

APPLICATION FOR CERTIFICATION

On Behalf of

LG Electronics Inc.

WLAN Adapter Card

Model No. : WN8522D2

FCC ID : BEJ9QK-WN8522D2

Brand : LG

Prepared for : LG Electronics Inc.
19-1, Cheongho-ri, Jinwi-myeon,
Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

Prepared by : AUDIX Technology Corporation
EMC Department
No. 53-11, Tin-Fu Tsun, Lin-Kou Hsiang,
Taipei Hsien, Taiwan

Tel : (02) 2609-9301, 2609-2133

Fax: (02) 2609-9303

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TEST REPORT CERTIFICATION

Applicant : LG Electronics Inc.
 Manufacturer : Compal Networking (KunShan) Co., Ltd.
 EUT Description : WLAN Adapter Card
FCC ID : BEJ9QK-WN8522D2
 (A) Model No. : WN8522D2
 (B) Serial No. : N/A
 (C) Brand : LG
 (D) Power Supply : DC 5V (Powered by Notebook PC)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C & E, Oct. 2009
 And ANSI C63.4/2003

(FCC CFR 47 Part 15C & E, §15.205, §15.207, §15.209 and 15.407)

The device described above was tested by AUDIX Technology Corporation to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C & E limits.

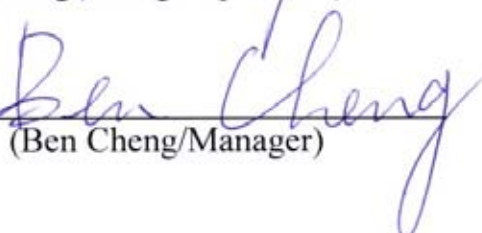
The measurement results are contained in this test report and AUDIX Technology Corporation is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Technology Corporation.

Date of Test: Oct. 29 ~ Nov. 05, 2010 Date of Report: Nov. 05, 2010

Producer: 
 (Tina Huang/Administrator)

Reviewer: 
 (Henning Chang/Supervisor)

Signatory: 
 (Ben Cheng/Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

| | | |
|---------------------------|---|--|
| Description | : | WLAN Adapter Card The frequency range of 5150MHz ~ 5250MHz was tested in this report. The frequency range of 2400MHz ~ 2483.5MHz、5725MHz ~ 5850MHz has been tested and the test data are reported in other report of EM-F991077. |
| Model Number | : | WN8522D2 |
| Serial Number | : | N/A |
| Brand | : | LG |
| FCC ID | : | BEJ9QK-WN8522D2 |
| Applicant | : | LG Electronics Inc. 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea |
| Manufacturer | : | Compal Networking (KunShan) Co., Ltd. 520 HaoTeng RD., Economic & Technical, Development Zone, Kunshan, JiangSu, China |
| Fundamental Range | : | 2400MHz ~ 2483.5MHz and 5150MHz ~ 5250MHz and 5725MHz ~ 5850MHz |
| Radio Technology | : | 802.11b: DSSS Modulation (DBPSK/DQPSK/CCK) 802.11a/g/n-HT20/n-HT40:OFDM Modulation (BPSK/QPSK/16QAM/64QAM) |
| Data Transfer Rate | : | 802.11b: 1/2/5.5/11Mbps 802.11a/g: 6/9/12/18/24/48/54Mbps 802.11n: up to 300Mbps |
| Antenna Gain | : | 1.89dBi (Peak) |
| Date of Receipt of Sample | : | Oct. 11, 2010 |
| Date of Test | : | Oct. 29 ~ Nov. 05, 2010 |

Antenna Information

| Antenna Part Number | Manufacture | Antenna Type | Peak Gain W/ Cable loss (dBi) | |
|-----------------------------|-------------|-----------------|-------------------------------|----------------|
| | | | Frequency (MHz) | Max Gain (dBi) |
| Ant_L Ant./120800003400J | arcadyan | MIFA Antenna | 2.4GHz | 0.97dBi (peak) |
| | | | 2.45GHz | 1.25dBi (peak) |
| | | | 2.5GHz | 0.94dBi (peak) |
| | | | 5.15GHz | 1.73dBi (peak) |
| | | | 5.25GHz | 1.89dBi (peak) |
| | | | 5.725GHz | 1.54dBi (peak) |
| | | | 5.825GHz | 1.44dBi (peak) |
| | | | 5.85GHz | 1.45dBi (peak) |
| Inner Ant./120800003600J | arcadyan | MIFA Antenna | 2.4GHz | 1.24dBi (peak) |
| | | | 2.45GHz | 1.35dBi (peak) |
| | | | 2.5GHz | 1.64dBi (peak) |
| | | | 5.15GHz | 1.19dBi (peak) |
| | | | 5.25GHz | 1.78dBi (peak) |
| | | | 5.725GHz | 0.91dBi (peak) |
| | | | 5.825GHz | 1.62dBi (peak) |
| | | | 5.85GHz | 1.27dBi (peak) |

1.2. Data Rate Relative to Output Power

| 802.11a | | | |
|---------|------------|------------------|-------------|
| Channel | Modulation | Date Rate (Mbps) | Power (dBm) |
| 36 | BPSK | 6 | 12.36 |
| 36 | BPSK | 9 | 12.34 |
| 36 | QPSK | 12 | 12.33 |
| 36 | QPSK | 18 | 12.31 |
| 36 | 16-QAM | 24 | 12.28 |
| 36 | 16-QAM | 36 | 12.28 |
| 36 | 64-QAM | 48 | 12.27 |
| 36 | 64-QAM | 54 | 12.25 |

| 802.11n-HT20 | | | | 802.11n-HT40 | | | |
|--------------|------------|------------------|-------------|--------------|------------|------------------|-------------|
| Channel | Modulation | Date Rate (Mbps) | Power (dBm) | Channel | Modulation | Date Rate (Mbps) | Power (dBm) |
| 36 | BPSK | 6.5 | 11.96 | 38 | BPSK | 6.5 | 13.35 |
| 36 | QPSK | 13 | 11.94 | 38 | QPSK | 13 | 13.34 |
| 36 | QPSK | 19.5 | 11.93 | 38 | QPSK | 19.5 | 13.32 |
| 36 | 16-QAM | 26 | 11.92 | 38 | 16-QAM | 26 | 13.30 |
| 36 | 16-QAM | 39 | 11.90 | 38 | 16-QAM | 39 | 13.27 |
| 36 | 64-QAM | 52 | 11.88 | 38 | 64-QAM | 52 | 13.27 |
| 36 | 64-QAM | 58.6 | 11.87 | 38 | 64-QAM | 58.6 | 13.26 |
| 36 | 64-QAM | 65 | 11.86 | 38 | 64-QAM | 65 | 13.25 |

1.3. Test Configuration for Each Test Item

| Test Item | 802.11a | 802.11n-HT20 | 802.11n-HT40 |
|---------------------------|--------------------------|--------------|--------------|
| | Data Rate for Test(Mbps) | | |
| 26dB Bandwidth | 6 | 6.5 | 13.5 |
| Emission Limitations | 6 | 6.5 | 13.5 |
| Maximum peak output power | 6 | 6.5 | 13.5 |
| Power spectral density | 6 | 6.5 | 13.5 |
| Peak power Excursion | 6 | 6.5 | 13.5 |
| Frequency Stability | 6 | 6.5 | 13.5 |

1.4. Tested Supporting System Details

1.4.1. NOTEBOOK PC

Model Number : PP2170
 Serial Number : N/A
 FCC ID : By DoC
 BSMI ID : 33001
 Brand : hp
 AC Adapter : COMPAQ, M/N:Series PPP009L
 DC Cord: Non-Shielded, Undetachable, 1.8m
 USB Cable : Non-Shielded, Detachable, 0.25m
 Power Cord : Non-Shielded, Detachable, 1.8m

1.5. Description of Test Facility

Name of Firm : **AUDIX Technology Corporation**
 EMC Department
 No. 53-11, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien, Taiwan

Test Site : **No. 2 Shielded Room &**
 (C2/Semi-AC) No. 53-11, Tin-Fu Tsun, Lin-Kou Hsiang,
 Taipei Hsien, Taiwan
Semi-Anechoic Chamber
 No. 53-11, Tin-Fu Tsun, Lin-Kou, Hsiang,
 Taipei Hsien, Taiwan
 May 14, 2009 Renewal on
 Federal Communication Commission
 Registration Number: 90993

NVLAP Lab. Code : 200077-0
 TAF Accreditation No : 1724

1.6. Measurement Uncertainty

| Test Item | Frequency Range | Uncertainty (dB) |
|----------------------------------|-----------------|------------------|
| Conduction Test | 150kHz~30MHz | ± 1.73dB |
| Radiation Test (Distance: 3m) | 30MHz~300MHz | ± 2.91dB |
| | 300MHz~1000MHz | ± 2.74dB |
| | Above 1GHz | ± 5.02dB |

Remark : Uncertainty = $ku_c(y)$

| Test Item | Uncertainty |
|---------------------------|-------------|
| 26dB Bandwidth | ± 0.2kHz |
| Emission Limitations | ± 0.13dB |
| Maximum peak output power | ± 0.33dBm |
| Power spectral density | ± 0.13dB |
| Peak power Excursion | ± 0.14dB |
| Frequency Stability | ± 0.01% |

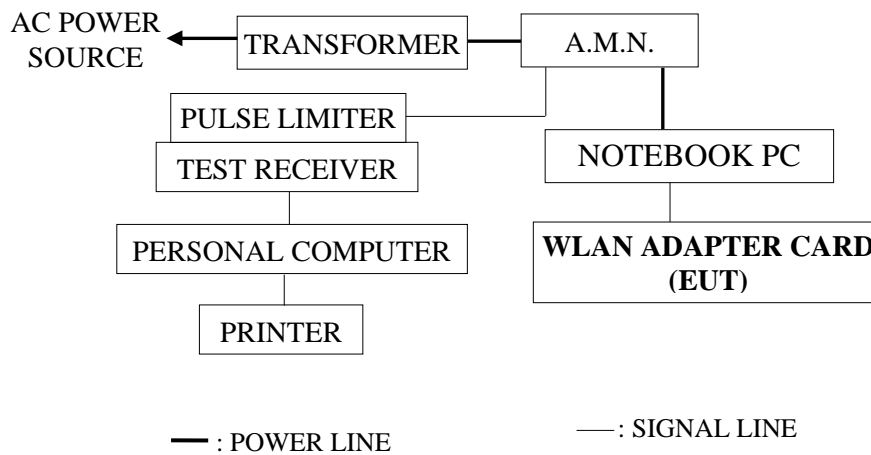
2. CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipment was used during the powerline conducted emission measurement: (No. 2 Shielded Room)

| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|---------------|--------------|-----------|------------|--------------|--------------|
| 1. | Test Receiver | R & S | ESCS30 | 100339 | Mar. 10, 10' | Mar. 09, 11' |
| 2. | A.M.N. | R & S | ESH2-Z5 | 890485/023 | Jan. 14, 10' | Jan. 13, 11' |
| 3. | Pulse Limiter | R & S | ESH3-Z2 | 001 | Feb. 08, 10' | Feb. 07, 11' |

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit (§15.207, Class B)

| Frequency | Maximum RF Line Voltage | |
|-----------------|-------------------------|--------------------|
| | Quasi-Peak Level | Average Level |
| 150kHz ~ 500kHz | 66 ~ 56 dB μ V | 56 ~ 46 dB μ V |
| 500kHz ~ 5MHz | 56 dB μ V | 46 dB μ V |
| 5MHz ~ 30MHz | 60 dB μ V | 50 dB μ V |

- Remark: 1. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.
 2. The lower limit applies at the band edges.

2.4. Operating Condition of EUT

- 2.4.1. Setup the EUT and simulator as shown on 2.2.
- 2.4.2. Turn on the power of all equipment.
- 2.4.3. The Notebook PC was running test software “Broadcom WL Command” to set EUT (WLAN Adapter Card) on transmitting and receiving during all testing.

2.5. Test Procedure

The EUT (link Notebook PC) was put on table which was above the ground by 80cm and Notebook PC’s AC adapter’s power cord connected to the AC mains through an Artificial Mains Network (A.M.N.). This provided a 50Ω coupling impedance for the tested equipment. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to FCC ANSI C63.4-2003 during conducted measurement.

The bandwidth of the R&S Test Receiver ESCS30 was set at 9kHz.

The frequency range from 150kHz to 30MHz was pre-scanned with a peak detector.

The all final readings from test receiver were measured with Quasi-Peak detector and Average detector. (Remark : If the Average limit is met when using a Quasi-Peak detector, the Average detector is unnecessary)

2.6. Powerline Conducted Emission Measurement Results

PASSED.

(All the emissions not reported below are too low against the prescribed limits.)

EUT was performed during this section testing and all the test results are attached in next pages.

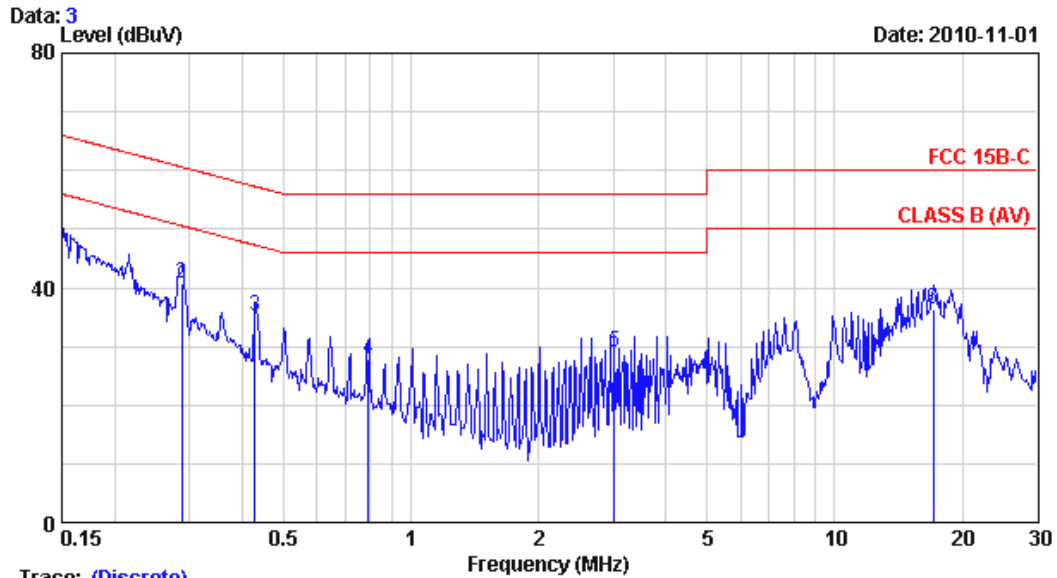
EUT : WLAN Adapter Card M/N : WN8522D2

Test Date : Nov. 01, 2010 Temperature : 24°C Humidity : 47%

Reference Test Data : Neutral # 3; Line # 1



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code:24443
 Tel:02-26092133 Fax:02-26099303
 Email:ttemc@ttemc.com.tw



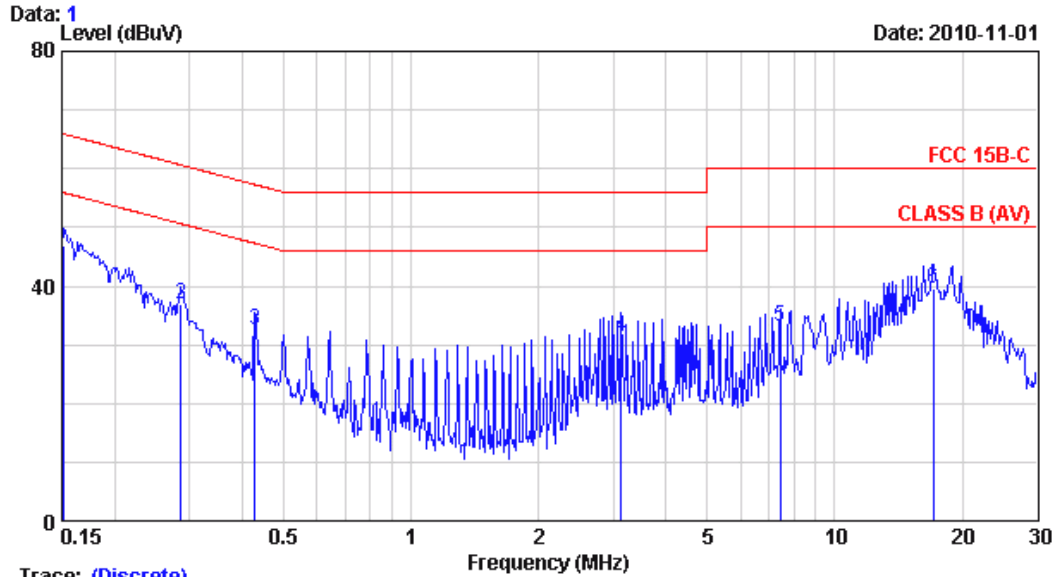
Trace: (Discrete)
 Site : No.2 Shielded room Data : 3
 Condition : ESH3-Z5 Phase : NEUTRAL
 Limit : FCC 15B-C
 Env. / Ins. : 24°C,47% / ESCS 30 (339) Engineer: Charles_Yuan
 EUT : WN8522D2
 Power Rating : 120Vac/60Hz
 Test Mode : operating

| | Freq. (MHz) | AMN Factor (dB) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV) | Limits (dBμV) | Margin (dB) | Remark |
|---|----------------|-----------------------|-----------------------|-------------------|-----------------------------|------------------|----------------|--------|
| 1 | 0.150 | 0.10 | 0.24 | 47.72 | 48.06 | 66.00 | 17.94 | QP |
| 2 | 0.288 | 0.10 | 0.29 | 40.46 | 40.85 | 60.59 | 19.74 | QP |
| 3 | 0.428 | 0.10 | 0.33 | 34.79 | 35.22 | 57.29 | 22.07 | QP |
| 4 | 0.792 | 0.10 | 0.38 | 27.50 | 27.98 | 56.00 | 28.02 | QP |
| 5 | 3.025 | 0.16 | 0.40 | 28.50 | 29.06 | 56.00 | 26.94 | QP |
| 6 | 17.109 | 0.60 | 0.70 | 35.07 | 36.37 | 60.00 | 23.63 | QP |

Remarks: 1.Emission Level= AMN Factor + Cable Loss + Reading.
 2.If the average limit is met when using a quasi-peak detector ,the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.53-11, Tin-fu Tsun, Lin-kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code:24443
 Tel:02-26092133 Fax:02-26099303
 Email:ttemc@ttemc.com.tw



Trace: (Discrete)
 Site : No.2 Shielded room Data : 1
 Condition : ESH3-Z5 Phase : LINE
 Limit : FCC 15B-C
 Env. / Ins. : 24*C,47% / ESCS 30 (339) Engineer: Charles_Yuan
 EUT : WN8522D2
 Power Rating : 120Vac/60Hz
 Test Mode : operating

| | Freq. (MHz) | AMN Factor (dB) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV) | Limits (dBμV) | Margin (dB) | Remark |
|---|----------------|-----------------------|-----------------------|-------------------|-----------------------------|------------------|----------------|--------|
| 1 | 0.151 | 0.10 | 0.24 | 46.51 | 46.85 | 65.96 | 19.11 | QP |
| 2 | 0.286 | 0.10 | 0.29 | 36.59 | 36.98 | 60.63 | 23.65 | QP |
| 3 | 0.428 | 0.10 | 0.33 | 32.00 | 32.43 | 57.29 | 24.86 | QP |
| 4 | 3.140 | 0.20 | 0.40 | 30.81 | 31.41 | 56.00 | 24.59 | QP |
| 5 | 7.446 | 0.40 | 0.60 | 31.96 | 32.97 | 60.00 | 27.03 | QP |
| 6 | 17.109 | 0.75 | 0.70 | 38.21 | 39.66 | 60.00 | 20.34 | QP |

Remarks: 1.Emission Level= AMN Factor + Cable Loss + Reading.
 2.If the average limit is met when using a quasi-peak detector
 ,the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.

3. RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

The following test equipment was used during the radiated emission measurement:

3.1.1. For Frequency Range 30MHz~1000MHz (at Semi-Anechoic Chamber)

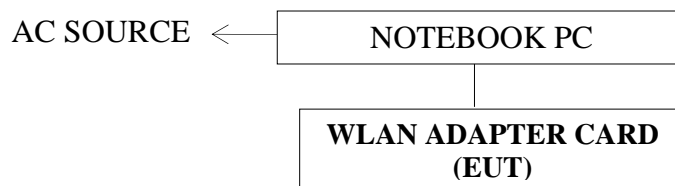
| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|----------------------|--------------|--------------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 10' | Aug. 03, 11' |
| 2. | Test Receiver | R & S | ESCS30 | 100338 | Jul. 08, 10' | Jul. 07, 11' |
| 3. | Amplifier | HP | 8447D | 2944A06305 | Feb. 03, 10' | Feb. 02, 11' |
| 4. | Log Periodic Antenna | Schwarzbeck | UHALP 9108-A | 0810 | Mar. 13, 10' | Mar. 12, 11' |
| 5. | Biconical Antenna | CHASE | VBA6106A | 1264 | Mar. 13, 10' | Mar. 12, 11' |

3.1.2. For Frequency Above 1GHz (at Semi-Anechoic Chamber)

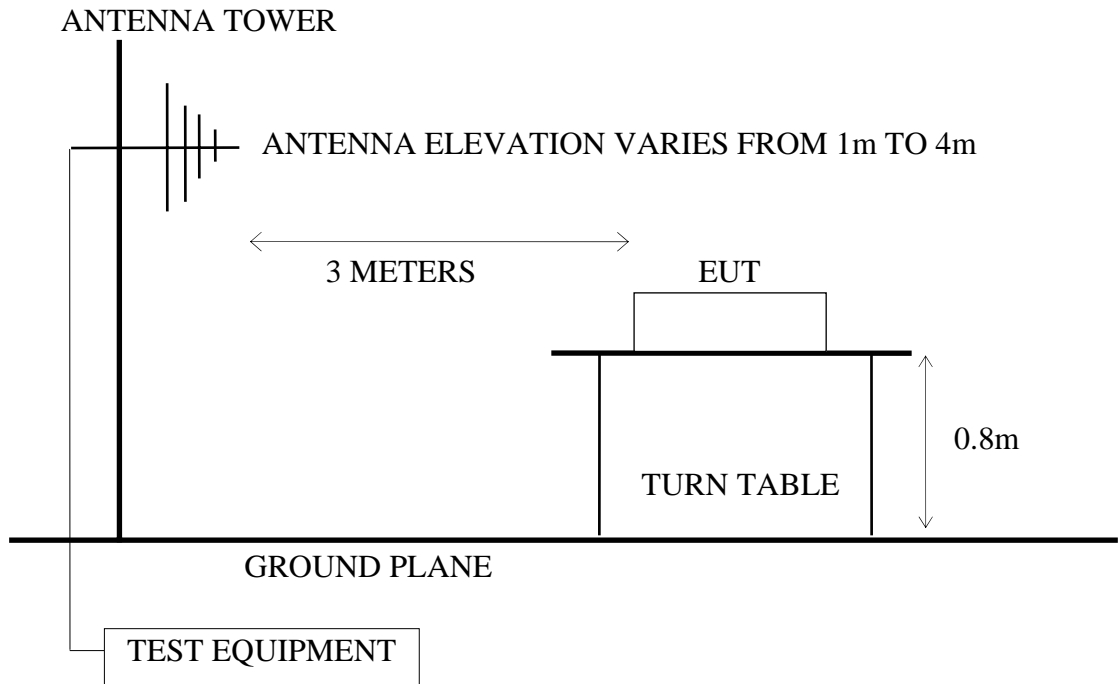
| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-------------------|--------------|-----------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 10' | Aug. 03, 11' |
| 2. | Test Receiver | R & S | ESCS30 | 100338 | Jul. 08, 10' | Jul. 07, 11' |
| 3. | Amplifier | HP | 8449B | 3008A00529 | Dec. 15, 09' | Dec. 14, 10' |
| 4. | Horn Antenna | EMCO | 3115 | 9112-3775 | May 10, 10' | May 09, 11' |
| 5. | Horn Antenna | EMCO | 3116 | 2653 | Oct. 04, 10' | Oct. 03, 11' |

