260	3.14	11	3.1
	60	5300	3.02	11	3.2
	64	5320	2.88	11	3.3
802.11n 20MHz	52	5260	3.17	11	3.4
	60	5300	2.91	11	3.5
	64	5320	2.95	11	3.6
802.11n 40MHz	54	5270	-1.69	11	3.7
	62	5310	-1.91	11	3.8
802.11ac 80MHz	58	5290	-5.95	11	3.9

Plot 3. 10

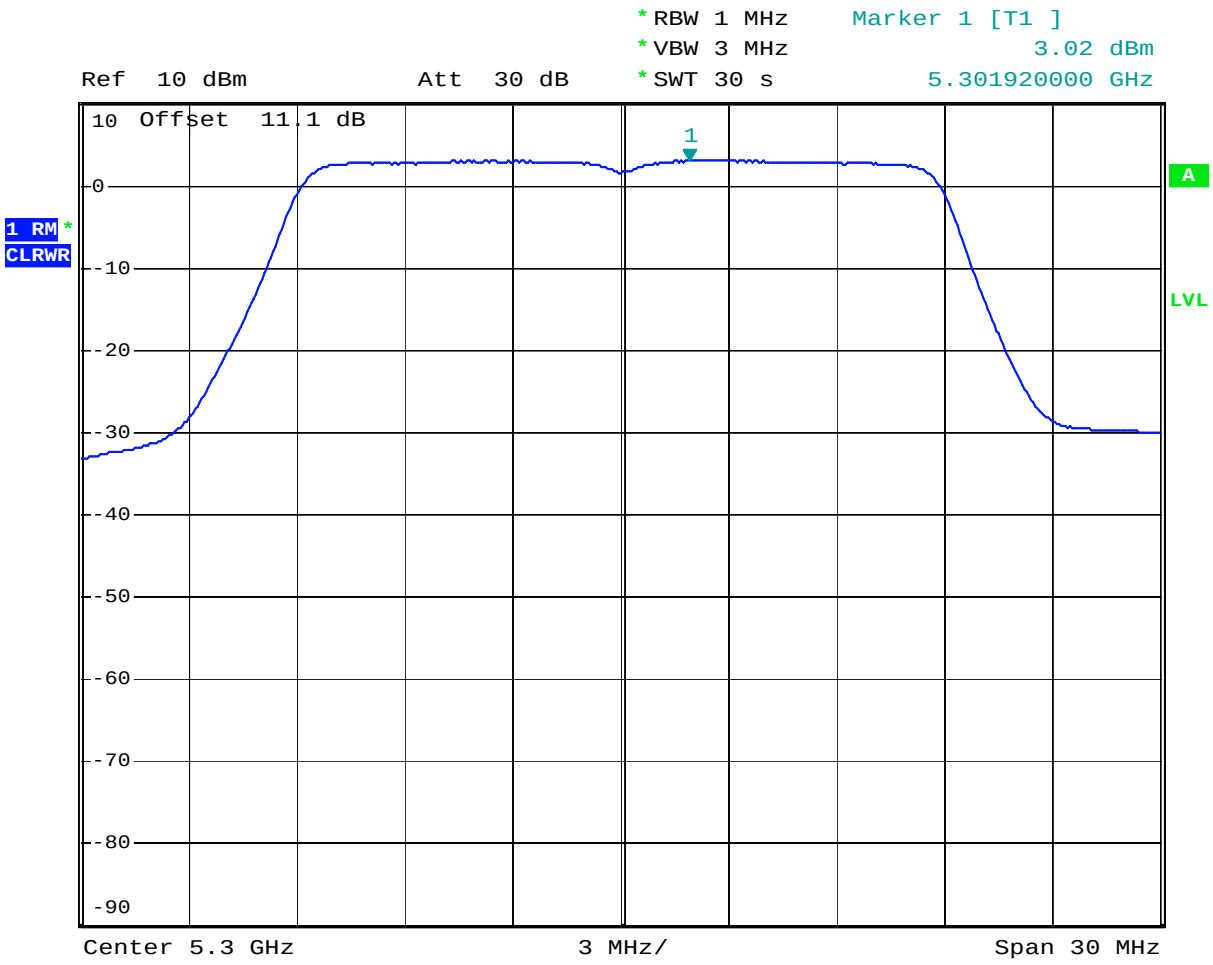
802.11a, 5260MHz



Date: 7.DEC.2015 14:28:04

Plot 3. 11

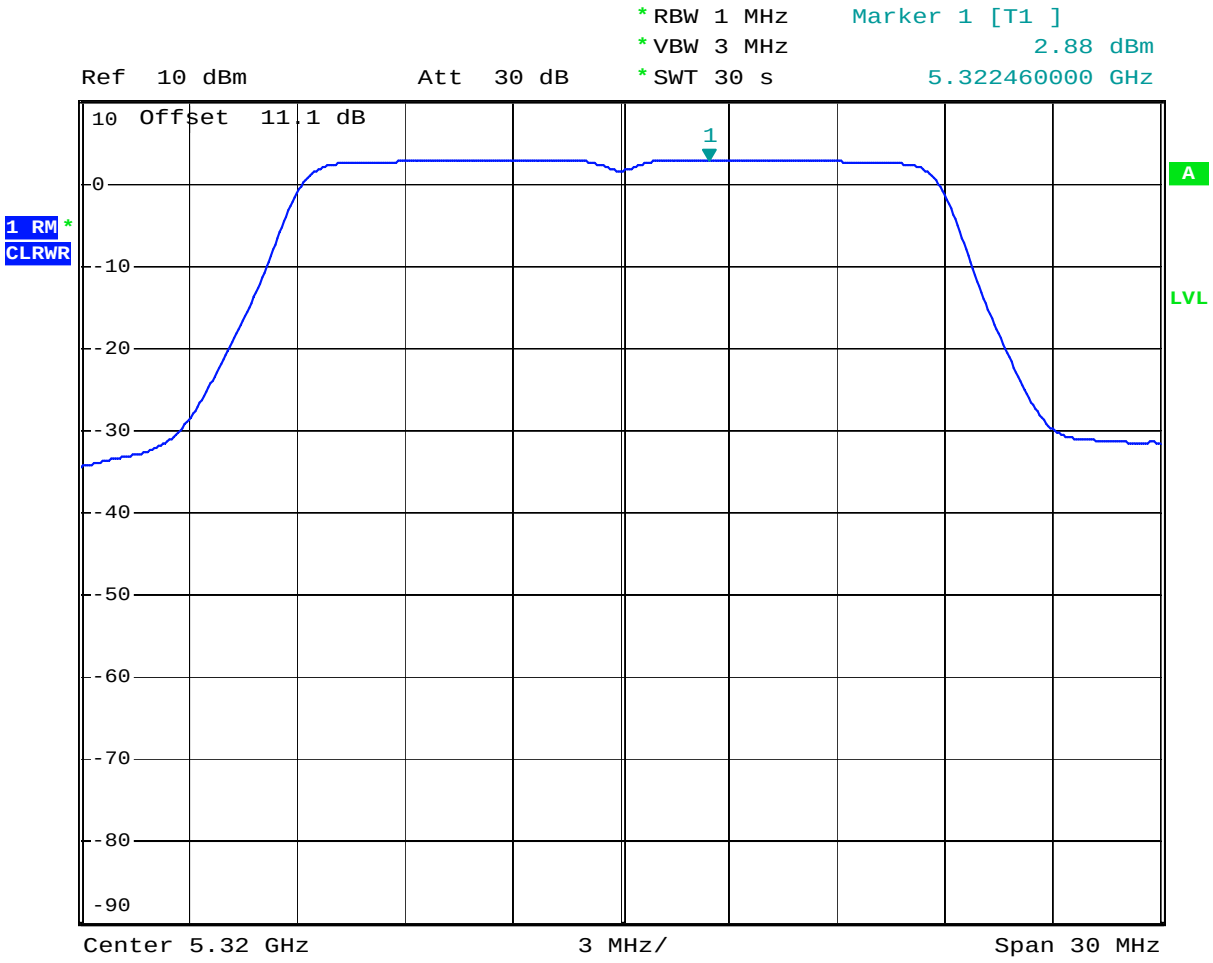
802.11a, 5300MHz



Date: 7.DEC.2015 14:32:08

Plot 3. 12

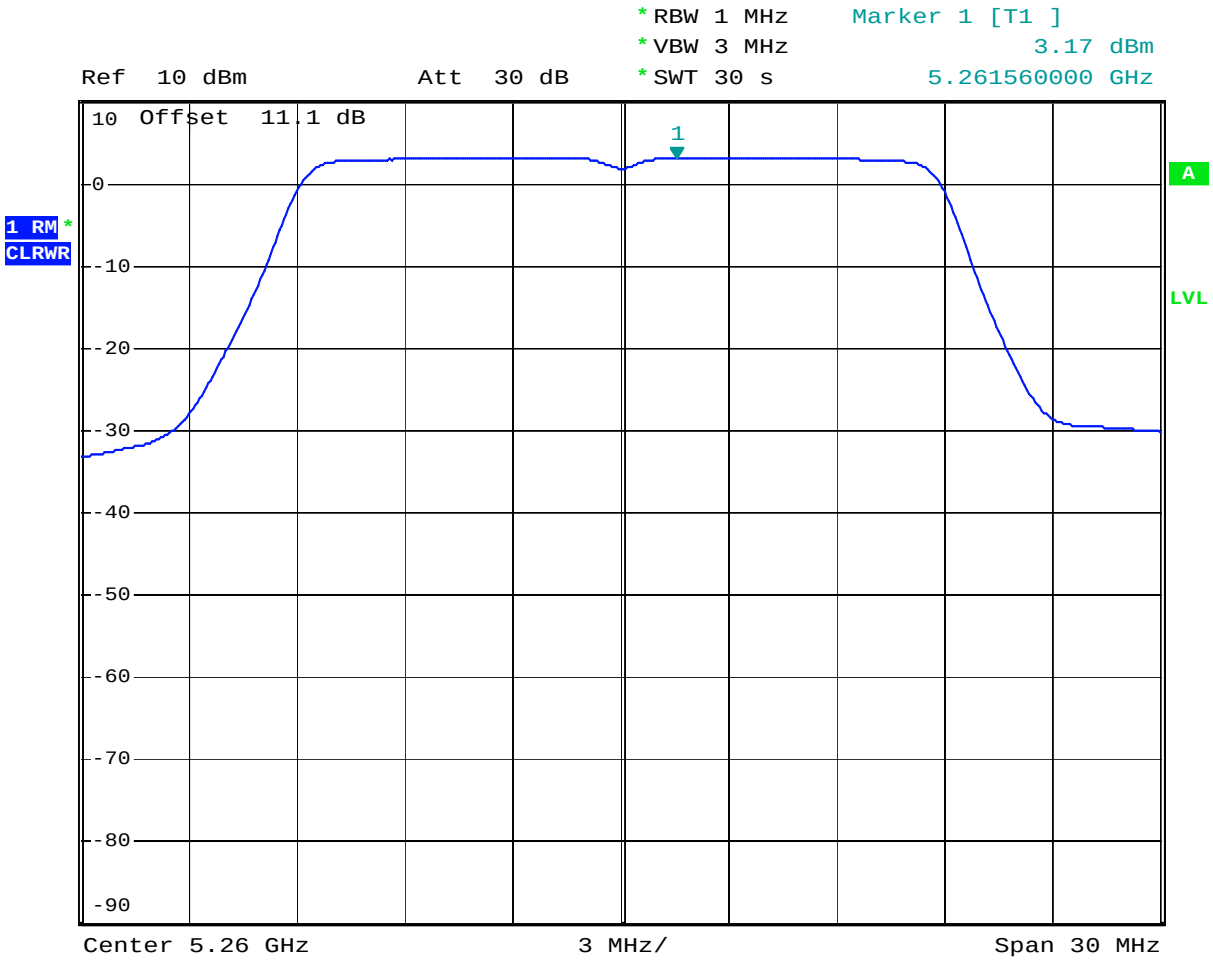
802.11a, 5320MHz



Date: 7.DEC.2015 14:34:11

Plot 3. 13

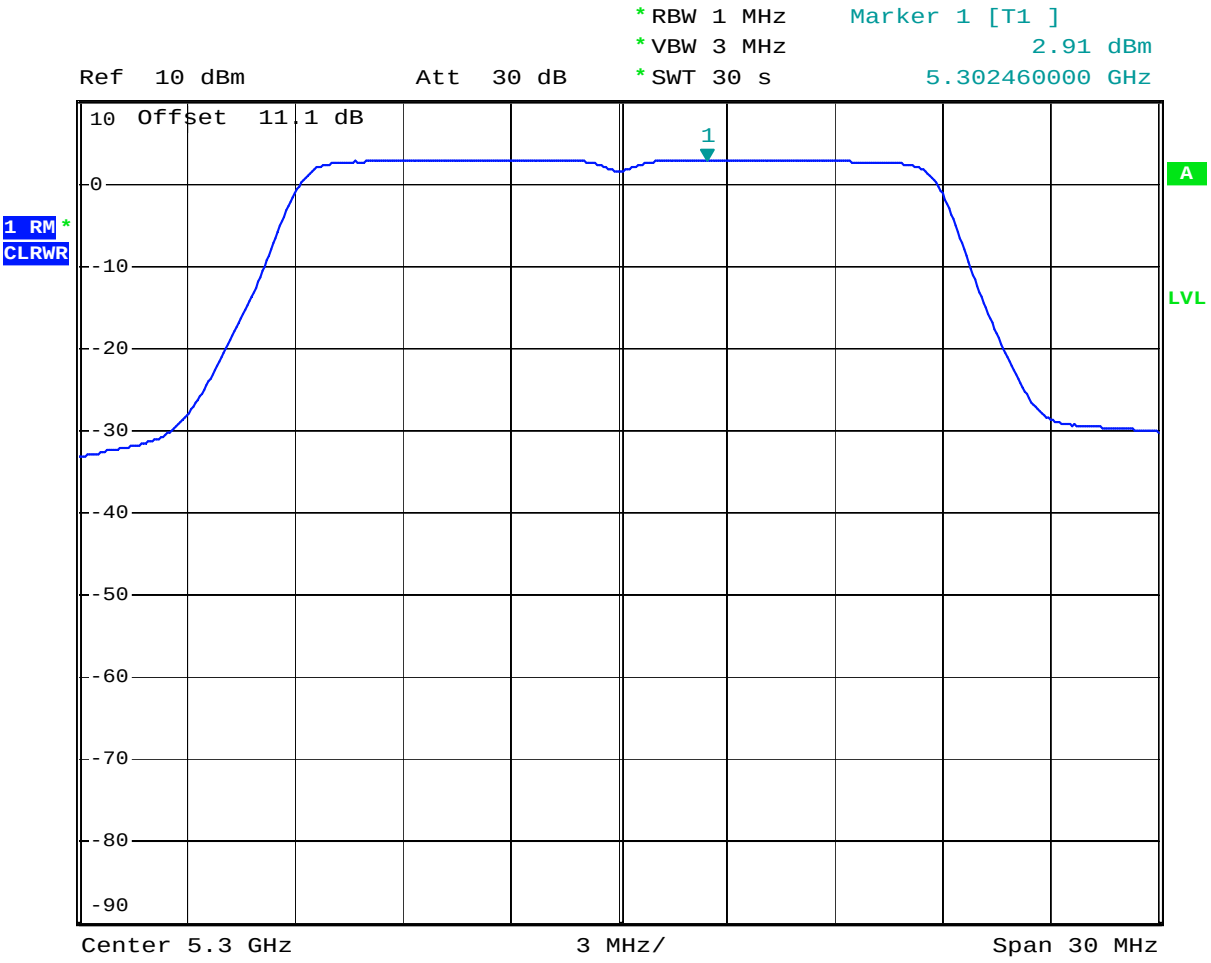
802.11n 20MHz, 5260MHz



Date: 7.DEC.2015 14:55:51

Plot 3. 14

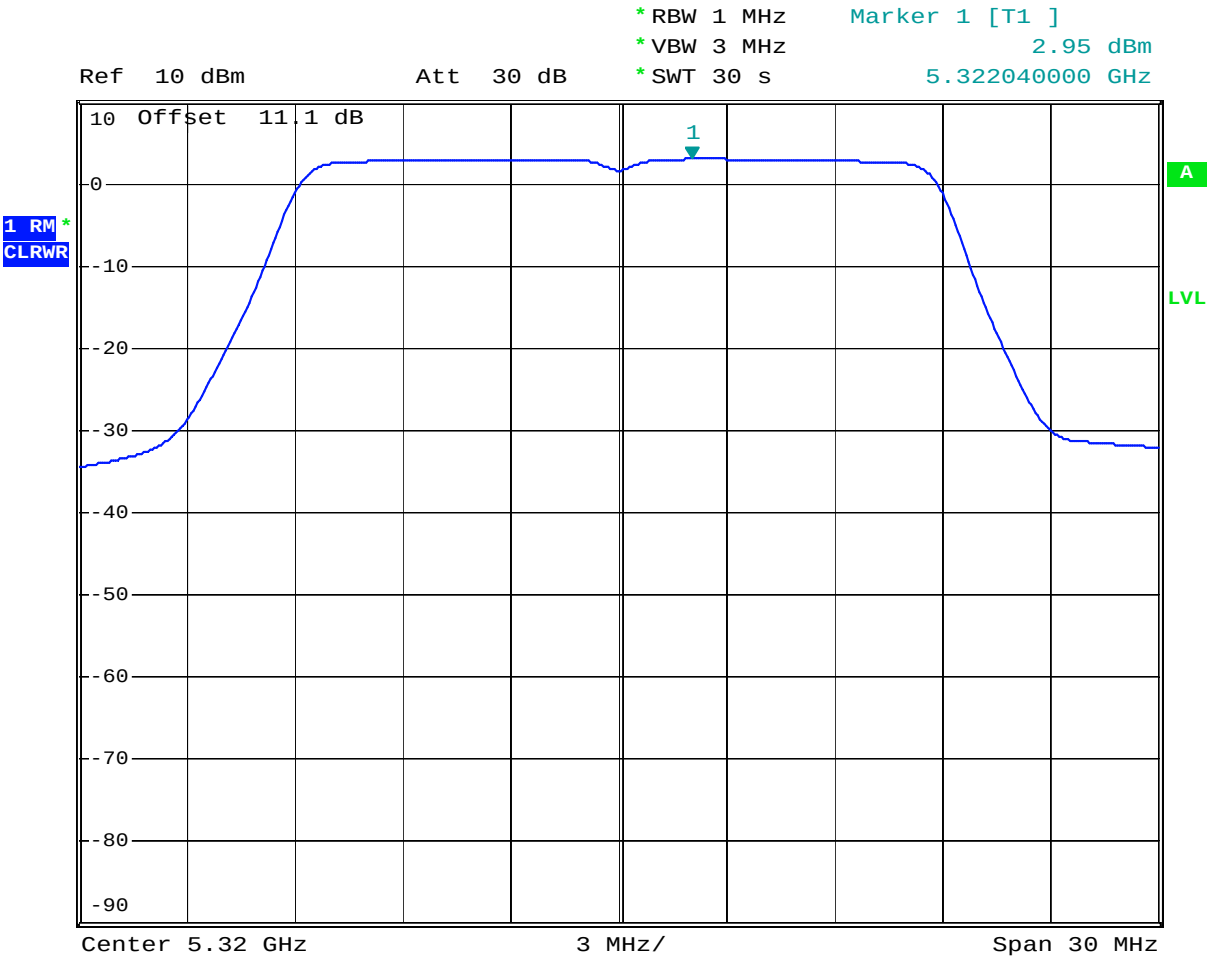
H802.11n 20MHz, 5300MHz



Date: 7.DEC.2015 14:58:13

Plot 3. 15

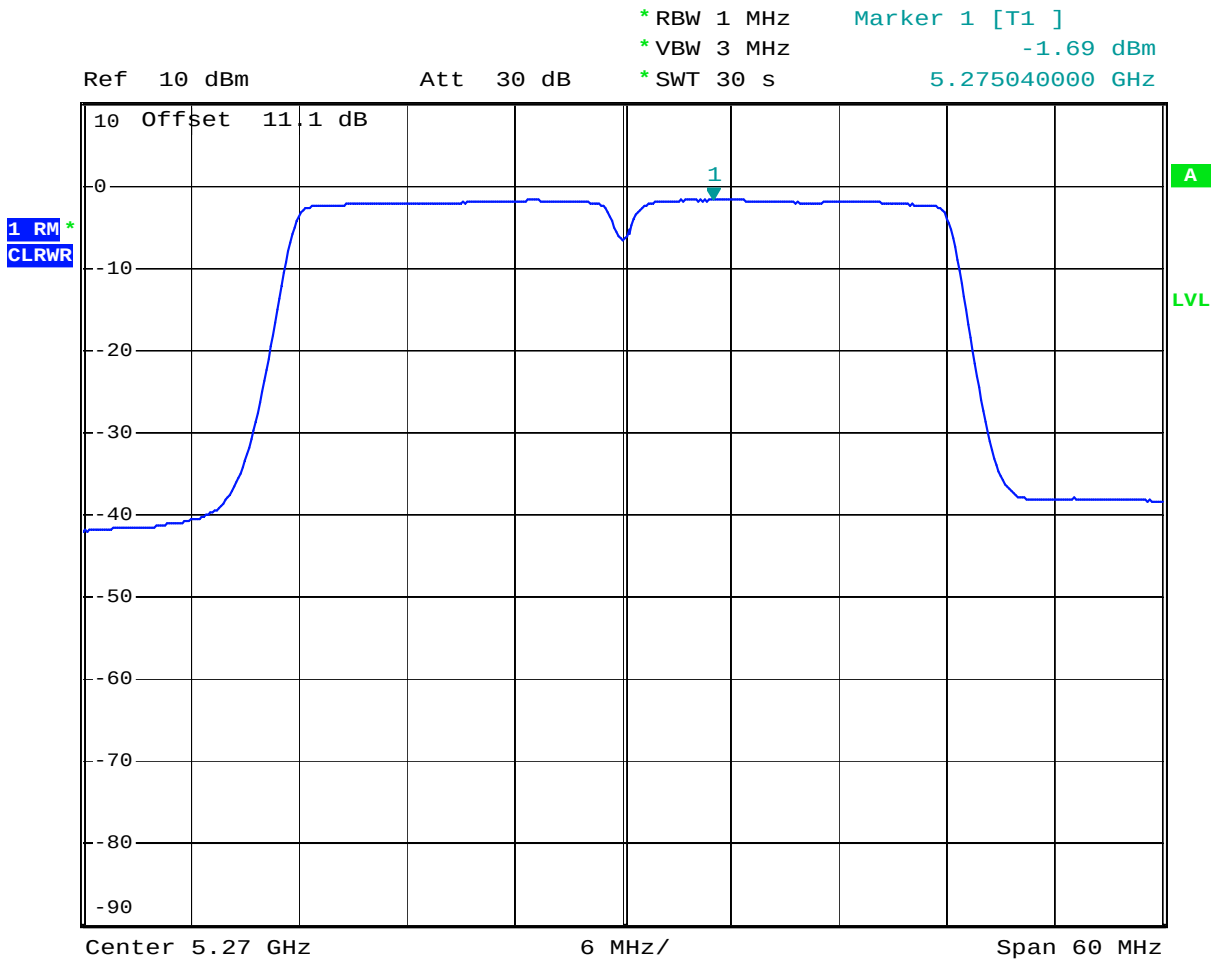
802.11n 20MHz, 5320MHz



Date: 7.DEC.2015 14:59:43

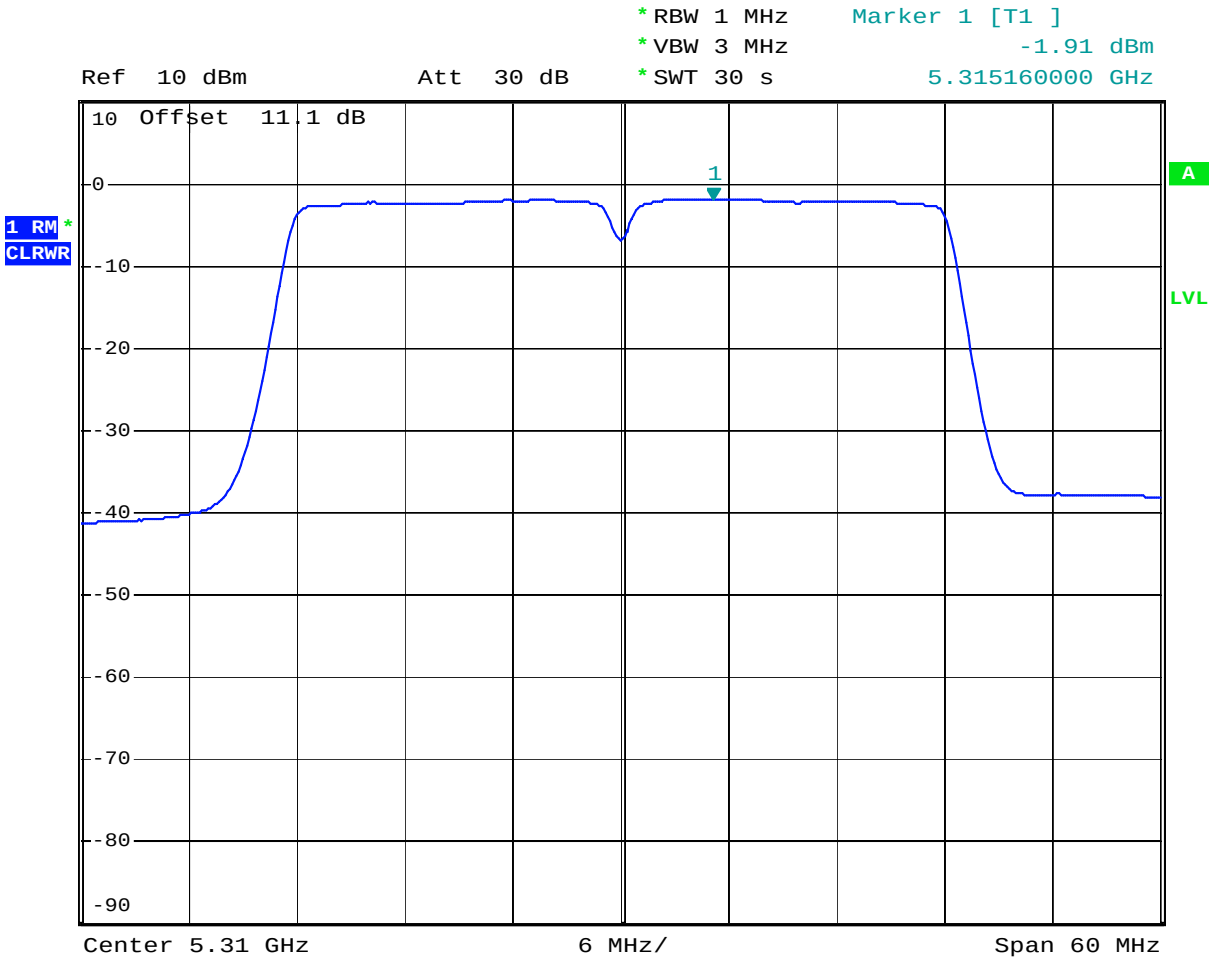
Plot 3. 16

802.11n 40MHz, 5270MHz



Plot 3. 17

802.11n 40MHz, 5310MHz



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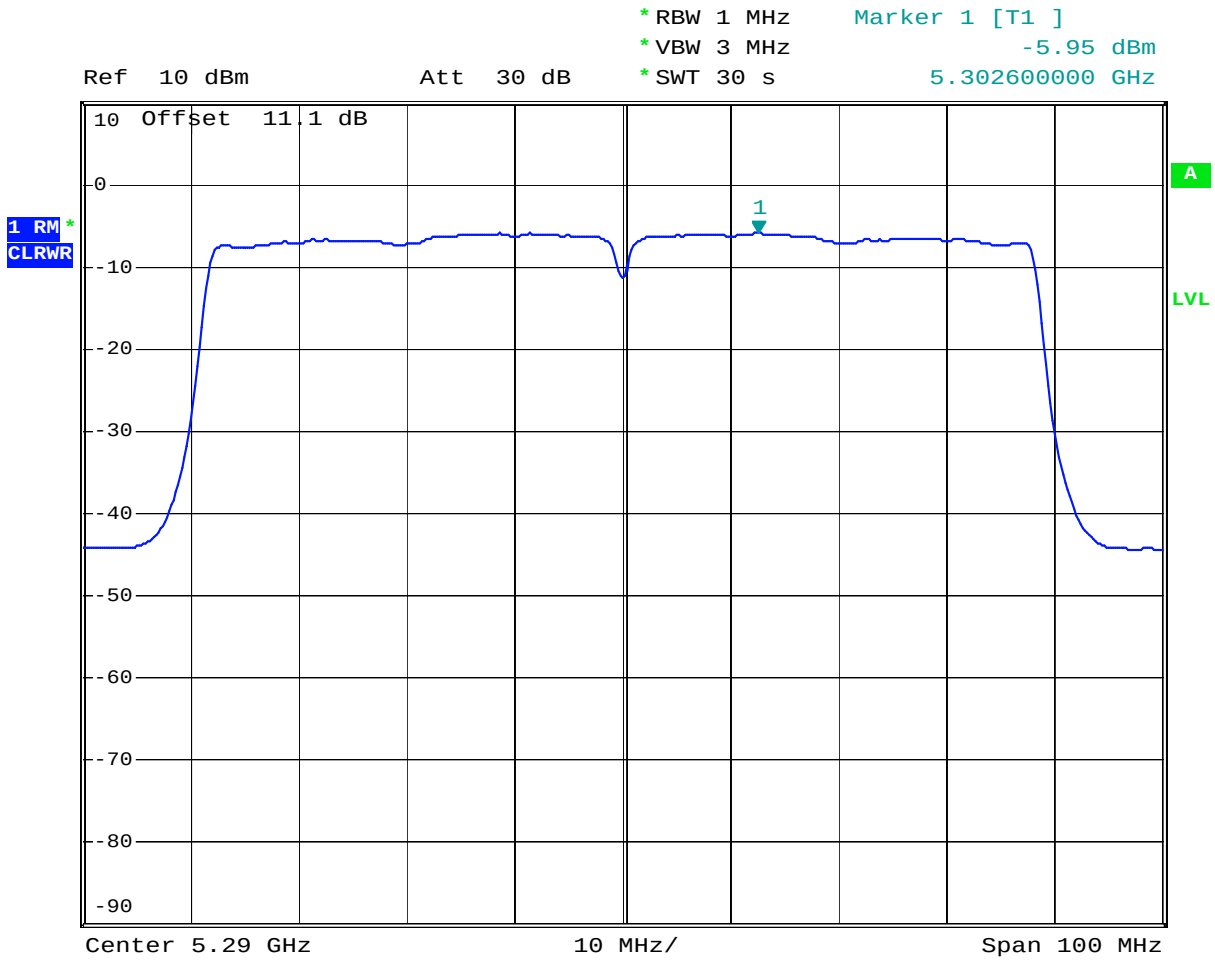
Plot 3. 18

802.11ac 80MHz, 5290MHz



Date: 7.DEC.2015 14:11:20

4.4 Frequency stability
FCC 15.407(g)

4.4.1 Requirement

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

4.4.2 Procedure

The EUT was placed in a temperature chamber and setup to transmit. Procedures for frequency stability in ANSIC63.10:2013 section 6.8 was utilized.

The carrier frequency was measured with the spectrum analyzer with resolution bandwidth of 1 kHz. The temperature was varied from 0^0C to 50^0C, as stated in the user manual.

The radio module in this report is powered by 5.0VDC which was varied to 85% and 115% for testing. Testing was performed at a temperature of 20^0 C.

After the temperature stabilized for approximately 20 minutes, the transmitting frequency was measured.

Tested By:	Anderson Soungpanya
Test Date:	December 29, 2015

4.4.3 Result

Temperature, ^{0}C	Frequency at nominal voltage, (GHz)	Maximum deviation from frequency at 20°C, ppm
Nominal Frequency: 5260 MHz		
50	5260.009457	1.560
40	5260.009144	1.500
30	5260.005582	0.823
20	5260.001253	0.000
10	5260.000221	0.196
0	5260.002952	0.323
Voltage at 20^{0}C	**Frequency at nominal voltage, (GHz)**	**Maximum deviation from frequency at 20°C, ppm**
5V – 15%	5260.003340	0.397
5V + 15%	5260.003351	0.399

Temperature, ^{0}C	Frequency at nominal voltage, (GHz)	Maximum deviation from frequency at 20°C, ppm
Nominal Frequency: 5320 MHz		
50	5320.010404	1.721
40	5320.010012	1.647
30	5320.008581	1.378
20	5320.001250	0.000
10	5320.001184	0.012
0	5320.002080	0.156
Voltage at 20^{0}C	**Frequency at nominal voltage, (GHz)**	**Maximum deviation from frequency at 20°C, ppm**
5V – 15%	5320.002415	0.219
5V + 15%	5320.002421	0.220

4.5 Transmitter Radiated Emissions
FCC Rule 15.407(b) (1-8) 15.209, 15.205

4.5.1 Requirement

(b) Undesirable emission limits. Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

Emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.

Note: This corresponds to the field strength level of 68.3 dB(μV/m) at 3 m distance when measure with 1 MHz resolution bandwidth.

4.5.2 Procedure

Radiated emission measurements were performed from 30 MHz to 40 GHz according to the procedure described in ANSI C64.10. Spectrum Analyzer Resolution Bandwidth is 100 kHz or greater for frequencies 30 MHz to 1000 MHz, 1 MHz for frequencies above 1000 MHz. Above 1000 MHz Peak and Average measurements were performed.