3.2. Test Setup

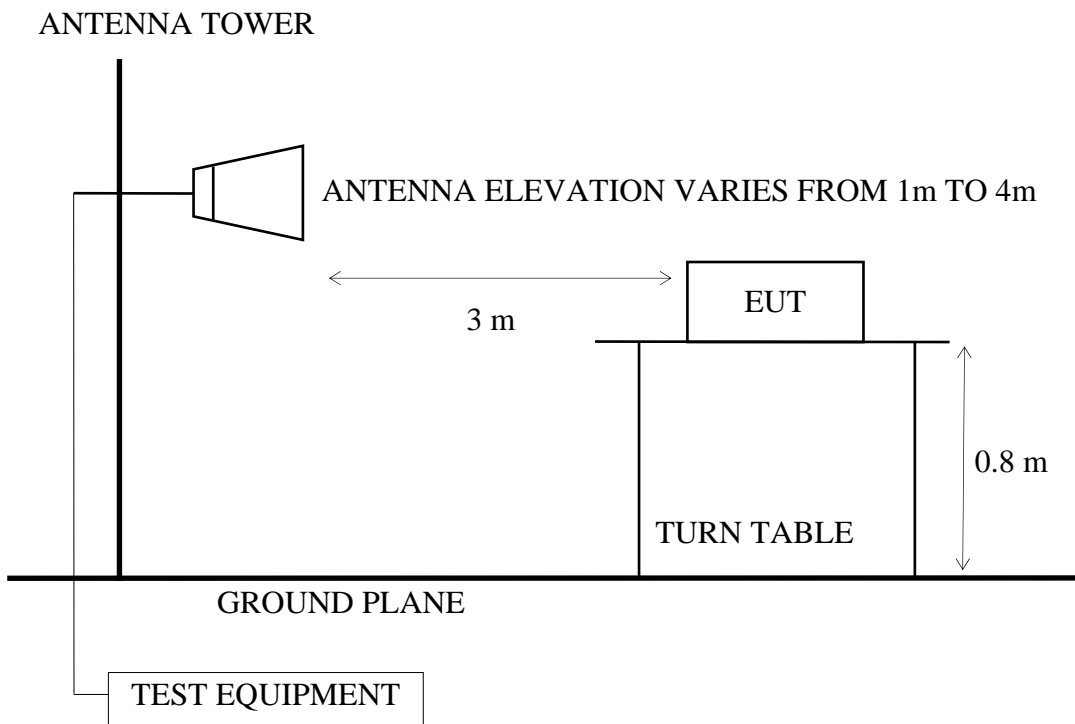
3.2.1. Block Diagram of connection between EUT and simulators



3.2.2. Semi-Anechoic Chamber (3m) Setup Diagram for 30-1000MHz



3.2.3. Semi-Anechoic Chamber (3m) Setup Diagram for above 1GHz



3.3. Radiated Emission Limits (§15.209)

| FREQUENCY MHz | DISTANCE Meters | FIELD STRENGTHS LIMITS | |
|------------------|--------------------|---|--------------------------|
| | | $\mu\text{V/m}$ | $\text{dB}\mu\text{V/m}$ |
| 30 ~ 88 | 3 | 100 | 40.0 |
| 88 ~ 216 | 3 | 150 | 43.5 |
| 216 ~ 960 | 3 | 200 | 46.0 |
| Above 960 | 3 | 500 | 54.0 |
| Above 1000 | 3 | 74.0 $\text{dB}\mu\text{V/m}$ (Peak) 54.0 $\text{dB}\mu\text{V/m}$ (Average) | |

- Remark :
- (1) Emission level ($\text{dB}\mu\text{V/m}$) = 20 log Emission level ($\mu\text{V/m}$)
 - (2) The tighter limit applies at the edge between two frequency bands.
 - (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
 - (4) The limits in this table are based on CFR 47 Part 15.205(a)(b) and Part 15.209 (a).
 - (5) The over 1GHz limit, FCC limit is used based on CFR 47 Part 15.35 (b) and Part 15.205(b) & Part 15.209(e) and Part 15.207(c).

3.4. Operating Condition of EUT

- 3.4.1. Set up the EUT (WLAN Adapter Card) via Notebook PC and simulator as shown on 3.2.
- 3.4.2. To turn on the power of all equipments.
- 3.4.3. The EUT was set the Notebook PC using test program “Broadcom WL Command”.

802.11a/802.11n-HT20

- 3.4.4. Transmit Mode: The EUT was set to continuously transmit signals at 5180Hz , 5200MHz and 5240MHz during testing.
- 3.4.5. Receive Mode: The EUT was set to continuously receive signals at 5200MHz during testing.

802.11n-HT40

- 3.4.6. Transmit Mode: The EUT was set to continuously transmit signals at 5190Hz and 5230MHz during testing.
- 3.4.7. Receive Mode: The EUT was set to continuously receive signals at 5230MHz during testing.

3.5. Test Procedure

The EUT and its simulators were placed on a turn table which was 0.8 meter above the ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set 3 meters away from the receiving antenna which was mounted on a antenna tower. The antenna moved up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna such as calibrated biconical and log-periodical antenna or horn antenna were used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to FCC ANSI C63.4-2003 regulation.

The bandwidth of the R&S Test Receiver was set at 120kHz. (For 30MHz to 1000MHz)

The resolution bandwidth and video bandwidth of test spectrum analyzer is 1MHz for peak detection (PK) at frequency above 1GHz.

The resolution bandwidth of test spectrum analyzer is 1MHz and the video bandwidth is 10Hz for average detection (AV) at frequency above 1GHz.

The frequency range from 30MHz to 40GHz (Up to 10th harmonics from fundamental frequency) was checked. 30MHz to 1000MHz was measured with Quasi-Peak detector.

Above 1GHz was measured with peak and average detector. For frequency from 1GHz to 40GHz, we checked it in 1 meter distance and with a shorter cable 2 meter instead of original's. There is no signal exist.

3.6. Test Results

PASSED.

(All emissions not reported below are too low against the prescribed limits.)

EUT : WLAN Adapter Card M/N : WN8522D2

Test Date : Oct. 29, 2010 Temperature : 23°C Humidity : 59%

The radiation tests on three different axes (stand, lie and side), we assessed the value and we selected the worst radiation position “stand” for our measured results.

For Frequency Range 30MHz~1000MHz:

The EUT select **worst position “stand”** and with following test modes was performed during this section testing and all the test results are listed in section 3.6.1.

| Mode | Type of Network | Channel | Frequency | Test Mode | Reference Test Data | |
|------|-----------------|---------|-----------|-----------|---------------------|----------|
| | | | | | Horizontal | Vertical |
| 1. | 802.11a | CH 36 | 5180MHz | Transmit | # 9 | # 10 |
| 2. | | CH 40 | 5200MHz | | # 10 | # 9 |
| 3. | | CH 48 | 5240MHz | | # 10 | # 9 |
| 4. | | CH 40 | 5200MHz | Receive | # 8 | # 7 |
| 5. | 802.11n-HT20 | CH 36 | 5180MHz | Transmit | # 10 | # 9 |
| 6. | | CH 40 | 5200MHz | | # 10 | # 9 |
| 7. | | CH 48 | 5240MHz | | # 9 | # 10 |
| 8. | | CH 40 | 5200MHz | Receive | # 7 | # 8 |
| 9. | 802.11n-HT40 | CH 38 | 5190MHz | Transmit | # 10 | # 9 |
| 10. | | CH 46 | 5230MHz | | # 9 | # 10 |
| 11. | | CH 46 | 5230MHz | Receive | # 7 | # 8 |

* Above all final readings were measured with Quasi-Peak detector.

For Frequency above 1GHz:

The EUT select **worst position “stand”** and with following test modes was performed during this section testing and all the test results are listed in section 3.6.2.

| Mode | Type of Network | Channel | Frequency | Test Mode | Reference Test Data | | |
|------|-----------------|--------------|-----------|-----------|---------------------|------------------------|------------------------|
| | | | | | Horizontal | Vertical | |
| 1. | 802.11a | CH 36 | 5180MHz | Transmit | Peak | # 7 | # 8 |
| | | | | | Average | # 11 | # 12 |
| 2. | | CH 40 | 5200MHz | | Peak | # 8 | # 7 |
| | | | | | Average | # 12 | # 11 |
| 3. | | CH 48 | 5240MHz | Peak | # 7 | # 8 | |
| | | | | Average | # 11 | # 12 | |
| 4. | | CH 40 | 5200MHz | Receive | Peak | None ^(Note) | None ^(Note) |
| 5. | | 802.11n-HT20 | CH 36 | 5180MHz | Transmit | Peak | # 8 |
| | Average | | | | | # 12 | # 11 |
| 6. | CH 40 | | 5200MHz | Peak | | # 7 | # 8 |
| | | | | Average | | # 11 | # 12 |
| 7. | CH 48 | | 5240MHz | Peak | # 8 | # 7 | |
| | | | | Average | # 12 | # 11 | |
| 8. | CH 40 | | 5200MHz | Receive | Peak | None ^(Note) | None ^(Note) |
| 9. | 802.11n-HT40 | | CH 38 | 5190MHz | Transmit | Peak | # 7 |
| | | Average | | | | # 11 | # 12 |
| 10. | | CH 46 | 5230MHz | Peak | | # 8 | # 7 |
| | | | | Average | | # 12 | # 11 |
| 11. | | CH 46 | 5190MHz | Receive | Peak | None ^(Note) | None ^(Note) |

* Above all final readings were measured with Peak detector and Average detector.
 Note: The emissions (up to 25GHz) not reported are too low to be measured.

For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 3.6.3. (The restricted bands defined in part 15.205(a))

| Mode | Type of Network | Channel | Frequency | Test Mode | Reference Test Data | |
|------|-----------------|---------|-----------|-----------|---------------------|----------|
| | | | | | Horizontal | Vertical |
| 1. | 802.11a | CH 36 | 5180MHz | Transmit | # 2, # 3 | # 1, # 4 |
| 2. | 802.11n-HT20 | CH 36 | 5180MHz | Transmit | # 2, # 3 | # 1, # 4 |
| 3. | 802.11n-HT40 | CH 38 | 5190MHz | Transmit | # 1, # 4 | # 2, # 3 |

The highest level of spurious emission is also complied with -27Bm/MHz e.i.r.p. mentioned in 15.407(b)(1) limit:

| FREQUENCY MHz | DISTANCE Meters | FIELD STRENGTHS LIMITS |
|------------------|--------------------|------------------------|
| | | dBµV/m |
| 30 ~ 40000 | 3 | 68.22 |
| 30 ~ 40000 | 1 | 77.77 |

Remark: E-field=20log($\sqrt{30P}/d$)+120; P=power in watt ; d=distance to measure

3.6.1. Frequency Range 30-1000MHz

802.11a, Transmit, Frequency: 5180MHz

Site no. : A/C Chamber Data no. : 9
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 147.370 | 20.53 | 2.58 | 0.83 | 23.94 | 43.50 | 19.56 | |
| 2 | 271.530 | 25.06 | 3.70 | 0.14 | 28.90 | 46.00 | 17.10 | |
| 3 | 293.840 | 26.33 | 3.96 | -0.04 | 30.25 | 46.00 | 15.75 | |
| 4 | 515.970 | 19.98 | 6.80 | -0.68 | 26.10 | 46.00 | 19.90 | |
| 5 | 889.420 | 25.09 | 7.30 | 0.62 | 33.01 | 46.00 | 12.99 | |
| 6 | 964.110 | 26.80 | 7.60 | -0.90 | 33.50 | 54.00 | 20.50 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 10
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 200.720 | 22.08 | 3.00 | 0.62 | 25.70 | 43.50 | 17.80 | |
| 2 | 404.420 | 17.47 | 4.90 | 0.24 | 22.61 | 46.00 | 23.39 | |
| 3 | 518.880 | 20.01 | 6.90 | -0.58 | 26.33 | 46.00 | 19.67 | |
| 4 | 658.560 | 22.21 | 6.40 | -0.42 | 28.19 | 46.00 | 17.81 | |
| 5 | 813.760 | 23.98 | 7.00 | 0.19 | 31.17 | 46.00 | 14.83 | |
| 6 | 964.110 | 26.80 | 7.60 | -1.31 | 33.09 | 54.00 | 20.91 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11a, Transmit, Frequency: 5200MHz

Site no. : A/C Chamber Data no. : 10
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 106.630 | 17.77 | 2.20 | 3.73 | 23.69 | 43.50 | 19.81 | |
| 2 | 166.770 | 20.96 | 2.70 | 1.13 | 24.79 | 43.50 | 18.71 | |
| 3 | 709.000 | 23.54 | 6.60 | -0.78 | 29.37 | 46.00 | 16.63 | |
| 4 | 761.380 | 23.68 | 6.70 | -0.39 | 29.99 | 46.00 | 16.01 | |
| 5 | 852.560 | 25.70 | 7.10 | -1.13 | 31.68 | 46.00 | 14.32 | |
| 6 | 964.110 | 26.80 | 7.60 | -0.53 | 33.87 | 54.00 | 20.13 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 9
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 271.530 | 25.06 | 3.70 | 0.62 | 29.38 | 46.00 | 16.62 | |
| 2 | 320.030 | 14.99 | 4.20 | 2.21 | 21.40 | 46.00 | 24.60 | |
| 3 | 704.150 | 23.56 | 6.60 | -0.46 | 29.70 | 46.00 | 16.30 | |
| 4 | 773.990 | 24.21 | 6.80 | -1.03 | 29.97 | 46.00 | 16.03 | |
| 5 | 915.610 | 24.90 | 7.40 | -0.50 | 31.80 | 46.00 | 14.20 | |
| 6 | 963.140 | 26.63 | 7.60 | -0.31 | 33.92 | 54.00 | 20.08 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11a, Transmit, Frequency: 5240MHz

Site no. : A/C Chamber Data no. : 10
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5240 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 166.770 | 20.96 | 2.70 | 1.02 | 24.68 | 43.50 | 18.82 | |
| 2 | 448.070 | 17.63 | 5.40 | 0.98 | 24.01 | 46.00 | 21.99 | |
| 3 | 536.340 | 19.47 | 7.07 | 0.29 | 26.83 | 46.00 | 19.17 | |
| 4 | 600.360 | 21.31 | 6.30 | -1.06 | 26.55 | 46.00 | 19.45 | |
| 5 | 858.380 | 25.98 | 7.20 | -1.08 | 32.10 | 46.00 | 13.90 | |
| 6 | 954.410 | 26.15 | 7.60 | -0.36 | 33.38 | 46.00 | 12.62 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 9
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5240 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 166.770 | 20.96 | 2.70 | 2.38 | 26.04 | 43.50 | 17.46 | |
| 2 | 271.530 | 25.06 | 3.70 | 0.92 | 29.68 | 46.00 | 16.32 | |
| 3 | 371.440 | 17.08 | 4.60 | 0.22 | 21.90 | 46.00 | 24.10 | |
| 4 | 536.340 | 19.47 | 7.07 | -0.17 | 26.37 | 46.00 | 19.63 | |
| 5 | 865.170 | 26.00 | 7.20 | -1.05 | 32.15 | 46.00 | 13.85 | |
| 6 | 943.740 | 25.59 | 7.50 | 0.91 | 34.00 | 46.00 | 12.00 | |
| 7 | 973.810 | 26.64 | 7.70 | -0.92 | 33.43 | 54.00 | 20.57 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11a, Receive, Frequency: 5200MHz

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : RX5200 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 83.350 | 14.41 | 1.90 | 7.93 | 24.24 | 40.00 | 15.76 | |
| 2 | 166.770 | 20.96 | 2.70 | 1.70 | 25.36 | 43.50 | 18.14 | |
| 3 | 441.280 | 17.63 | 5.30 | 0.85 | 23.78 | 46.00 | 22.22 | |
| 4 | 518.880 | 20.01 | 6.90 | -0.47 | 26.44 | 46.00 | 19.56 | |
| 5 | 619.760 | 21.35 | 6.20 | 0.03 | 27.58 | 46.00 | 18.42 | |
| 6 | 966.050 | 26.89 | 7.70 | -1.52 | 33.07 | 54.00 | 20.93 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : RX5200 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 161.920 | 20.85 | 2.70 | 1.63 | 25.18 | 43.50 | 18.32 | |
| 2 | 270.560 | 25.00 | 3.70 | -0.07 | 28.63 | 46.00 | 17.37 | |
| 3 | 327.790 | 15.28 | 4.10 | 0.46 | 19.84 | 46.00 | 26.16 | |
| 4 | 450.010 | 17.65 | 5.40 | 0.73 | 23.77 | 46.00 | 22.23 | |
| 5 | 697.360 | 23.32 | 6.50 | -0.26 | 29.56 | 46.00 | 16.44 | |
| 6 | 969.930 | 26.83 | 7.69 | 0.08 | 34.61 | 54.00 | 19.39 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT20, Transmit, Frequency: 5180MHz

Site no. : A/C Chamber Data no. : 10
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 270.560 | 25.00 | 3.70 | 0.41 | 29.11 | 46.00 | 16.89 | |
| 2 | 320.030 | 14.99 | 4.20 | 1.65 | 20.84 | 46.00 | 25.16 | |
| 3 | 614.910 | 21.33 | 6.30 | 0.25 | 27.88 | 46.00 | 18.12 | |
| 4 | 691.540 | 23.22 | 6.50 | -0.24 | 29.47 | 46.00 | 16.53 | |
| 5 | 705.120 | 23.56 | 6.60 | -0.41 | 29.75 | 46.00 | 16.25 | |
| 6 | 974.780 | 26.52 | 7.70 | -0.43 | 33.79 | 54.00 | 20.21 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 9
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 293.840 | 26.33 | 3.96 | -0.22 | 30.07 | 46.00 | 15.93 | |
| 2 | 320.030 | 14.99 | 4.20 | 2.07 | 21.26 | 46.00 | 24.74 | |
| 3 | 513.060 | 19.95 | 6.80 | 0.65 | 27.40 | 46.00 | 18.60 | |
| 4 | 712.880 | 23.30 | 6.53 | 0.52 | 30.35 | 46.00 | 15.65 | |
| 5 | 835.100 | 24.90 | 7.10 | 0.26 | 32.26 | 46.00 | 13.74 | |
| 6 | 961.200 | 26.50 | 7.60 | 0.06 | 34.16 | 54.00 | 19.84 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT20, Transmit, Frequency: 5200MHz

Site no. : A/C Chamber Data no. : 10
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200 (802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 296.750 | 26.59 | 4.00 | -0.72 | 29.87 | 46.00 | 16.13 | |
| 2 | 486.870 | 18.67 | 6.20 | 2.06 | 26.93 | 46.00 | 19.07 | |
| 3 | 705.120 | 23.56 | 6.60 | -0.48 | 29.68 | 46.00 | 16.32 | |
| 4 | 826.370 | 24.42 | 7.00 | 0.03 | 31.45 | 46.00 | 14.55 | |
| 5 | 921.430 | 24.62 | 7.40 | -0.20 | 31.82 | 46.00 | 14.18 | |
| 6 | 963.140 | 26.63 | 7.60 | 0.52 | 34.75 | 54.00 | 19.25 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 9
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200 (802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 271.530 | 25.06 | 3.70 | 0.87 | 29.63 | 46.00 | 16.37 | |
| 2 | 299.660 | 26.77 | 3.90 | -0.11 | 30.56 | 46.00 | 15.44 | |
| 3 | 399.570 | 17.69 | 4.80 | 0.59 | 23.07 | 46.00 | 22.93 | |
| 4 | 571.260 | 21.14 | 6.50 | -0.84 | 26.80 | 46.00 | 19.20 | |
| 5 | 861.290 | 26.09 | 7.20 | -0.67 | 32.62 | 46.00 | 13.38 | |
| 6 | 967.990 | 26.90 | 7.69 | -0.55 | 34.04 | 54.00 | 19.96 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT20, Transmit, Frequency: 5240MHz

Site no. : A/C Chamber Data no. : 9
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5240 (802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 109.540 | 18.13 | 2.20 | 1.65 | 21.98 | 43.50 | 21.52 | |
| 2 | 298.690 | 26.72 | 3.90 | 0.31 | 30.93 | 46.00 | 15.07 | |
| 3 | 508.210 | 19.14 | 6.80 | 0.76 | 26.70 | 46.00 | 19.30 | |
| 4 | 674.080 | 22.87 | 6.40 | -0.44 | 28.83 | 46.00 | 17.17 | |
| 5 | 780.780 | 24.11 | 6.80 | -0.61 | 30.30 | 46.00 | 15.70 | |
| 6 | 871.960 | 25.52 | 7.20 | -0.35 | 32.37 | 46.00 | 13.63 | |
| 7 | 969.930 | 26.83 | 7.69 | -1.32 | 33.21 | 54.00 | 20.79 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 10
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5240 (802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 195.870 | 21.85 | 3.00 | 1.65 | 26.50 | 43.50 | 17.00 | |
| 2 | 271.530 | 25.06 | 3.70 | 0.14 | 28.90 | 46.00 | 17.10 | |
| 3 | 515.970 | 19.98 | 6.80 | -0.43 | 26.35 | 46.00 | 19.65 | |
| 4 | 658.560 | 22.21 | 6.40 | -0.08 | 28.53 | 46.00 | 17.47 | |
| 5 | 828.310 | 24.62 | 7.10 | -0.18 | 31.54 | 46.00 | 14.46 | |
| 6 | 861.290 | 26.09 | 7.20 | -1.02 | 32.27 | 46.00 | 13.73 | |
| 7 | 969.930 | 26.83 | 7.69 | -0.32 | 34.21 | 54.00 | 19.79 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT20, Receive, Frequency: 5200MHz

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : RX5200 (802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 271.530 | 25.06 | 3.70 | 0.99 | 29.75 | 46.00 | 16.25 | |
| 2 | 400.540 | 17.66 | 4.80 | 0.30 | 22.76 | 46.00 | 23.24 | |
| 3 | 518.880 | 20.01 | 6.90 | -0.22 | 26.69 | 46.00 | 19.31 | |
| 4 | 649.830 | 21.50 | 6.30 | 0.18 | 27.98 | 46.00 | 18.02 | |
| 5 | 861.290 | 26.09 | 7.20 | 0.00 | 33.29 | 46.00 | 12.71 | |
| 6 | 973.810 | 26.64 | 7.70 | -0.71 | 33.64 | 54.00 | 20.36 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : RX5200 (802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 282.200 | 25.39 | 3.80 | -0.32 | 28.87 | 46.00 | 17.13 | |
| 2 | 320.030 | 14.99 | 4.20 | 0.36 | 19.55 | 46.00 | 26.45 | |
| 3 | 467.470 | 18.21 | 5.80 | 1.15 | 25.16 | 46.00 | 20.84 | |
| 4 | 519.850 | 19.99 | 6.90 | -0.32 | 26.57 | 46.00 | 19.43 | |
| 5 | 861.290 | 26.09 | 7.20 | -0.84 | 32.45 | 46.00 | 13.55 | |
| 6 | 967.990 | 26.90 | 7.69 | -1.00 | 33.59 | 54.00 | 20.41 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT40, Transmit, Frequency: 5190MHz

Site no. : A/C Chamber Data no. : 10
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190(802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 278.320 | 25.25 | 3.80 | -0.36 | 28.69 | 46.00 | 17.31 | |
| 2 | 509.180 | 19.29 | 6.80 | 0.08 | 26.17 | 46.00 | 19.83 | |
| 3 | 560.590 | 20.03 | 6.70 | -0.58 | 26.15 | 46.00 | 19.85 | |
| 4 | 712.880 | 23.30 | 6.53 | -0.72 | 29.11 | 46.00 | 16.89 | |
| 5 | 806.000 | 24.25 | 7.00 | -0.11 | 31.13 | 46.00 | 14.87 | |
| 6 | 959.260 | 26.38 | 7.60 | -0.51 | 33.48 | 46.00 | 12.52 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 9
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190(802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 295.780 | 26.48 | 4.00 | 0.27 | 30.74 | 46.00 | 15.26 | |
| 2 | 320.030 | 14.99 | 4.20 | 1.19 | 20.38 | 46.00 | 25.62 | |
| 3 | 400.540 | 17.66 | 4.80 | 0.05 | 22.51 | 46.00 | 23.49 | |
| 4 | 698.330 | 23.36 | 6.50 | -1.01 | 28.85 | 46.00 | 17.15 | |
| 5 | 861.290 | 26.09 | 7.20 | -1.15 | 32.14 | 46.00 | 13.86 | |
| 6 | 961.200 | 26.50 | 7.60 | -0.43 | 33.67 | 54.00 | 20.33 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT40, Transmit, Frequency: 5230MHz

Site no. : A/C Chamber Data no. : 9
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5230(802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 271.530 | 25.06 | 3.70 | -0.12 | 28.64 | 46.00 | 17.36 | |
| 2 | 297.720 | 26.68 | 3.98 | -0.20 | 30.46 | 46.00 | 15.54 | |
| 3 | 353.980 | 15.64 | 4.30 | 0.18 | 20.12 | 46.00 | 25.88 | |
| 4 | 589.690 | 21.01 | 6.30 | 0.36 | 27.67 | 46.00 | 18.33 | |
| 5 | 837.040 | 24.94 | 7.10 | -0.02 | 32.01 | 46.00 | 13.99 | |
| 6 | 898.150 | 24.98 | 7.30 | 0.06 | 32.34 | 46.00 | 13.66 | |
| 7 | 945.680 | 25.68 | 7.50 | 1.15 | 34.33 | 46.00 | 11.67 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 10
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5230(802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 268.620 | 24.86 | 3.70 | 0.13 | 28.69 | 46.00 | 17.31 | |
| 2 | 291.900 | 26.17 | 3.90 | -0.28 | 29.79 | 46.00 | 16.21 | |
| 3 | 360.770 | 16.24 | 4.43 | 1.16 | 21.83 | 46.00 | 24.17 | |
| 4 | 515.000 | 19.97 | 6.80 | -0.26 | 26.51 | 46.00 | 19.49 | |
| 5 | 682.810 | 23.05 | 6.41 | -0.27 | 29.19 | 46.00 | 16.81 | |
| 6 | 806.970 | 24.20 | 7.00 | 0.29 | 31.49 | 46.00 | 14.51 | |
| 7 | 959.260 | 26.38 | 7.60 | -0.73 | 33.26 | 46.00 | 12.74 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

802.11n-HT40, Receive, Frequency: 5230MHz

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : RX5230 (802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 297.720 | 26.68 | 3.98 | -0.40 | 30.26 | 46.00 | 15.74 | |
| 2 | 393.750 | 17.56 | 4.70 | -0.58 | 21.68 | 46.00 | 24.32 | |
| 3 | 623.640 | 21.32 | 6.20 | -0.11 | 27.41 | 46.00 | 18.59 | |
| 4 | 789.510 | 23.83 | 6.90 | -0.72 | 30.01 | 46.00 | 15.99 | |
| 5 | 910.760 | 25.03 | 7.40 | -0.60 | 31.84 | 46.00 | 14.16 | |
| 6 | 961.200 | 26.50 | 7.60 | -0.38 | 33.72 | 54.00 | 20.28 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : RX5230 (802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 271.530 | 25.06 | 3.70 | 0.41 | 29.17 | 46.00 | 16.83 | |
| 2 | 320.030 | 14.99 | 4.20 | 1.19 | 20.38 | 46.00 | 25.62 | |
| 3 | 572.230 | 21.12 | 6.50 | -0.64 | 26.98 | 46.00 | 19.02 | |
| 4 | 704.150 | 23.56 | 6.60 | -0.76 | 29.40 | 46.00 | 16.60 | |
| 5 | 858.380 | 25.98 | 7.20 | -0.15 | 33.03 | 46.00 | 12.97 | |
| 6 | 964.110 | 26.80 | 7.60 | -0.42 | 33.98 | 54.00 | 20.02 | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3.6.2. Above 1GHz Frequency Range Measurement Results

802.11a, Transmit, Frequency: 5180MHz

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180(802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10360.800 | 38.43 | 13.34 | 22.36 | 74.12 | 83.50 | 9.38 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is $20\log(3/1)$]. Peak value limit is 83.5 dBµV/m.

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : 8564EC 25°C/56% □Jarwei Wang
 EUT : E4446A 23°C/59%
 Power Rating : DC 5V via notebook
 Test Mode : TX5180(802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10363.800 | 38.43 | 13.39 | 14.17 | 65.99 | 83.50 | 17.51 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is $20\log(3/1)$]. Peak value limit is 83.5 dBµV/m

Site no. : A/C Chamber Data no. : 11
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180(802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10360.800 | 38.43 | 13.34 | 6.89 | 58.65 | 63.50 | 4.85 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

Site no. : A/C Chamber Data no. : 12
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180(802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10363.800 | 38.43 | 13.39 | -1.58 | 50.24 | 63.50 | 13.26 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

802.11a, Transmit, Frequency: 5200MHz

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200(802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10398.400 | 38.42 | 13.43 | 24.24 | 76.09 | 83.50 | 7.41 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m.

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200(802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10398.800 | 38.42 | 13.43 | 14.84 | 66.69 | 83.50 | 16.81 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m


```

Site no.       : A/C Chamber           Data no.      : 12
Dis. / Ant.   : 3m 3115(4927)         Ant. pol.    : HORIZONTAL
Limit         : FCC ABOVE 1GHZ (AV)
Env. / Ins.   : E4446A 23°C/59%      □Jarwei Wang
EUT           : WN8522D2
Power Rating  : DC 5V via notebook
Test Mode     : TX5200(802.11a)
    
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10398.400 | 38.42 | 13.43 | 8.17 | 60.01 | 63.50 | 3.49 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBµV/m

```

Site no.       : A/C Chamber           Data no.      : 11
Dis. / Ant.   : 3m 3115(4927)         Ant. pol.    : VERTICAL
Limit         : FCC ABOVE 1GHZ (AV)
Env. / Ins.   : E4446A 23°C/59%      □Jarwei Wang
EUT           : WN8522D2
Power Rating  : DC 5V via notebook
Test Mode     : TX5200(802.11a)
    
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10398.800 | 38.42 | 13.43 | -1.71 | 50.14 | 63.50 | 13.36 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBµV/m

802.11a, Transmit, Frequency: 5240MHz

```

Site no.       : A/C Chamber           Data no.   : 7
Dis. / Ant.   : 3m 3115(4927)         Ant. pol.  : HORIZONTAL
Limit         : FCC ABOVE 1GHZ (PK)
Env. / Ins.   : E4446A 23°C/59%      □Jarwei Wang
EUT           : WN8522D2
Power Rating  : DC 5V via notebook
Test Mode     : TX5240(802.11a)
    
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|------|
| ----- | 1 | 10478.400 | 38.40 | 13.51 | 22.93 | 74.85 | 83.50 | 8.65 | Peak |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Peak value limit is 83.5 dBµV/m,

```

Site no.       : A/C Chamber           Data no.   : 8
Dis. / Ant.   : 3m 3115(4927)         Ant. pol.  : VERTICAL
Limit         : FCC ABOVE 1GHZ (PK)
Env. / Ins.   : E4446A 23°C/59%      □Jarwei Wang
EUT           : WN8522D2
Power Rating  : DC 5V via notebook
Test Mode     : TX5240(802.11a)
    
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|------|
| ----- | 1 | 10478.400 | 38.40 | 13.51 | 17.65 | 69.57 | 83.50 | 13.93 | Peak |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Peak value limit is 83.5 dBµV/m

Site no. : A/C Chamber Data no. : 11
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5240(802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|---------|
| 1 10478.400 | 38.40 | 13.51 | 6.20 | 58.12 | 63.50 | 5.38 | Average |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is $20\log(3/1)$]. Average value limit is 63.5 dBμV/m

Site no. : A/C Chamber Data no. : 12
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5240(802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|---------|
| 1 10478.400 | 38.40 | 13.51 | 1.28 | 53.20 | 63.50 | 10.31 | Average |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is $20\log(3/1)$]. Average value limit is 63.5 dBμV/m

802.11n-HT20, Transmit, Frequency: 5180MHz

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180(802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|------|
| ----- | 1 | 10360.400 | 38.43 | 13.34 | 18.90 | 70.66 | 83.50 | 12.84 | Peak |
| ----- | | | | | | | | | |

- Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is $20\log(3/1)$]. Peak value limit is 83.5 dBμV/m.

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180(802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|------|
| ----- | 1 | 10354.800 | 38.43 | 13.34 | 12.07 | 63.83 | 83.50 | 19.67 | Peak |
| ----- | | | | | | | | | |

- Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is $20\log(3/1)$]. Peak value limit is 83.5 dBμV/m

Site no. : A/C Chamber Data no. : 12
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180(802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10360.400 | 38.43 | 13.34 | 2.90 | 54.66 | 63.50 | 8.84 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

Site no. : A/C Chamber Data no. : 11
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180(802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10354.800 | 38.43 | 13.34 | -4.41 | 47.36 | 63.50 | 16.14 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

802.11n-HT20, Transmit, Frequency: 5200MHz

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200 (802.11n-HT20)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10398.400 | 38.42 | 13.43 | 19.81 | 71.66 | 83.50 | 11.84 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m.

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200 (802.11n-HT20)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10399.400 | 38.42 | 13.43 | 13.88 | 65.72 | 83.50 | 17.78 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m

Site no. : A/C Chamber Data no. : 11
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200(802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------------|
| ----- | 1 | 10398.400 | 38.42 | 13.43 | 4.09 | 55.94 | 63.50 | 7.56 Average |
| ----- | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

Site no. : A/C Chamber Data no. : 12
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5200(802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|---------------|
| ----- | 1 | 10399.400 | 38.42 | 13.43 | -2.21 | 49.64 | 63.50 | 13.86 Average |
| ----- | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

802.11n-HT20, Transmit, Frequency: 5240MHz

```

Site no.       : A/C Chamber           Data no.      : 8
Dis. / Ant.   : 3m 3115(4927)        Ant. pol.    : HORIZONTAL
Limit         : FCC ABOVE 1GHZ (PK)
Env. / Ins.   : E4446A 23°C/59%      □Jarwei Wang
EUT          : WN8522D2
Power Rating  : DC 5V via notebook
Test Mode     : TX5240(802.11n-HT20)
    
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|------|
| ----- | 1 | 10480.400 | 38.40 | 13.51 | 19.62 | 71.54 | 83.50 | 11.96 | Peak |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m,

```

Site no.       : A/C Chamber           Data no.      : 7
Dis. / Ant.   : 3m 3115(4927)        Ant. pol.    : VERTICAL
Limit         : FCC ABOVE 1GHZ (PK)
Env. / Ins.   : E4446A 23°C/59%      □Jarwei Wang
EUT          : WN8522D2
Power Rating  : DC 5V via notebook
Test Mode     : TX5240(802.11n-HT20)
    
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|------|
| ----- | 1 | 10472.800 | 38.41 | 13.51 | 12.65 | 64.57 | 83.50 | 18.93 | Peak |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m

Site no. : A/C Chamber Data no. : 12
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5240(802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------------|
| ----- | 1 | 10480.400 | 38.40 | 13.51 | 3.38 | 55.29 | 63.50 | 8.21 Average |
| ----- | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

Site no. : A/C Chamber Data no. : 11
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5240(802.11n-HT20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|---------------|
| ----- | 1 | 10472.800 | 38.41 | 13.51 | -3.44 | 48.48 | 63.50 | 15.02 Average |
| ----- | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

802.11n-HT40, Transmit, Frequency: 5190MHz

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190(802.11n-HT40)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10380.800 | 38.42 | 13.39 | 22.42 | 74.23 | 83.50 | 9.27 | Peak |

- Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m.

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190(802.11n-HT40)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10378.800 | 38.42 | 13.39 | 11.08 | 62.89 | 83.50 | 20.61 | Peak |

- Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m

Site no. : A/C Chamber Data no. : 11
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190(802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10380.800 | 38.42 | 13.39 | 6.59 | 58.40 | 63.50 | 5.11 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

Site no. : A/C Chamber Data no. : 12
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190(802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10378.800 | 38.42 | 13.39 | -5.68 | 46.13 | 63.50 | 17.37 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is 20log(3/1)]. Average value limit is 63.5 dBμV/m

802.11n-HT40, Transmit, Frequency: 5230MHz

Site no. : A/C Chamber Data no. : 8
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5230(802.11n-HT40)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10460.800 | 38.41 | 13.51 | 21.87 | 73.79 | 83.50 | 9.71 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m,

Site no. : A/C Chamber Data no. : 7
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5230(802.11n-HT40)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 10462.800 | 38.41 | 13.51 | 12.56 | 64.48 | 83.50 | 19.02 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. When test distance at 1m, the limit shall be added a correction factor 9.5dB [The formula is 20log(3/1)]. Peak value limit is 83.5 dBμV/m

Site no. : A/C Chamber Data no. : 12
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5230(802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10460.800 | 38.41 | 13.51 | 5.02 | 56.94 | 63.50 | 6.56 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is $20\log(3/1)$]. Average value limit is 63.5 dBμV/m

Site no. : A/C Chamber Data no. : 11
 Dis. / Ant. : 3m 3115(4927) Ant. pol. : VERTICAL
 Limit : FCC ABOVE 1GHZ (AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5230(802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark | |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|---------|
| ----- | 1 | 10462.800 | 38.41 | 13.51 | -3.63 | 48.29 | 63.50 | 15.22 | Average |
| ----- | | | | | | | | | |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

3. When test distance at 1m, the limit shall be added a correction factor 9.5dB
 [The formula is $20\log(3/1)$]. Average value limit is 63.5 dBμV/m

3.6.3. Restricted Bands Measurement Results

Date of Test : Oct. 29, 2010 Temperature : 23°C

EUT : WLAN Adapter Card Humidity : 59%

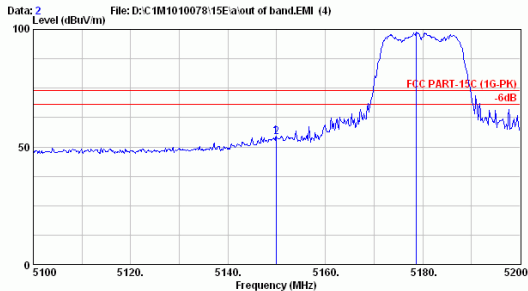
Test Mode : 802.11a, Transmit, Channel: 36, Frequency: 5180MHz

| | Emission Frequency MHz | Antenna Factor dB/m | Cable Loss dB | Meter Reading Horizontal dBμV | Emission Level Horizontal dBμV/m | Limits dBμV/m | Margin dB |
|-----------|------------------------|---------------------|---------------|-------------------------------|----------------------------------|---------------|-----------|
| Peak * | 5149.900 | 33.45 | 9.43 | 11.69 | 54.57 | 74.00 | 19.43 |
| Average * | 5149.900 | 33.45 | 9.43 | 0.79 | 43.67 | 54.00 | 10.33 |

- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. Low frequency section (spurious in the restricted band 4500-5150MHz).
 3. '*' The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.59-11, Tin-Fu Tsuei, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092133 Fax:+886-2-26099303
 Email:temc@ttemc.com.tw



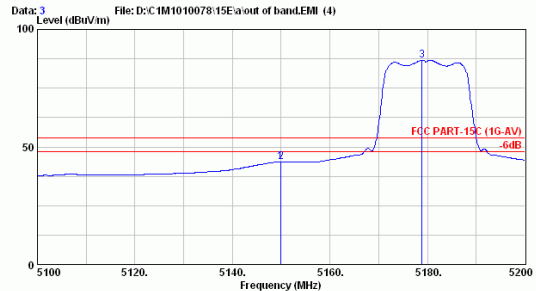
Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1 5149.900 | 33.45 | 9.43 | 11.69 | 54.57 | 74.00 | 19.43 | Peak |
| 2 5150.000 | 33.45 | 9.43 | 11.34 | 54.22 | 74.00 | 19.78 | Peak |
| 3 5178.700 | 33.48 | 9.46 | 55.91 | 98.86 | 74.00 | -24.86 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.59-11, Tin-Fu Tsuei, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092133 Fax:+886-2-26099303
 Email:temc@ttemc.com.tw



Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|---------|
| 1 5149.900 | 33.45 | 9.43 | 0.79 | 43.67 | 54.00 | 10.33 | Average |
| 2 5150.000 | 33.45 | 9.43 | 0.78 | 43.66 | 54.00 | 10.34 | Average |
| 3 5178.900 | 33.48 | 9.46 | 43.94 | 86.89 | 54.00 | -32.89 | Average |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Date of Test : Oct. 29, 2010 Temperature : 23°C

EUT : WLAN Adapter Card Humidity : 59%

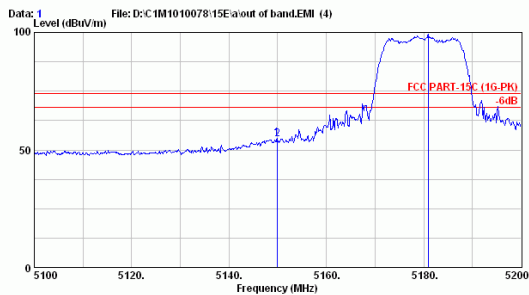
Test Mode : 802.11a, Transmit, Channel: 36, Frequency: 5180MHz

| | Emission Frequency MHz | Antenna Factor dB/m | Cable Loss dB | Meter Reading Vertical dBμV | Emission Level Vertical dBμV/m | Limits dBμV/m | Margin dB |
|-----------|------------------------|---------------------|---------------|-----------------------------|--------------------------------|---------------|-----------|
| Peak * | 5149.900 | 33.45 | 9.43 | 12.19 | 55.07 | 74.00 | 18.93 |
| Average * | 5149.900 | 33.45 | 9.43 | -0.49 | 42.39 | 54.00 | 11.61 |

- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. Low frequency section (spurious in the restricted band 4500-5150MHz).
 3. '*' The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.33-11, Tin-Fu Tsun, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092133 Fax:+886-2-26099303
 Email:ttenc@ttenc.com.tw



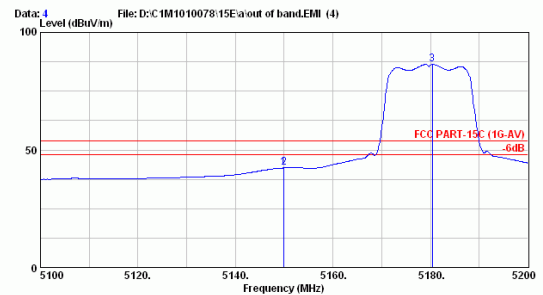
Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 23°C/59% DJarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1 5149.900 | 33.45 | 9.43 | 12.19 | 55.07 | 74.00 | 18.93 | Peak |
| 2 5150.000 | 33.45 | 9.43 | 11.56 | 54.45 | 74.00 | 19.55 | Peak |
| 3 5180.900 | 33.48 | 9.46 | 56.17 | 99.11 | 74.00 | -25.11 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



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 No.33-11, Tin-Fu Tsun, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092133 Fax:+886-2-26099303
 Email:ttenc@ttenc.com.tw



Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 23°C/59% DJarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11a)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|---------|
| 1 5149.900 | 33.45 | 9.43 | -0.49 | 42.39 | 54.00 | 11.61 | Average |
| 2 5150.000 | 33.45 | 9.43 | -0.50 | 42.38 | 54.00 | 11.62 | Average |
| 3 5180.400 | 33.48 | 9.46 | 43.41 | 86.35 | 54.00 | -32.35 | Average |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Date of Test : Oct. 29, 2010 Temperature : 23°C

EUT : WLAN Adapter Card Humidity : 59%

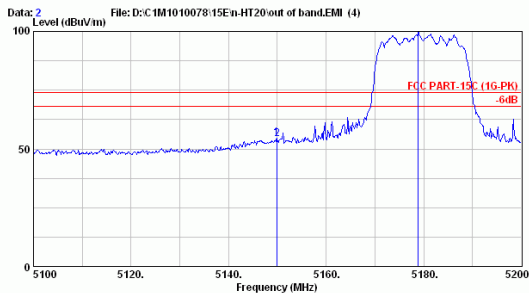
Test Mode : 802.11n-HT20, Transmit, Channel: 36, Frequency: 5180MHz

| | Emission Frequency MHz | Antenna Factor dB/m | Cable Loss dB | Meter Reading Horizontal dBμV | Emission Level Horizontal dBμV/m | Limits dBμV/m | Margin dB |
|-----------|------------------------|---------------------|---------------|-------------------------------|----------------------------------|---------------|-----------|
| Peak * | 5149.900 | 33.45 | 9.43 | 11.83 | 54.71 | 74.00 | 19.29 |
| Average * | 5149.900 | 33.45 | 9.43 | 0.84 | 43.72 | 54.00 | 10.28 |

- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. High frequency section (spurious in the restricted band 4500-5150MHz).
 3. '*' The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.33-11, Tin-Ru Tsun, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26099133 Fax:+886-2-26099303
 Email:ttmc@ttmc.com.tw



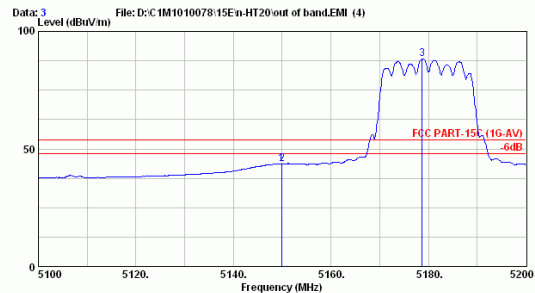
Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : B4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11n-HT20)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1 5149.900 | 33.45 | 9.43 | 11.83 | 54.71 | 74.00 | 19.29 | Peak |
| 2 5150.000 | 33.45 | 9.43 | 11.23 | 54.11 | 74.00 | 19.89 | Peak |
| 3 5178.900 | 33.48 | 9.46 | 57.62 | 100.57 | 74.00 | -26.57 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.33-11, Tin-Ru Tsun, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26099133 Fax:+886-2-26099303
 Email:ttmc@ttmc.com.tw



Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : B4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11n-HT20)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|---------|
| 1 5149.900 | 33.45 | 9.43 | 0.84 | 43.72 | 54.00 | 10.28 | Average |
| 2 5150.000 | 33.45 | 9.43 | 0.82 | 43.70 | 54.00 | 10.30 | Average |
| 3 5178.700 | 33.48 | 9.46 | 45.36 | 88.31 | 54.00 | -34.31 | Average |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Date of Test : Oct. 29, 2010 Temperature : 23°C

EUT : WLAN Adapter Card Humidity : 59%

Test Mode : 802.11n-HT20, Transmit, Channel: 36, Frequency: 5180MHz

| | Emission Frequency MHz | Antenna Factor dB/m | Cable Loss dB | Meter Reading Vertical dBμV | Emission Level Vertical dBμV/m | Limits dBμV/m | Margin dB |
|-----------|------------------------|---------------------|---------------|-----------------------------|--------------------------------|---------------|-----------|
| Peak * | 5148.400 | 33.45 | 9.43 | 11.07 | 53.95 | 74.00 | 20.05 |
| Average * | 5150.000 | 33.45 | 9.43 | 0.01 | 42.89 | 54.00 | 11.11 |

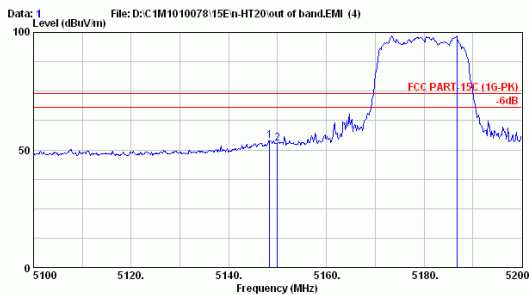
- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. High frequency section (spurious in the restricted band 4500-5150MHz).
 3. '*' The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.33-11, Tin-Fu Tsun, Lin-kou Hsiang, Taipei County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092133 Fax:+886-2-26099303
 Email:ttmc@ttmc.com.tw