The EUT is placed on a plastic turntable that is 80 cm in height for below 1000MHz and 1.5m in height for above 1GHz. If the EUT attaches to peripherals, they are connected and operational (as typical as possible). During testing, all cables were manipulated to produce worst-case emissions. The signal is maximized through rotation. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at 3 meters for frequencies above 1 GHz and at 10 meters for frequencies below 1 GHz.

Measurements made from 30 MHz to 40 GHz were measured with 50 ohm terminator on the output of the EUT RF port. A preamp was used from 30MHz to 40GHz.

All measurements were made with a Peak Detector and compared to QP limits for 30MHz – 1GHz and Average limits for 1GHz – 40 GHz.

Data is included of the worst-case configuration (the configuration which resulted in the highest emission levels).

4.5.3 Field Strength Calculation

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CF – AG; if measurement is performed at a distance other than specified in the rule, a Distance Correction Factor (DCF) shall be added.

Where FS = Field Strength in dB(μV/m)
RA = Receiver Amplitude (including preamplifier) in dB(μV); AF = Antenna Factor in dB(1/m)
CF = Cable Attenuation Factor in dB; AG = Amplifier Gain in dB

Assume a receiver reading of 52.0 dB(μV) is obtained. The antennas factor of 7.4 dB(1/m) and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving field strength of 32 dB(μV/m). This value in dB(μV/m) was converted to its corresponding level in μV/m.
RA = 52.0 dB(μV)
AF = 7.4 dB(1/m)
CF = 1.6 dB
AG = 29.0 dB
FS = 52.0+7.4+1.6-29.0 = 32 dB(μV/m).
Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m.

4.5.4 Antenna-port conducted measurements

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

4.5.6 General Procedure for conducted measurements in restricted bands

a) Measure the conducted output power (in dBm) using the detector specified for determining quasi-peak, peak, and average conducted output power, respectively.

b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see 12.2.5 for guidance on determining the applicable antenna gain)

c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).

d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (*e.g.*, Watts, mW).

e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:
E = EIRP – 20log D + 104.8
where:
E = electric field strength in dBµV/m,
EIRP = equivalent isotropic radiated power in dBm
D = specified measurement distance in meters.
f) Compare the resultant electric field strength level to the applicable limit.
g) Perform radiated spurious emission test

4.5.7 Test Results

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance where emissions are within 3dB of the limit.

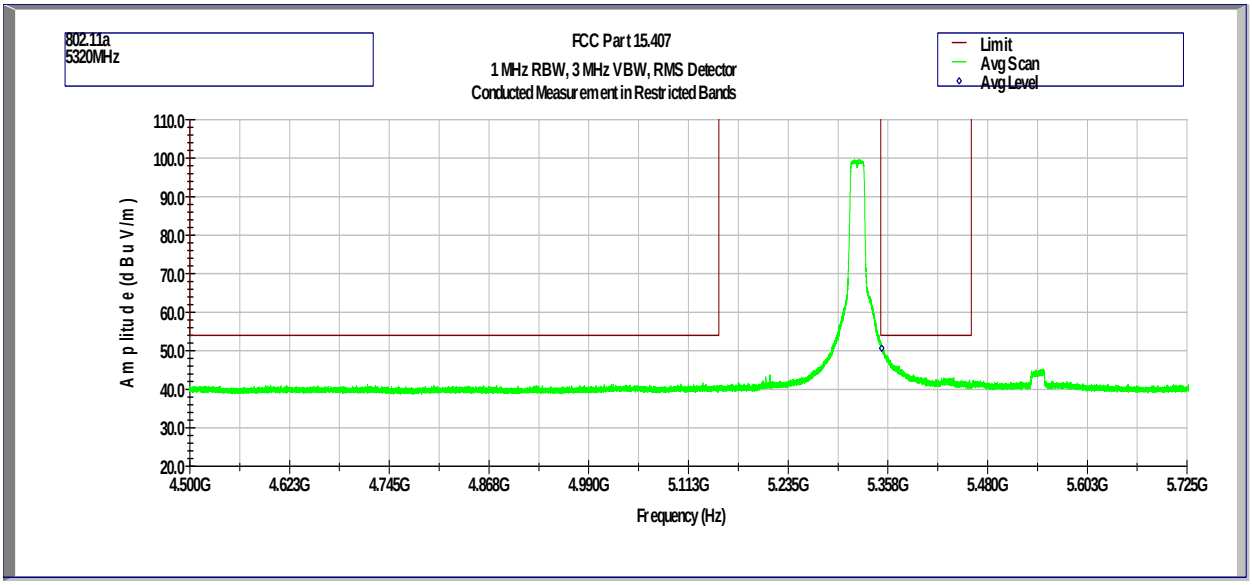
All conducted antenna port plots are corrected with the consideration of a 3.4 dBi Antenna Gain.

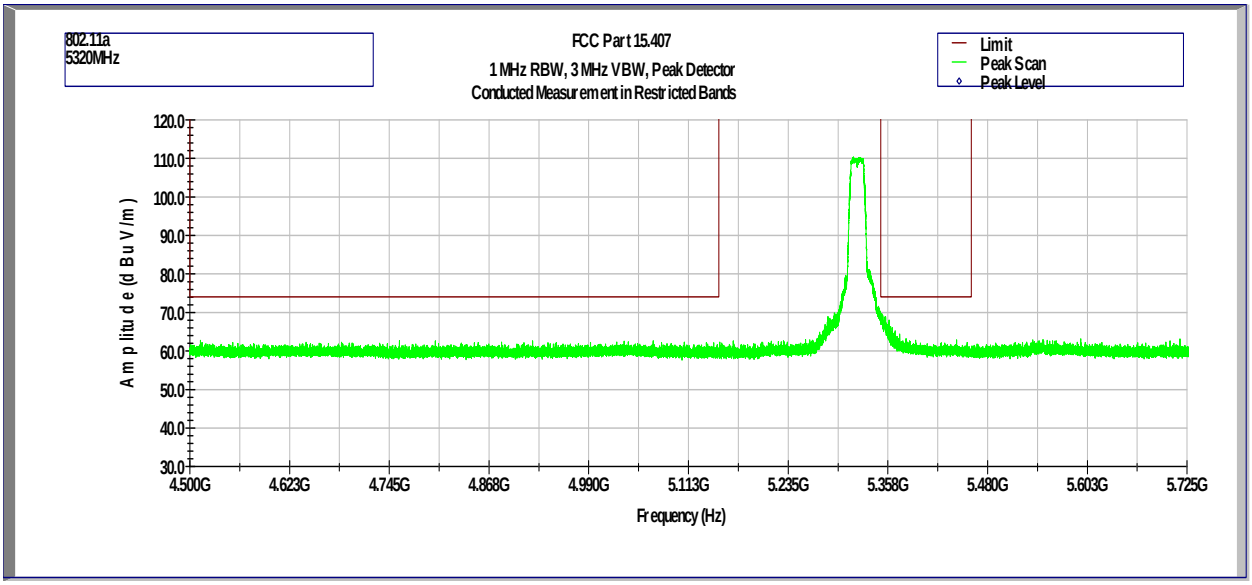
Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz.

15.209/15.205 Restricted Band Emissions at Antenna Port

Tested By:	Anderson Soungpanya
Test Date:	December 1-3, 2015

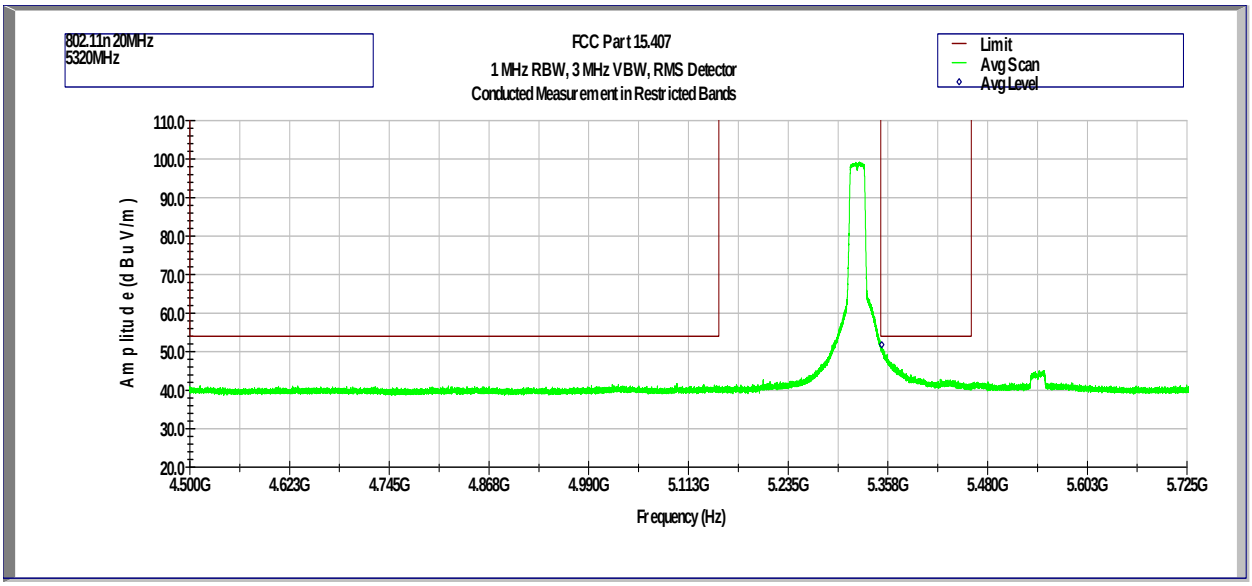
Out-of-Band Spurious Emissions at the Band Edge - 802.11a, 5320 MHz

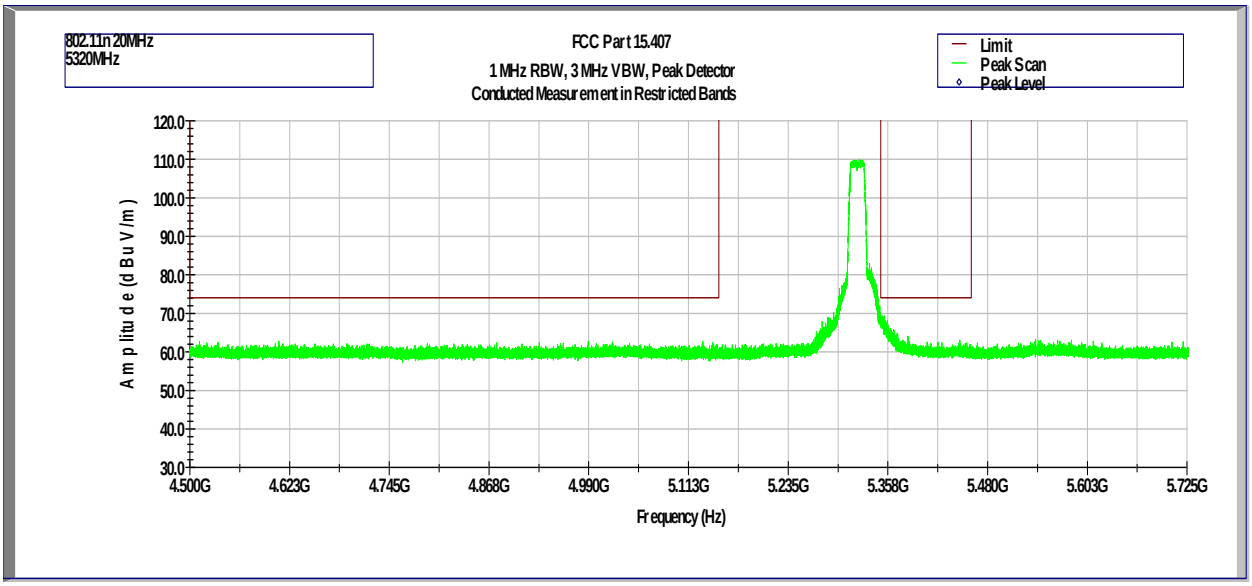




Frequency	Corrected Amplitude	Limit	Margin	Detector	Results
GHz	dBµV/m	dBµV/m	dB		
5.350	50.60	54	-3.4	Avg	Pass

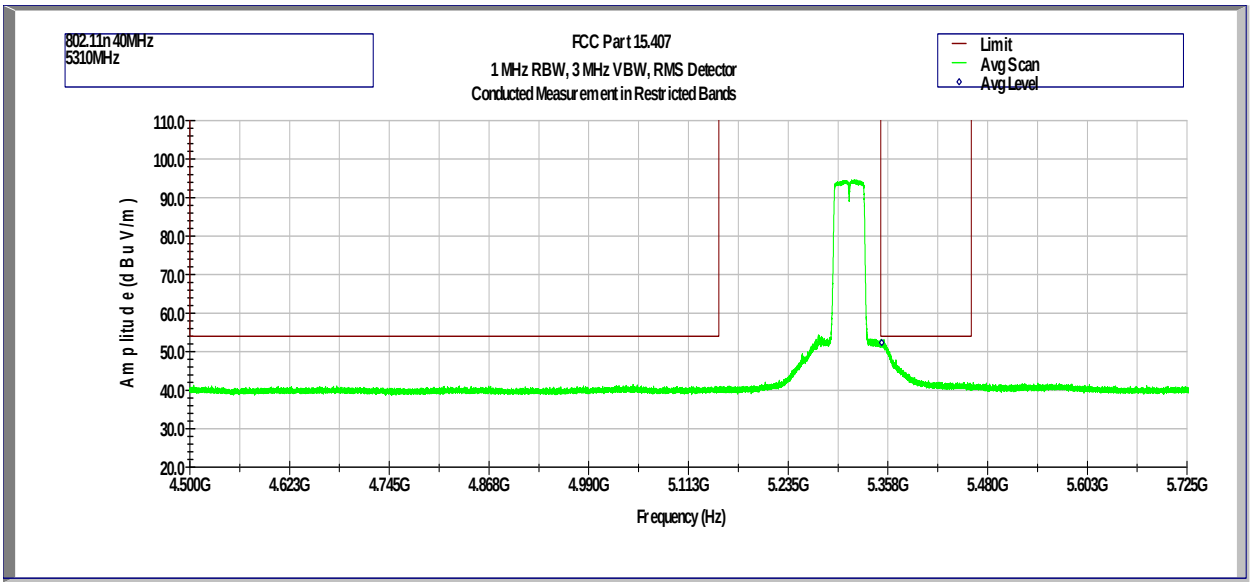
Out-of-Band Spurious Emissions at the Band Edge - 802.11n 20MHz, 5320 MHz

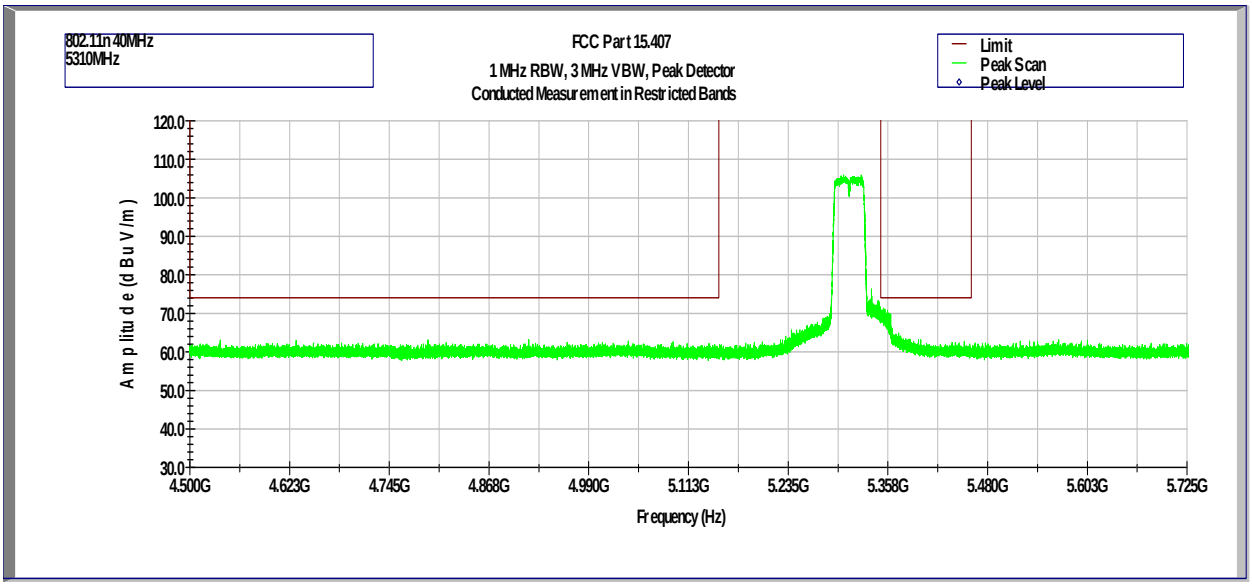




Frequency	Corrected Amplitude	Limit	Margin	Detector	Results
GHz	dBµV/m	dBµV/m	dB		
5.350	51.8	54	-2.2	Avg	Pass

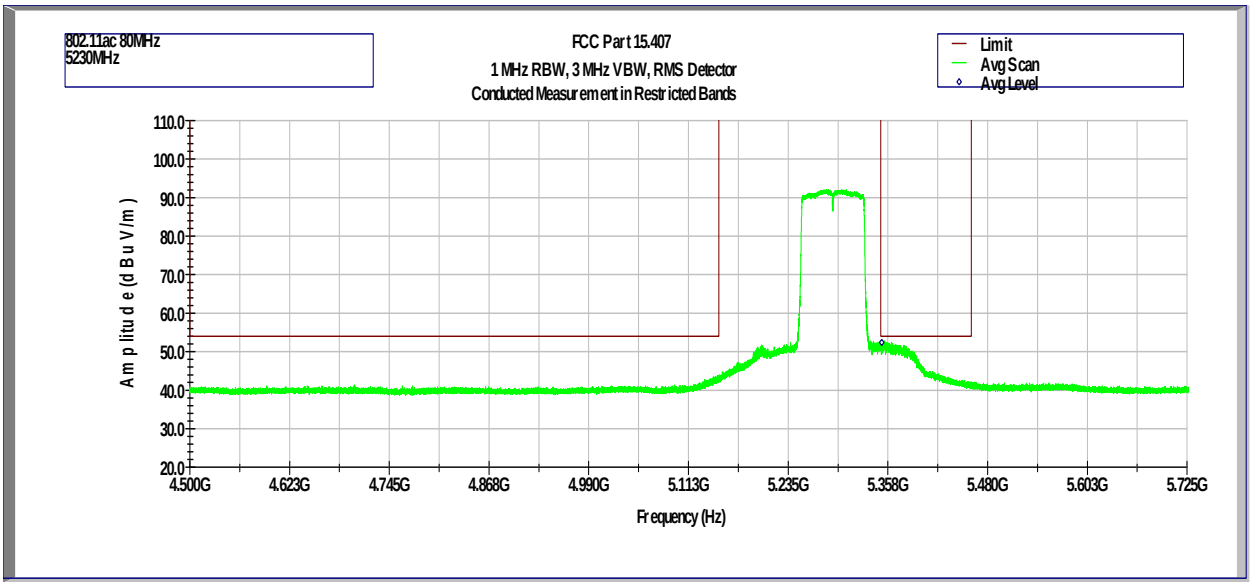
Out-of-Band Spurious Emissions at the Band Edge - 802.11n 40MHz, 5310 MHz

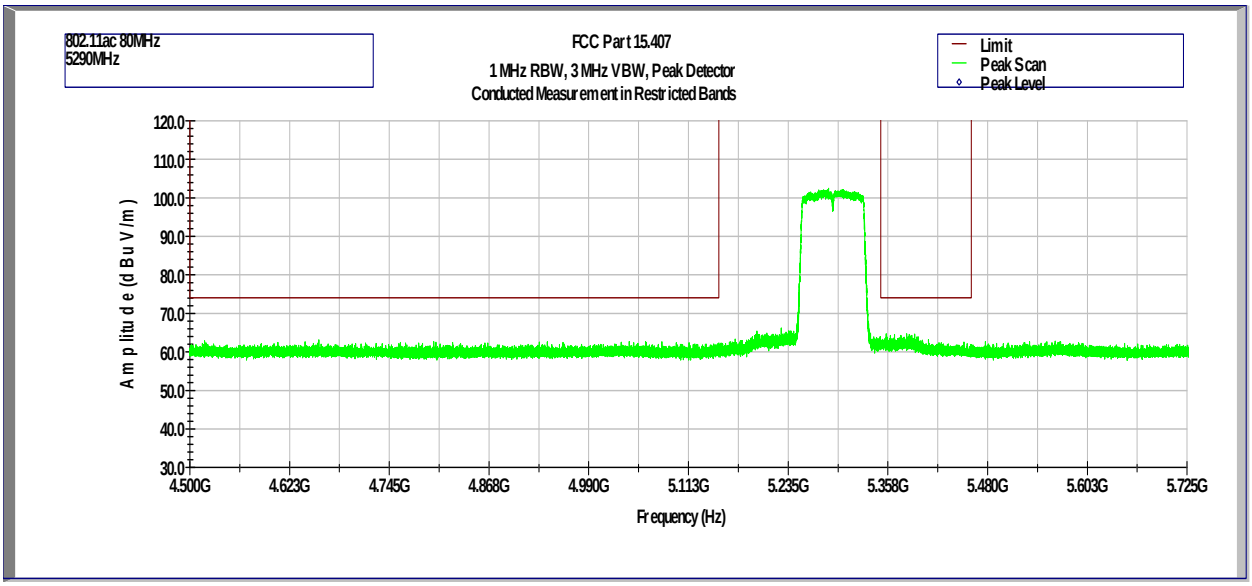




Frequency	Corrected Amplitude	Limit	Margin	Detector	Results
GHz	dBµV/m	dBµV/m	dB		
5.350	52.3	54	-1.7	Avg	Pass

Out-of-Band Spurious Emissions at the Band Edge - 802.11ac 80MHz, 5290 MHz



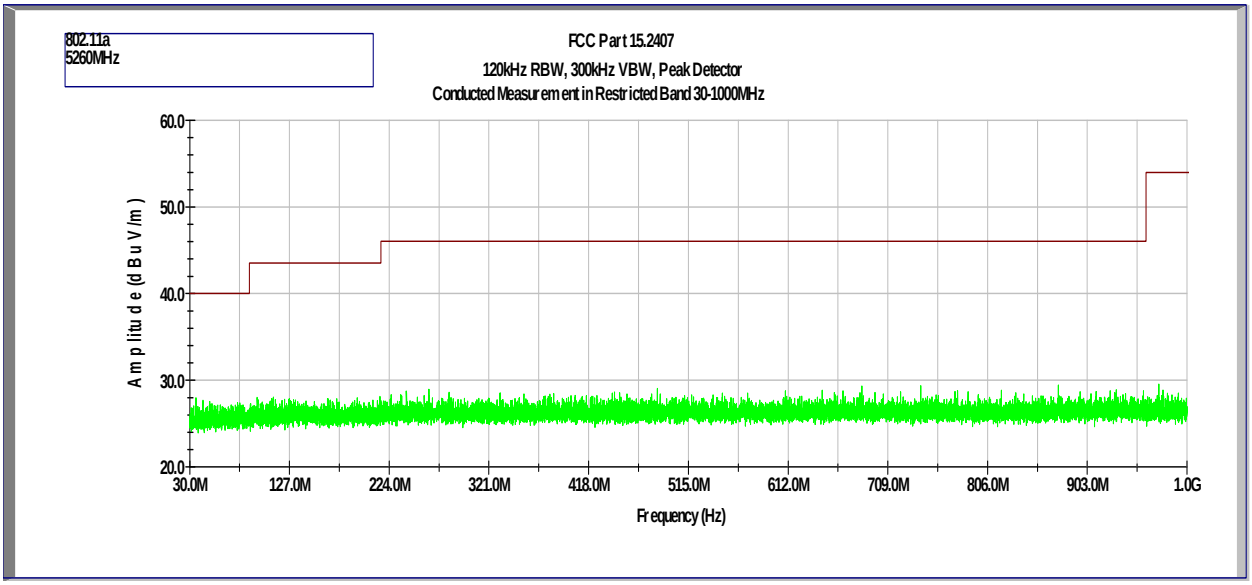


Frequency	Corrected Amplitude	Limit	Margin	Detector	Results
GHz	dBµV/m	dBµV/m	dB		
5.350	52.4	54	-1.6	Avg	Pass

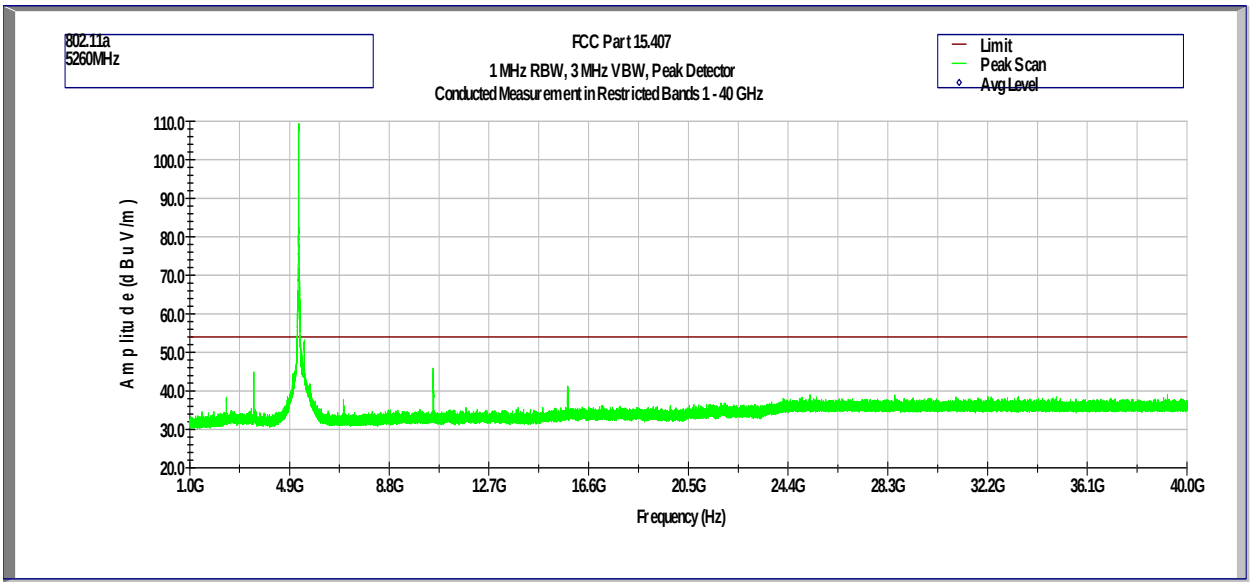
Out-of-Band Conducted Spurious Emissions (at Antenna Port)