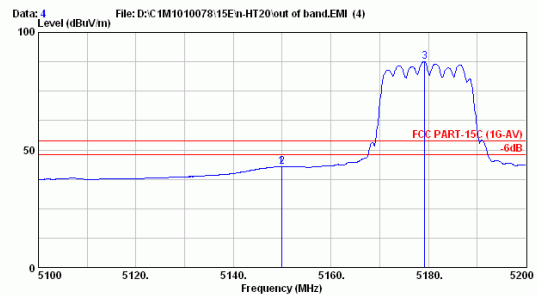
AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.33-11, Tin-Fu Tsun, Lin-kou Hsiang, Taipei County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092133 Fax:+886-2-26099303
 Email:ttmc@ttmc.com.tw



Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (16-FH)
 Env. / Ins. : E4446A 23°C/59% DJarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11n-HT20)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1 5148.400 | 33.45 | 9.43 | 11.07 | 53.96 | 74.00 | 20.04 | Peak |
| 2 5150.000 | 33.45 | 9.43 | 9.81 | 52.70 | 74.00 | 21.30 | Peak |
| 3 5186.700 | 33.48 | 9.46 | 55.67 | 98.61 | 74.00 | -24.61 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (16-AV)
 Env. / Ins. : E4446A 23°C/59% DJarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5180 (802.11n-HT20)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|---------|
| 1 5149.900 | 33.45 | 9.43 | -0.01 | 42.87 | 54.00 | 11.13 | Average |
| 2 5150.000 | 33.45 | 9.43 | 0.01 | 42.89 | 54.00 | 11.11 | Average |
| 3 5179.200 | 33.48 | 9.46 | 44.52 | 87.47 | 54.00 | -33.47 | Average |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Date of Test : Oct. 29, 2010 Temperature : 23°C

EUT : WLAN Adapter Card Humidity : 59%

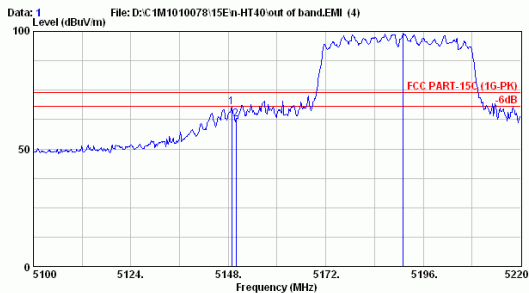
Test Mode : 802.11n-HT40, Transmit, Channel: 38, Frequency: 5190MHz

| | Emission Frequency MHz | Antenna Factor dB/m | Cable Loss dB | Meter Reading Horizontal dBμV | Emission Level Horizontal dBμV/m | Limits dBμV/m | Margin dB |
|-----------|------------------------|---------------------|---------------|-------------------------------|----------------------------------|---------------|-----------|
| Peak * | 5148.840 | 33.45 | 9.43 | 24.90 | 67.78 | 74.00 | 6.22 |
| Average * | 5148.720 | 33.45 | 9.43 | 6.61 | 49.49 | 54.00 | 4.51 |

- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. High frequency section (spurious in the restricted band 4500-5150MHz).
 3. '*' The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.33-11, Tin-Ru Tsun, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092133 Fax:+886-2-26099303
 Email:ttmc@ttmc.com.tw



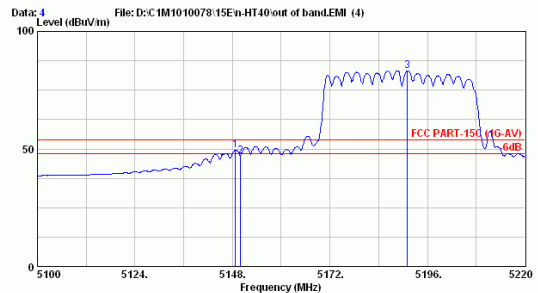
Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190 (802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|---|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1 | 5148.840 | 33.45 | 9.43 | 24.90 | 67.78 | 74.00 | 6.22 | Peak |
| 2 | 5149.920 | 33.45 | 9.43 | 19.59 | 62.47 | 74.00 | 11.53 | Peak |
| 3 | 5191.080 | 33.50 | 9.48 | 56.18 | 99.16 | 74.00 | -25.16 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.33-11, Tin-Ru Tsun, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092133 Fax:+886-2-26099303
 Email:ttmc@ttmc.com.tw



Site no. : A/C Chamber Data no. : 4
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 23°C/59% □Jarwei Wang
 EUT : WN8522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190 (802.11n-HT40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|---|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|-----------|
| 1 | 5148.720 | 33.45 | 9.43 | 6.61 | 49.50 | 54.00 | 4.50 | Average 1 |
| 2 | 5150.040 | 33.45 | 9.43 | 3.92 | 46.81 | 54.00 | 7.19 | Average |
| 3 | 5191.080 | 33.50 | 9.48 | 40.31 | 83.29 | 54.00 | -29.29 | Average 6 |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Date of Test : Oct. 29, 2010 Temperature : 23°C

EUT : WLAN Adapter Card Humidity : 59%

Test Mode : 802.11n-HT20, Transmit, Channel: 36, Frequency: 5180MHz

| | Emission Frequency MHz | Antenna Factor dB/m | Cable Loss dB | Meter Reading Vertical dBμV | Emission Level Vertical dBμV/m | Limits dBμV/m | Margin dB |
|-----------|------------------------|---------------------|---------------|-----------------------------|--------------------------------|---------------|-----------|
| Peak * | 5146.680 | 33.45 | 9.43 | 23.78 | 66.66 | 74.00 | 7.34 |
| Average * | 5149.440 | 33.45 | 9.43 | 5.78 | 48.66 | 54.00 | 5.34 |

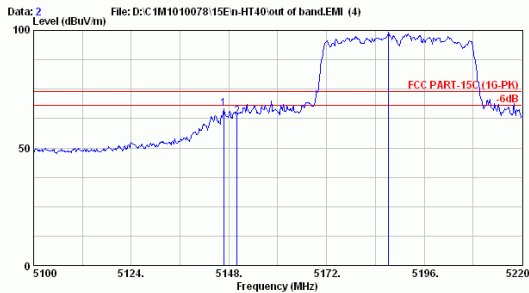
- Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
 2. High frequency section (spurious in the restricted band 4500-5150MHz).
 3. '*' The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.



AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.53-11, Tin-Ri Tsun, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092153 Fax:+886-2-26099303
 Email:ttmc@ttmc.com.tw



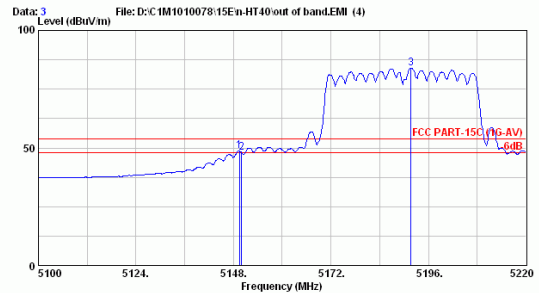
AUDIX TECHNOLOGY Corp. EMC Laboratory
 No.53-11, Tin-Ri Tsun, Lin-Kou Hsiang, Taipei
 County, Taiwan R.O.C. Post Code 24443
 Tel:+886-2-26092153 Fax:+886-2-26099303
 Email:ttmc@ttmc.com.tw



Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (16-PK)
 Env. / Ins. : E4446A 23°C/598 □Jarwei Wang
 EUT : WNS522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190(802.11n-HT40)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1 5146.680 | 33.45 | 9.43 | 23.78 | 66.66 | 74.00 | 7.34 | Peak |
| 2 5150.040 | 33.45 | 9.43 | 20.57 | 63.45 | 74.00 | 10.55 | Peak |
| 3 5187.240 | 33.48 | 9.48 | 56.23 | 99.19 | 74.00 | -25.19 | Peak |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115 (3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (16-AV)
 Env. / Ins. : E4446A 23°C/598 □Jarwei Wang
 EUT : WNS522D2
 Power Rating : DC 5V via notebook
 Test Mode : TX5190(802.11n-HT40)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|---------|
| 1 5149.440 | 33.45 | 9.43 | 5.78 | 48.66 | 54.00 | 5.34 | Average |
| 2 5150.040 | 33.45 | 9.43 | 5.18 | 48.06 | 54.00 | 5.94 | Average |
| 3 5191.680 | 33.50 | 9.48 | 40.97 | 83.94 | 54.00 | -29.94 | Average |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

4. 26dB BANDWIDTH MEASUREMENT

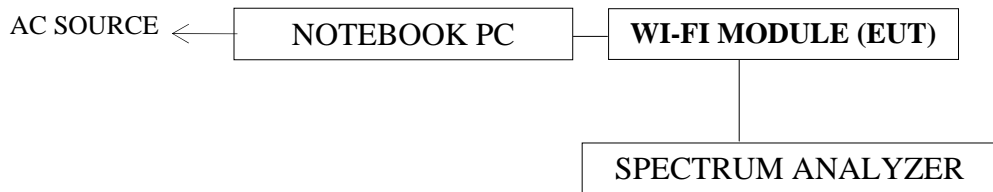
4.1. Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

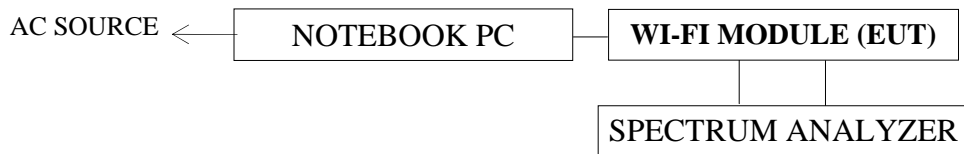
| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-------------------|--------------|-----------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 10' | Aug. 03, 11' |

4.2. Block Diagram of Test Setup

4.2.1. For 802.11a



4.2.2. For 802.11n-HT20/802.11n-HT40



4.3. Operating Condition of EUT

The test program “Broadcom WL Command” was used to enable the EUT to transmit data at different channel frequency individually.

4.4. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer with RBW=300kHz VBW=1MHz. The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

The measurement guideline was according to DA-02-2138.

4.5. Test Results

PASSED. All the test results are attached in next pages.

(Test Date : Oct. 29, 2010 Temperature : 26°C Humidity : 55%)

(Test Date : Nov. 05, 2010 Temperature : 24°C Humidity : 58%)

4.5.1. For 802.11a

| Mode | Type of Network | Channel | Frequency | 26dB Bandwidth |
|------|-----------------|---------|-----------|----------------|
| 1. | 802.11a | CH 36 | 5180MHz | 19.472MHz |
| 2. | | CH 40 | 5200MHz | 19.435MHz |
| 3. | | CH 48 | 5240MHz | 19.529MHz |

4.5.2. For 802.11n-HT20

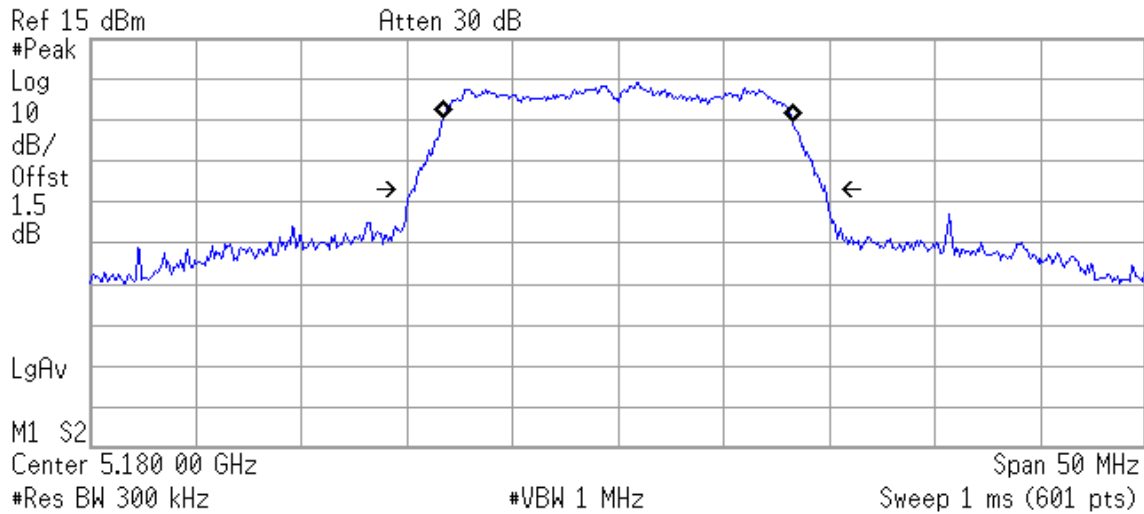
| Mode | Type of Network | Channel | Frequency | 26dB Bandwidth | |
|------|-----------------|---------|-----------|----------------|------------|
| | | | | Ant. 0 | Ant.1 |
| 1. | 802.11n-HT20 | CH 36 | 5180MHz | 19.387MHz | 19.587MHz |
| 2. | | CH 40 | 5200MHz | 19.678MHz | 19.589MHz |
| 3. | | CH 48 | 5240MHz | 19.588MHz | 19.618 MHz |

4.5.3. For 802.11n-HT40

| Mode | Type of Network | Channel | Frequency | 26dB Bandwidth | |
|------|-----------------|---------|-----------|----------------|-----------|
| | | | | Ant. 0 | Ant.1 |
| 1. | 802.11n-HT40 | CH 38 | 5190MHz | 38.990MHz | 38.781MHz |
| 2. | | CH 46 | 5230MHz | 38.557MHz | 39.116MHz |

802.11a, Frequency: 5180MHz

Agilent 15:51:14 Oct 29, 2010



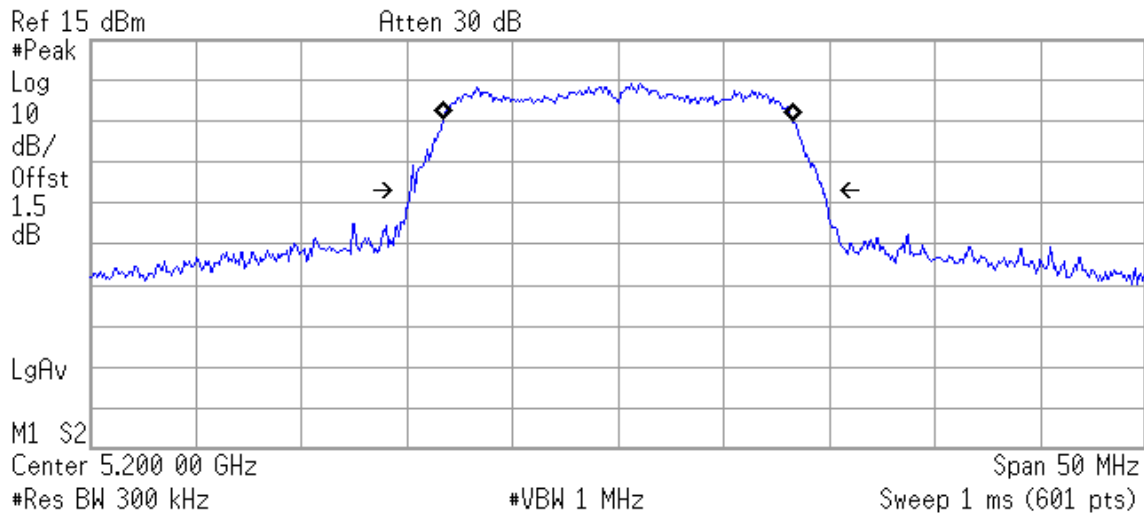
Occupied Bandwidth
16.4529 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -6.587 kHz
x dB Bandwidth 19.472 MHz

802.11a, Frequency: 5200MHz

Agilent 15:59:09 Oct 29, 2010



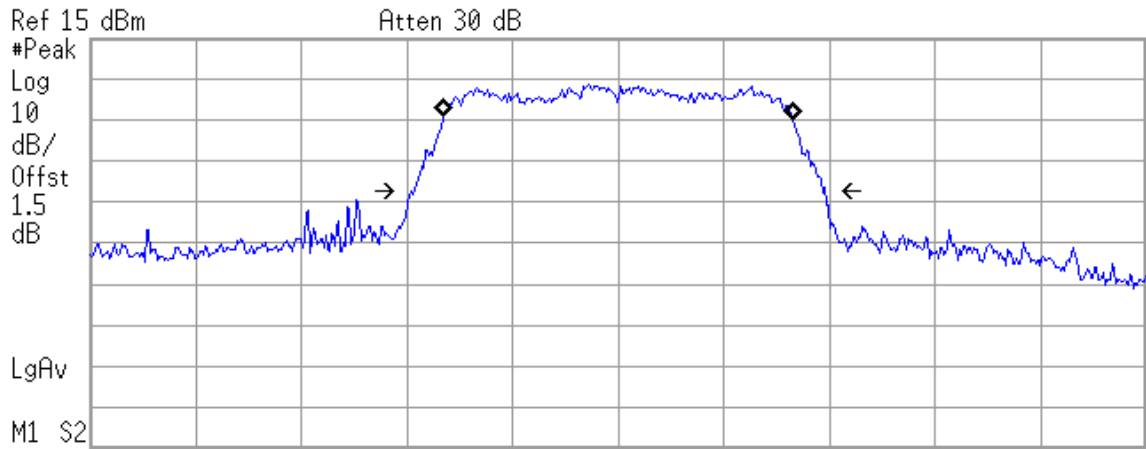
Occupied Bandwidth
16.5055 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -11.088 kHz
x dB Bandwidth 19.435 MHz

802.11a, Frequency: 5240MHz

Agilent 15:59:46 Oct 29, 2010



Center 5.240 00 GHz Span 50 MHz
 #Res BW 300 kHz #VBW 1 MHz Sweep 1 ms (601 pts)

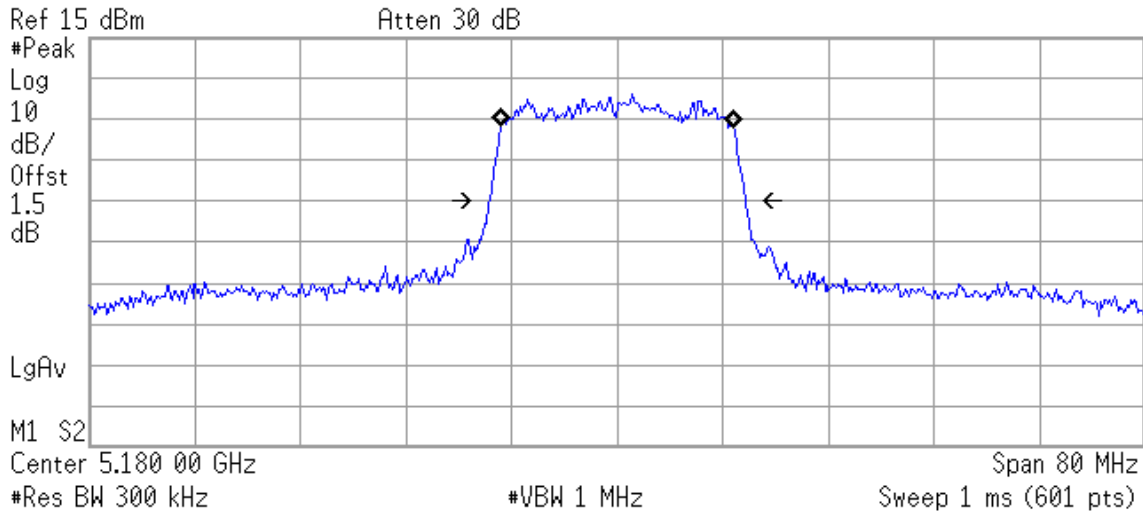
Occupied Bandwidth
16.4479 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -8.083 kHz
x dB Bandwidth 19.529 MHz

802.11n-HT20, Frequency: 5180MHz (Ant. 0)

Agilent 11:56:50 Nov 5, 2010



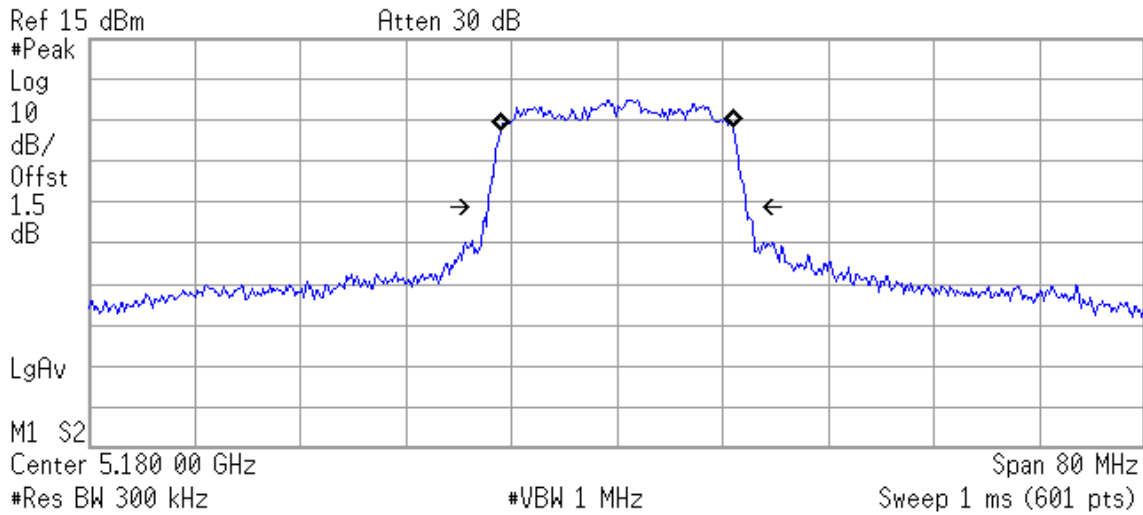
Occupied Bandwidth
17.6165 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 26.297 kHz
x dB Bandwidth 19.387 MHz

802.11n-HT20, Frequency: 5180MHz (Ant. 1)

Agilent 11:57:10 Nov 5, 2010



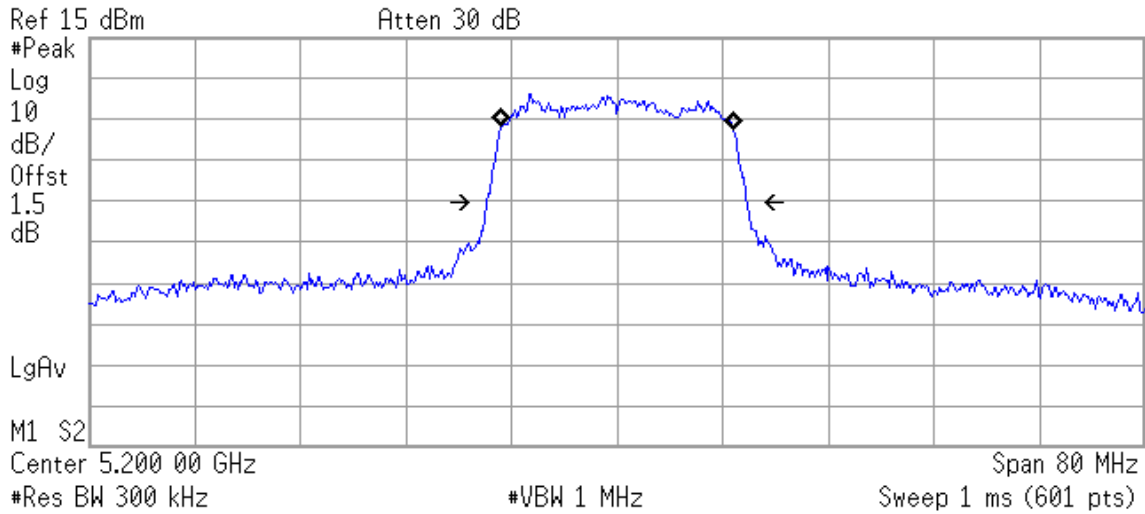
Occupied Bandwidth
17.6113 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -12.435 kHz
x dB Bandwidth 19.587 MHz