Tx @ 5260MHz 802.11a

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz

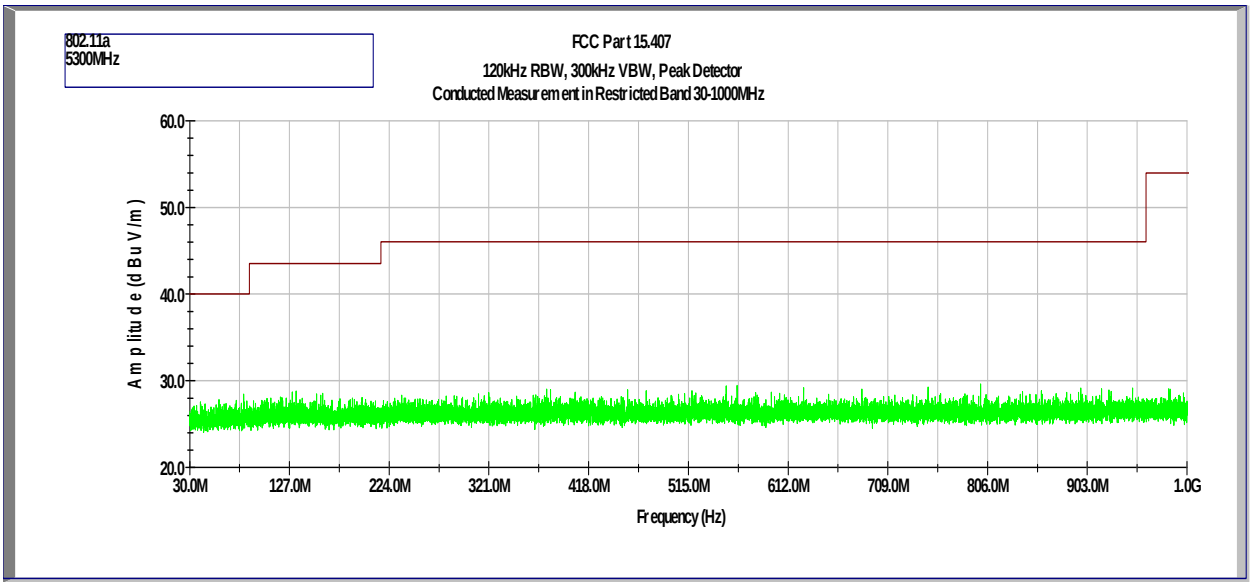


Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz

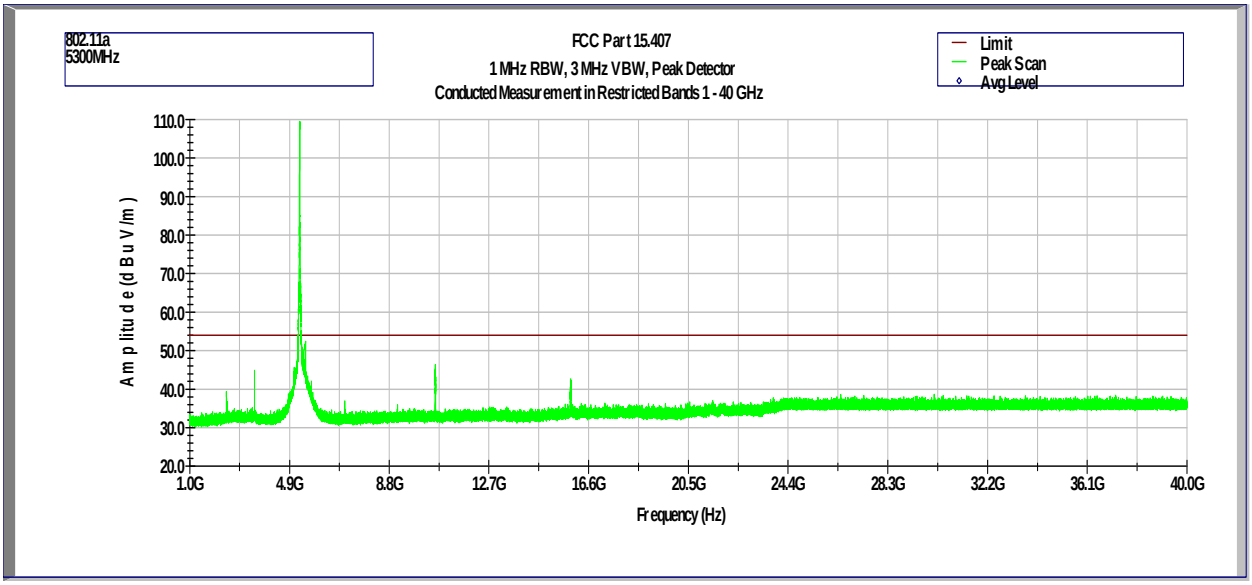


Tx @ 5300MHz 802.11a

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz

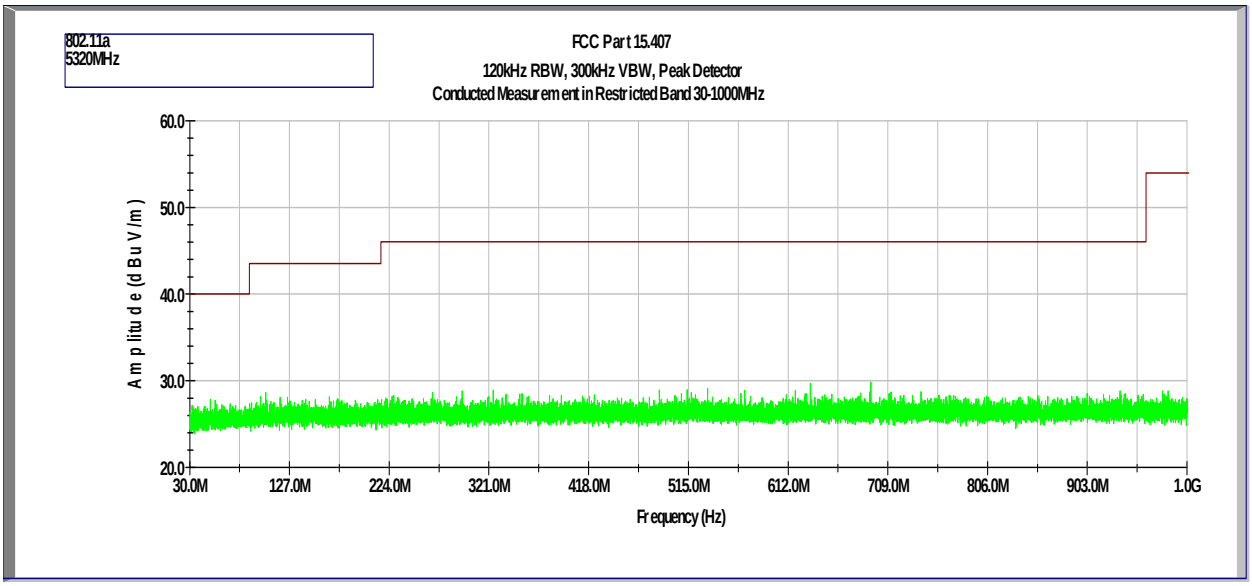


Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz

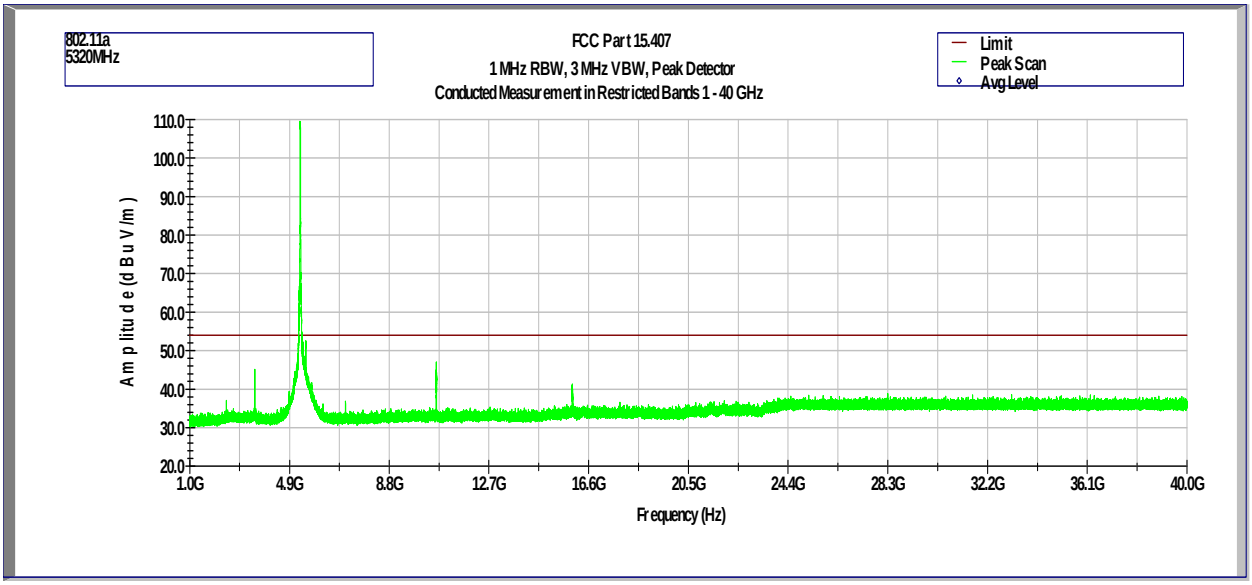


Tx @ 5320MHz 802.11a

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz

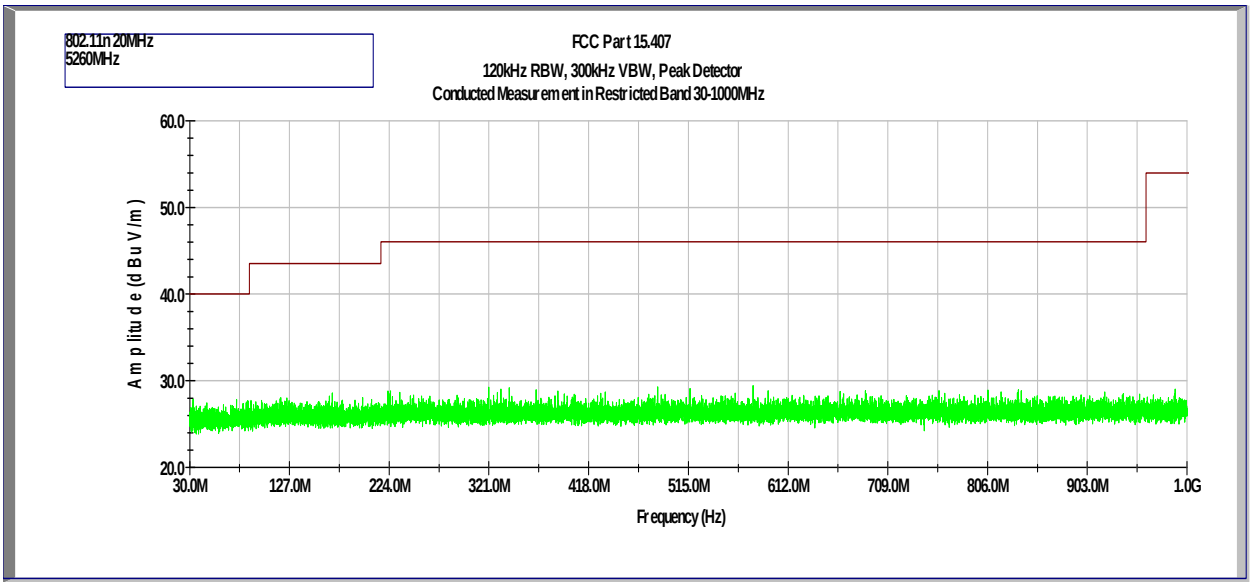


Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz

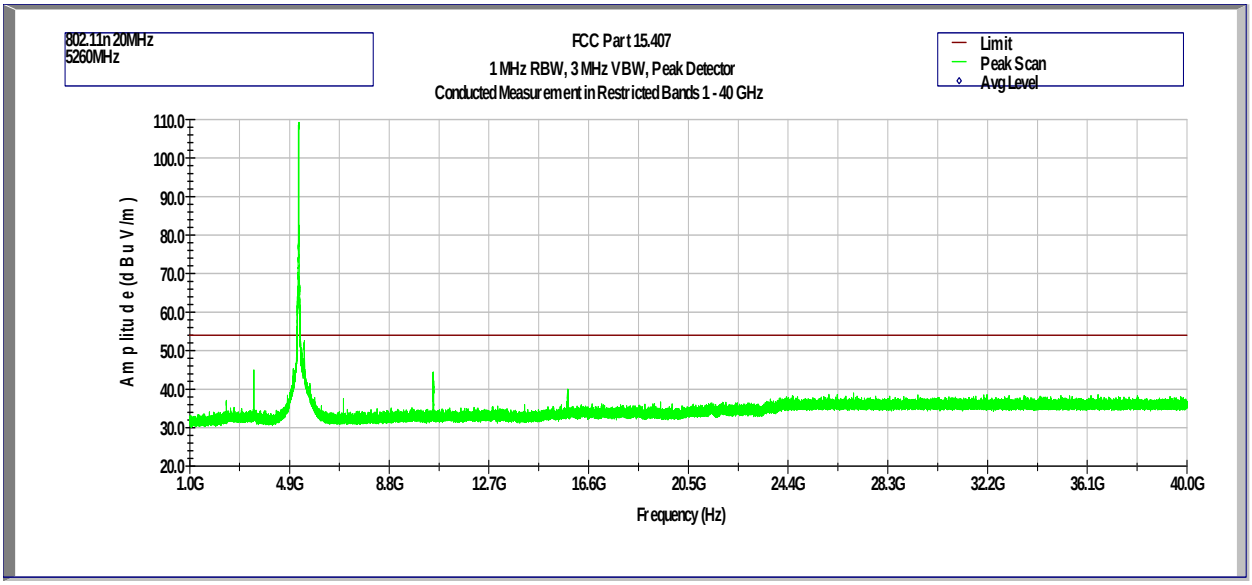


Tx @ 5260MHz 802.11n 20MHz

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz

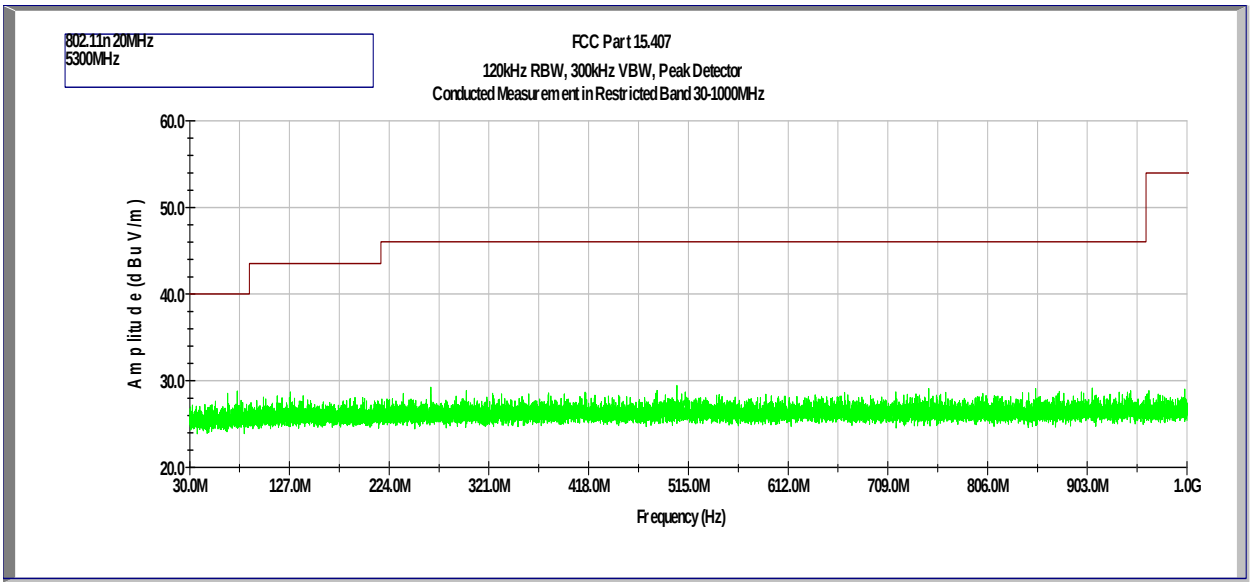


Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz

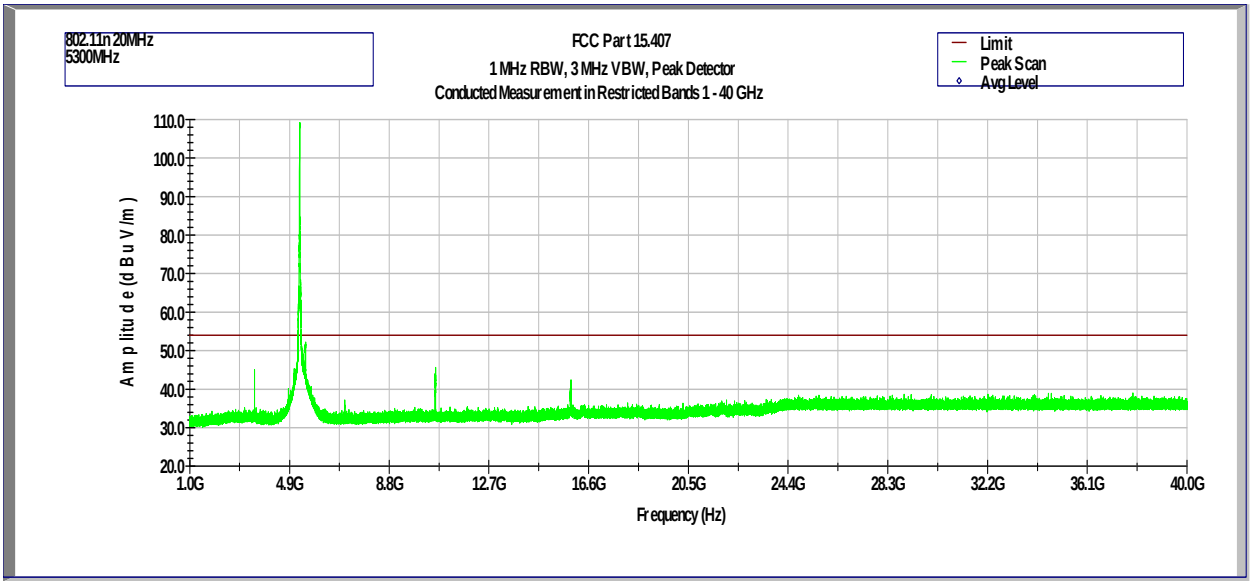


Tx @ 5300MHz 802.11n 20MHz

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz

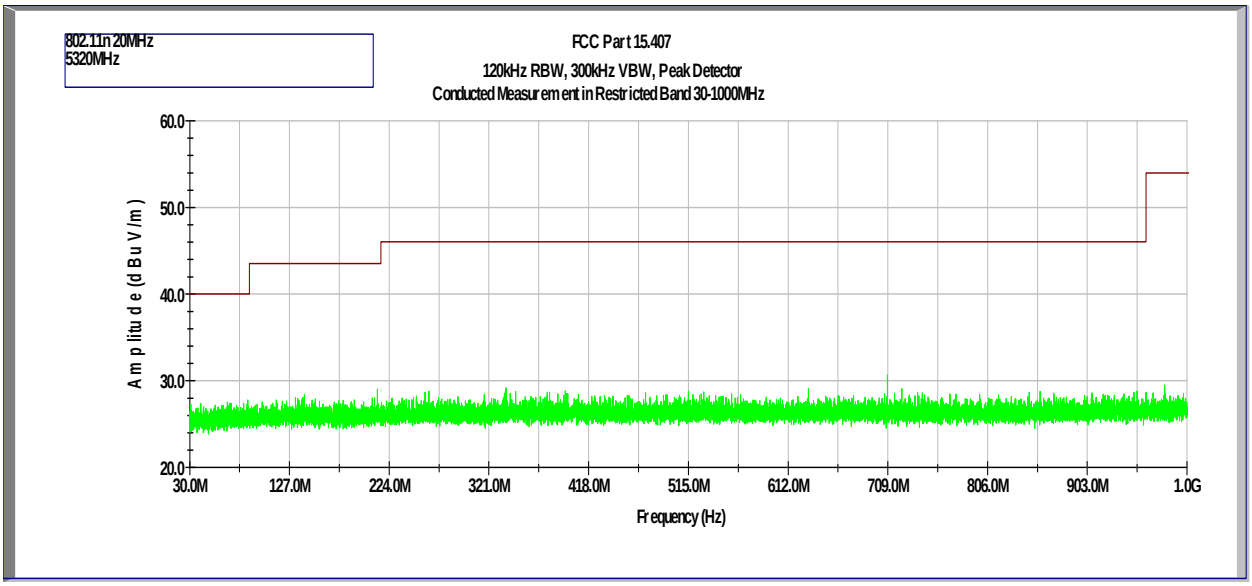


Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz

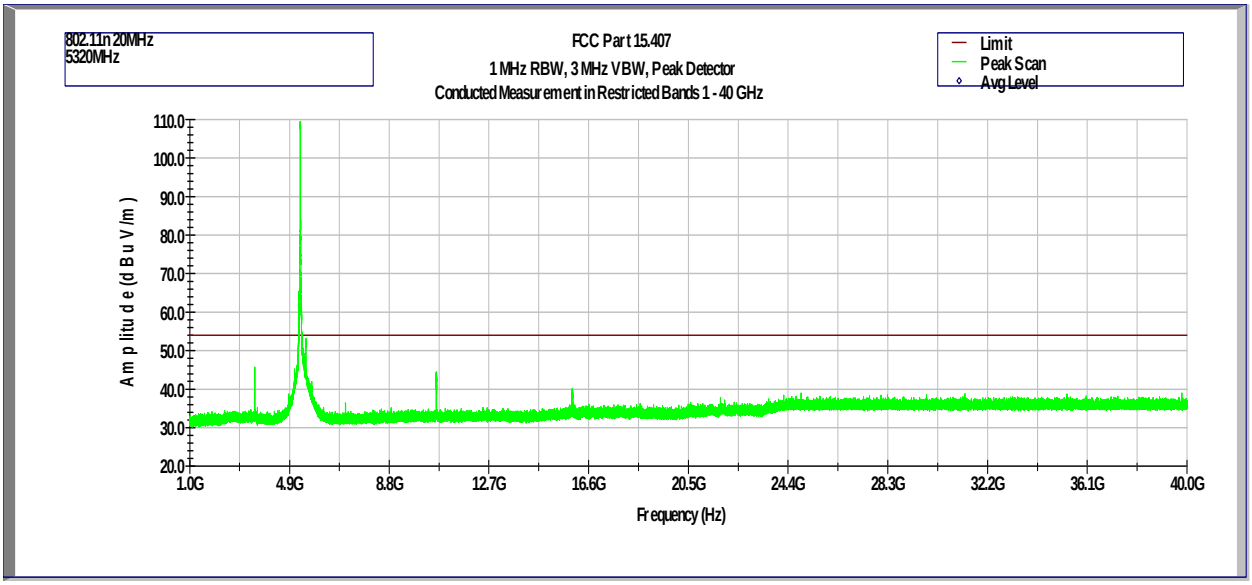


Tx @ 5320MHz 802.11n 20MHz

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz

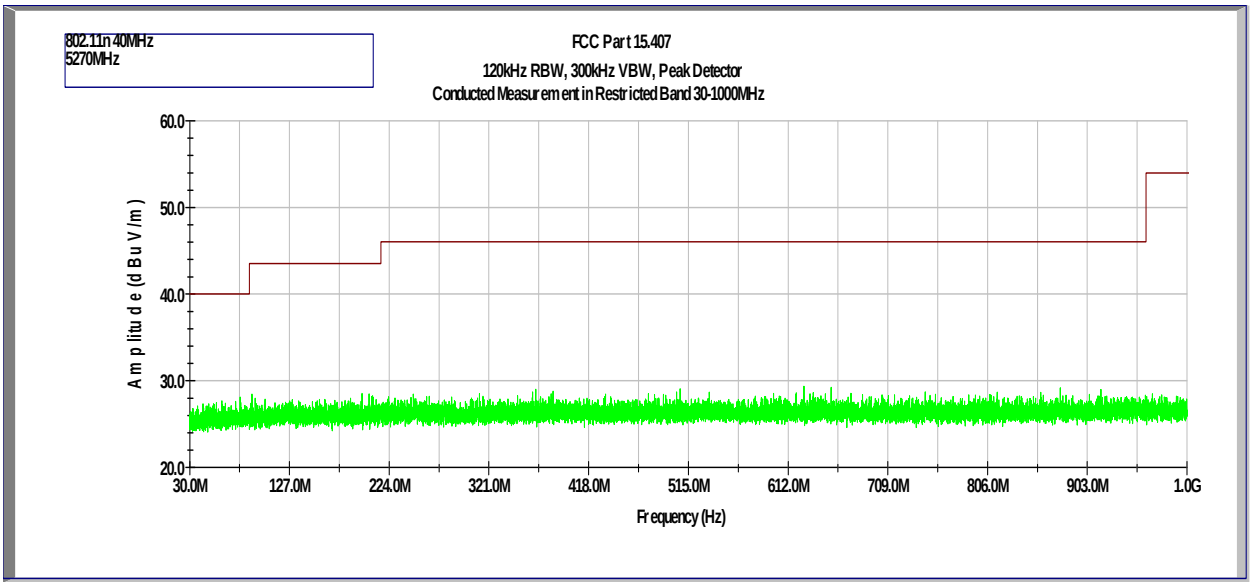


Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz

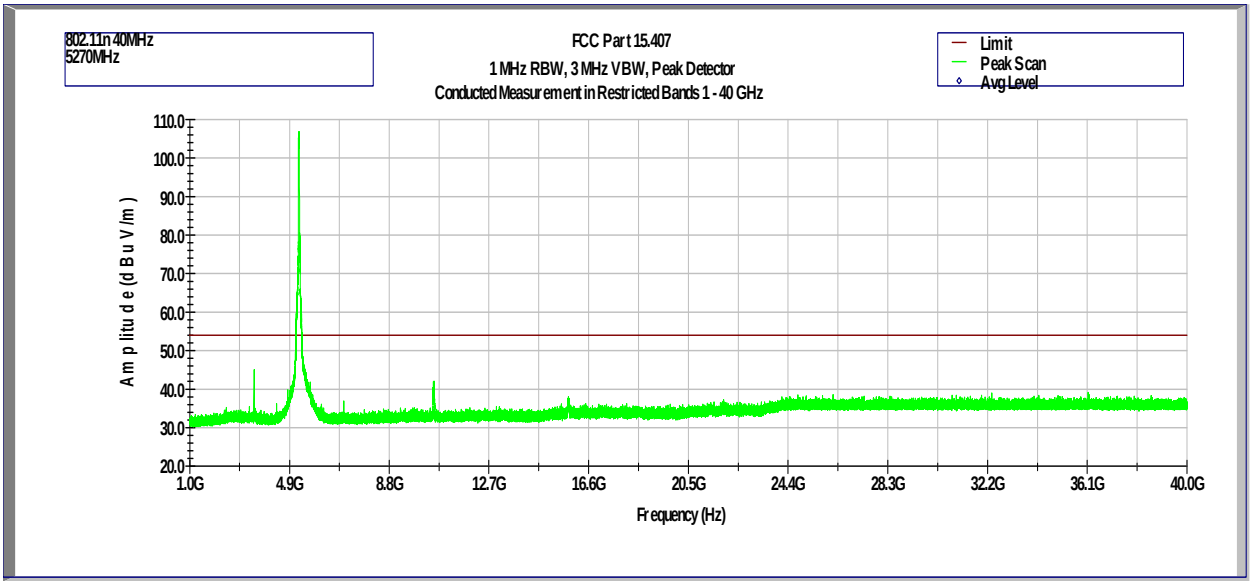


Tx @ 5270MHz 802.11n 40MHz

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz

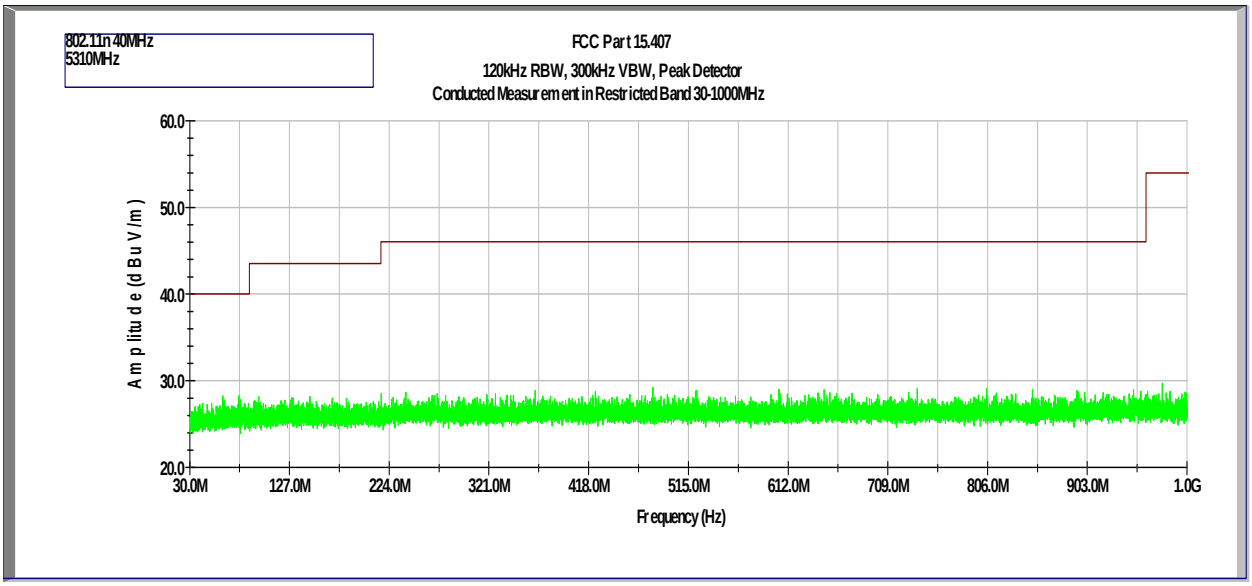


Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz

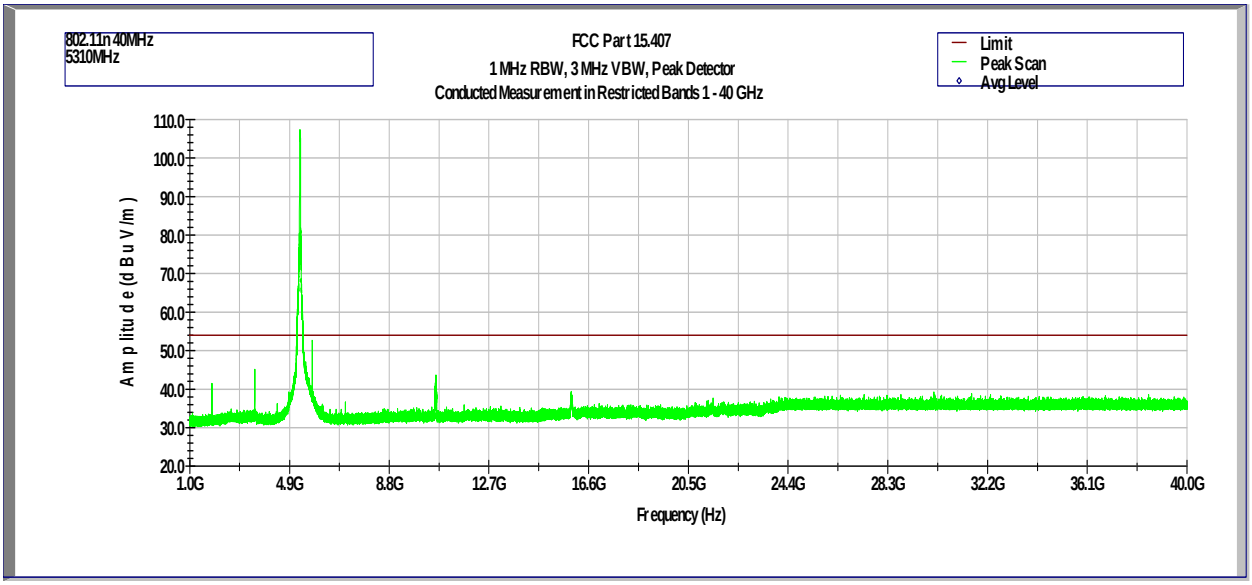


Tx @ 5310MHz 802.11n 40MHz

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz

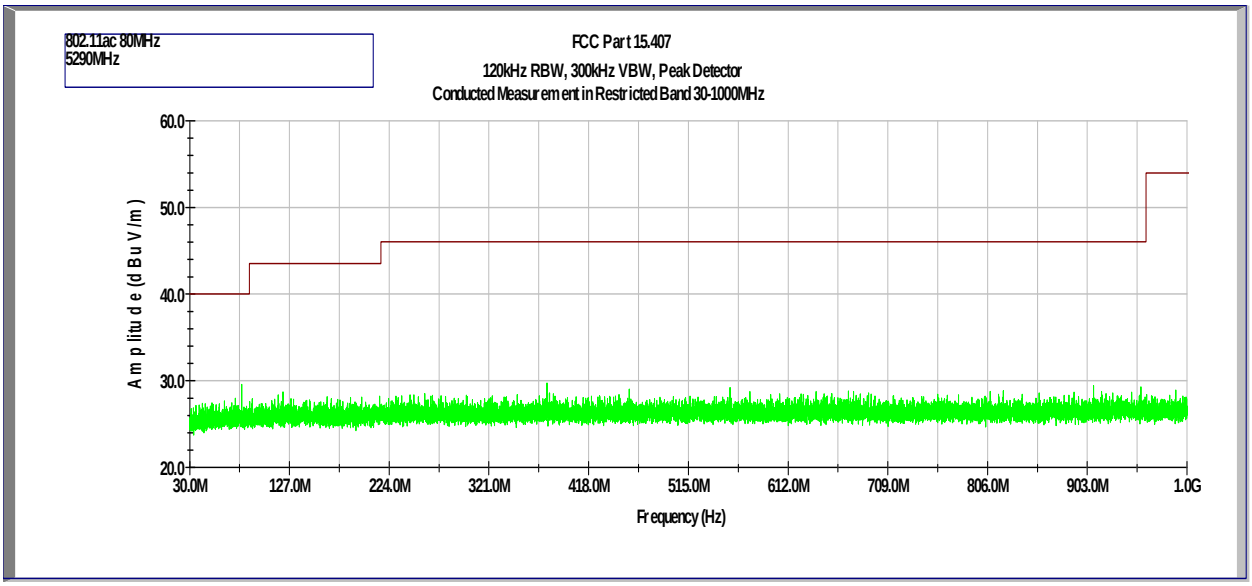


Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz

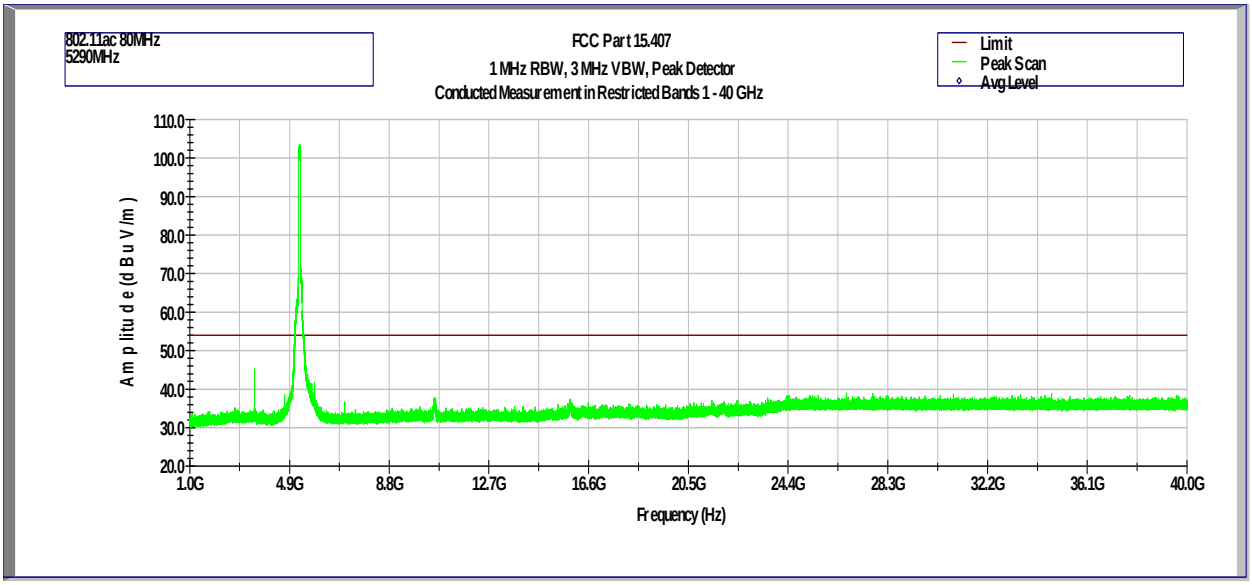


Tx @ 5290MHz 802.11ac 80MHz

Out-of-Band Spurious Emissions at Antenna Port - 30 MHz to 1 GHz



Out-of-Band Spurious Emissions at Antenna Port - 1 GHz to 40 GHz



Out-of-Band Radiated Spurious Emissions (Cabinet Radiation)

Tested By:	Anderson Soungpanya
Test Date:	December 8-18, 2015

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11a 5260MHz

Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

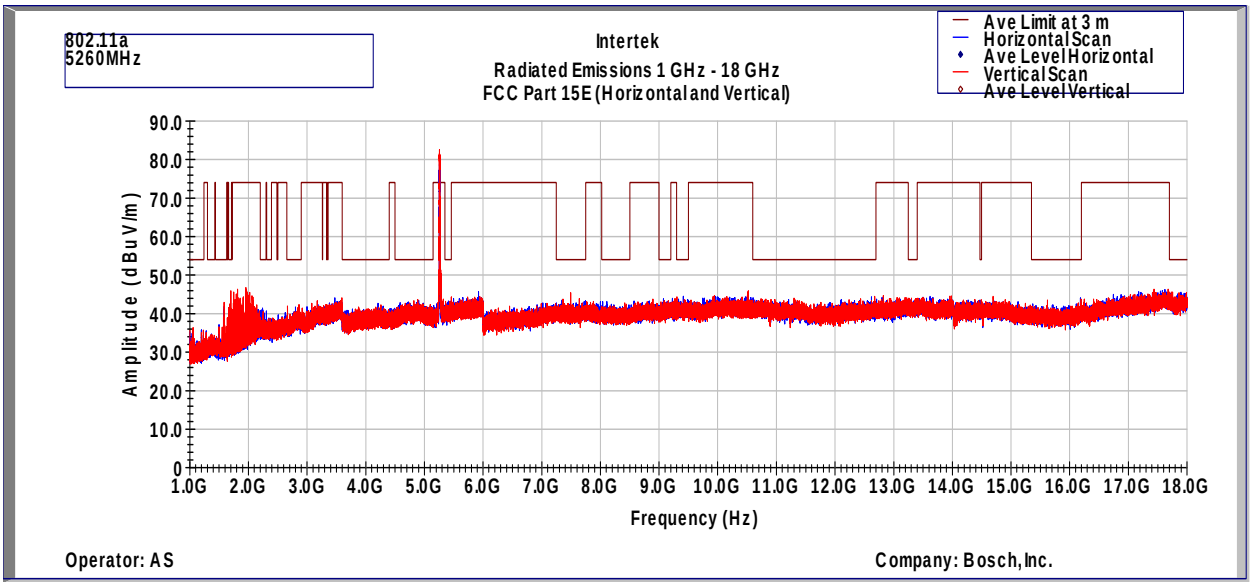
Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
167.999	36.3	43.5	-7.2	47.2	1.4	32.0	10.5	9.2
172.558	38.3	43.5	-5.2	49.0	1.4	32.0	10.5	9.4
192.022	35.1	43.5	-8.4	45.6	1.5	32.0	10.5	9.5
193.962	34.6	43.5	-8.9	45.1	1.5	32.0	10.5	9.5
216.014	39.5	46.0	-6.5	48.7	1.7	32.0	10.5	10.6
249.996	41.0	46.0	-5.0	48.8	1.9	32.0	10.5	11.8
258.176	34.0	46.0	-12.0	40.9	2.0	32.0	10.5	12.6
300.048	35.5	46.0	-10.5	41.4	2.3	32.0	10.5	13.3
312.011	37.2	46.0	-8.8	42.7	2.3	32.0	10.5	13.6
323.328	37.0	46.0	-9.0	42.2	2.4	32.0	10.5	13.9
389.999	34.8	46.0	-11.2	38.2	2.5	32.0	10.5	15.5
420.005	36.2	46.0	-9.8	38.6	2.6	32.0	10.5	16.5
479.983	37.3	46.0	-8.7	39.1	2.8	32.1	10.5	16.9
494.016	34.2	46.0	-11.8	35.7	2.9	32.1	10.5	17.2
527.998	40.3	46.0	-5.7	40.9	3.0	32.1	10.5	18.0
540.026	38.5	46.0	-7.5	39.3	3.0	32.1	10.5	17.8
550.017	35.8	46.0	-10.2	36.7	3.0	32.1	10.5	17.7
555.643	34.8	46.0	-11.2	35.6	3.0	32.1	10.5	17.9
600.004	39.4	46.0	-6.6	39.8	3.1	32.2	10.5	18.3
605.986	34.7	46.0	-11.3	34.9	3.1	32.2	10.5	18.4
624.028	34.9	46.0	-11.1	34.6	3.2	32.2	10.5	18.9
644.010	36.5	46.0	-9.5	35.6	3.3	32.2	10.5	19.3
648.019	35.3	46.0	-10.7	34.4	3.3	32.3	10.5	19.3
672.011	34.7	46.0	-11.3	33.8	3.4	32.3	10.5	19.2
711.166	37.7	46.0	-8.3	35.8	3.6	32.3	10.5	20.1
720.026	35.3	46.0	-10.7	33.2	3.6	32.3	10.5	20.2
730.987	38.7	46.0	-7.3	36.5	3.7	32.2	10.5	20.2
747.994	34.5	46.0	-11.5	32.7	3.7	32.2	10.5	19.9
769.011	37.4	46.0	-8.6	35.0	3.8	32.2	10.5	20.3
801.926	36.2	46.0	-9.8	32.8	3.8	32.1	10.5	21.1
834.065	36.1	46.0	-9.9	32.6	3.9	31.9	10.5	21.1

1000.000	42.2	54.0	-11.8	35.6	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
124.995	38.3	43.5	-5.2	46.9	1.2	32.0	10.5	11.8
166.770	35.4	43.5	-8.1	46.5	1.4	32.0	10.5	9.0
168.839	37.0	43.5	-6.5	47.8	1.4	32.0	10.5	9.3
169.712	37.7	43.5	-5.8	48.4	1.4	32.0	10.5	9.4
192.022	38.2	43.5	-5.3	48.7	1.5	32.0	10.5	9.5
201.916	34.7	43.5	-8.8	45.1	1.6	32.0	10.5	9.6
204.471	35.4	43.5	-8.1	45.5	1.6	32.0	10.5	9.8
207.057	35.5	43.5	-8.0	45.4	1.6	32.0	10.5	10.0
209.644	35.2	43.5	-8.3	44.8	1.6	32.0	10.5	10.2
210.808	35.2	43.5	-8.3	44.8	1.7	32.0	10.5	10.2
212.101	34.8	43.5	-8.7	44.3	1.7	32.0	10.5	10.3
213.395	34.9	43.5	-8.6	44.3	1.7	32.0	10.5	10.4
214.688	34.9	43.5	-8.6	44.2	1.7	32.0	10.5	10.5
217.242	35.8	46.0	-10.2	44.9	1.7	32.0	10.5	10.7
219.829	34.7	46.0	-11.3	43.7	1.7	32.0	10.5	10.8
222.286	35.2	46.0	-10.8	43.9	1.7	32.0	10.5	11.1
230.014	35.7	46.0	-10.3	43.5	1.8	32.0	10.5	11.8
240.005	39.4	46.0	-6.6	46.9	1.9	32.0	10.5	12.0
499.997	36.3	46.0	-9.7	37.7	2.9	32.1	10.5	17.3
527.998	36.1	46.0	-9.9	36.8	3.0	32.1	10.5	18.0
551.989	35.4	46.0	-10.6	36.3	3.0	32.1	10.5	17.8
625.030	38.6	46.0	-7.4	38.3	3.2	32.2	10.5	18.9
708.644	37.7	46.0	-8.3	35.9	3.6	32.3	10.5	20.0
708.968	38.8	46.0	-7.2	36.9	3.6	32.3	10.5	20.0
712.266	39.0	46.0	-7.0	37.1	3.6	32.3	10.5	20.1
749.999	36.6	46.0	-9.4	34.8	3.7	32.2	10.5	19.8
801.894	37.1	46.0	-8.9	33.8	3.8	32.1	10.5	21.1
874.999	40.5	46.0	-5.5	36.2	3.9	31.7	10.5	21.6
945.130	37.9	46.0	-8.1	32.1	4.1	31.2	10.5	22.5
984.512	38.0	54.0	-16.0	31.5	4.1	30.9	10.5	22.8

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

Corrected Peak Scans are under the Average Limit of 54.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11a 5300MHz

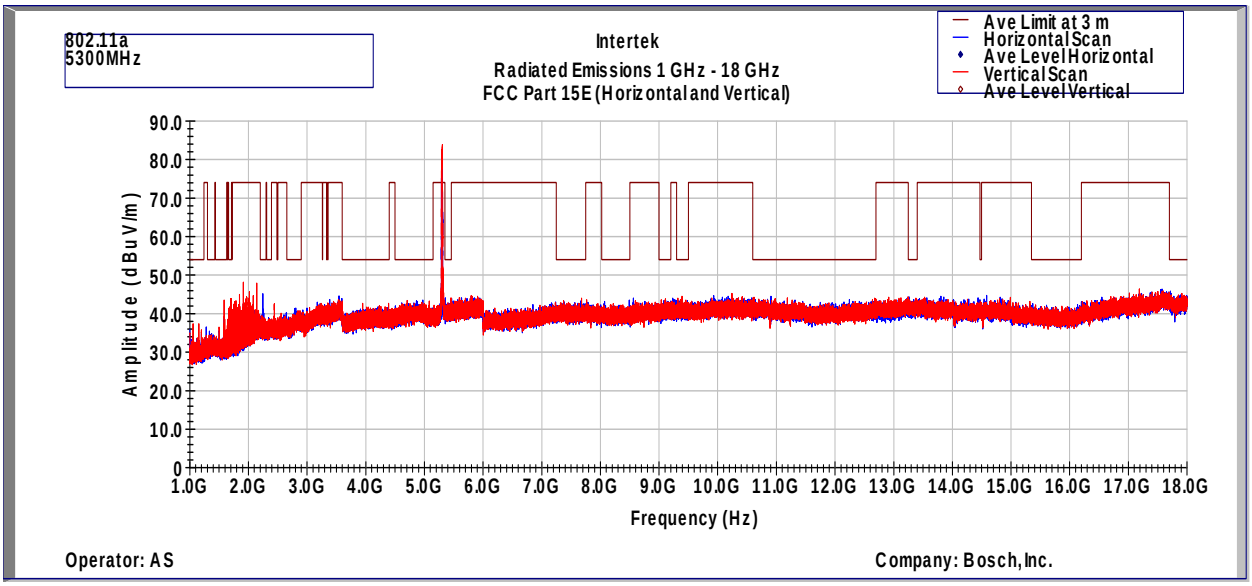
Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
165.800	34.5	43.5	-9.0	45.7	1.4	32.0	10.5	8.9
168.031	36.1	43.5	-7.4	47.0	1.4	32.0	10.5	9.2
171.814	36.4	43.5	-7.1	47.0	1.4	32.0	10.5	9.4
191.990	35.0	43.5	-8.5	45.5	1.5	32.0	10.5	9.5
193.930	35.2	43.5	-8.3	45.7	1.5	32.0	10.5	9.5
300.016	37.1	46.0	-8.9	43.0	2.3	32.0	10.5	13.3
312.044	36.5	46.0	-9.5	42.0	2.3	32.0	10.5	13.6
323.296	36.8	46.0	-9.2	42.0	2.4	32.0	10.5	13.9
389.999	34.6	46.0	-11.4	38.0	2.5	32.0	10.5	15.5
420.005	35.7	46.0	-10.3	38.1	2.6	32.0	10.5	16.5
479.983	36.0	46.0	-10.0	37.8	2.8	32.1	10.5	16.9
527.998	40.0	46.0	-6.0	40.6	3.0	32.1	10.5	18.0
539.994	39.1	46.0	-6.9	39.9	3.0	32.1	10.5	17.9
550.017	35.7	46.0	-10.3	36.7	3.0	32.1	10.5	17.7
576.013	34.4	46.0	-11.6	34.4	3.0	32.2	10.5	18.6
600.004	39.2	46.0	-6.8	39.6	3.1	32.2	10.5	18.3
606.018	34.8	46.0	-11.2	35.0	3.1	32.2	10.5	18.4
624.028	36.7	46.0	-9.3	36.3	3.2	32.2	10.5	18.9
644.010	37.0	46.0	-9.0	36.1	3.3	32.2	10.5	19.3
648.019	36.4	46.0	-9.6	35.5	3.3	32.3	10.5	19.3
660.047	34.4	46.0	-11.6	33.5	3.4	32.3	10.5	19.3
711.166	37.3	46.0	-8.7	35.4	3.6	32.3	10.5	20.1
730.987	36.8	46.0	-9.2	34.6	3.7	32.2	10.5	20.2
743.985	34.8	46.0	-11.2	32.7	3.7	32.2	10.5	20.1
752.003	35.5	46.0	-10.5	33.6	3.7	32.2	10.5	19.9
768.978	36.4	46.0	-9.6	34.0	3.8	32.2	10.5	20.3
775.801	39.5	46.0	-6.5	37.0	3.8	32.2	10.5	20.4
801.926	35.2	46.0	-10.8	31.8	3.8	32.1	10.5	21.1
826.629	35.4	46.0	-10.6	31.8	3.9	32.0	10.5	21.2
961.426	37.3	54.0	-16.7	31.5	4.1	31.1	10.5	22.4
1000.000	45.7	54.0	-8.3	39.0	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
125.028	38.2	43.5	-5.3	46.8	1.2	32.0	10.5	11.8
129.296	34.1	43.5	-9.4	42.8	1.2	32.0	10.5	11.6
165.929	35.5	43.5	-8.0	46.7	1.4	32.0	10.5	8.9
166.835	35.7	43.5	-7.8	46.8	1.4	32.0	10.5	9.0
167.934	36.4	43.5	-7.1	47.3	1.4	32.0	10.5	9.2
169.680	36.4	43.5	-7.1	47.1	1.4	32.0	10.5	9.4
170.618	36.8	43.5	-6.7	47.5	1.4	32.0	10.5	9.4
191.990	37.8	43.5	-5.7	48.3	1.5	32.0	10.5	9.5
193.930	35.5	43.5	-8.0	46.0	1.5	32.0	10.5	9.5
199.297	34.1	43.5	-9.4	44.6	1.6	32.0	10.5	9.4
204.503	34.8	43.5	-8.7	44.9	1.6	32.0	10.5	9.8
207.090	35.9	43.5	-7.6	45.8	1.6	32.0	10.5	10.0
208.318	34.7	43.5	-8.8	44.5	1.6	32.0	10.5	10.1
209.612	35.8	43.5	-7.7	45.5	1.6	32.0	10.5	10.2
210.840	35.6	43.5	-7.9	45.2	1.7	32.0	10.5	10.2
212.166	35.7	43.5	-7.8	45.2	1.7	32.0	10.5	10.3
213.427	34.7	43.5	-8.8	44.1	1.7	32.0	10.5	10.4
214.656	35.4	43.5	-8.1	44.7	1.7	32.0	10.5	10.5
217.210	35.8	46.0	-10.2	45.0	1.7	32.0	10.5	10.7
219.797	34.2	46.0	-11.8	43.2	1.7	32.0	10.5	10.8
222.416	34.8	46.0	-11.2	43.5	1.7	32.0	10.5	11.1
224.938	34.8	46.0	-11.2	43.2	1.8	32.0	10.5	11.3
226.263	34.7	46.0	-11.3	42.9	1.8	32.0	10.5	11.5
229.982	34.1	46.0	-11.9	42.0	1.8	32.0	10.5	11.8
240.005	40.0	46.0	-6.0	47.5	1.9	32.0	10.5	12.0
499.997	36.5	46.0	-9.5	37.9	2.9	32.1	10.5	17.3
527.998	36.2	46.0	-9.8	36.9	3.0	32.1	10.5	18.0
539.994	34.0	46.0	-12.0	34.8	3.0	32.1	10.5	17.9
552.022	36.7	46.0	-9.3	37.6	3.0	32.1	10.5	17.8
624.998	38.6	46.0	-7.4	38.2	3.2	32.2	10.5	18.9
749.999	36.8	46.0	-9.2	35.0	3.7	32.2	10.5	19.8
801.926	36.5	46.0	-9.5	33.2	3.8	32.1	10.5	21.1
834.162	35.0	46.0	-11.0	31.5	3.9	31.9	10.5	21.1
983.348	38.7	54.0	-15.3	32.2	4.1	30.9	10.5	22.8

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

Corrected Peak Scans are under the Average Limit of 54.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11a 5320MHz

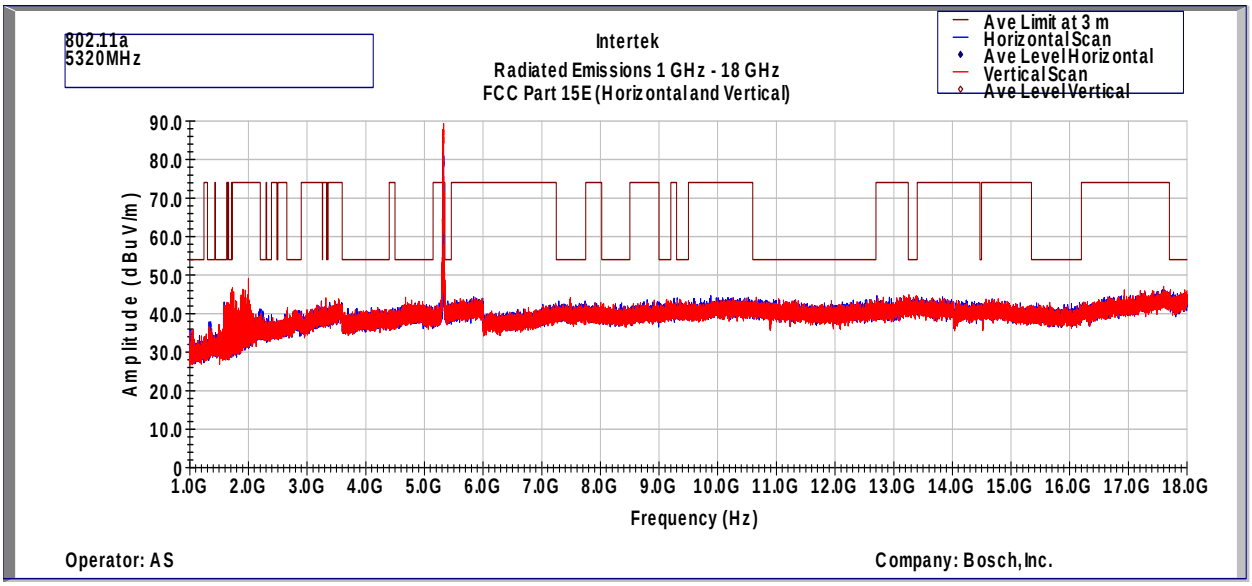
Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
184.068	36.1	43.5	-7.4	46.9	1.5	32.0	10.5	9.3
192.022	36.3	43.5	-7.2	46.8	1.5	32.0	10.5	9.5
193.962	34.9	43.5	-8.6	45.4	1.5	32.0	10.5	9.5
216.014	39.1	46.0	-6.9	48.3	1.7	32.0	10.5	10.6
250.028	41.0	46.0	-5.0	48.7	1.9	32.0	10.5	11.8
299.983	36.3	46.0	-9.7	42.2	2.3	32.0	10.5	13.3
312.011	36.5	46.0	-9.5	42.1	2.3	32.0	10.5	13.6
323.263	37.3	46.0	-8.7	42.5	2.4	32.0	10.5	13.9
338.040	34.4	46.0	-11.6	39.1	2.4	32.0	10.5	14.4
389.999	35.0	46.0	-11.0	38.4	2.5	32.0	10.5	15.5
394.009	36.1	46.0	-9.9	39.4	2.6	32.0	10.5	15.7
419.972	36.4	46.0	-9.6	38.8	2.6	32.0	10.5	16.5
480.015	37.4	46.0	-8.6	39.2	2.8	32.1	10.5	16.9
527.998	40.4	46.0	-5.6	41.1	3.0	32.1	10.5	18.0
539.994	38.7	46.0	-7.3	39.5	3.0	32.1	10.5	17.9
549.985	35.4	46.0	-10.6	36.3	3.0	32.1	10.5	17.7
600.004	38.5	46.0	-7.5	38.8	3.1	32.2	10.5	18.3
606.018	34.9	46.0	-11.1	35.1	3.1	32.2	10.5	18.4
624.028	35.4	46.0	-10.6	35.0	3.2	32.2	10.5	18.9
644.010	36.7	46.0	-9.3	35.9	3.3	32.2	10.5	19.3
648.019	35.9	46.0	-10.1	35.0	3.3	32.3	10.5	19.3
672.043	34.5	46.0	-11.5	33.7	3.4	32.3	10.5	19.2
711.328	37.5	46.0	-8.5	35.5	3.6	32.3	10.5	20.1
720.026	36.2	46.0	-9.8	34.1	3.6	32.3	10.5	20.2
730.987	35.4	46.0	-10.6	33.3	3.7	32.2	10.5	20.2
768.978	37.0	46.0	-9.0	34.6	3.8	32.2	10.5	20.3
775.801	38.4	46.0	-7.6	35.8	3.8	32.2	10.5	20.4
779.972	35.9	46.0	-10.1	33.2	3.8	32.1	10.5	20.5
801.894	35.2	46.0	-10.8	31.9	3.8	32.1	10.5	21.1
932.811	37.3	46.0	-8.7	31.5	4.0	31.4	10.5	22.6
1000.000	42.2	54.0	-11.8	35.5	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
125.028	37.2	43.5	-6.3	45.7	1.2	32.0	10.5	11.8
125.771	35.6	43.5	-7.9	44.2	1.2	32.0	10.5	11.8
168.742	36.6	43.5	-6.9	47.4	1.4	32.0	10.5	9.3
185.232	37.8	43.5	-5.7	48.5	1.5	32.0	10.5	9.3
191.990	37.9	43.5	-5.6	48.4	1.5	32.0	10.5	9.5
193.962	35.8	43.5	-7.7	46.3	1.5	32.0	10.5	9.5
207.025	35.7	43.5	-7.8	45.6	1.6	32.0	10.5	10.0
209.612	35.5	43.5	-8.0	45.2	1.6	32.0	10.5	10.2
210.873	34.8	43.5	-8.7	44.4	1.7	32.0	10.5	10.2
212.134	35.0	43.5	-8.5	44.5	1.7	32.0	10.5	10.3
213.427	34.7	43.5	-8.8	44.2	1.7	32.0	10.5	10.4
214.591	35.4	43.5	-8.1	44.7	1.7	32.0	10.5	10.5
217.242	35.2	46.0	-10.8	44.3	1.7	32.0	10.5	10.7
221.058	34.9	46.0	-11.1	43.7	1.7	32.0	10.5	10.9
222.254	35.7	46.0	-10.3	44.4	1.7	32.0	10.5	11.1
226.199	35.2	46.0	-10.8	43.5	1.8	32.0	10.5	11.4
227.427	35.0	46.0	-11.0	43.1	1.8	32.0	10.5	11.6
235.187	34.9	46.0	-11.1	42.6	1.8	32.0	10.5	11.9
240.037	39.3	46.0	-6.7	46.8	1.9	32.0	10.5	12.0
499.965	36.5	46.0	-9.5	37.8	2.9	32.1	10.5	17.3
527.998	36.3	46.0	-9.7	37.0	3.0	32.1	10.5	18.0
552.022	35.9	46.0	-10.1	36.8	3.0	32.1	10.5	17.8
624.998	38.4	46.0	-7.6	38.0	3.2	32.2	10.5	18.9
712.201	39.7	46.0	-6.3	37.8	3.6	32.3	10.5	20.1
722.936	34.6	46.0	-11.4	32.5	3.6	32.3	10.5	20.2
801.958	37.6	46.0	-8.4	34.3	3.8	32.1	10.5	21.1
987.196	38.3	54.0	-15.7	31.7	4.1	30.9	10.5	22.8

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

Corrected Peak Scans are under the Average Limit of 54.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 20MHz 5260MHz

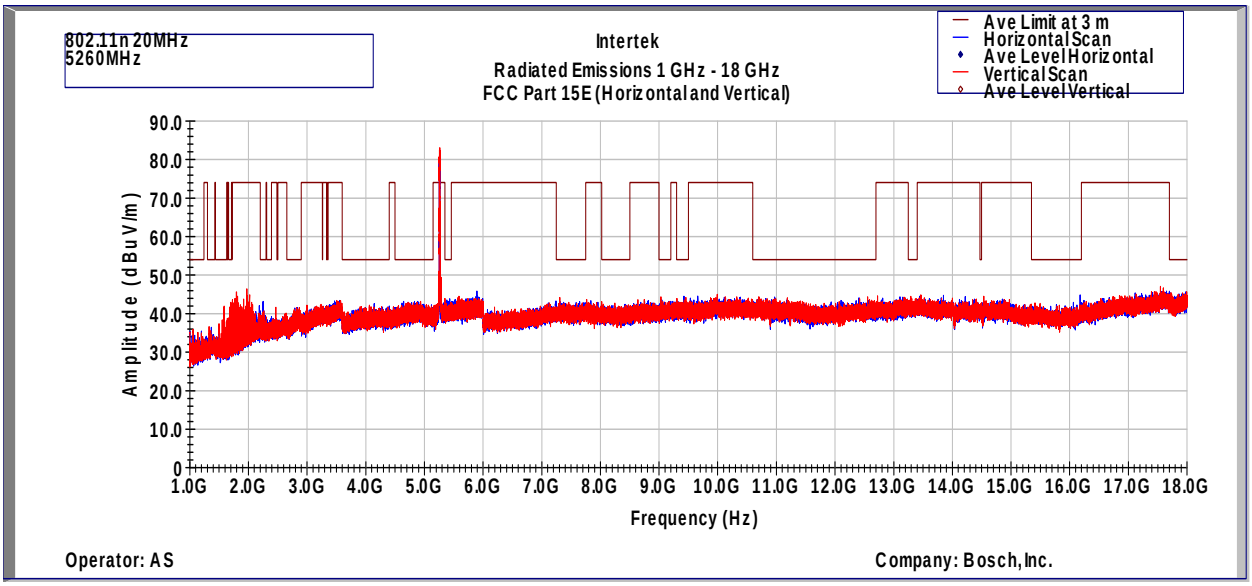
Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
172.493	36.0	43.5	-7.5	46.7	1.4	32.0	10.5	9.4
191.990	35.0	43.5	-8.5	45.5	1.5	32.0	10.5	9.5
193.995	35.6	43.5	-7.9	46.1	1.5	32.0	10.5	9.5
199.394	33.7	43.5	-9.8	44.2	1.6	32.0	10.5	9.4
216.014	40.0	46.0	-6.0	49.3	1.7	32.0	10.5	10.6
300.016	36.2	46.0	-9.8	42.0	2.3	32.0	10.5	13.3
312.011	36.9	46.0	-9.1	42.5	2.3	32.0	10.5	13.6
323.296	37.6	46.0	-8.4	42.8	2.4	32.0	10.5	13.9
338.007	34.1	46.0	-11.9	38.8	2.4	32.0	10.5	14.4
387.865	34.4	46.0	-11.6	37.8	2.5	32.0	10.5	15.5
389.999	34.7	46.0	-11.3	38.1	2.5	32.0	10.5	15.5
419.972	35.8	46.0	-10.2	38.2	2.6	32.0	10.5	16.5
452.564	33.7	46.0	-12.3	35.5	2.7	32.0	10.5	17.0
479.983	36.0	46.0	-10.0	37.8	2.8	32.1	10.5	16.9
528.030	39.7	46.0	-6.3	40.3	3.0	32.1	10.5	18.0
539.994	38.9	46.0	-7.1	39.7	3.0	32.1	10.5	17.9
550.017	35.4	46.0	-10.6	36.3	3.0	32.1	10.5	17.7
600.004	39.6	46.0	-6.4	39.9	3.1	32.2	10.5	18.3
606.018	34.6	46.0	-11.4	34.8	3.1	32.2	10.5	18.4
624.028	35.2	46.0	-10.8	34.9	3.2	32.2	10.5	18.9
644.010	37.2	46.0	-8.8	36.4	3.3	32.2	10.5	19.3
648.019	34.8	46.0	-11.2	34.0	3.3	32.3	10.5	19.3
672.011	34.9	46.0	-11.1	34.0	3.4	32.3	10.5	19.2
695.970	33.7	46.0	-12.3	32.3	3.6	32.3	10.5	19.6
711.199	37.1	46.0	-8.9	35.2	3.6	32.3	10.5	20.1
730.987	36.8	46.0	-9.2	34.7	3.7	32.2	10.5	20.2
743.985	34.6	46.0	-11.4	32.5	3.7	32.2	10.5	20.1
768.978	36.6	46.0	-9.4	34.2	3.8	32.2	10.5	20.3
801.926	36.9	46.0	-9.1	33.5	3.8	32.1	10.5	21.1
980.988	38.6	54.0	-15.4	32.2	4.1	31.0	10.5	22.8
1000.000	41.0	54.0	-13.0	34.3	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
124.995	38.1	43.5	-5.4	46.6	1.2	32.0	10.5	11.8
125.771	35.1	43.5	-8.4	43.6	1.2	32.0	10.5	11.8
126.483	34.9	43.5	-8.6	43.5	1.2	32.0	10.5	11.8
167.772	36.3	43.5	-7.2	47.2	1.4	32.0	10.5	9.1
169.777	37.1	43.5	-6.4	47.8	1.4	32.0	10.5	9.4
171.717	35.5	43.5	-8.0	46.2	1.4	32.0	10.5	9.4
192.022	37.6	43.5	-5.9	48.1	1.5	32.0	10.5	9.5
193.962	36.6	43.5	-6.9	47.1	1.5	32.0	10.5	9.5
201.949	35.3	43.5	-8.2	45.6	1.6	32.0	10.5	9.6
203.210	34.8	43.5	-8.7	45.0	1.6	32.0	10.5	9.7
204.503	35.6	43.5	-7.9	45.7	1.6	32.0	10.5	9.8
207.090	36.3	43.5	-7.2	46.2	1.6	32.0	10.5	10.0
208.286	34.8	43.5	-8.7	44.6	1.6	32.0	10.5	10.1
209.612	34.9	43.5	-8.6	44.6	1.6	32.0	10.5	10.2
210.873	34.7	43.5	-8.8	44.3	1.7	32.0	10.5	10.2
212.231	35.0	43.5	-8.5	44.5	1.7	32.0	10.5	10.3
213.492	36.1	43.5	-7.4	45.5	1.7	32.0	10.5	10.4
214.720	35.5	43.5	-8.0	44.8	1.7	32.0	10.5	10.5
217.242	34.5	46.0	-11.5	43.7	1.7	32.0	10.5	10.7
218.568	34.4	46.0	-11.6	43.4	1.7	32.0	10.5	10.7
219.861	34.6	46.0	-11.4	43.6	1.7	32.0	10.5	10.8
222.351	35.4	46.0	-10.6	44.1	1.7	32.0	10.5	11.1
226.263	34.7	46.0	-11.3	42.9	1.8	32.0	10.5	11.5
228.753	34.8	46.0	-11.2	42.8	1.8	32.0	10.5	11.7
230.079	34.6	46.0	-11.4	42.5	1.8	32.0	10.5	11.8
240.005	38.8	46.0	-7.2	46.4	1.9	32.0	10.5	12.0
499.997	35.7	46.0	-10.3	37.1	2.9	32.1	10.5	17.3
527.998	36.0	46.0	-10.0	36.7	3.0	32.1	10.5	18.0
552.022	35.6	46.0	-10.4	36.5	3.0	32.1	10.5	17.8
624.998	39.3	46.0	-6.7	38.9	3.2	32.2	10.5	18.9
801.926	37.3	46.0	-8.7	34.0	3.8	32.1	10.5	21.1
899.508	36.6	46.0	-9.4	31.8	4.0	31.6	10.5	21.9
1000.000	37.4	54.0	-16.6	30.7	4.2	30.8	10.5	22.8