802.11n-HT20, Frequency: 5200MHz (Ant. 0)

Agilent 12:01:00 Nov 5, 2010



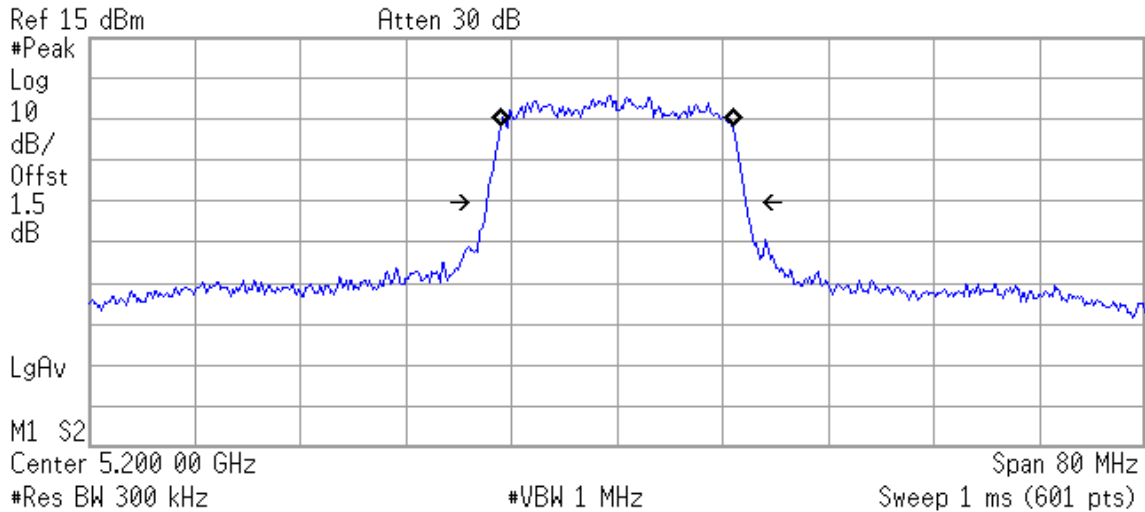
Occupied Bandwidth
17.5813 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -7.150 kHz
x dB Bandwidth 19.678 MHz

802.11n-HT20, Frequency: 5200MHz (Ant. 1)

Agilent 12:01:18 Nov 5, 2010



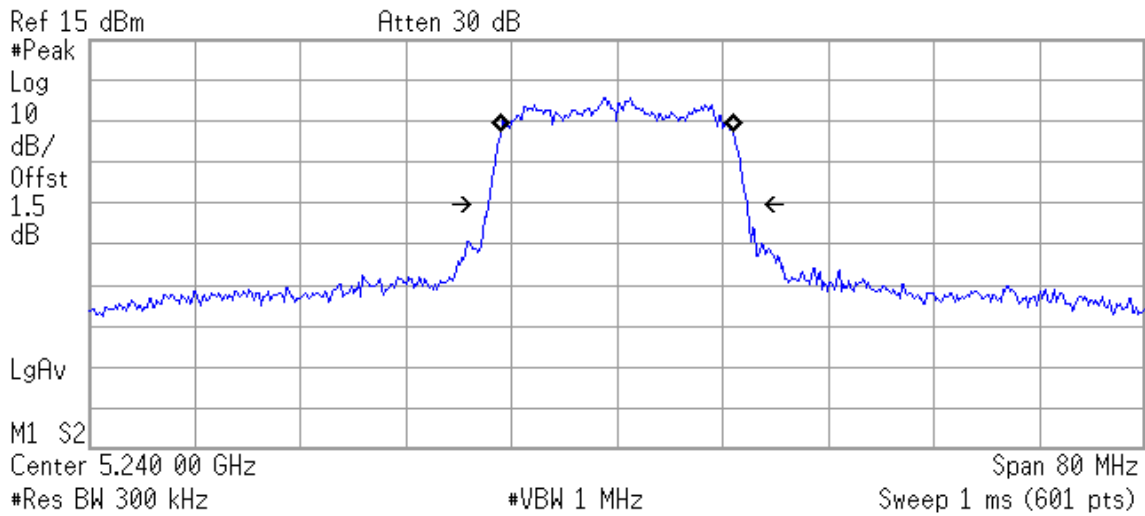
Occupied Bandwidth
17.6017 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -15.637 kHz
x dB Bandwidth 19.589 MHz

802.11n-HT20, Frequency: 5240MHz (Ant. 0)

Agilent 12:04:52 Nov 5, 2010



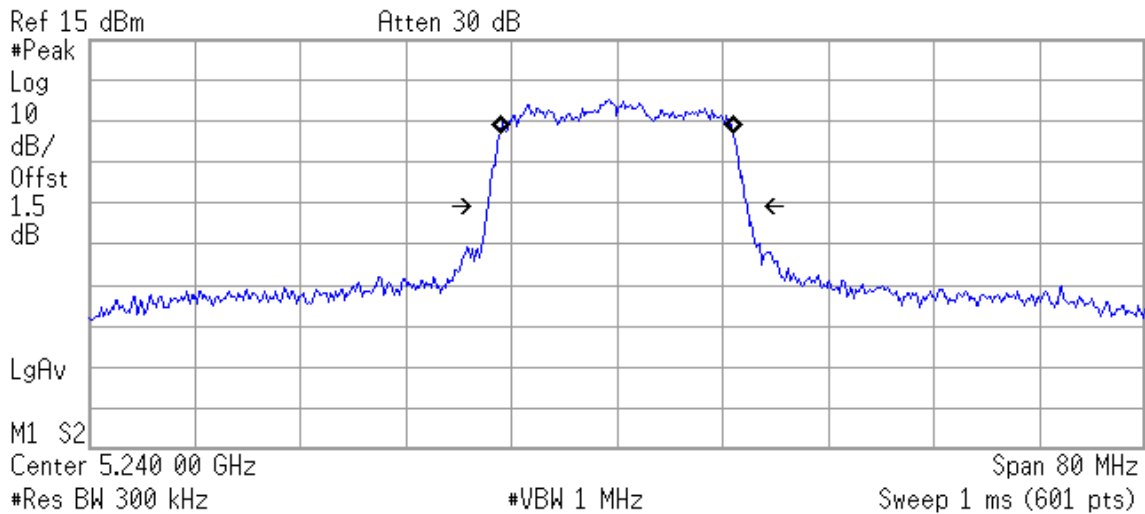
Occupied Bandwidth
17.5985 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 6.823 kHz
x dB Bandwidth 19.588 MHz

802.11n-HT20, Frequency: 5240MHz (Ant. 1)

Agilent 12:05:10 Nov 5, 2010



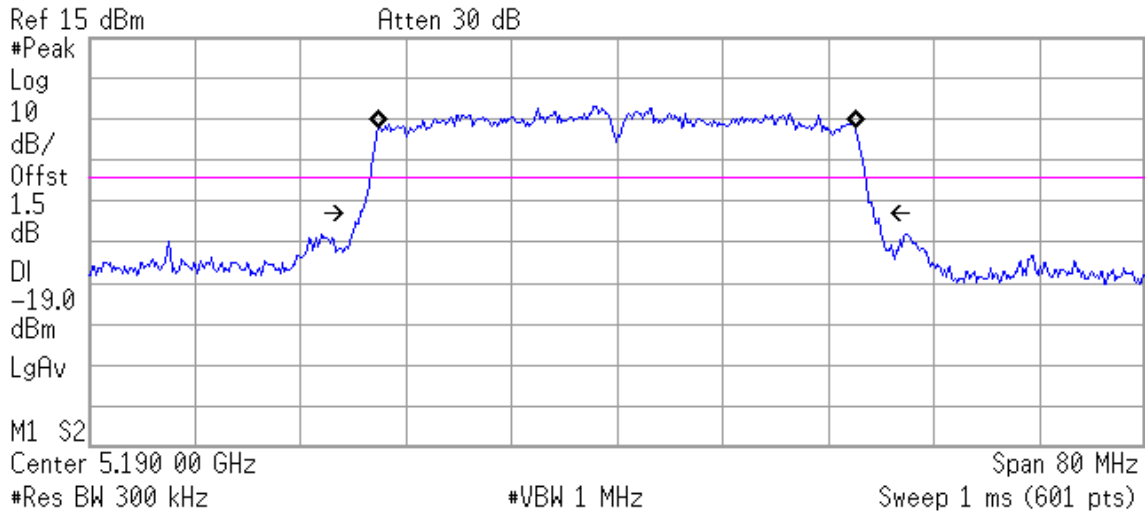
Occupied Bandwidth
17.6158 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -38.527 kHz
x dB Bandwidth 19.618 MHz

802.11n-HT40, Frequency: 5190MHz (Ant. 0)

Agilent 11:39:22 Nov 5, 2010



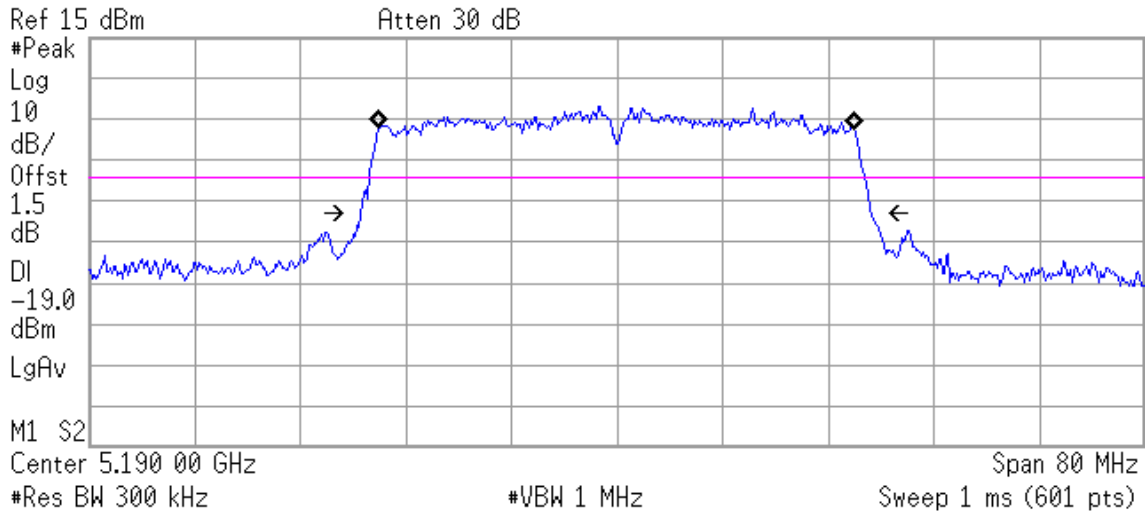
Occupied Bandwidth
36.2140 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 2.806 kHz
x dB Bandwidth 38.990 MHz

802.11n-HT40, Frequency: 5190MHz (Ant. 1)

Agilent 11:39:33 Nov 5, 2010



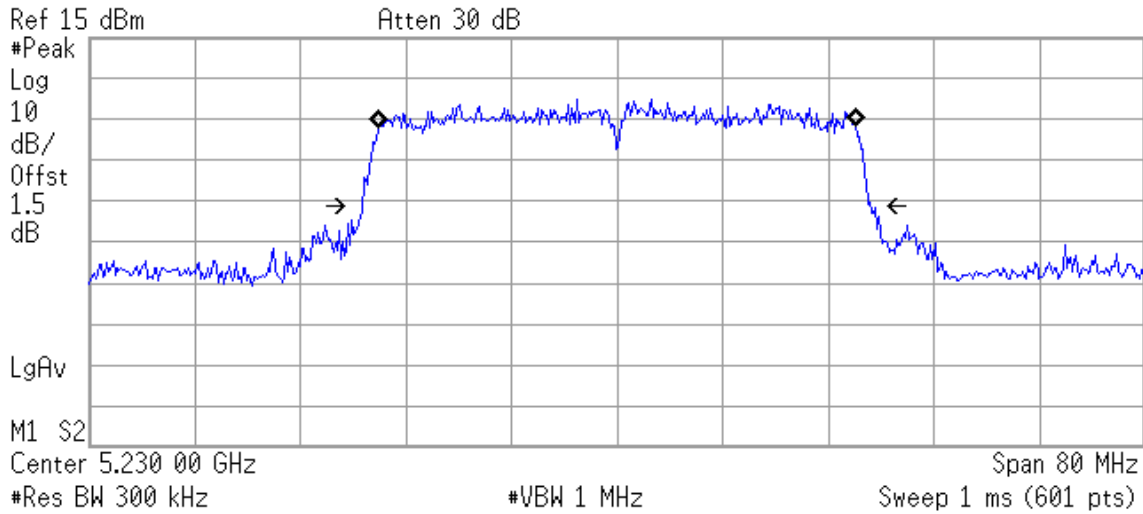
Occupied Bandwidth
36.1715 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -55.341 kHz
x dB Bandwidth 38.781 MHz

802.11n-HT40, Frequency: 5230MHz (Ant. 0)

Agilent 11:49:09 Nov 5, 2010



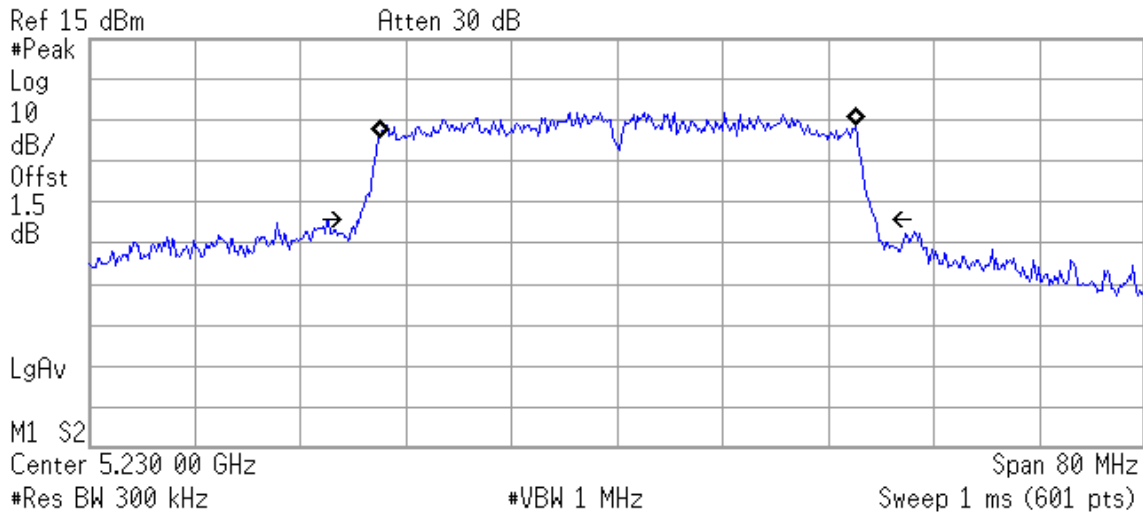
Occupied Bandwidth
36.2018 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 9.751 kHz
x dB Bandwidth 38.557 MHz

802.11n-HT40, Frequency: 5230MHz (Ant. 1)

Agilent 11:49:31 Nov 5, 2010



Occupied Bandwidth
36.1755 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 46.244 kHz
x dB Bandwidth 39.116 MHz

5. MAXIMUM PEAK OUTPUT POWER MEASUREMENT

5.1. Test Equipment

The following test equipment was used during the maximum peak output power measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-------------------|--------------|-----------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 10' | Aug. 03, 11' |

5.2. Block Diagram of Test Setup

The same as section.4.2.

5.3. Specification Limits (§15.407(a)-(1))

5.3.1. For 802.11a

| Frequency | Limit 1 | Limit 2 (4dBm+10log B) |
|--------------|--------------|------------------------|
| 5150~5250MHz | 50mW (17dBm) | 16.91dBm |

Remark: B= 26dB Bandwidth

5.3.2. For 802.11n-HT20

| Frequency | Limit 1 | Limit 2 (4dBm+10log B) |
|--------------|--------------|------------------------|
| 5150~5250MHz | 50mW (17dBm) | 16.94dBm |

Remark: B= 26dB Bandwidth

5.3.3. For 802.11n-HT40

| Frequency | Limit 1 | Limit 2 (4dBm+10log B) |
|--------------|--------------|------------------------|
| 5150~5250MHz | 50mW (17dBm) | 19.92dBm |

Remark: B= 26dB Bandwidth

5.4. Operating Condition of EUT

The test program “Broadcom WL Command” was used to enable the EUT to transmit data at different channel frequency individually.

5.5. Test Procedure

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices-Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method#1 is used.

5.6. Test Results

PASSED. All the test results are listed below.

(Test Date : Oct. 29, 2010 Temperature : 26°C Humidity : 55%)

(Test Date : Nov. 05, 2010 Temperature : 24°C Humidity : 58%)

5.6.1. For 802.11a

| Mode | Type of Network | Channel | Frequency | Peak Output Power (dBm) | Power Setting |
|------|-----------------|---------|-----------|-------------------------|---------------|
| 1. | 802.11a | CH 36 | 5180MHz | 12.09 | 56 |
| 2. | | CH 40 | 5200MHz | 12.07 | 56 |
| 3. | | CH 48 | 5240MHz | 12.38 | 56 |

[Limit: 1Watt. (17dBm)]

5.6.2. For 802.11n-HT20

| Mode | Type of Network | Channel | Frequency | Peak output power (dBm) | | Total Peak Output Power (dBm) | Power Setting |
|------|-----------------|---------|-----------|-------------------------|-------------|-------------------------------|---------------|
| | | | | Ant. 0 | Ant. 1 | | |
| 1. | 802.11n-HT20 | CH 36 | 5180MHz | 8.75 | 8.45 | 11.61 | 36 |
| 2. | | CH 40 | 5200MHz | 8.87 | 9.06 | 11.98 | 36 |
| 3. | | CH 48 | 5240MHz | 8.25 | 8.34 | 11.31 | 36 |

[Limit: 1Watt. (17dBm)]

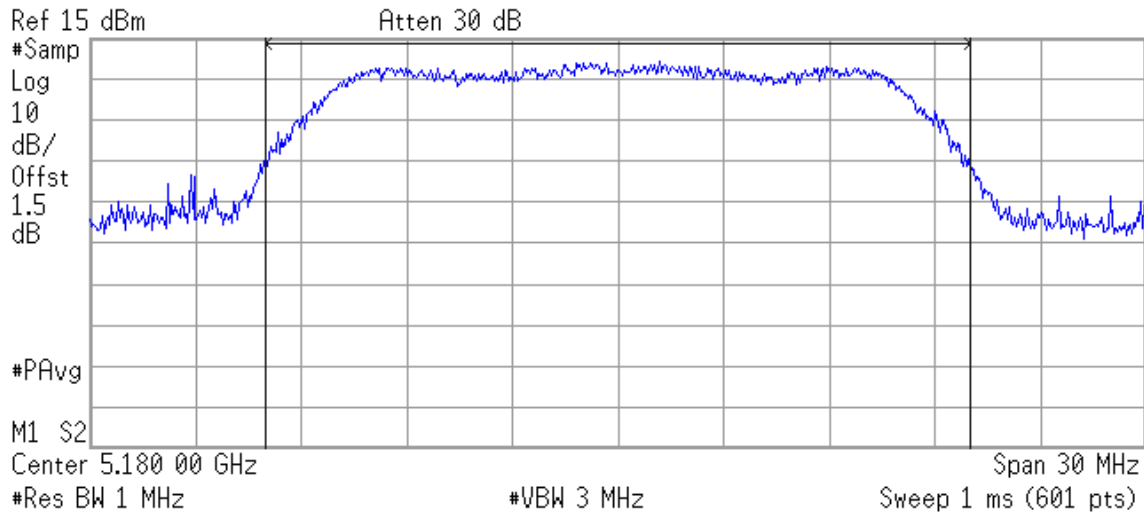
5.6.3. For 802.11n-HT40

| Mode | Type of Network | Channel | Frequency | Peak output power (dBm) | | Total Peak Output Power (dBm) | Power Setting |
|------|-----------------|---------|-----------|-------------------------|--------------|-------------------------------|---------------|
| | | | | Ant. 0 | Ant. 1 | | |
| 1. | 802.11n-HT40 | CH 38 | 5190MHz | 10.75 | 9.94 | 13.37 | 42 |
| 2. | | CH 46 | 5230MHz | 10.07 | 10.28 | 13.19 | 42 |

[Limit: 1Watt. (19.92dBm)]

802.11a, Frequency: 5180MHz

Agilent 15:50:34 Oct 29, 2010



Channel Power

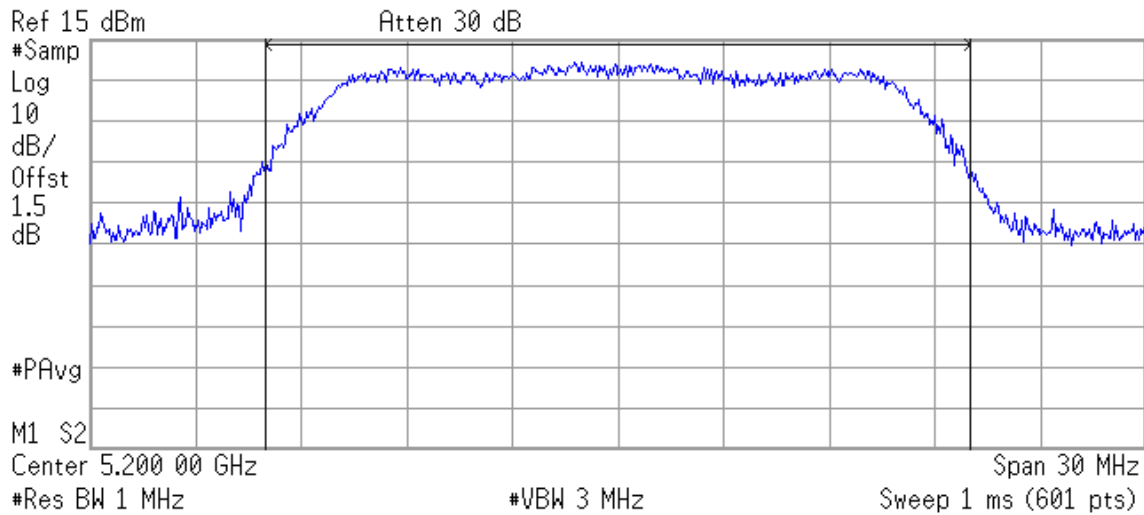
12.09 dBm /20.0000 MHz

Power Spectral Density

-60.92 dBm/Hz

802.11a, Frequency: 5200MHz

Agilent 15:58:27 Oct 29, 2010



Channel Power

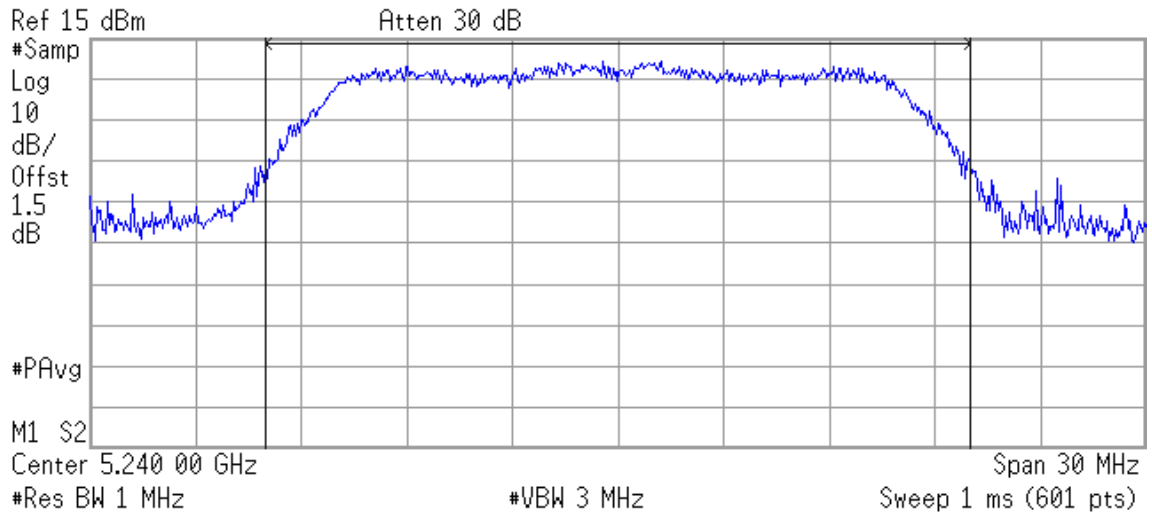
12.07 dBm /20.0000 MHz

Power Spectral Density

-60.94 dBm/Hz

802.11a, Frequency: 5240MHz

Agilent 16:00:38 Oct 29, 2010



Channel Power

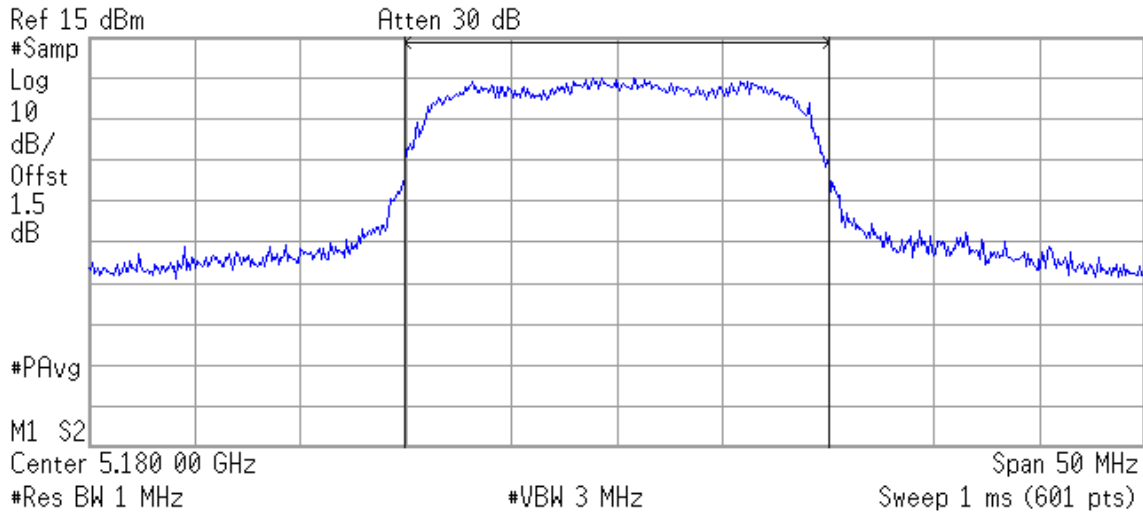
12.38 dBm /20.0000 MHz

Power Spectral Density

-60.63 dBm/Hz

802.11n-HT20, Frequency: 5180MHz (Ant. 0)