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

Corrected Peak Scans are under the Average Limit of 54.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 20MHz 5300MHz

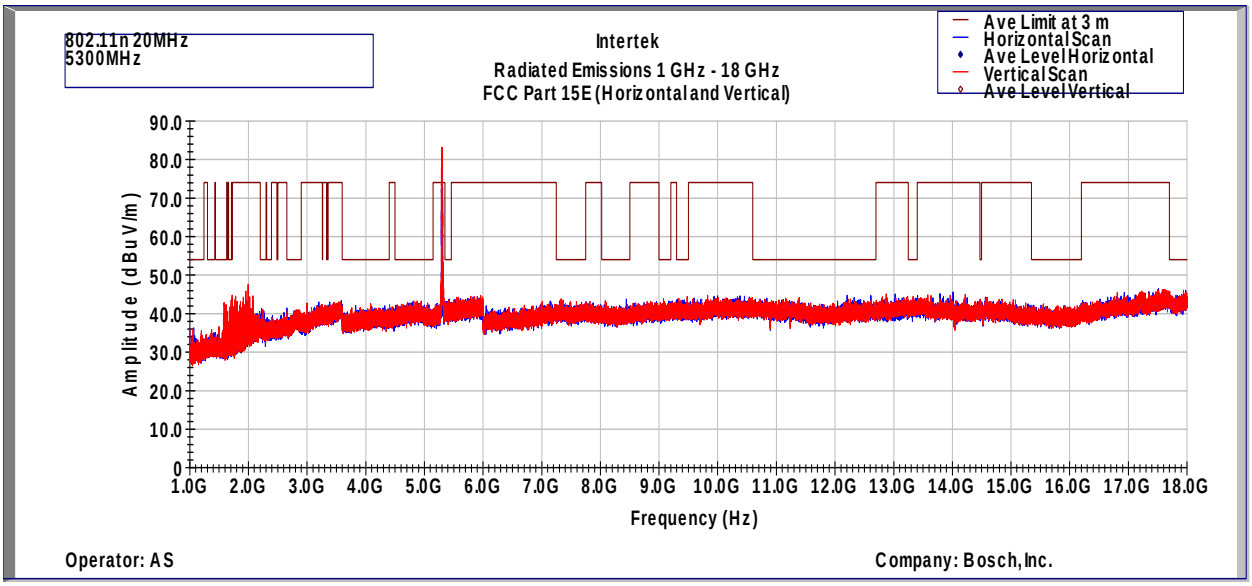
Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
167.999	35.7	43.5	-7.8	46.6	1.4	32.0	10.5	9.2
168.678	36.2	43.5	-7.3	47.0	1.4	32.0	10.5	9.3
169.777	36.9	43.5	-6.6	47.6	1.4	32.0	10.5	9.4
172.719	36.2	43.5	-7.3	47.0	1.4	32.0	10.5	9.4
192.022	36.7	43.5	-6.8	47.2	1.5	32.0	10.5	9.5
193.962	35.6	43.5	-7.9	46.1	1.5	32.0	10.5	9.5
196.840	34.1	43.5	-9.4	44.6	1.6	32.0	10.5	9.4
216.014	39.7	46.0	-6.3	48.9	1.7	32.0	10.5	10.6
299.983	36.6	46.0	-9.4	42.4	2.3	32.0	10.5	13.3
312.011	37.4	46.0	-8.6	42.9	2.3	32.0	10.5	13.6
323.296	37.8	46.0	-8.2	43.0	2.4	32.0	10.5	13.9
387.898	34.9	46.0	-11.1	38.3	2.5	32.0	10.5	15.5
389.999	34.1	46.0	-11.9	37.6	2.5	32.0	10.5	15.5
420.005	36.3	46.0	-9.7	38.7	2.6	32.0	10.5	16.5
480.015	36.4	46.0	-9.6	38.2	2.8	32.1	10.5	16.9
527.998	39.5	46.0	-6.5	40.2	3.0	32.1	10.5	18.0
539.994	38.7	46.0	-7.3	39.5	3.0	32.1	10.5	17.9
550.017	35.4	46.0	-10.6	36.3	3.0	32.1	10.5	17.7
600.037	38.9	46.0	-7.1	39.2	3.1	32.2	10.5	18.3
606.018	34.2	46.0	-11.8	34.4	3.1	32.2	10.5	18.4
624.028	36.0	46.0	-10.0	35.7	3.2	32.2	10.5	18.9
644.010	37.1	46.0	-8.9	36.3	3.3	32.2	10.5	19.3
648.019	36.4	46.0	-9.6	35.5	3.3	32.3	10.5	19.3
711.199	37.2	46.0	-8.8	35.3	3.6	32.3	10.5	20.1
730.987	37.5	46.0	-8.5	35.3	3.7	32.2	10.5	20.2
743.985	34.4	46.0	-11.6	32.4	3.7	32.2	10.5	20.1
769.011	35.8	46.0	-10.2	33.4	3.8	32.2	10.5	20.3
801.926	36.7	46.0	-9.3	33.4	3.8	32.1	10.5	21.1
828.278	35.2	46.0	-10.8	31.6	3.9	32.0	10.5	21.1
1000.000	42.3	54.0	-11.7	35.6	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
92.565	33.9	43.5	-9.6	45.6	1.0	32.1	10.5	8.8
123.864	34.3	43.5	-9.2	42.7	1.2	32.0	10.5	11.9
125.028	38.5	43.5	-5.0	47.0	1.2	32.0	10.5	11.8
125.804	36.0	43.5	-7.5	44.5	1.2	32.0	10.5	11.8
171.782	36.6	43.5	-6.9	47.3	1.4	32.0	10.5	9.4
185.944	38.2	43.5	-5.3	48.8	1.5	32.0	10.5	9.3
193.962	36.2	43.5	-7.3	46.7	1.5	32.0	10.5	9.5
201.949	33.8	43.5	-9.7	44.2	1.6	32.0	10.5	9.6
204.438	34.7	43.5	-8.8	44.8	1.6	32.0	10.5	9.8
205.796	35.2	43.5	-8.3	45.2	1.6	32.0	10.5	9.9
207.090	35.8	43.5	-7.7	45.7	1.6	32.0	10.5	10.0
208.286	34.3	43.5	-9.2	44.1	1.6	32.0	10.5	10.1
209.579	35.7	43.5	-7.8	45.4	1.6	32.0	10.5	10.2
210.937	34.9	43.5	-8.6	44.4	1.7	32.0	10.5	10.2
212.134	36.6	43.5	-6.9	46.1	1.7	32.0	10.5	10.3
213.459	34.8	43.5	-8.7	44.2	1.7	32.0	10.5	10.4
214.688	35.4	43.5	-8.1	44.7	1.7	32.0	10.5	10.5
217.242	35.2	46.0	-10.8	44.4	1.7	32.0	10.5	10.7
222.351	36.1	46.0	-9.9	44.7	1.7	32.0	10.5	11.1
224.938	34.3	46.0	-11.7	42.7	1.8	32.0	10.5	11.3
227.492	35.2	46.0	-10.8	43.3	1.8	32.0	10.5	11.6
228.785	34.3	46.0	-11.7	42.3	1.8	32.0	10.5	11.7
230.046	33.9	46.0	-12.1	41.8	1.8	32.0	10.5	11.8
232.568	34.2	46.0	-11.8	42.0	1.8	32.0	10.5	11.9
240.005	38.9	46.0	-7.1	46.5	1.9	32.0	10.5	12.0
253.100	34.0	46.0	-12.0	41.4	2.0	32.0	10.5	12.1
256.883	34.5	46.0	-11.5	41.5	2.0	32.0	10.5	12.5
499.997	36.6	46.0	-9.4	37.9	2.9	32.1	10.5	17.3
527.998	36.4	46.0	-9.6	37.0	3.0	32.1	10.5	18.0
552.022	35.4	46.0	-10.6	36.3	3.0	32.1	10.5	17.8
801.926	38.2	46.0	-7.8	34.9	3.8	32.1	10.5	21.1
1000.000	38.2	54.0	-15.8	31.5	4.2	30.8	10.5	22.8

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

Corrected Peak Scans are under the Average Limit of 54.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 20MHz 5320MHz

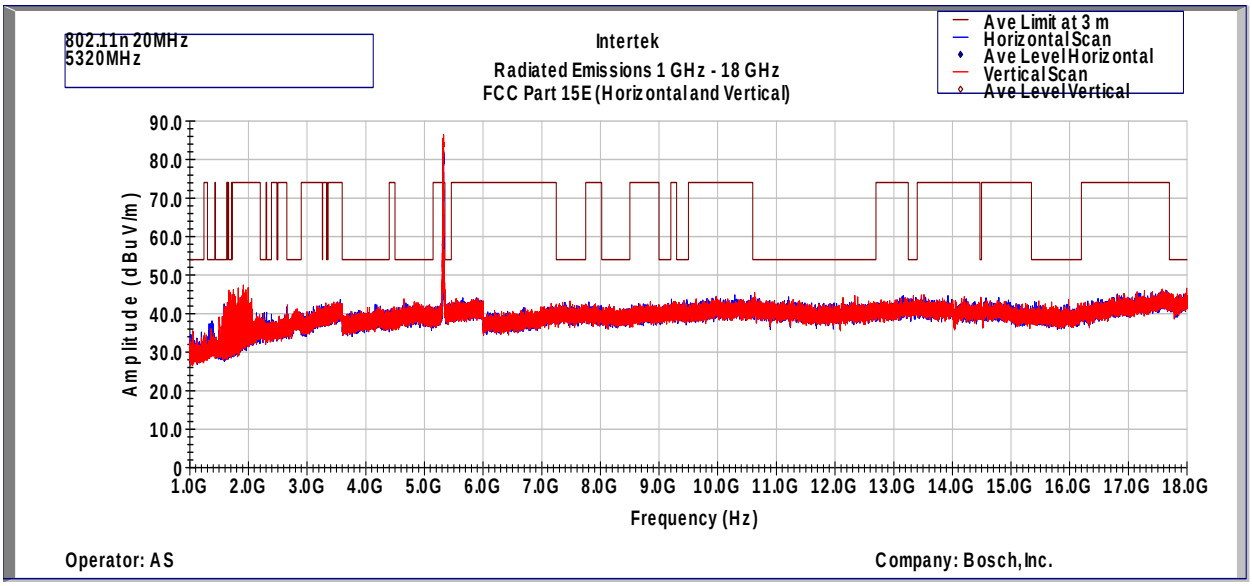
Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
168.031	36.4	43.5	-7.1	47.4	1.4	32.0	10.5	9.2
172.525	36.3	43.5	-7.2	47.0	1.4	32.0	10.5	9.4
191.990	35.5	43.5	-8.0	46.0	1.5	32.0	10.5	9.5
193.962	35.0	43.5	-8.5	45.5	1.5	32.0	10.5	9.5
216.014	40.1	46.0	-5.9	49.3	1.7	32.0	10.5	10.6
249.996	41.0	46.0	-5.0	48.7	1.9	32.0	10.5	11.8
300.016	36.9	46.0	-9.1	42.8	2.3	32.0	10.5	13.3
312.011	37.3	46.0	-8.7	42.8	2.3	32.0	10.5	13.6
323.263	36.6	46.0	-9.4	41.8	2.4	32.0	10.5	13.9
338.040	34.6	46.0	-11.4	39.3	2.4	32.0	10.5	14.4
387.898	35.1	46.0	-10.9	38.6	2.5	32.0	10.5	15.5
389.967	34.5	46.0	-11.5	37.9	2.5	32.0	10.5	15.5
419.972	36.4	46.0	-9.6	38.8	2.6	32.0	10.5	16.5
479.983	37.6	46.0	-8.4	39.4	2.8	32.1	10.5	16.9
527.998	39.8	46.0	-6.2	40.5	3.0	32.1	10.5	18.0
539.994	38.4	46.0	-7.6	39.2	3.0	32.1	10.5	17.9
550.017	36.2	46.0	-9.8	37.2	3.0	32.1	10.5	17.7
600.004	38.8	46.0	-7.2	39.1	3.1	32.2	10.5	18.3
606.018	34.4	46.0	-11.6	34.6	3.1	32.2	10.5	18.4
623.996	35.5	46.0	-10.5	35.2	3.2	32.2	10.5	18.9
644.010	36.4	46.0	-9.6	35.5	3.3	32.2	10.5	19.3
647.987	36.2	46.0	-9.8	35.4	3.3	32.3	10.5	19.3
696.002	34.0	46.0	-12.0	32.6	3.6	32.3	10.5	19.6
711.199	38.1	46.0	-7.9	36.2	3.6	32.3	10.5	20.1
719.961	34.7	46.0	-11.3	32.6	3.6	32.3	10.5	20.2
731.019	37.5	46.0	-8.5	35.4	3.7	32.2	10.5	20.2
752.036	34.1	46.0	-11.9	32.2	3.7	32.2	10.5	19.9
768.978	36.8	46.0	-9.2	34.4	3.8	32.2	10.5	20.3
779.972	34.7	46.0	-11.3	32.1	3.8	32.1	10.5	20.5
801.958	35.8	46.0	-10.2	32.5	3.8	32.1	10.5	21.1
855.858	35.8	46.0	-10.2	32.1	3.9	31.8	10.5	21.1
1000.000	42.8	54.0	-11.2	36.2	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
123.670	34.3	43.5	-9.2	42.8	1.2	32.0	10.5	11.9
124.995	37.8	43.5	-5.7	46.4	1.2	32.0	10.5	11.8
129.328	34.2	43.5	-9.3	42.9	1.2	32.0	10.5	11.6
164.862	34.9	43.5	-8.6	46.3	1.4	32.0	10.5	8.7
167.772	36.9	43.5	-6.6	47.9	1.4	32.0	10.5	9.1
192.022	38.1	43.5	-5.4	48.6	1.5	32.0	10.5	9.5
193.962	35.7	43.5	-7.8	46.2	1.5	32.0	10.5	9.5
203.210	33.9	43.5	-9.6	44.1	1.6	32.0	10.5	9.7
204.535	34.8	43.5	-8.7	45.0	1.6	32.0	10.5	9.8
206.993	34.9	43.5	-8.6	44.8	1.6	32.0	10.5	10.0
208.318	33.9	43.5	-9.6	43.7	1.6	32.0	10.5	10.1
209.579	34.7	43.5	-8.8	44.4	1.6	32.0	10.5	10.2
210.873	34.8	43.5	-8.7	44.4	1.7	32.0	10.5	10.2
212.166	36.4	43.5	-7.1	45.9	1.7	32.0	10.5	10.3
213.395	34.9	43.5	-8.6	44.3	1.7	32.0	10.5	10.4
214.688	36.0	43.5	-7.5	45.3	1.7	32.0	10.5	10.5
217.210	35.0	46.0	-11.0	44.1	1.7	32.0	10.5	10.7
218.536	34.1	46.0	-11.9	43.2	1.7	32.0	10.5	10.7
219.829	34.1	46.0	-11.9	43.1	1.7	32.0	10.5	10.8
222.286	35.4	46.0	-10.6	44.1	1.7	32.0	10.5	11.1
224.970	34.8	46.0	-11.2	43.2	1.8	32.0	10.5	11.3
226.263	34.3	46.0	-11.7	42.6	1.8	32.0	10.5	11.5
227.492	34.4	46.0	-11.6	42.5	1.8	32.0	10.5	11.6
228.818	35.2	46.0	-10.8	43.2	1.8	32.0	10.5	11.7
230.079	33.9	46.0	-12.1	41.8	1.8	32.0	10.5	11.8
238.938	34.0	46.0	-12.0	41.6	1.9	32.0	10.5	12.0
240.005	38.6	46.0	-7.4	46.2	1.9	32.0	10.5	12.0
499.997	36.4	46.0	-9.6	37.7	2.9	32.1	10.5	17.3
527.998	36.1	46.0	-9.9	36.7	3.0	32.1	10.5	18.0
552.022	35.8	46.0	-10.2	36.7	3.0	32.1	10.5	17.8
801.926	37.1	46.0	-8.9	33.7	3.8	32.1	10.5	21.1
996.314	38.3	54.0	-15.7	31.6	4.2	30.8	10.5	22.8

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

Corrected Peak Scans are under the Average Limit of 54.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 40MHz 5270MHz

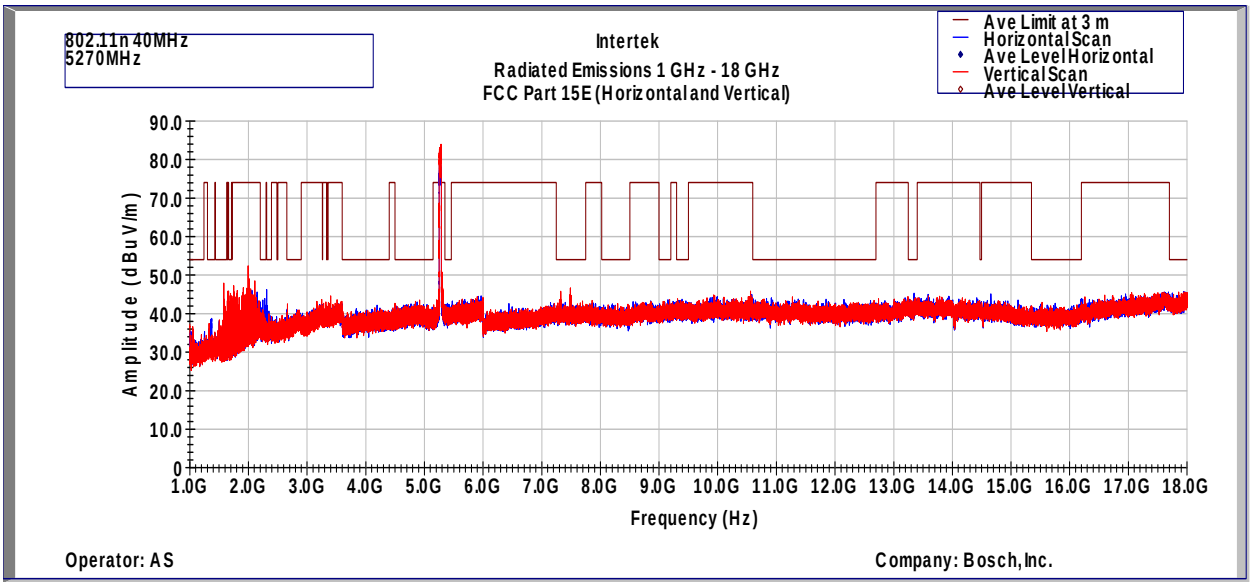
Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
172.687	36.4	43.5	-7.1	47.2	1.4	32.0	10.5	9.4
191.990	35.7	43.5	-7.8	46.2	1.5	32.0	10.5	9.5
193.930	34.5	43.5	-9.0	45.0	1.5	32.0	10.5	9.5
201.884	33.5	43.5	-10.0	43.8	1.6	32.0	10.5	9.6
209.547	33.2	43.5	-10.3	42.9	1.6	32.0	10.5	10.2
299.951	36.9	46.0	-9.1	42.7	2.3	32.0	10.5	13.3
311.979	37.1	46.0	-8.9	42.6	2.3	32.0	10.5	13.6
323.231	37.4	46.0	-8.6	42.5	2.4	32.0	10.5	13.9
337.975	33.6	46.0	-12.4	38.2	2.4	32.0	10.5	14.4
387.930	34.3	46.0	-11.7	37.7	2.5	32.0	10.5	15.5
389.967	35.1	46.0	-10.9	38.6	2.5	32.0	10.5	15.5
420.037	35.5	46.0	-10.5	37.9	2.6	32.0	10.5	16.5
452.532	34.3	46.0	-11.7	36.1	2.7	32.0	10.5	17.0
479.983	35.9	46.0	-10.1	37.7	2.8	32.1	10.5	16.9
527.998	39.7	46.0	-6.3	40.4	3.0	32.1	10.5	18.0
540.026	38.6	46.0	-7.4	39.4	3.0	32.1	10.5	17.8
550.017	35.1	46.0	-10.9	36.1	3.0	32.1	10.5	17.7
581.930	34.0	46.0	-12.0	34.0	3.0	32.2	10.5	18.7
600.069	40.1	46.0	-5.9	40.4	3.1	32.2	10.5	18.3
606.083	35.4	46.0	-10.6	35.6	3.1	32.2	10.5	18.4
624.028	34.7	46.0	-11.3	34.4	3.2	32.2	10.5	18.9
644.010	36.0	46.0	-10.0	35.1	3.3	32.2	10.5	19.3
647.987	36.3	46.0	-9.7	35.5	3.3	32.3	10.5	19.3
660.112	33.7	46.0	-12.3	32.7	3.4	32.3	10.5	19.3
672.043	34.0	46.0	-12.0	33.2	3.4	32.3	10.5	19.2
711.134	37.6	46.0	-8.4	35.7	3.6	32.3	10.5	20.1
731.019	37.0	46.0	-9.0	34.8	3.7	32.2	10.5	20.2
769.043	36.9	46.0	-9.1	34.5	3.8	32.2	10.5	20.3
775.833	39.6	46.0	-6.4	37.0	3.8	32.2	10.5	20.4
802.023	36.2	46.0	-9.8	32.9	3.8	32.1	10.5	21.1
1000.000	41.5	54.0	-12.5	34.8	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
122.829	34.4	43.5	-9.1	42.8	1.2	32.0	10.5	11.9
124.963	37.7	43.5	-5.8	46.2	1.2	32.0	10.5	11.8
162.793	34.0	43.5	-9.5	45.6	1.4	32.0	10.5	8.5
170.747	36.3	43.5	-7.2	46.9	1.4	32.0	10.5	9.4
184.521	38.1	43.5	-5.4	48.9	1.5	32.0	10.5	9.3
191.990	37.4	43.5	-6.1	47.9	1.5	32.0	10.5	9.5
193.930	37.3	43.5	-6.2	47.8	1.5	32.0	10.5	9.5
203.145	34.4	43.5	-9.1	44.6	1.6	32.0	10.5	9.7
204.503	35.0	43.5	-8.5	45.2	1.6	32.0	10.5	9.8
205.667	34.1	43.5	-9.4	44.1	1.6	32.0	10.5	9.9
206.928	34.4	43.5	-9.1	44.3	1.6	32.0	10.5	10.0
208.189	34.3	43.5	-9.2	44.1	1.6	32.0	10.5	10.1
209.644	34.7	43.5	-8.8	44.4	1.6	32.0	10.5	10.2
210.905	34.6	43.5	-8.9	44.2	1.7	32.0	10.5	10.2
212.069	35.6	43.5	-7.9	45.1	1.7	32.0	10.5	10.3
213.427	33.8	43.5	-9.7	43.2	1.7	32.0	10.5	10.4
214.688	36.4	43.5	-7.1	45.7	1.7	32.0	10.5	10.5
217.210	35.0	46.0	-11.0	44.1	1.7	32.0	10.5	10.7
219.829	33.8	46.0	-12.2	42.7	1.7	32.0	10.5	10.8
220.993	33.7	46.0	-12.3	42.5	1.7	32.0	10.5	10.9
222.351	35.5	46.0	-10.5	44.2	1.7	32.0	10.5	11.1
223.612	33.4	46.0	-12.6	41.9	1.7	32.0	10.5	11.2
224.873	34.1	46.0	-11.9	42.6	1.8	32.0	10.5	11.3
227.492	34.2	46.0	-11.8	42.3	1.8	32.0	10.5	11.6
230.014	34.7	46.0	-11.3	42.5	1.8	32.0	10.5	11.8
240.005	38.3	46.0	-7.7	45.9	1.9	32.0	10.5	12.0
457.770	34.0	46.0	-12.0	35.7	2.8	32.0	10.5	17.0
499.965	35.2	46.0	-10.8	36.5	2.9	32.1	10.5	17.3
527.998	36.4	46.0	-9.6	37.1	3.0	32.1	10.5	18.0
551.957	36.4	46.0	-9.6	37.3	3.0	32.1	10.5	17.8
624.998	39.3	46.0	-6.7	39.0	3.2	32.2	10.5	18.9
801.926	36.7	46.0	-9.3	33.4	3.8	32.1	10.5	21.1
997.090	37.5	54.0	-16.5	30.8	4.2	30.8	10.5	22.8

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

Corrected Peak Scans are under the Average Limit of 54.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n 40MHz 5310MHz