Agilent 11:55:39 Nov 5, 2010



Channel Power

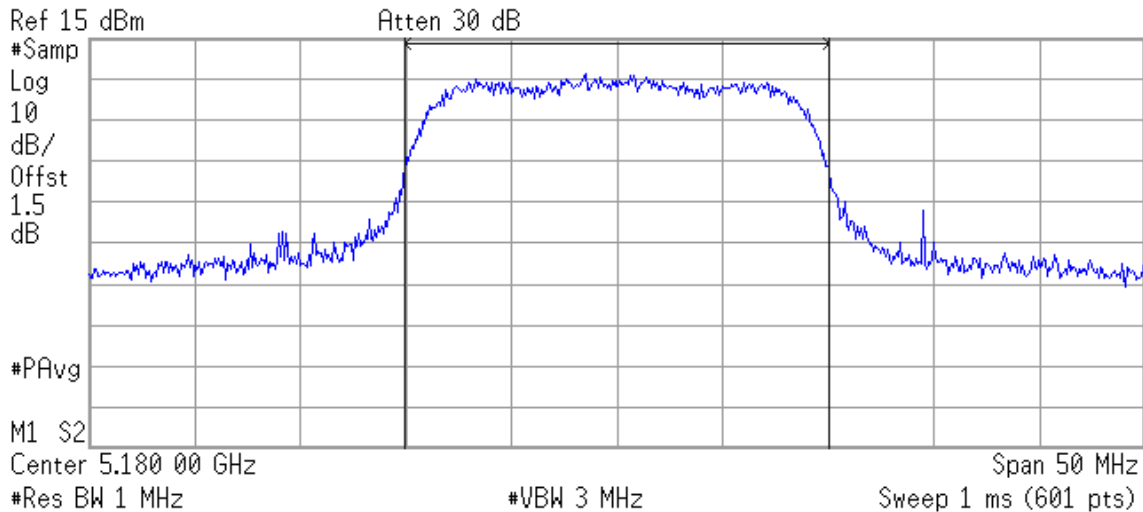
8.75 dBm /20.0000 MHz

Power Spectral Density

-64.26 dBm/Hz

802.11n-HT20, Frequency: 5180MHz (Ant. 1)

Agilent 11:56:11 Nov 5, 2010



Channel Power

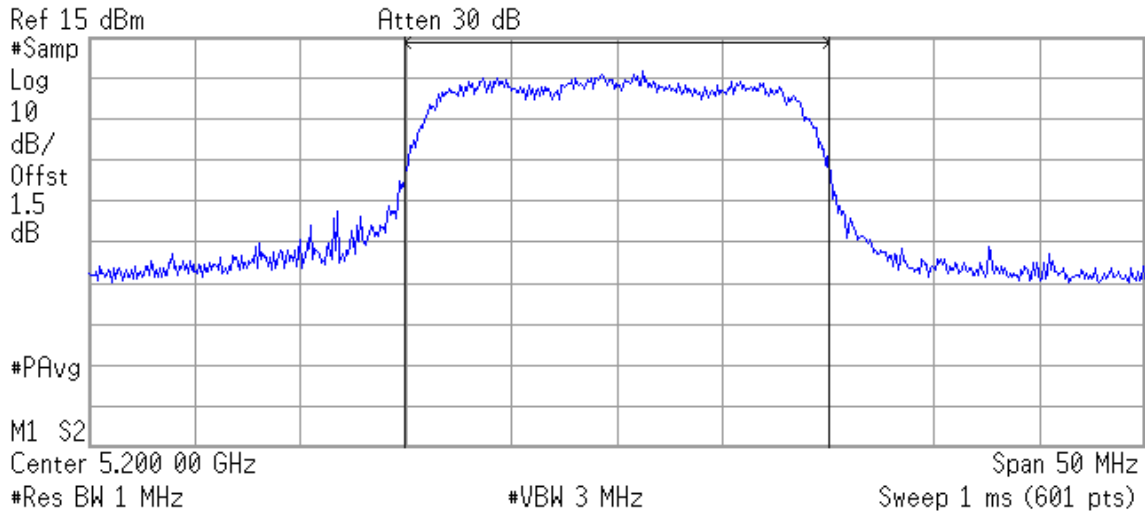
8.45 dBm /20.0000 MHz

Power Spectral Density

-64.56 dBm/Hz

802.11n-HT20, Frequency: 5200MHz (Ant. 0)

Agilent 12:02:26 Nov 5, 2010



Channel Power

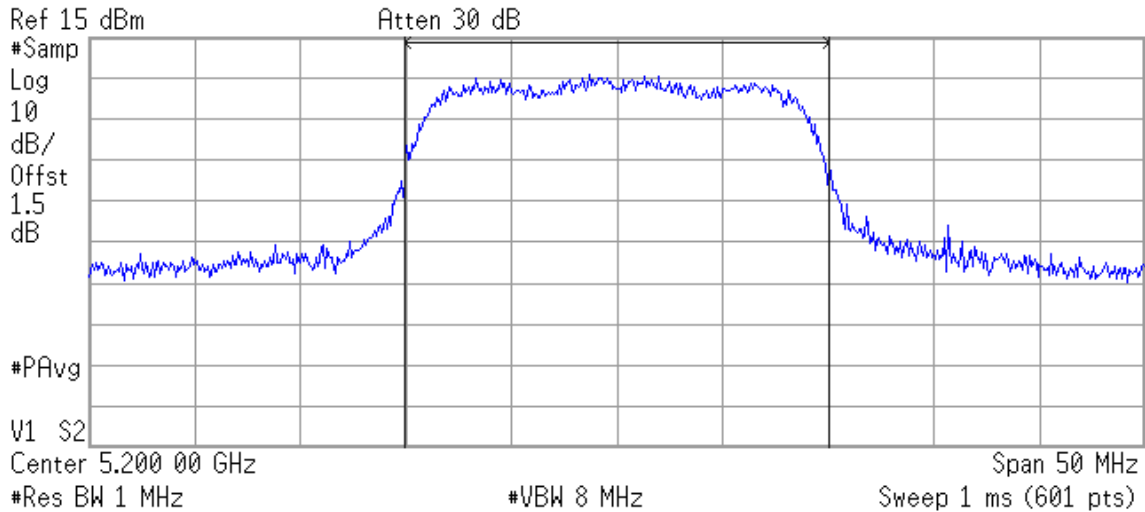
8.87 dBm /20.0000 MHz

Power Spectral Density

-64.14 dBm/Hz

802.11n-HT20, Frequency: 5200MHz (Ant. 1)

Agilent 12:02:55 Nov 5, 2010



Channel Power

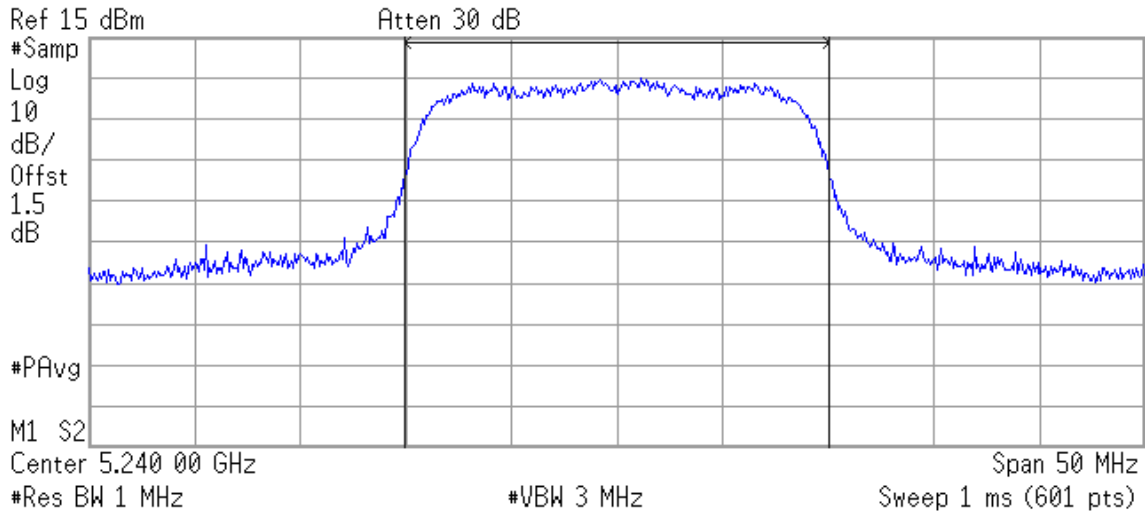
9.06 dBm /20.0000 MHz

Power Spectral Density

-63.95 dBm/Hz

802.11n-HT20, Frequency: 5240MHz (Ant. 0)

Agilent 12:03:40 Nov 5, 2010



Channel Power

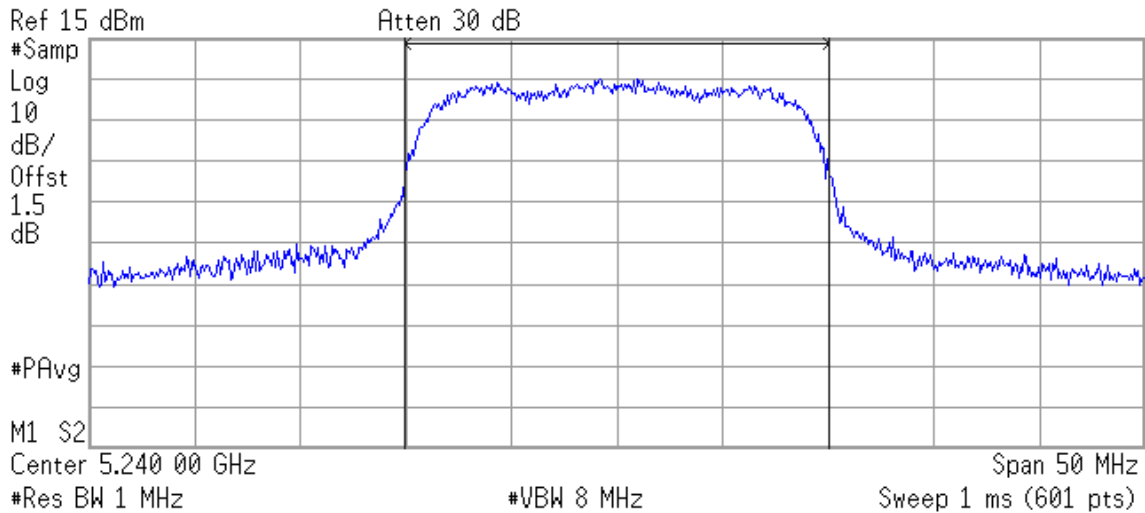
8.25 dBm /20.0000 MHz

Power Spectral Density

-64.76 dBm/Hz

802.11n-HT20, Frequency: 5240MHz (Ant. 1)

Agilent 12:04:25 Nov 5, 2010



Channel Power

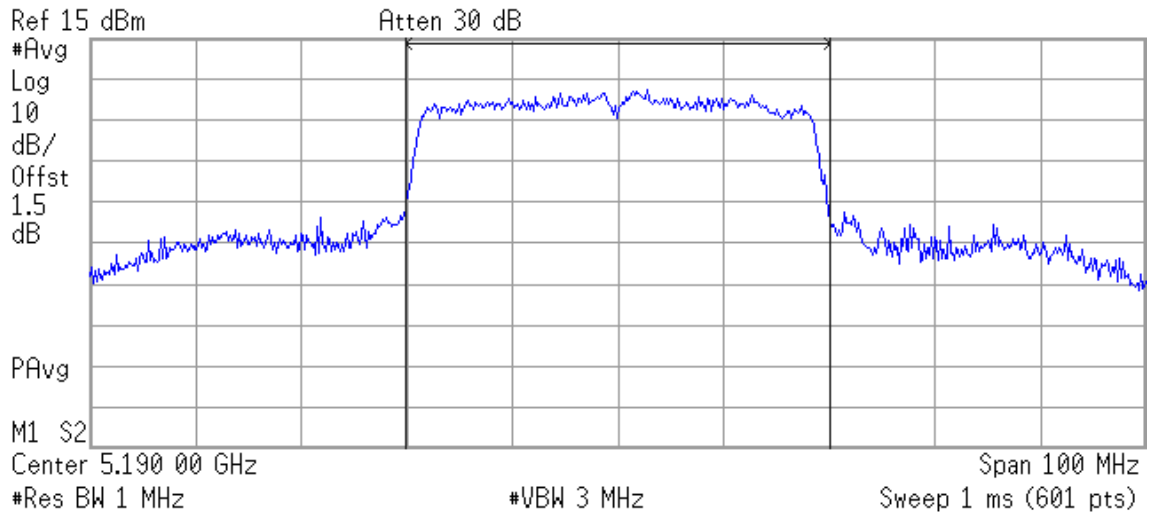
8.34 dBm /20.0000 MHz

Power Spectral Density

-64.67 dBm/Hz

802.11n-HT40, Frequency: 5190MHz (Ant. 0)

Agilent 12:10:04 Nov 5, 2010



Channel Power

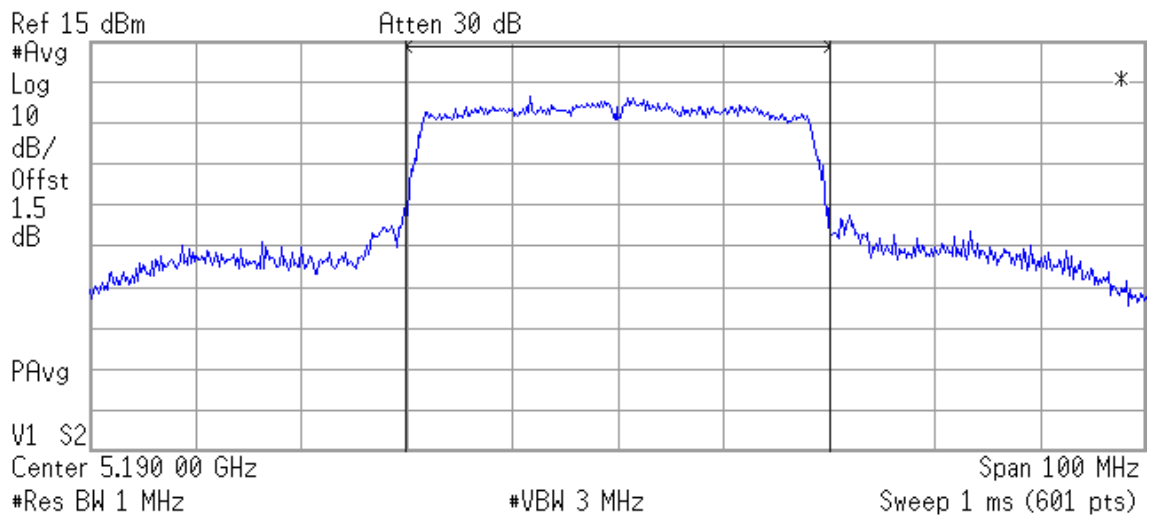
10.75 dBm /40.0000 MHz

Power Spectral Density

-65.27 dBm/Hz

802.11n-HT40, Frequency: 5190MHz (Ant. 1)

Agilent 12:10:50 Nov 5, 2010



Channel Power

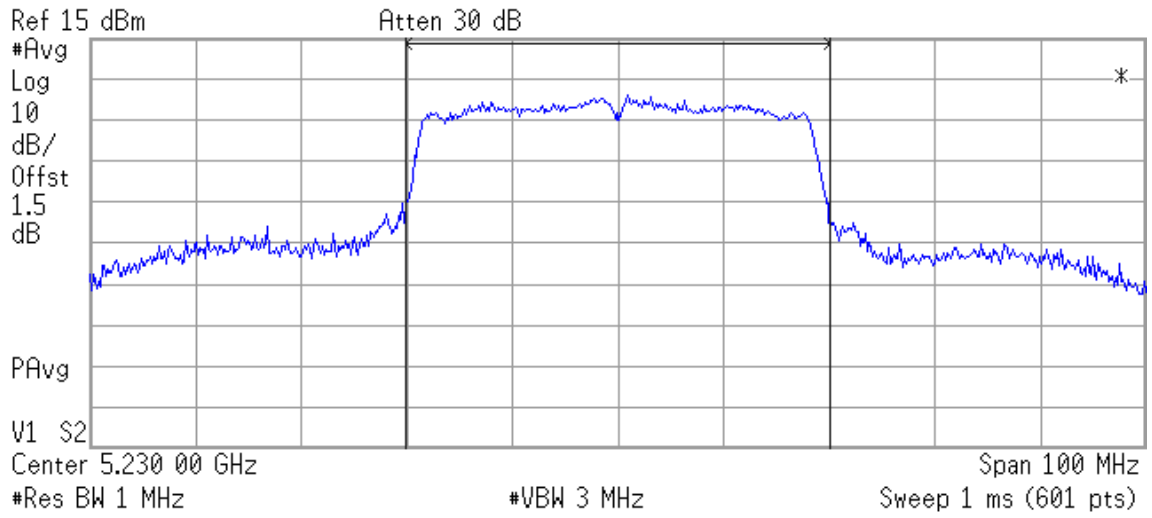
9.94 dBm /40.0000 MHz

Power Spectral Density

-66.08 dBm/Hz

802.11n-HT40, Frequency: 5230MHz (Ant. 0)

Agilent 12:12:53 Nov 5, 2010



Channel Power

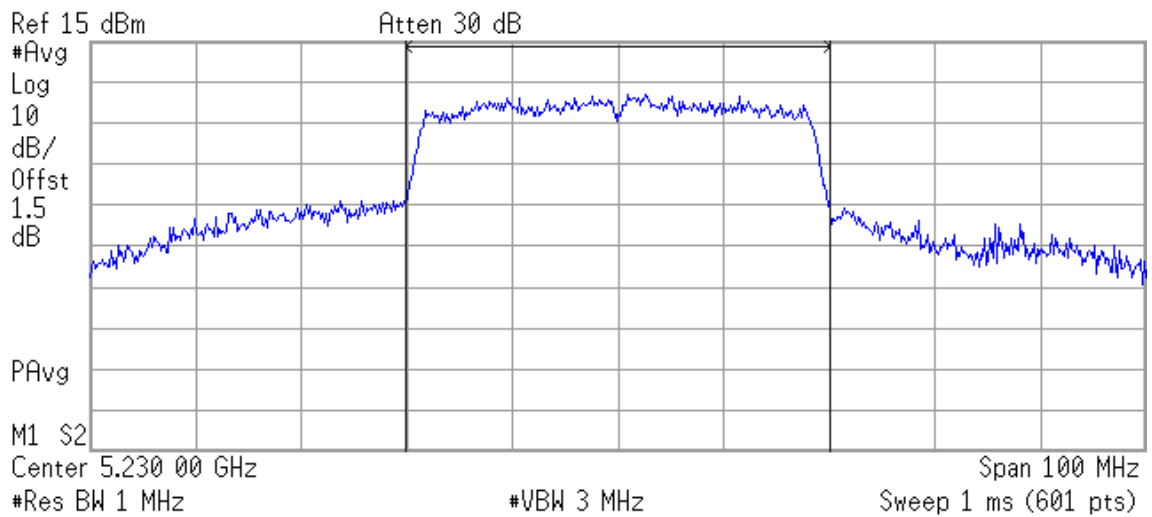
10.07 dBm /40.0000 MHz

Power Spectral Density

-65.95 dBm/Hz

802.11n-HT40, Frequency: 5230MHz (Ant. 1)

Agilent 12:13:14 Nov 5, 2010



Channel Power

10.28 dBm /40.0000 MHz

Power Spectral Density

-65.74 dBm/Hz

6. EMISSION LIMITATIONS MEASUREMENT

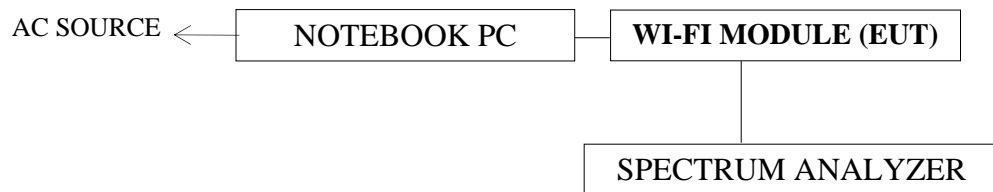
6.1. Test Equipment

The following test equipment was used during the emission limitations test :

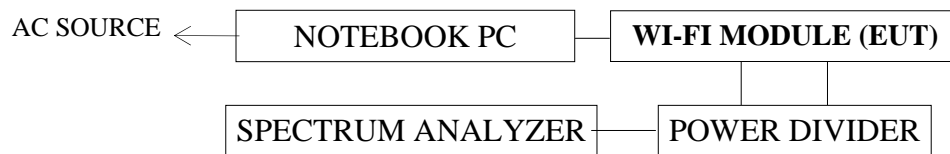
| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-------------------|--------------|-----------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 10' | Aug. 03, 11' |
| 2. | Power Divider | Anritsu | K240C | 019728 | Aug. 05, 10' | Aug. 04, 11' |

6.2. Block Diagram of Test Setup

6.2.1. For 802.11a



6.2.2. For 802.11n-HT20/802.11n-HT40



6.3. Specification Limits (§15.407(b)-(1))

For transmitters operating in the 5.15-5.25GHz band: all emission outside of the 5.150-5.350GHz band shall not exceed an EIRP of -27dBm/MHz.

Maximum Antenna Gain: 1.89dBi

Spurious Limit: -27dBm/MHz eirp

Limit Used on Plots ^{Note 1}: -28.89dBm/MHz

^{Note 1}: The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm-antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.

6.4. Operating Condition of EUT

The test program “Broadcom WL Command” was used to enable the EUT to transmit data at different channel frequency individually.

6.5. Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 1MHz RBW and 1MHz VBW.

6.6. Test Results

PASSED. The testing data was attached in the next pages.

(Test Date : Oct. 29, 2010 Temperature : 26°C Humidity : 55%)

In the 802.11n-HT20 and 802.11n-HT40 mode, we used power divider for measuring in the worst case.

All emission limitations were under limit -28.89dBm.

802.11a

1. 5180MHz: During 30MHz~40GHz bandwidth, the emission limitation was under limit -28.89dBm.
2. 5200MHz: During 30MHz~40GHz bandwidth, the emission limitation was under limit -28.89dBm.
3. 5240MHz: During 30MHz~40GHz bandwidth, the emission limitation was under limit -28.89dBm.

802.11n-HT20

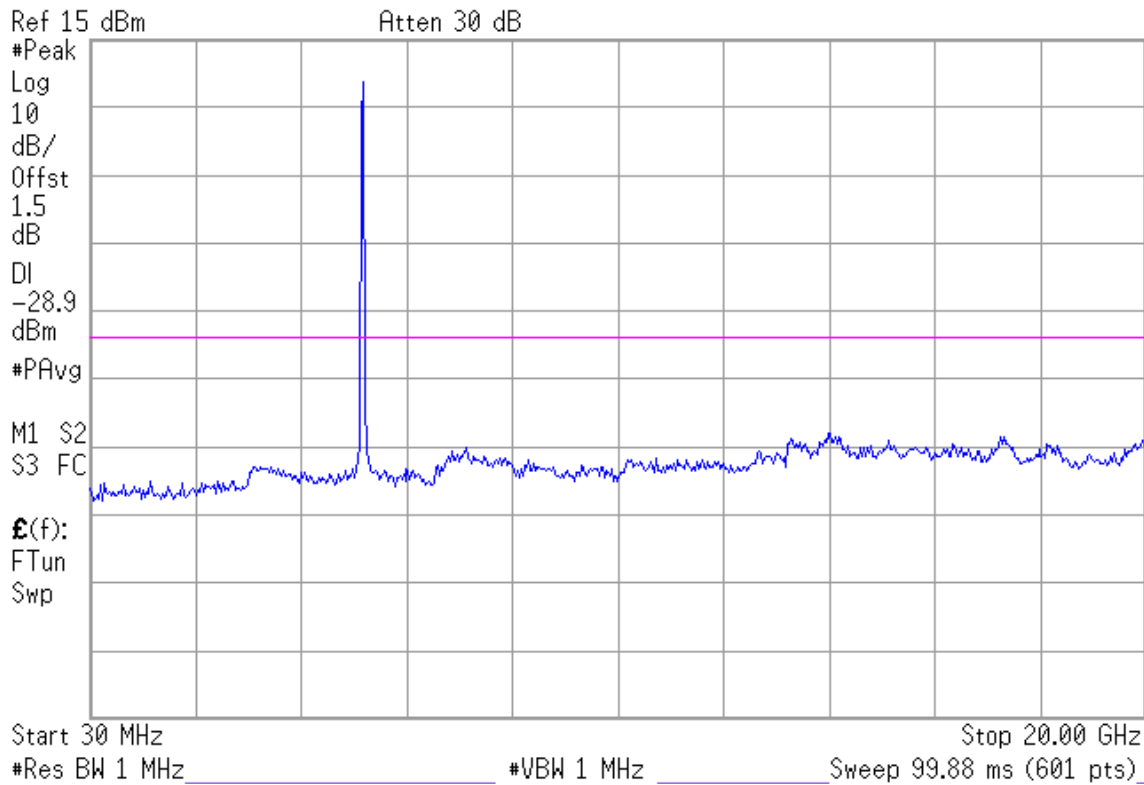
1. 5180MHz: During 30MHz~40GHz bandwidth, the emission limitation was under limit -28.89dBm.
2. 5200MHz: During 30MHz~40GHz bandwidth, the emission limitation was under limit -28.89dBm.
3. 5240MHz: During 30MHz~40GHz bandwidth, the emission limitation was under limit -28.89dBm.

802.11n-HT40

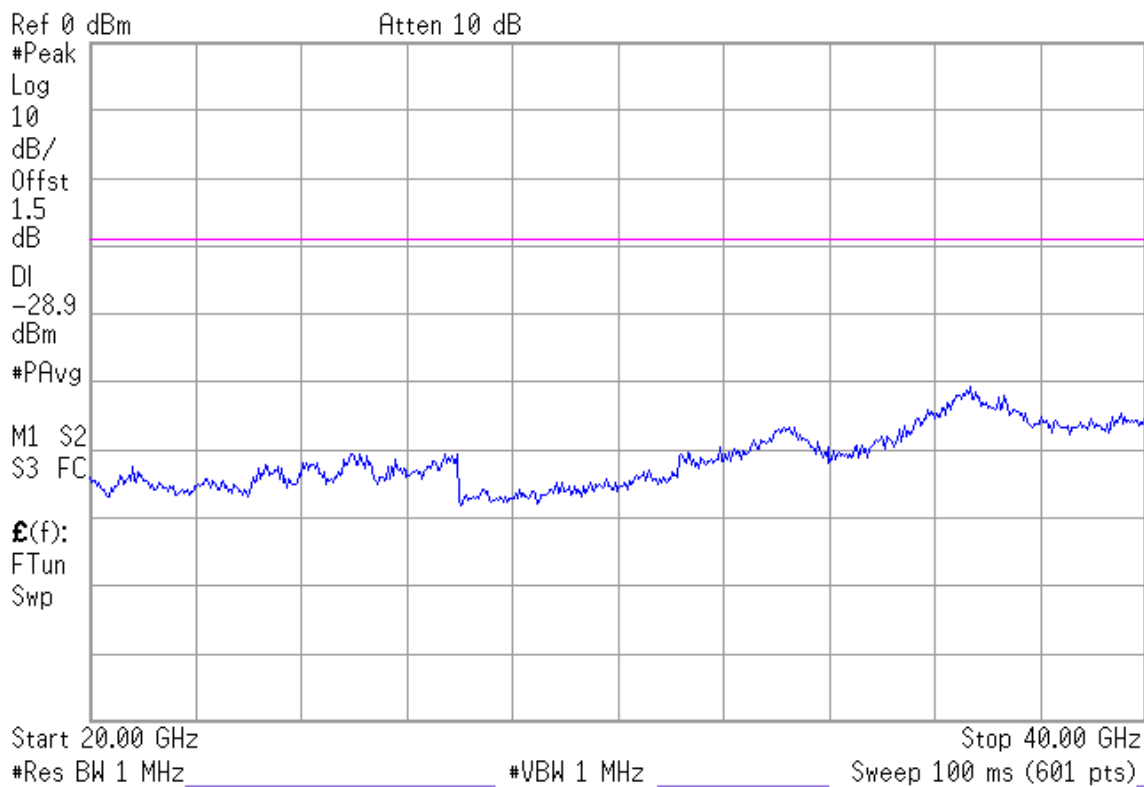
1. 5190MHz: During 30MHz~40GHz bandwidth, the emission limitation was under limit -28.89dBm.
2. 5230MHz: During 30MHz~40GHz bandwidth, the emission limitation was under limit -28.89dBm.

802.11a, Frequency: 5180MHz

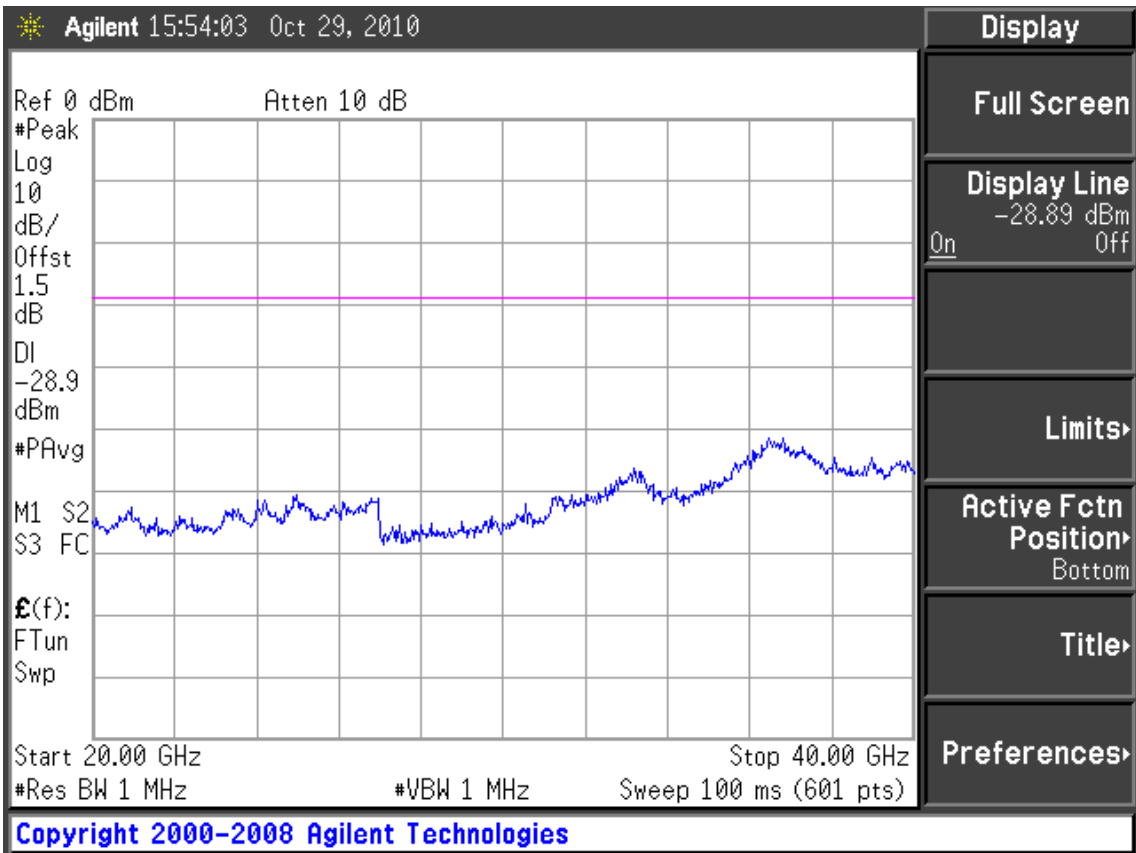
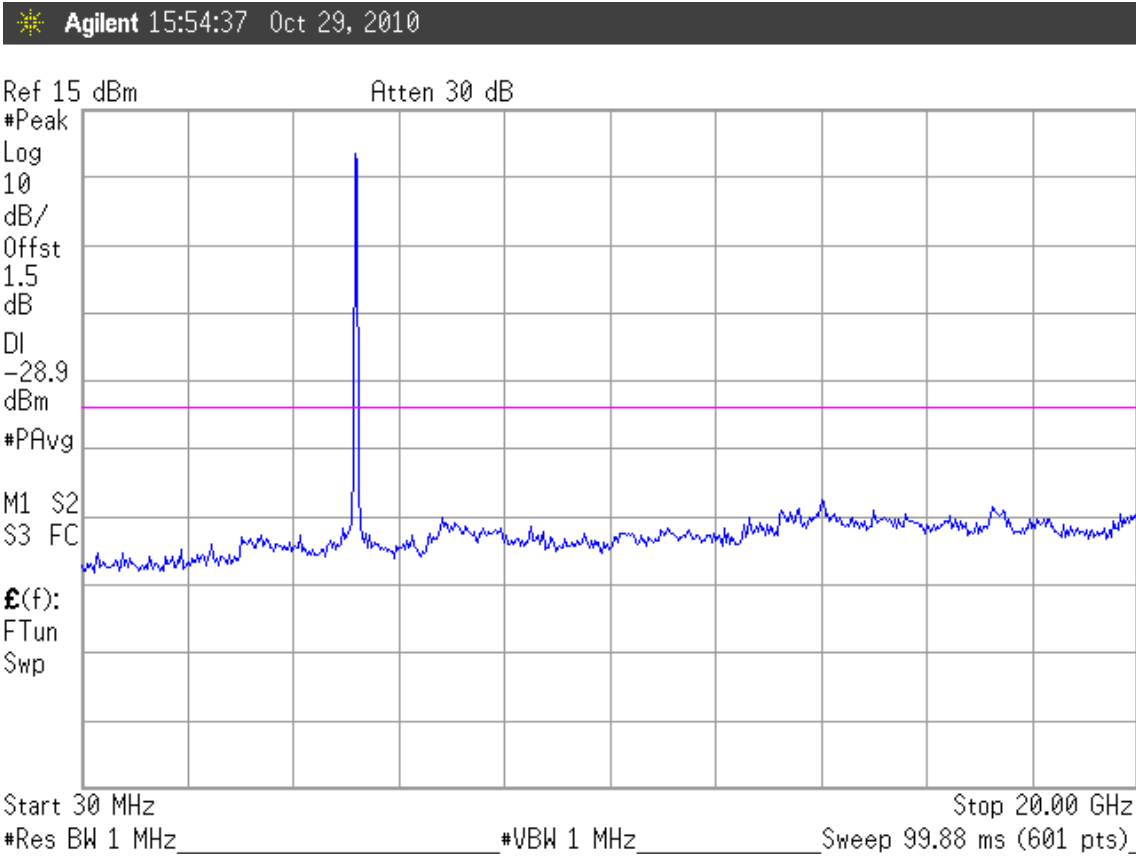
Agilent 15:53:10 Oct 29, 2010