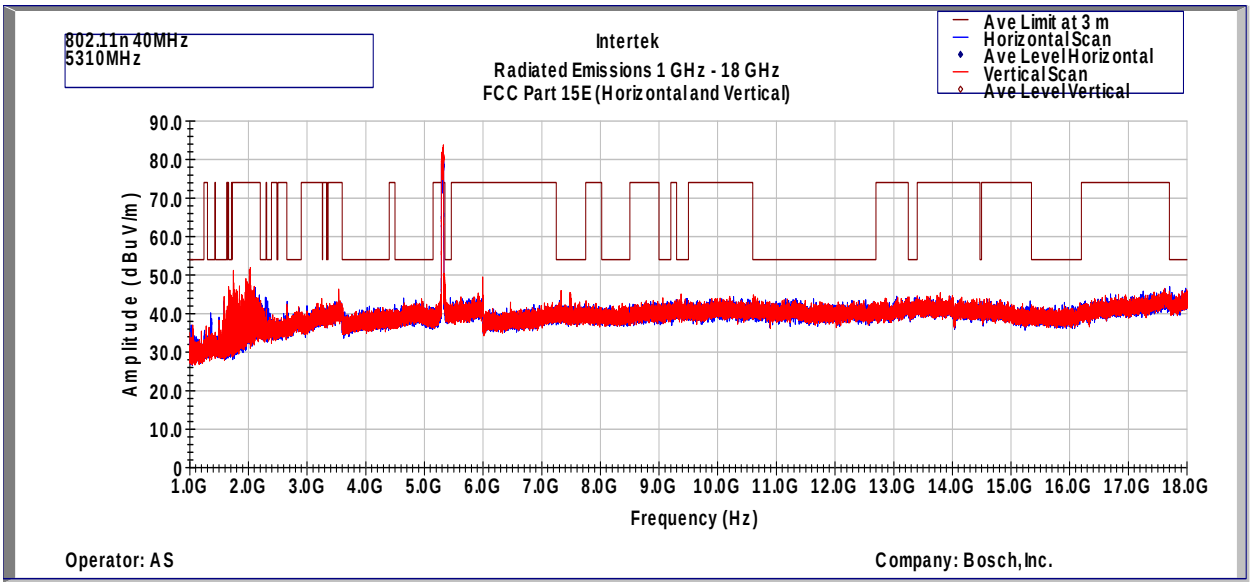
Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
170.650	36.4	43.5	-7.1	47.1	1.4	32.0	10.5	9.4
191.990	35.7	43.5	-7.8	46.3	1.5	32.0	10.5	9.5
193.930	35.6	43.5	-7.9	46.1	1.5	32.0	10.5	9.5
249.996	40.7	46.0	-5.3	48.4	1.9	32.0	10.5	11.8
300.048	35.8	46.0	-10.2	41.6	2.3	32.0	10.5	13.3
302.861	33.6	46.0	-12.4	39.4	2.3	32.0	10.5	13.4
311.979	36.7	46.0	-9.3	42.3	2.3	32.0	10.5	13.6
323.231	36.9	46.0	-9.1	42.1	2.4	32.0	10.5	13.9
337.975	33.4	46.0	-12.6	38.0	2.4	32.0	10.5	14.4
387.930	35.6	46.0	-10.4	39.1	2.5	32.0	10.5	15.5
389.967	34.7	46.0	-11.3	38.2	2.5	32.0	10.5	15.5
394.041	33.1	46.0	-12.9	36.3	2.6	32.0	10.5	15.7
420.037	35.7	46.0	-10.3	38.1	2.6	32.0	10.5	16.5
452.532	35.1	46.0	-10.9	36.9	2.7	32.0	10.5	17.0
479.983	36.3	46.0	-9.7	38.1	2.8	32.1	10.5	16.9
494.048	33.4	46.0	-12.6	34.9	2.9	32.1	10.5	17.2
527.998	40.0	46.0	-6.0	40.7	3.0	32.1	10.5	18.0
540.026	38.5	46.0	-7.5	39.3	3.0	32.1	10.5	17.8
550.017	34.7	46.0	-11.3	35.7	3.0	32.1	10.5	17.7
599.972	38.4	46.0	-7.6	38.7	3.1	32.2	10.5	18.3
605.986	34.8	46.0	-11.2	35.0	3.1	32.2	10.5	18.4
624.028	34.6	46.0	-11.4	34.3	3.2	32.2	10.5	18.9
644.010	35.3	46.0	-10.7	34.5	3.3	32.2	10.5	19.3
647.987	35.3	46.0	-10.7	34.5	3.3	32.3	10.5	19.3
660.015	36.3	46.0	-9.7	35.4	3.4	32.3	10.5	19.3
672.043	35.4	46.0	-10.6	34.6	3.4	32.3	10.5	19.2
711.231	36.9	46.0	-9.1	35.0	3.6	32.3	10.5	20.1
720.058	35.2	46.0	-10.8	33.1	3.6	32.3	10.5	20.2
731.019	36.5	46.0	-9.5	34.4	3.7	32.2	10.5	20.2
769.043	37.0	46.0	-9.0	34.7	3.8	32.2	10.5	20.3
1000.000	41.9	54.0	-12.1	35.2	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
122.829	34.3	43.5	-9.2	42.7	1.2	32.0	10.5	11.9
126.806	36.0	43.5	-7.5	44.6	1.2	32.0	10.5	11.7
169.874	37.6	43.5	-5.9	48.3	1.4	32.0	10.5	9.4
185.297	38.4	43.5	-5.1	49.1	1.5	32.0	10.5	9.3
204.503	34.0	43.5	-9.5	44.1	1.6	32.0	10.5	9.8
205.667	33.9	43.5	-9.6	43.9	1.6	32.0	10.5	9.9
207.025	35.7	43.5	-7.8	45.6	1.6	32.0	10.5	10.0
208.286	33.5	43.5	-10.0	43.3	1.6	32.0	10.5	10.1
209.644	34.8	43.5	-8.7	44.4	1.6	32.0	10.5	10.2
212.166	35.6	43.5	-7.9	45.1	1.7	32.0	10.5	10.3
213.427	35.2	43.5	-8.3	44.6	1.7	32.0	10.5	10.4
214.688	35.3	43.5	-8.2	44.6	1.7	32.0	10.5	10.5
217.210	35.0	46.0	-11.0	44.1	1.7	32.0	10.5	10.7
218.471	33.5	46.0	-12.5	42.6	1.7	32.0	10.5	10.7
219.829	34.8	46.0	-11.2	43.8	1.7	32.0	10.5	10.8
221.090	33.2	46.0	-12.8	42.0	1.7	32.0	10.5	10.9
222.448	36.4	46.0	-9.6	45.0	1.7	32.0	10.5	11.1
223.709	33.5	46.0	-12.5	42.0	1.7	32.0	10.5	11.2
224.873	33.9	46.0	-12.1	42.3	1.8	32.0	10.5	11.3
226.134	34.9	46.0	-11.1	43.2	1.8	32.0	10.5	11.4
227.492	34.1	46.0	-11.9	42.2	1.8	32.0	10.5	11.6
230.014	34.3	46.0	-11.7	42.2	1.8	32.0	10.5	11.8
235.155	33.5	46.0	-12.5	41.2	1.8	32.0	10.5	11.9
238.938	33.9	46.0	-12.1	41.5	1.9	32.0	10.5	12.0
240.005	38.7	46.0	-7.3	46.3	1.9	32.0	10.5	12.0
253.100	33.3	46.0	-12.7	40.7	2.0	32.0	10.5	12.1
255.622	33.6	46.0	-12.4	40.7	2.0	32.0	10.5	12.4
256.883	33.9	46.0	-12.1	40.9	2.0	32.0	10.5	12.5
499.965	36.3	46.0	-9.7	37.7	2.9	32.1	10.5	17.3
527.998	34.8	46.0	-11.2	35.4	3.0	32.1	10.5	18.0
552.054	35.0	46.0	-11.0	35.9	3.0	32.1	10.5	17.8
802.023	37.0	46.0	-9.0	33.7	3.8	32.1	10.5	21.1

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

Corrected Peak Scans are under the Average Limit of 54.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11ac 80MHz 5290MHz

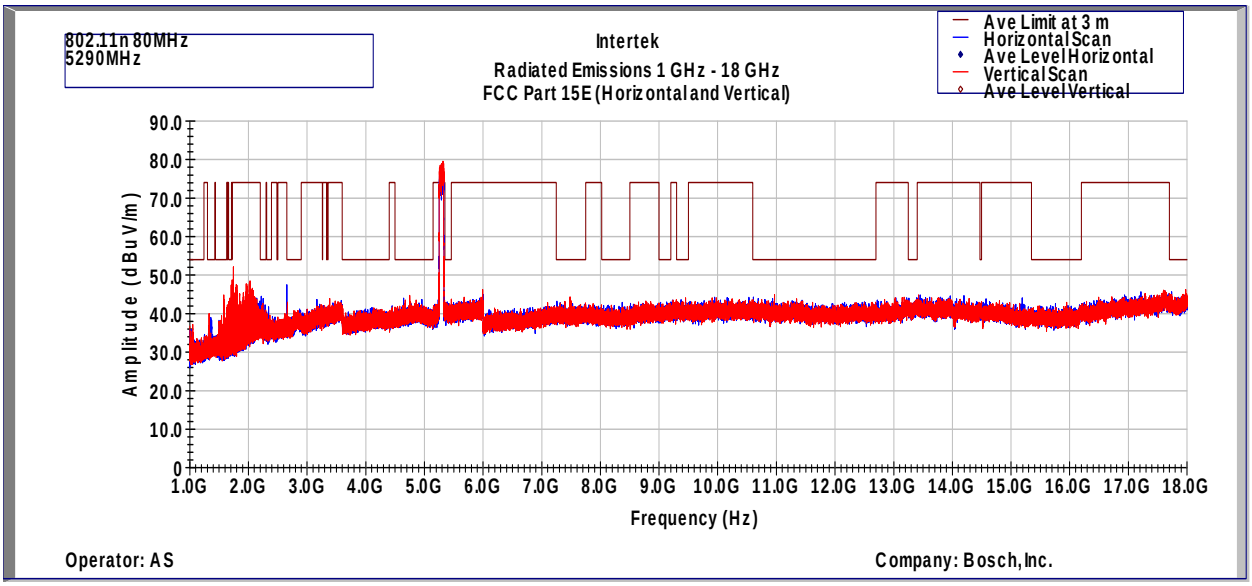
Radiated Spurious Emissions 30 MHz - 1000 MHz (Horizontal)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
172.687	36.3	43.5	-7.2	47.0	1.4	32.0	10.5	9.4
191.990	34.8	43.5	-8.7	45.3	1.5	32.0	10.5	9.5
193.930	34.7	43.5	-8.8	45.2	1.5	32.0	10.5	9.5
203.242	33.1	43.5	-10.4	43.4	1.6	32.0	10.5	9.7
204.503	32.9	43.5	-10.6	43.0	1.6	32.0	10.5	9.8
205.861	33.0	43.5	-10.5	43.0	1.6	32.0	10.5	9.9
249.996	41.0	46.0	-5.0	48.7	1.9	32.0	10.5	11.8
263.964	33.2	46.0	-12.8	39.8	2.0	32.0	10.5	12.8
299.951	35.8	46.0	-10.2	41.6	2.3	32.0	10.5	13.3
311.979	36.4	46.0	-9.6	41.9	2.3	32.0	10.5	13.6
323.231	35.7	46.0	-10.3	40.9	2.4	32.0	10.5	13.9
337.975	34.6	46.0	-11.4	39.2	2.4	32.0	10.5	14.4
387.930	34.2	46.0	-11.8	37.6	2.5	32.0	10.5	15.5
389.967	34.7	46.0	-11.3	38.1	2.5	32.0	10.5	15.5
394.041	32.8	46.0	-13.2	36.1	2.6	32.0	10.5	15.7
420.037	35.3	46.0	-10.7	37.7	2.6	32.0	10.5	16.5
452.629	34.2	46.0	-11.8	36.1	2.7	32.0	10.5	17.0
479.983	36.5	46.0	-9.5	38.3	2.8	32.1	10.5	16.9
527.998	39.6	46.0	-6.4	40.3	3.0	32.1	10.5	18.0
540.026	38.5	46.0	-7.5	39.3	3.0	32.1	10.5	17.8
550.017	35.4	46.0	-10.6	36.4	3.0	32.1	10.5	17.7
599.972	37.9	46.0	-8.1	38.2	3.1	32.2	10.5	18.3
605.986	35.4	46.0	-10.6	35.6	3.1	32.2	10.5	18.4
624.028	35.3	46.0	-10.7	35.0	3.2	32.2	10.5	18.9
644.010	35.9	46.0	-10.1	35.1	3.3	32.2	10.5	19.3
647.987	36.1	46.0	-9.9	35.2	3.3	32.3	10.5	19.3
672.043	33.9	46.0	-12.1	33.1	3.4	32.3	10.5	19.2
731.019	37.4	46.0	-8.6	35.2	3.7	32.2	10.5	20.2
769.043	37.2	46.0	-8.8	34.8	3.8	32.2	10.5	20.3
775.833	38.7	46.0	-7.3	36.2	3.8	32.2	10.5	20.4
1000.000	40.9	54.0	-13.1	34.2	4.2	30.8	10.5	22.8

Radiated Spurious Emissions 30 MHz - 1000 MHz (Vertical)

Frequency	Peak FS	Limit@3m	Margin	RA	CF	AG	DCF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB	dB(1/m)
92.662	33.6	43.5	-9.9	45.3	1.0	32.1	10.5	8.8
122.829	33.8	43.5	-9.7	42.3	1.2	32.0	10.5	11.9
124.963	36.9	43.5	-6.6	45.4	1.2	32.0	10.5	11.8
161.047	33.4	43.5	-10.1	45.3	1.4	32.0	10.5	8.2
163.860	33.9	43.5	-9.6	45.4	1.4	32.0	10.5	8.6
167.837	36.1	43.5	-7.4	47.0	1.4	32.0	10.5	9.2
168.710	37.0	43.5	-6.5	47.8	1.4	32.0	10.5	9.3
181.805	37.4	43.5	-6.1	48.3	1.5	32.0	10.5	9.2
191.990	37.4	43.5	-6.1	47.9	1.5	32.0	10.5	9.5
209.644	35.1	43.5	-8.4	44.8	1.6	32.0	10.5	10.2
212.069	34.4	43.5	-9.1	43.9	1.7	32.0	10.5	10.3
213.330	34.8	43.5	-8.7	44.2	1.7	32.0	10.5	10.4
214.688	36.0	43.5	-7.5	45.3	1.7	32.0	10.5	10.5
217.210	35.6	46.0	-10.4	44.7	1.7	32.0	10.5	10.7
222.351	34.5	46.0	-11.5	43.2	1.7	32.0	10.5	11.1
223.612	33.5	46.0	-12.5	42.0	1.7	32.0	10.5	11.2
224.873	34.1	46.0	-11.9	42.6	1.8	32.0	10.5	11.3
226.231	35.5	46.0	-10.5	43.8	1.8	32.0	10.5	11.5
227.395	33.6	46.0	-12.4	41.8	1.8	32.0	10.5	11.6
228.753	33.4	46.0	-12.6	41.4	1.8	32.0	10.5	11.7
230.014	34.3	46.0	-11.7	42.1	1.8	32.0	10.5	11.8
235.155	33.7	46.0	-12.3	41.4	1.8	32.0	10.5	11.9
240.005	38.8	46.0	-7.2	46.3	1.9	32.0	10.5	12.0
251.742	34.1	46.0	-11.9	41.6	1.9	32.0	10.5	12.0
254.361	33.9	46.0	-12.1	41.2	2.0	32.0	10.5	12.2
256.883	34.4	46.0	-11.6	41.4	2.0	32.0	10.5	12.5
499.965	35.4	46.0	-10.6	36.7	2.9	32.1	10.5	17.3
527.998	36.2	46.0	-9.8	36.9	3.0	32.1	10.5	18.0
551.957	34.7	46.0	-11.3	35.6	3.0	32.1	10.5	17.8
708.127	35.0	46.0	-11.0	33.2	3.6	32.3	10.5	20.0
801.926	36.8	46.0	-9.2	33.5	3.8	32.1	10.5	21.1
864.394	36.7	46.0	-9.3	32.7	3.9	31.8	10.5	21.4
997.672	37.3	54.0	-16.7	30.6	4.2	30.8	10.5	22.8

Out-of-Band Radiated Spurious Emissions (Cabinet Radiation) - 1 GHz to 18 GHz



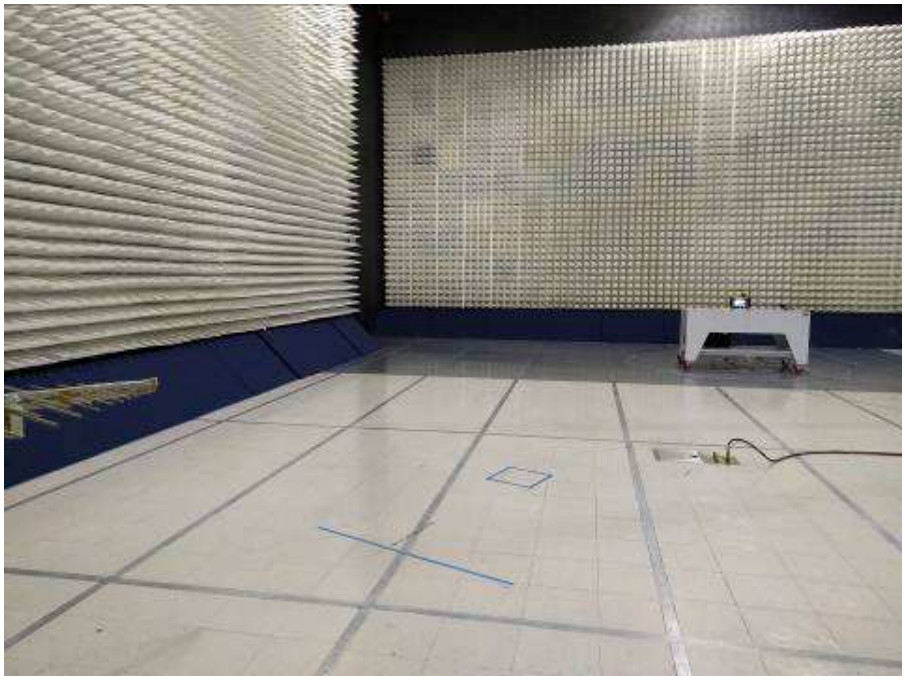
Note: Radiated emission measurements were performed up to 40GHz. No Emissions were identified when scanned from 18-40 GHz

Note: FS@3m = RA + AF + CF - Preamp, (Peak)

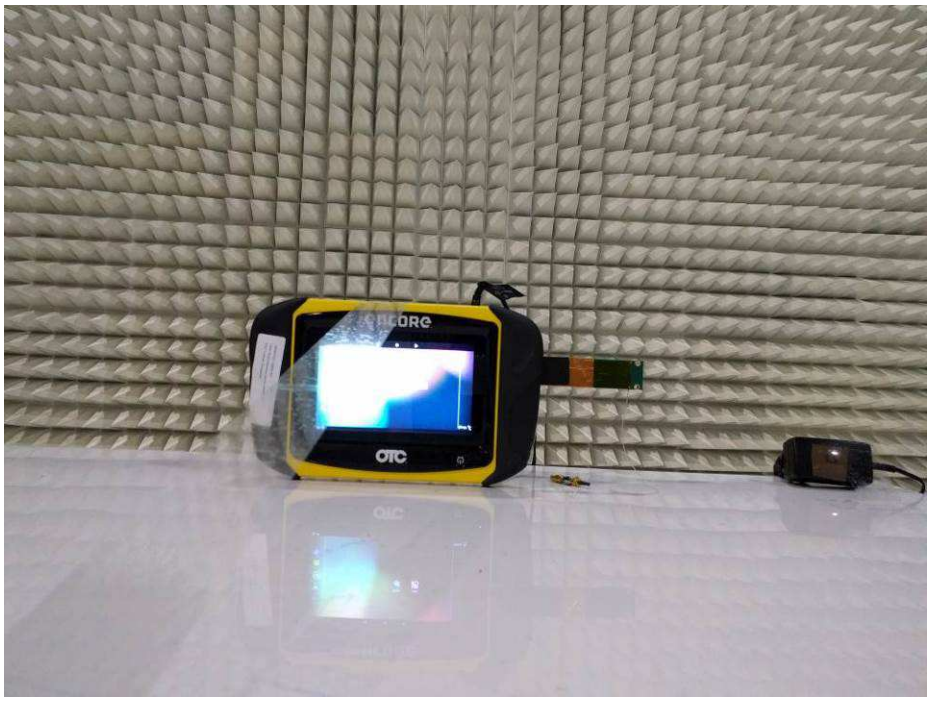
Corrected Peak Scans are under the Average Limit of 54.

4.5.8 Test setup photographs

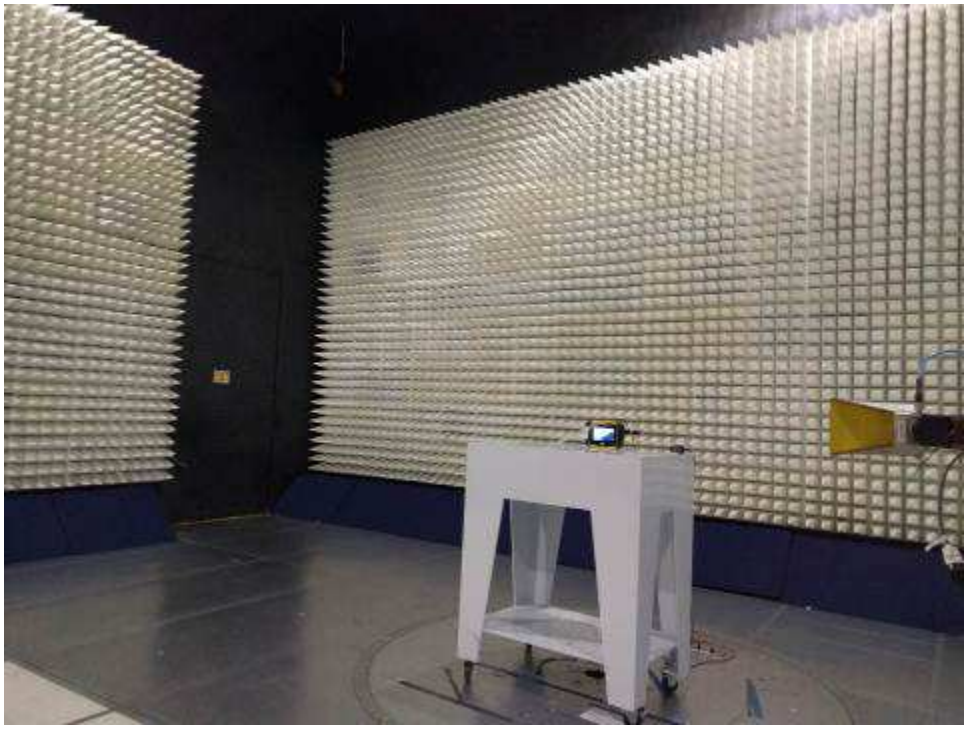
The following photographs show the testing configurations used.



4.5.8 Test Setup Photographs



4.5.8 Test Setup Photographs



4.6 Dynamic Frequency Selection (DFS)

4.6.1 Requirement

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

Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	**Client With Radar Detection**
DFS Detection Threshold	Yes	Not Required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not Required

Additional requirements for devices with multiple bandwidth modes	**Master Device or Client with Radar Detection**	**Client Without Radar Detection**
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 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 each of the bonded 20 MHz channels and the channel center frequency.		

4.6.1.1 DFS Detection Thresholds for Master or Client Devices with DFS Detection

Maximum Transmit Power	Values (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the 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. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01	

Parameter	Value
Non-Occupancy Period	Minimum 30 minutes
Channel Availability Check Time	60 Seconds
Channel Move Time	10 seconds (see note 1)
Channel Closing Transmission Time	200 ms + an aggregate of 60 ms over remaining 10 Second period. (see note 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.	

4.6.1.2 Test Waveform

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of 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	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	60.00%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, 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.					

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

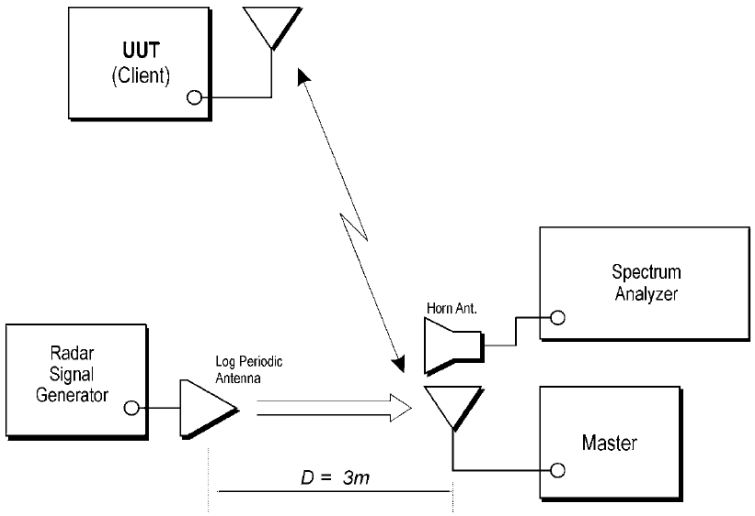
Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

4.6.2 Procedure

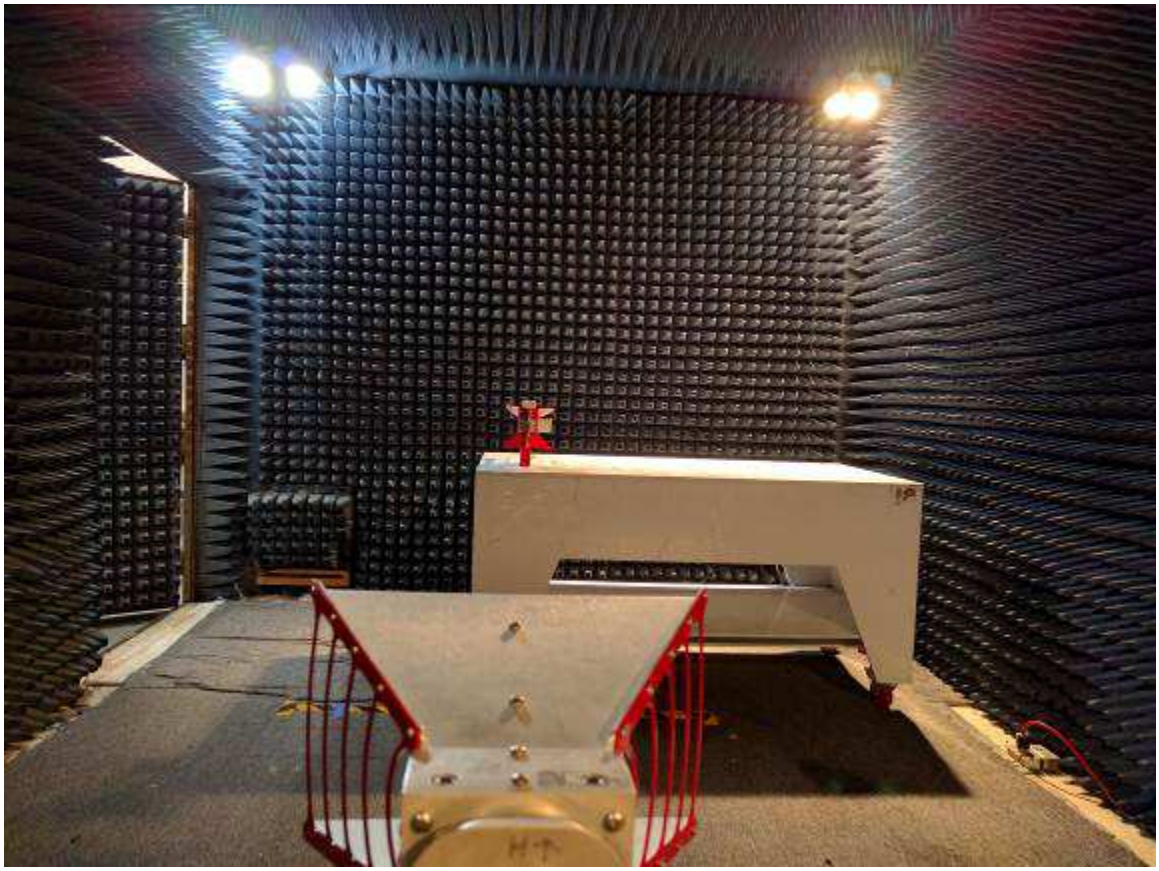
DFS Waveform Calibration

Calibration Procedure

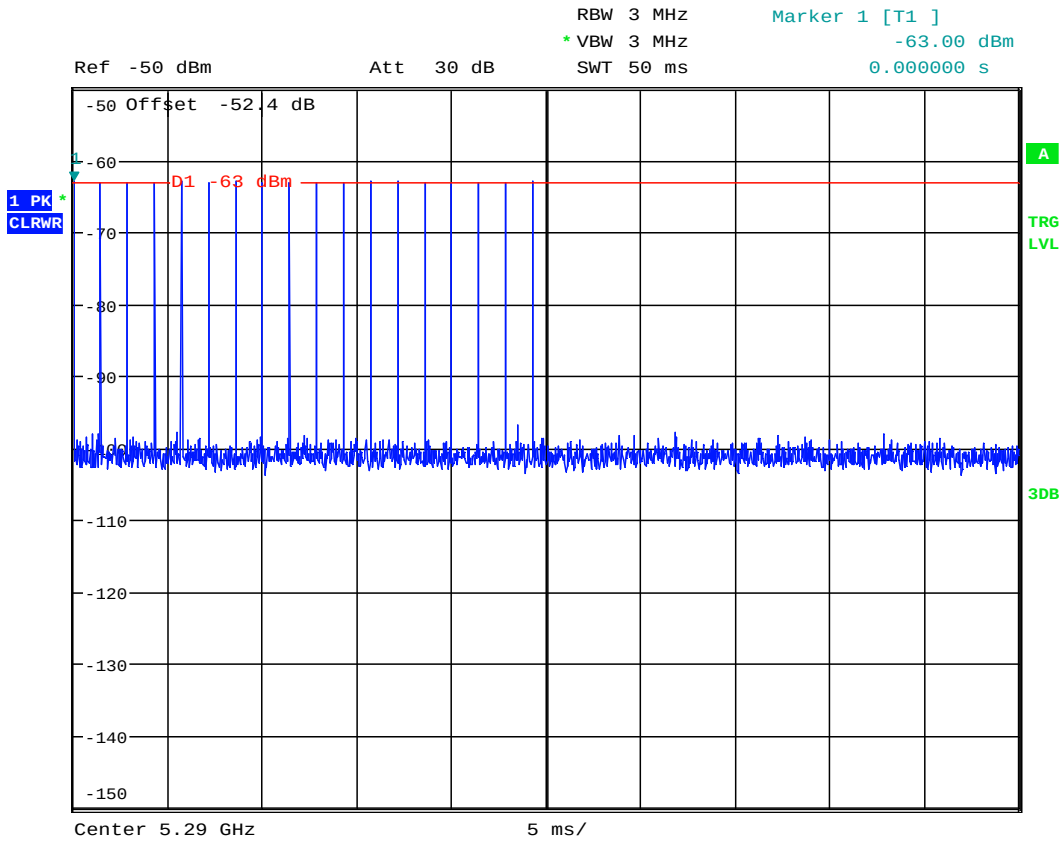
For the DFS signal, horn antenna was attached to a signal generator (RS SMU700A). On the Receive side another horn antenna was attached to a spectrum analyzer with a preamp inline. The spectrum analyzer's resolution bandwidth was set to 3 MHz and the video bandwidth was set to 3 MHz with peak detection. The field was corrected to account for cable loss, antenna gain and preamp. The DFS signal was calibrated to a field strength of -63 dBm. Test wave form 0 was utilized. The calibration setup is diagrammed below along with a setup picture.



Tested By:	Anderson Soungpanya
Test Date:	January 12, 2016



Radar Type 0 Calibration 5290MHz



The Spectrum Analyzer Reference Level Offset is System Gain + Cable Loss

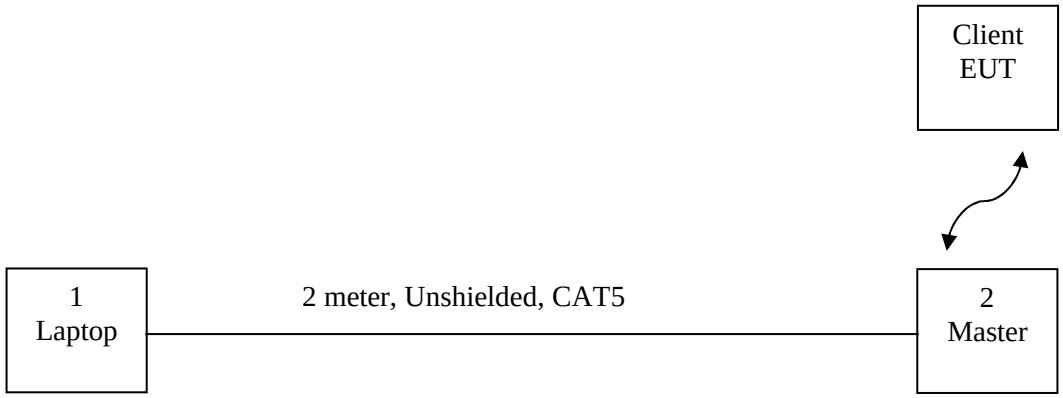
Frequency	Cable loss	System Gain (Preamp and Antenna Gain)	Reference Offset
MHz	dB	dBi	dB
5290	3.1	-55.5	-52.4
5530	3.7	-55.2	-51.5

DFS Setup & Procedure

Test Procedure

A radiated test method was used and the test setup was made as depicted in the diagram below. DFS testing was setup as a client with injection into the master.

The diagram below depicts the setup of the EUT along with associated support equipment.



Item	Description	Model	Serial
1	HP Laptop	EliteBook 8460p	CNU14429SL
2	Ruckus Wireless, Inc.	R710 Access Point FCC ID: S9GR710	421503700725

Test Procedure Continued

The Master and Client (EUT) were placed in a semi-anechoic chamber. The simulated radar waveform was transmitted from a horn antenna towards the Master. The signal level of the simulated radar waveform was set 10 dB higher than calibrated level to -53 dBm and was applied to the Master. The horn antenna was connected to the spectrum analyzer and positioned towards the client with the level >10 dB higher than emissions from the Master.

A Rhode & Schwarz Vector Signal Generator with Pulse Sequencer Software was used to generate the DFS radar signals. A Rhode & Schwarz Spectrum Analyzer was used to monitor the transmissions of the Client. The trigger of the spectrum analyzer was aligned with the end of the radar waveform burst from the signal generator.

Channel closing transmission time and channel move time were measured by applying a radar signal to the Master device. The EUT transmissions were observed while Type 0 Radar waveforms were applied. The time between the end of the applied radar waveform and the final transmission on the channel is the channel move time. The channel closing transmission time comprises only those fragments of the channel move time during which the EUT transmits.

The EUT (client without DFS detection) was configured to communicate with a Master wirelessly. The test file/data was streamed from the Master to the Client. The channel load is recorded and presented in test results below.

4.6.3 Test Results

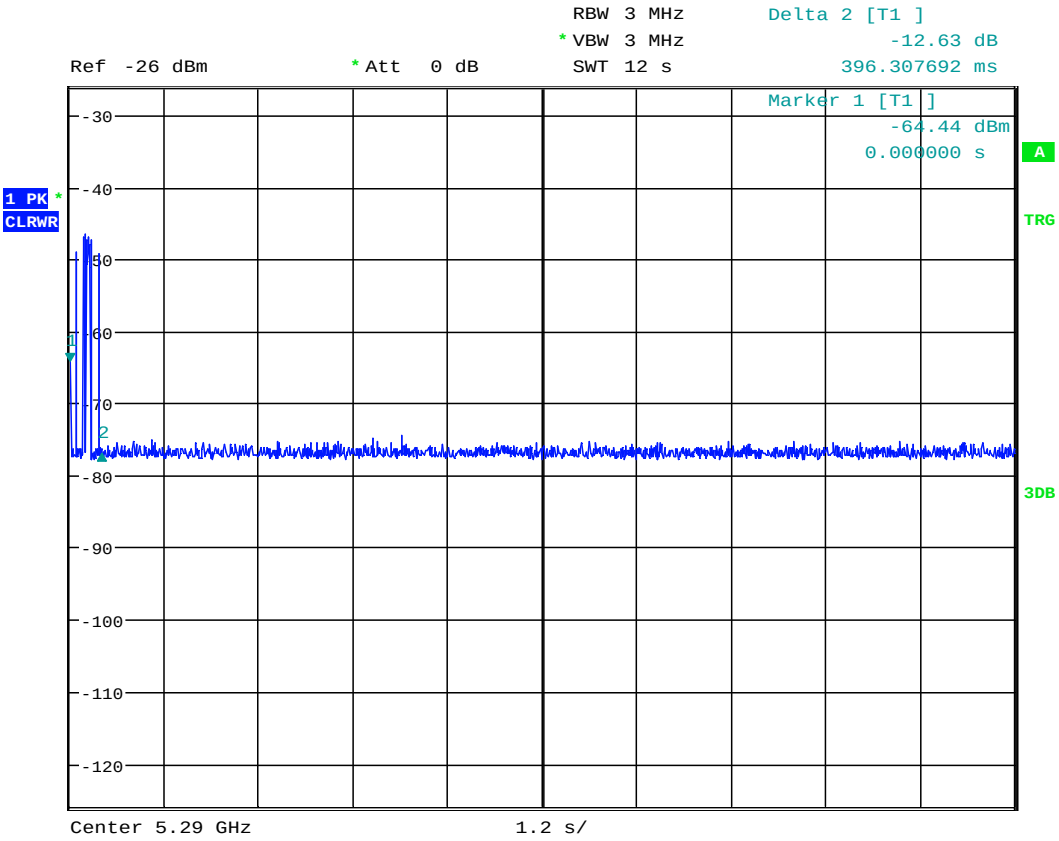
Channel Move Time Test Summary						
Description	**Plot #**	**Radar Type**	**Frequency MHz**	**Measured Value**	**Limit Requirements**	**Results**
Channel Move Time	1	0	5290	393.3ms	10s	Pass

Channel Closing Transmission Time Test Summary						
Description	**Plot #**	**Radar Type**	**Frequency MHz**	**Aggregate Measured Value**	**Limit Requirements**	**Results**
Channel Closing Transmission Time	2	0	5290	< 260ms	260ms	Pass

Un-occupancy Time Test Summary							
Description	**Plot #**	**Radar Type**	**Frequency MHz**	**Number of Beacons Observed**	**Measured Value**	**Minimum Requirement**	**Results**
Channel Move Time	3	0	5290	0	> 30 min	30 min	Pass

Plot 1

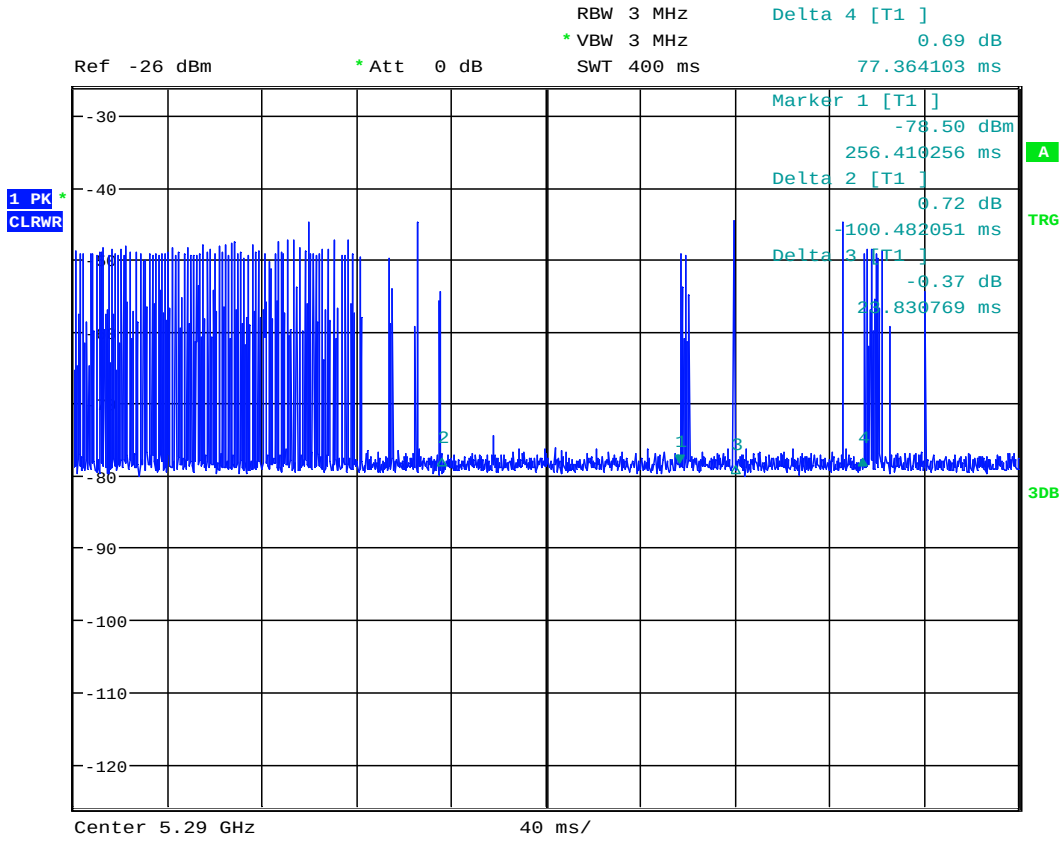
Channel Move Time (CMT), Radar Type 1 @ 5290 MHz



Date: 12.JAN.2016 10:54:28

Plot 2

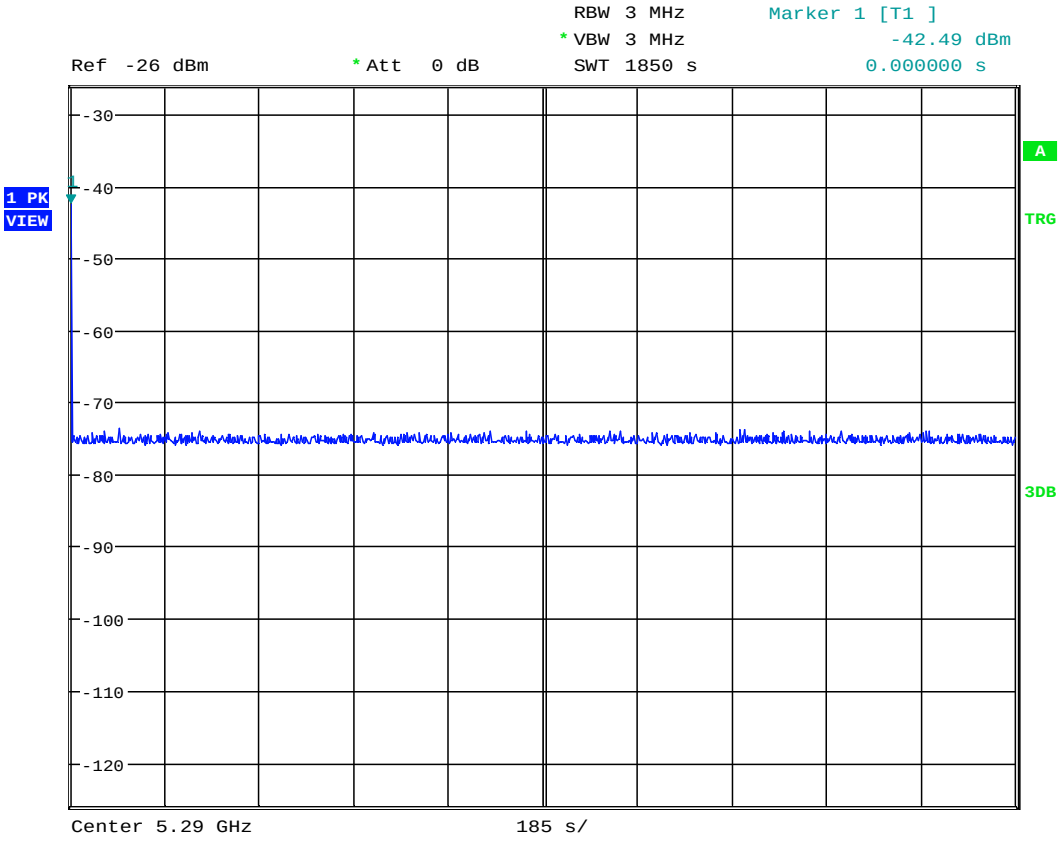
Channel Closing Transmission Time (CCTT), Radar Type 1 @ 5290 MHz



Date: 12.JAN.2016 11:10:10

Plot 3

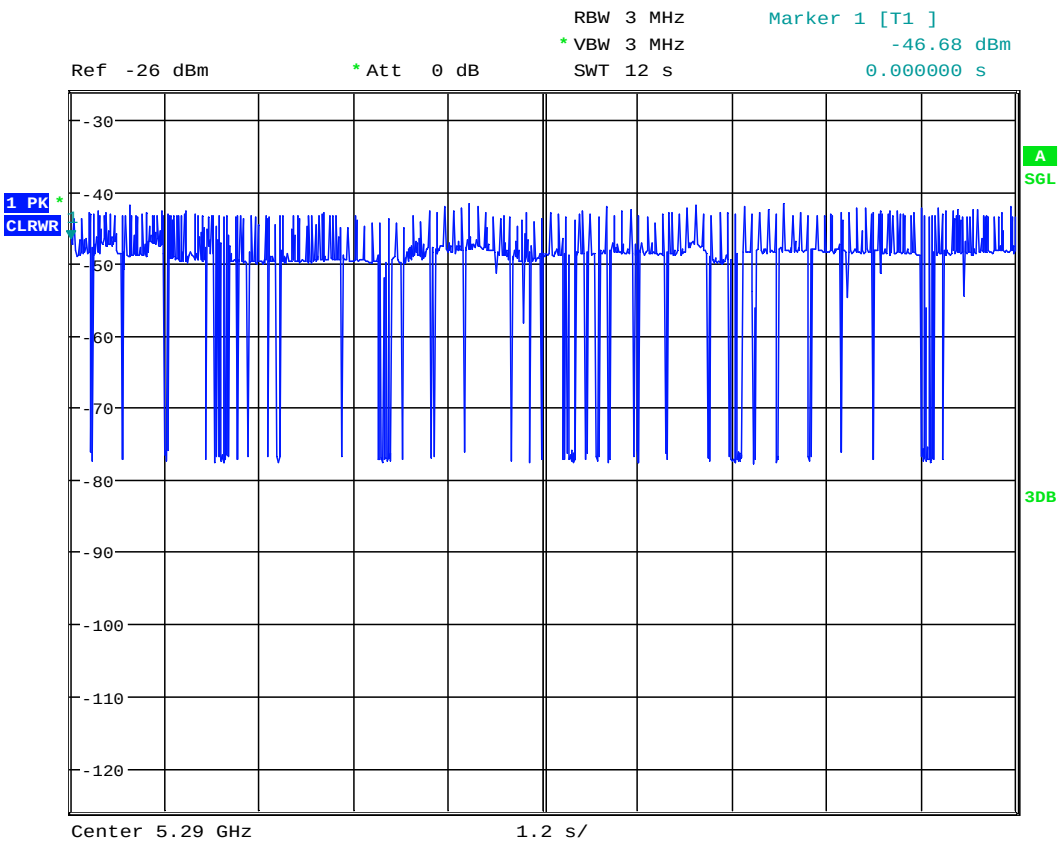
Channel Un-occupancy Time (CCTT), Radar Type 1 @ 5290 MHz



Date: 12.JAN.2016 03:21:33

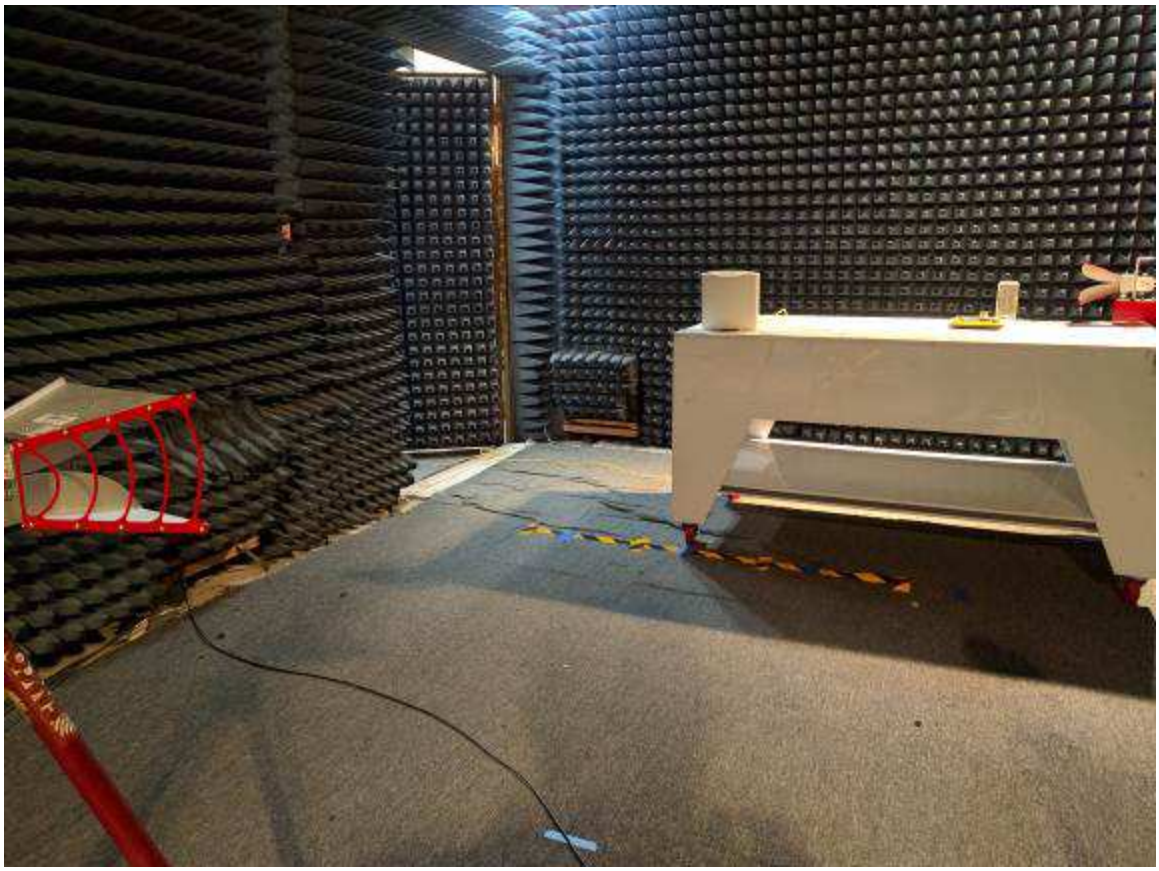
Plot 4

Channel Loading 5290MHz



Date: 12.JAN.2016 10:26:36

4.6.4 Test Setup Picture



5.0 List of Test Equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

Equipment	Manufacturer	Model/Type	Asset #	Cal Int	Cal Due
EMI Receiver	Rohde and Schwarz	ESU	ITS 00961	12	06/02/16
Spectrum Analyzer	Rohde and Schwarz	FSP	ITS 01200	12	02/09/16
BI-Log Antenna	Antenna Research	LPB-2513	ITS 00355	12	08/11/16
Pyramidal Horn Antenna	EMCO	3160-09	ITS 00571	#	#
Pyramidal Horn Antenna	EMCO	3160-10	ITS 00572	#	#
Pre-Amplifier	Sonoma Instrument	310	ITS 00942	12	01/15/16
Pre-Amplifier (1-18GHz)	Miteq	AMF-4D-001180-24-10P	ITS 00526	12	10/06/16
Pre-Amplifier (18-40GHz)	Miteq	JSD44-18004000-305P	ITS 00921	12	06/18/16
Horn Antenna	EMCO	3115	ITS 01595	12	01/14/16
Horn Antenna	ETS Lindgren	3117-PA	ITS 01365	12	10/15/16
Horn Antenna	ETS Lindgren	3115	ITS 00982	12	12/16/16

No Calibration required

6.0 Document History

Revision/ Job Number	Writer Initials	Reviewer Initials	Date	Change
1.0 / G102241369	AS	KV	February 04, 2016	Original document