Agilent 15:53:41 Oct 29, 2010

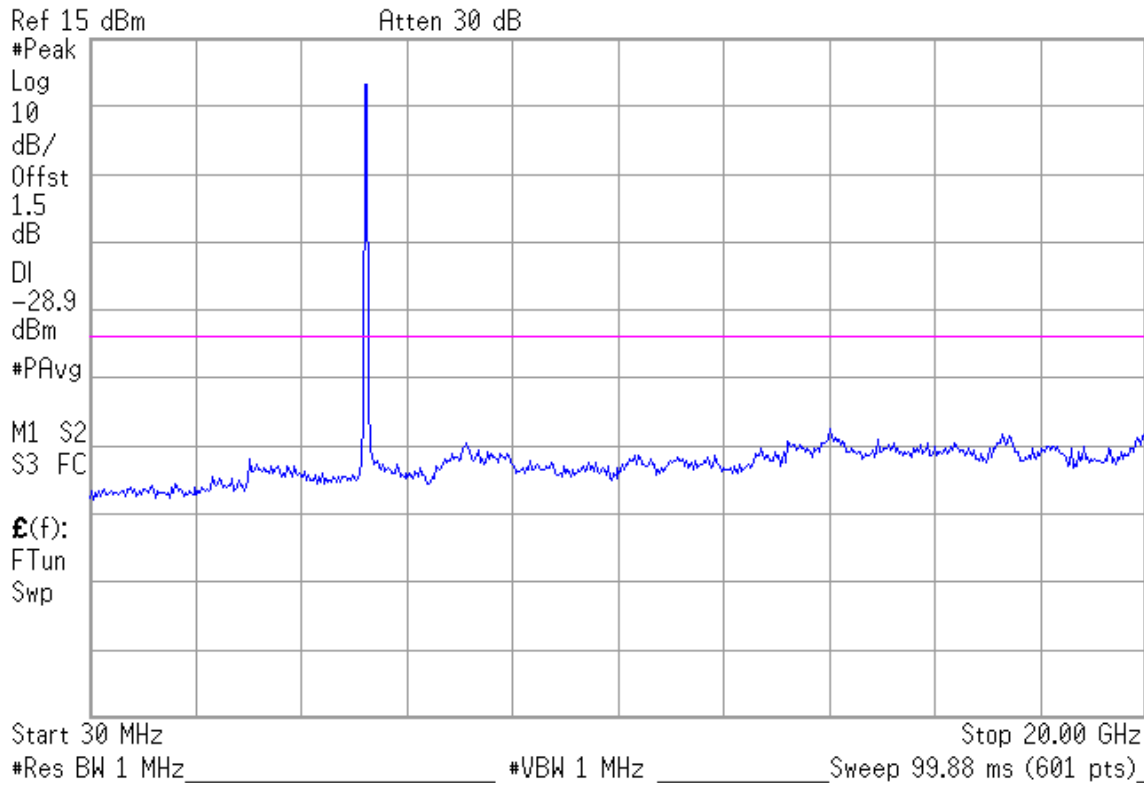


802.11a, Frequency: 5200MHz



802.11a, Frequency: 5240MHz

Agilent 16:05:43 Oct 29, 2010

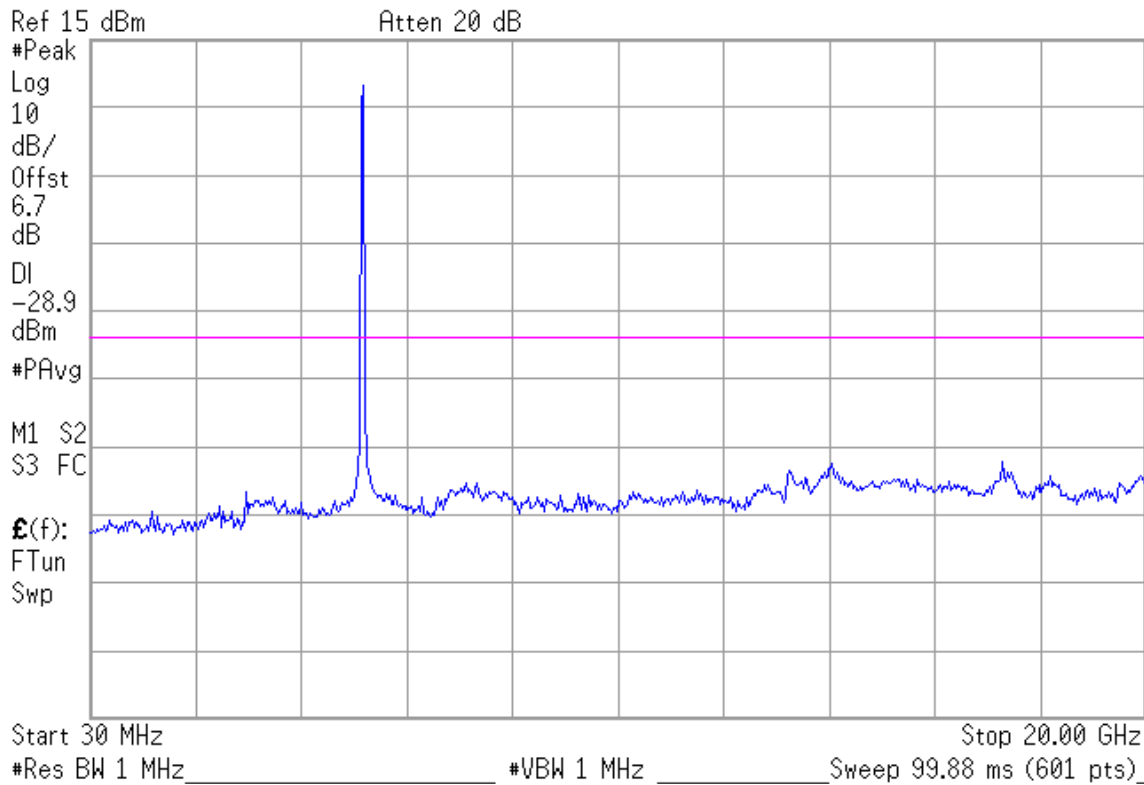


Agilent 16:06:17 Oct 29, 2010

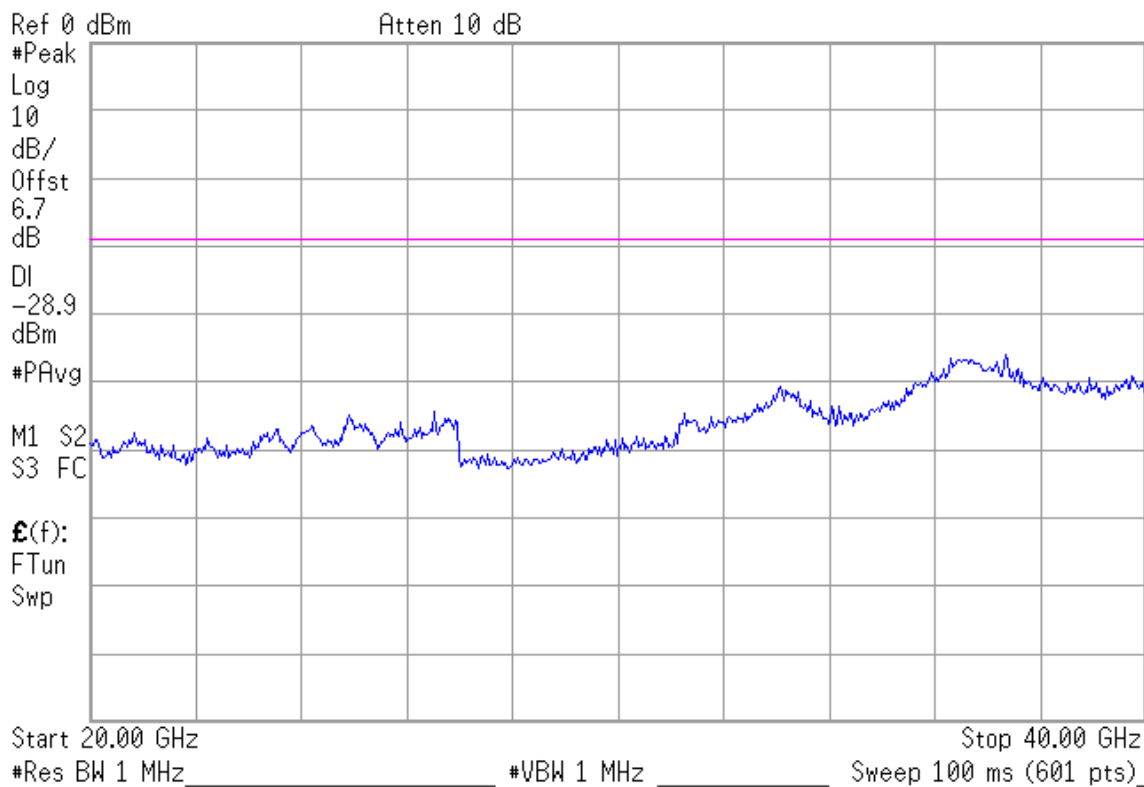


802.11n-HT20, Frequency: 5180MHz

Agilent 16:14:14 Oct 29, 2010

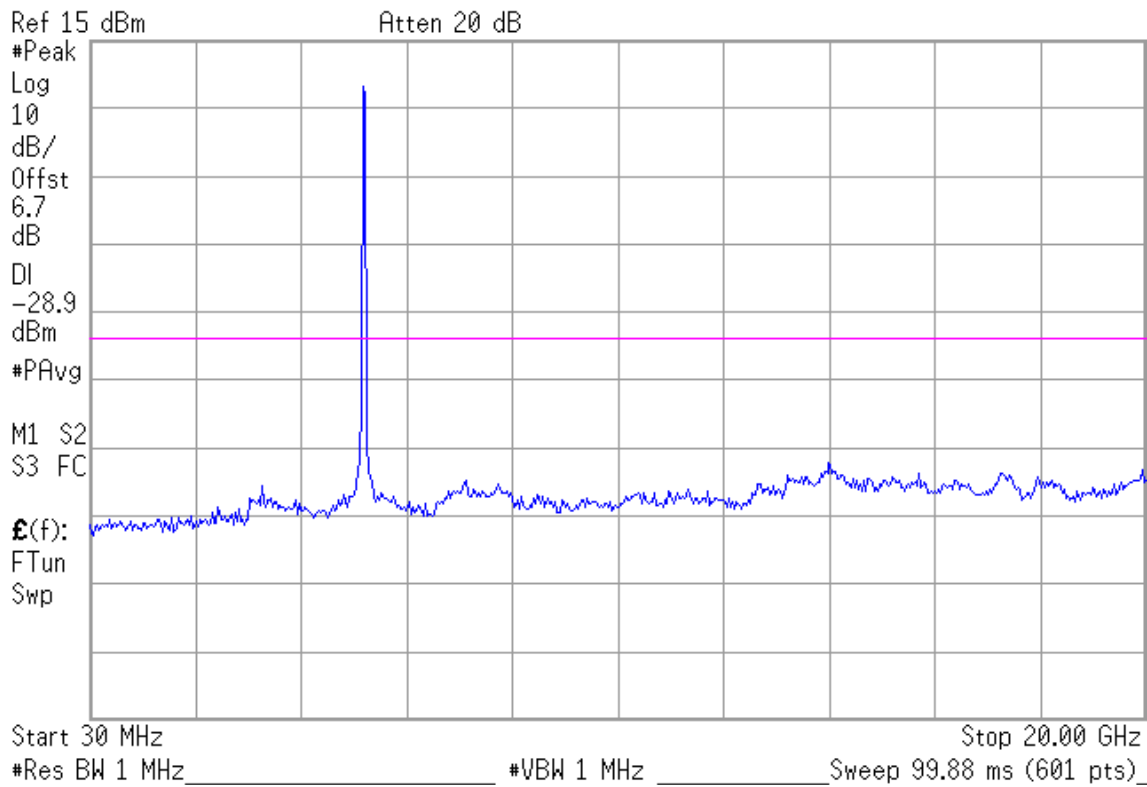


Agilent 16:13:45 Oct 29, 2010

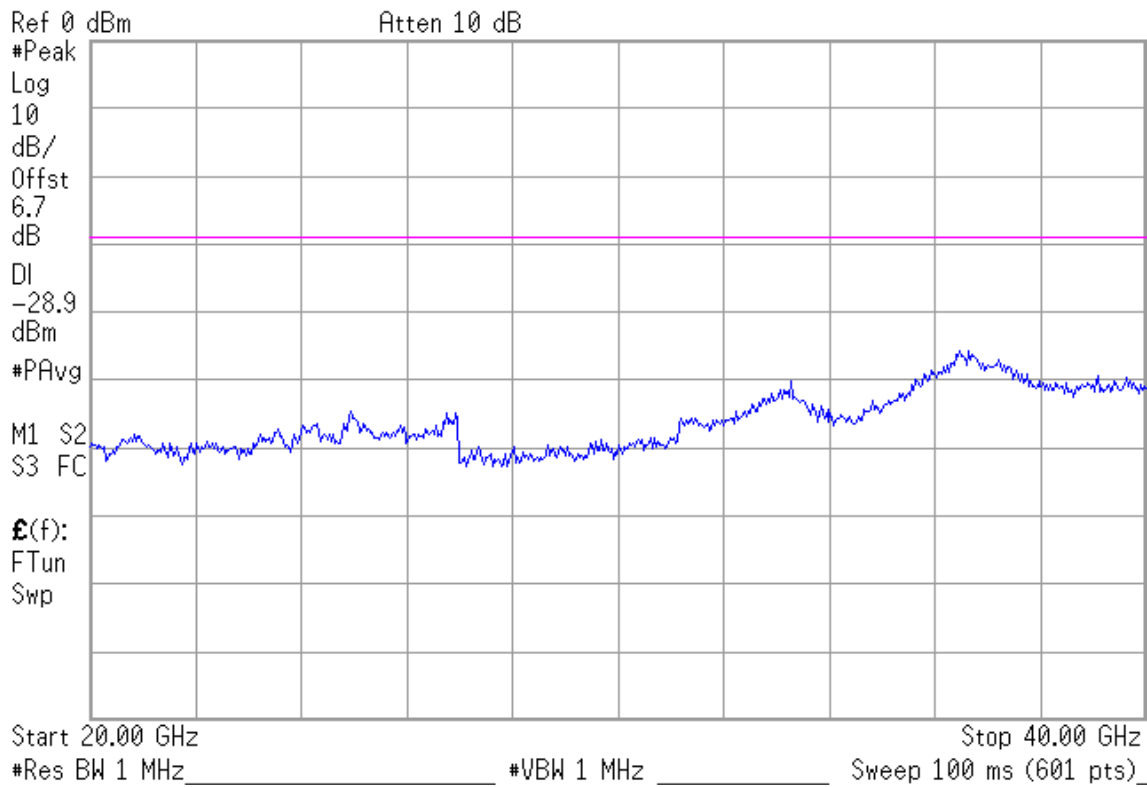


802.11n-HT20, Frequency: 5200MHz

Agilent 16:24:15 Oct 29, 2010

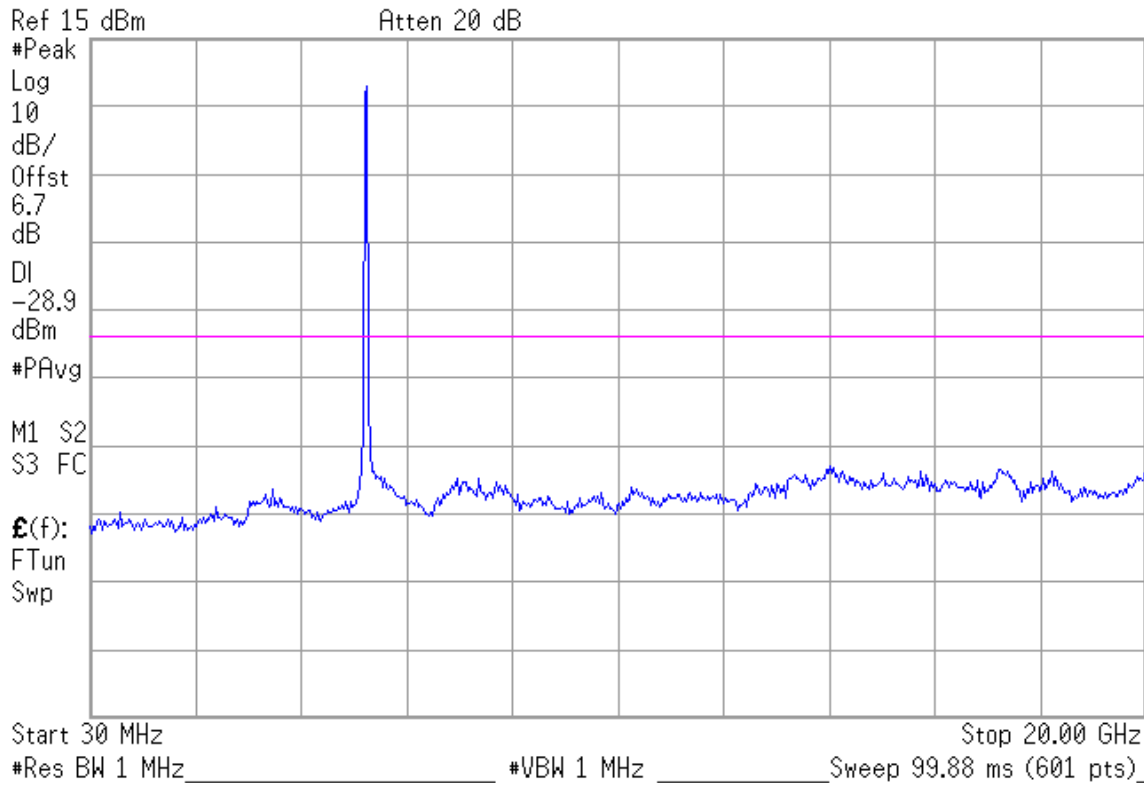


Agilent 16:24:47 Oct 29, 2010



802.11n-HT20, Frequency: 5240MHz

Agilent 16:25:56 Oct 29, 2010

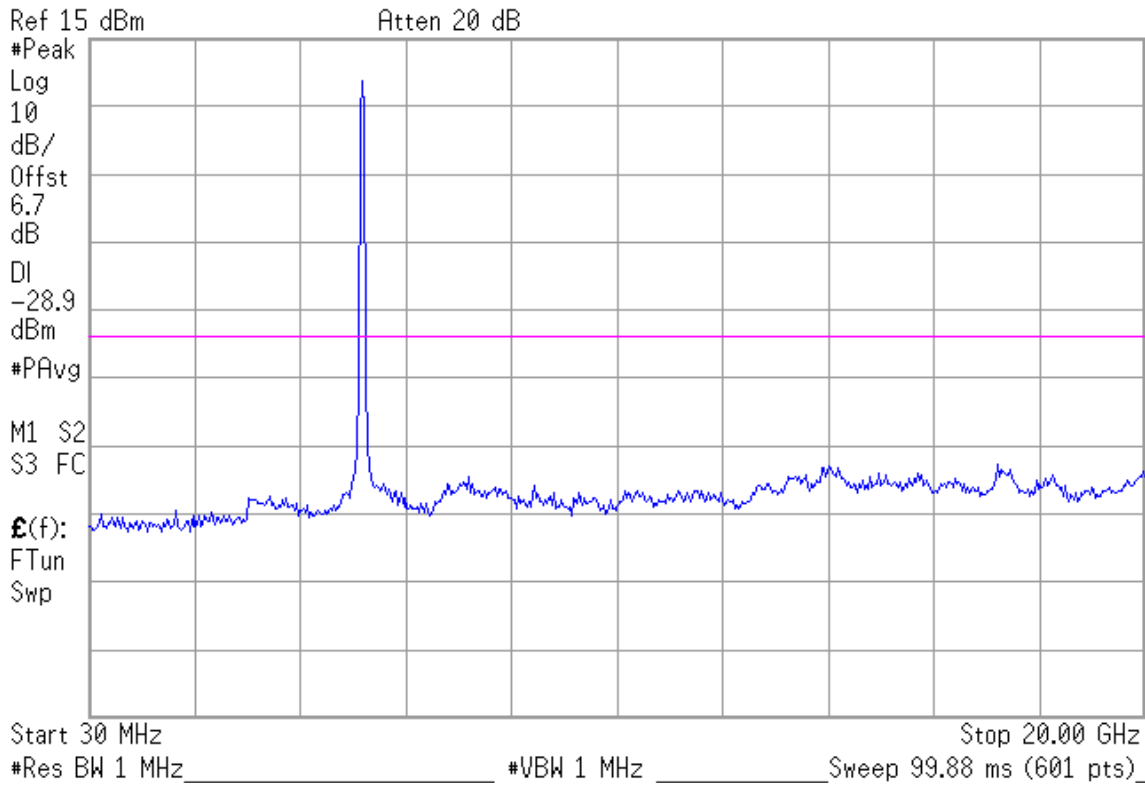


Agilent 16:25:25 Oct 29, 2010

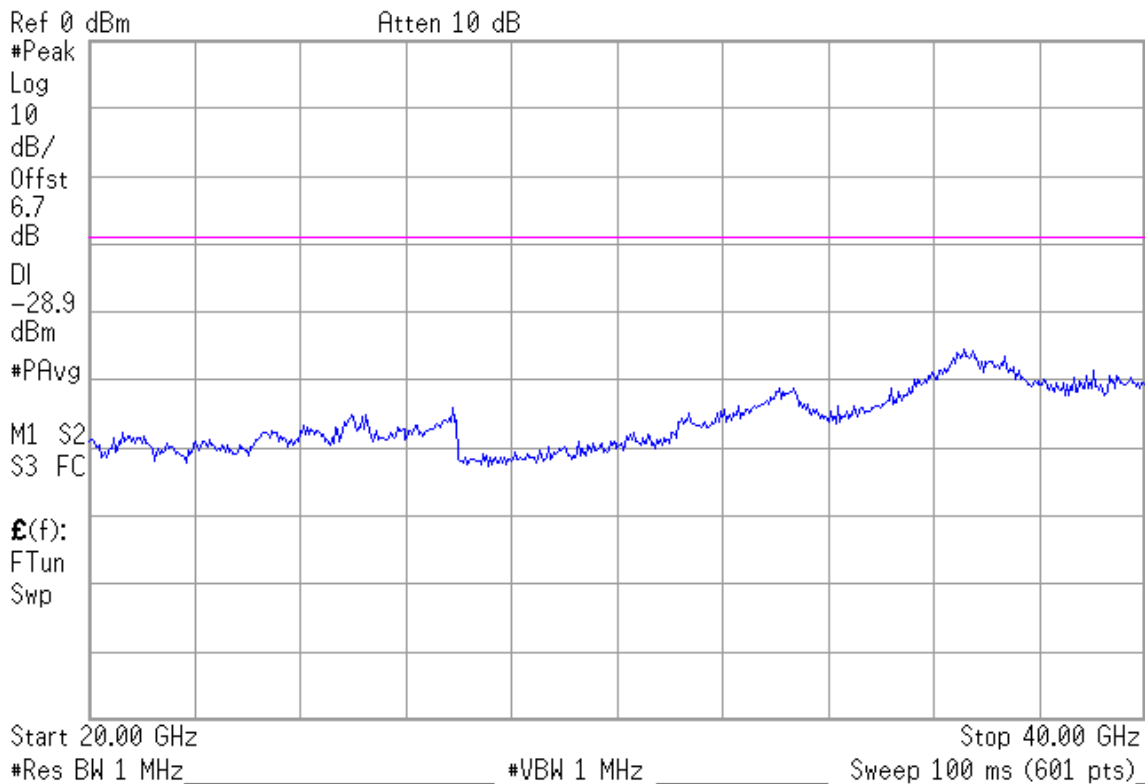


802.11n-HT40, Frequency: 5190MHz

Agilent 16:41:15 Oct 29, 2010

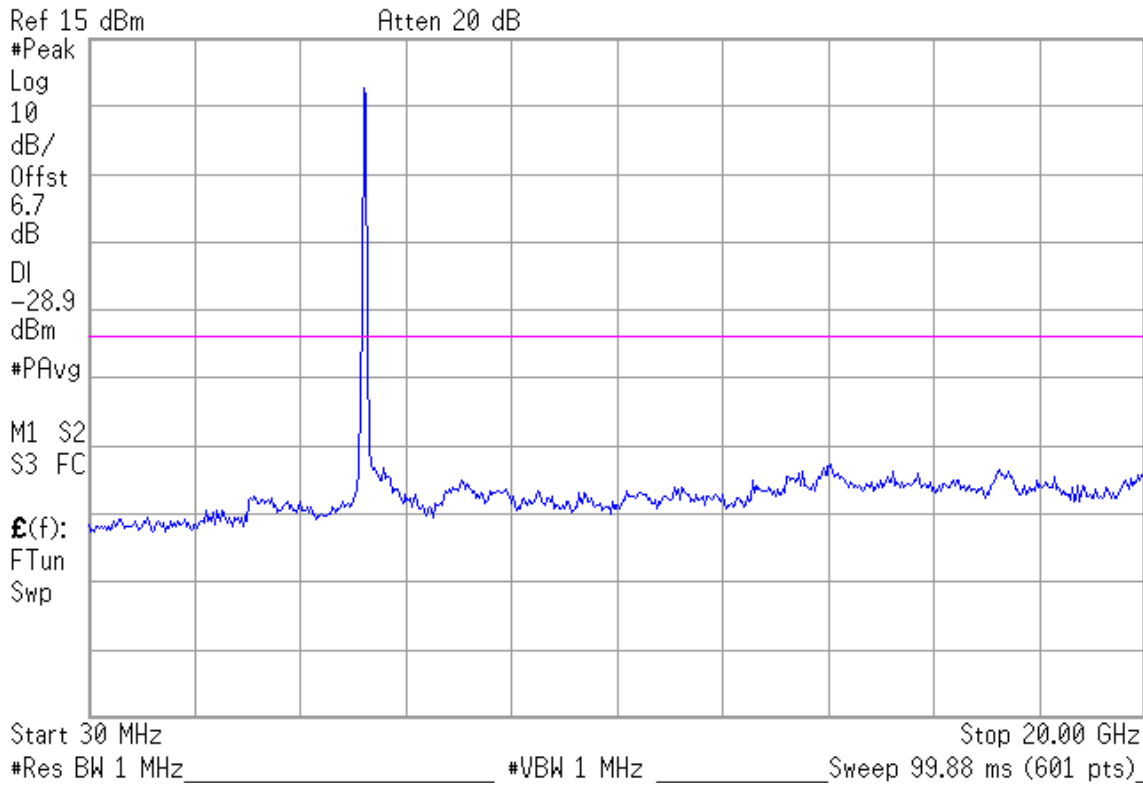


Agilent 16:41:49 Oct 29, 2010

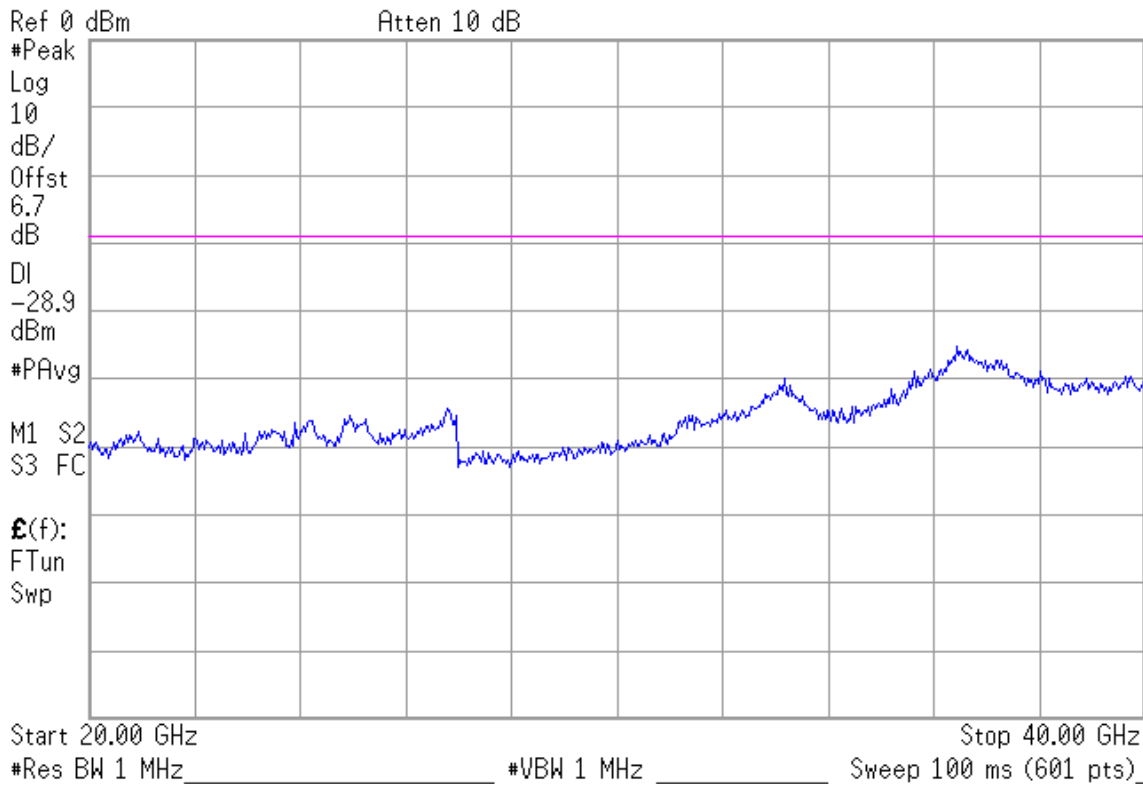


802.11n-HT40, Frequency: 5230MHz

Agilent 16:42:44 Oct 29, 2010



Agilent 16:42:16 Oct 29, 2010



7. POWER SPECTRAL DENSITY MEASUREMENT

7.1. Test Equipment

The following test equipment was used during the power spectral density measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-------------------|--------------|-----------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 10' | Aug. 03, 11' |
| 2. | Power Divider | Anritsu | K240C | 019728 | Aug. 05, 10' | Aug. 04, 11' |

7.2. Block Diagram of Test Setup

The same as section.6.2.

7.3. Specification Limits (§15.407(a)-(1))

For the band 5.15-5.25GHz, the peak power spectral density shall not exceed 4dBm in any 1MHz band.

7.4. Operating Condition of EUT

The test program “Broadcom WL Command” was used to enable the EUT to transmit data at different channel frequency individually.

7.5. Test Procedure

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices-Part 15, Subpart E, August 2002. PPSD Method#2 was used.

7.6. Test Results

PASSED. All the test results are attached in next pages.

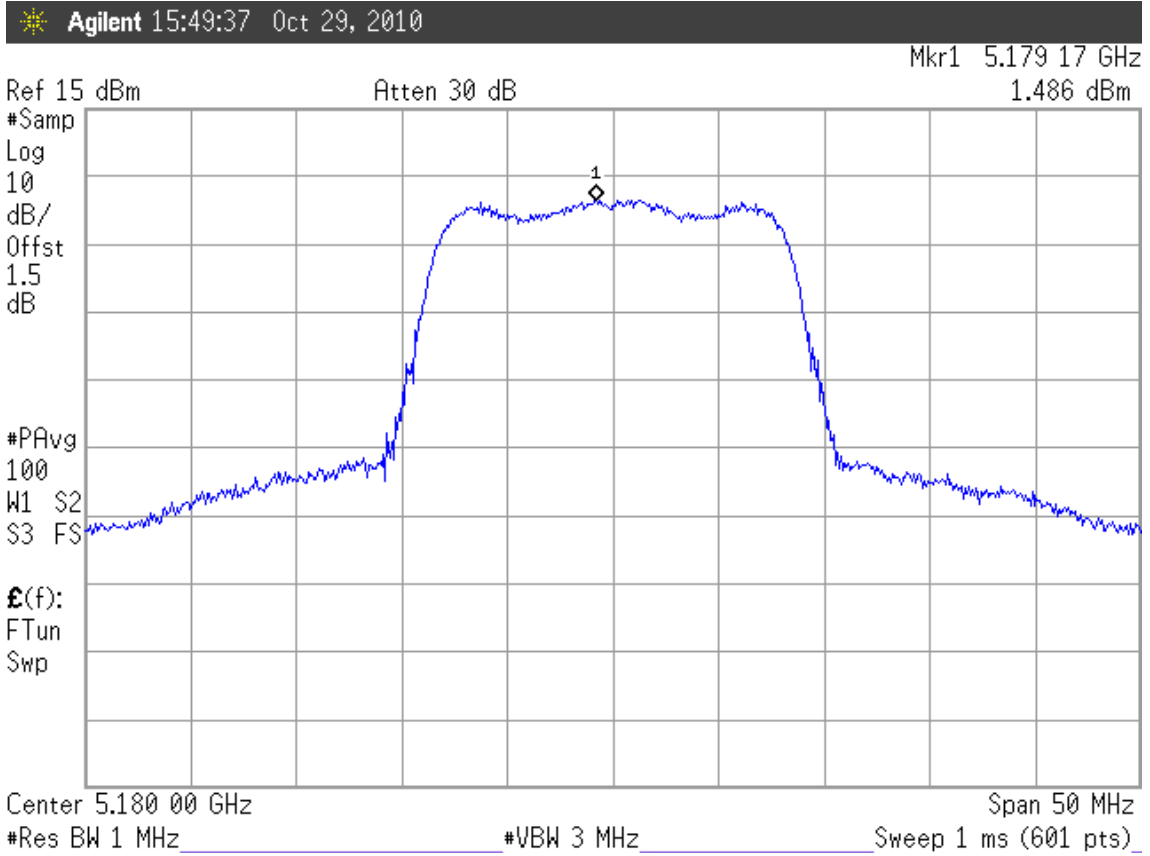
(Test Date : Oct. 29, 2010 Temperature : 26°C Humidity : 55%)

In the 802.11n-HT20 and 802.11n-HT40 mode, we using power divider for measuring in the worst case.

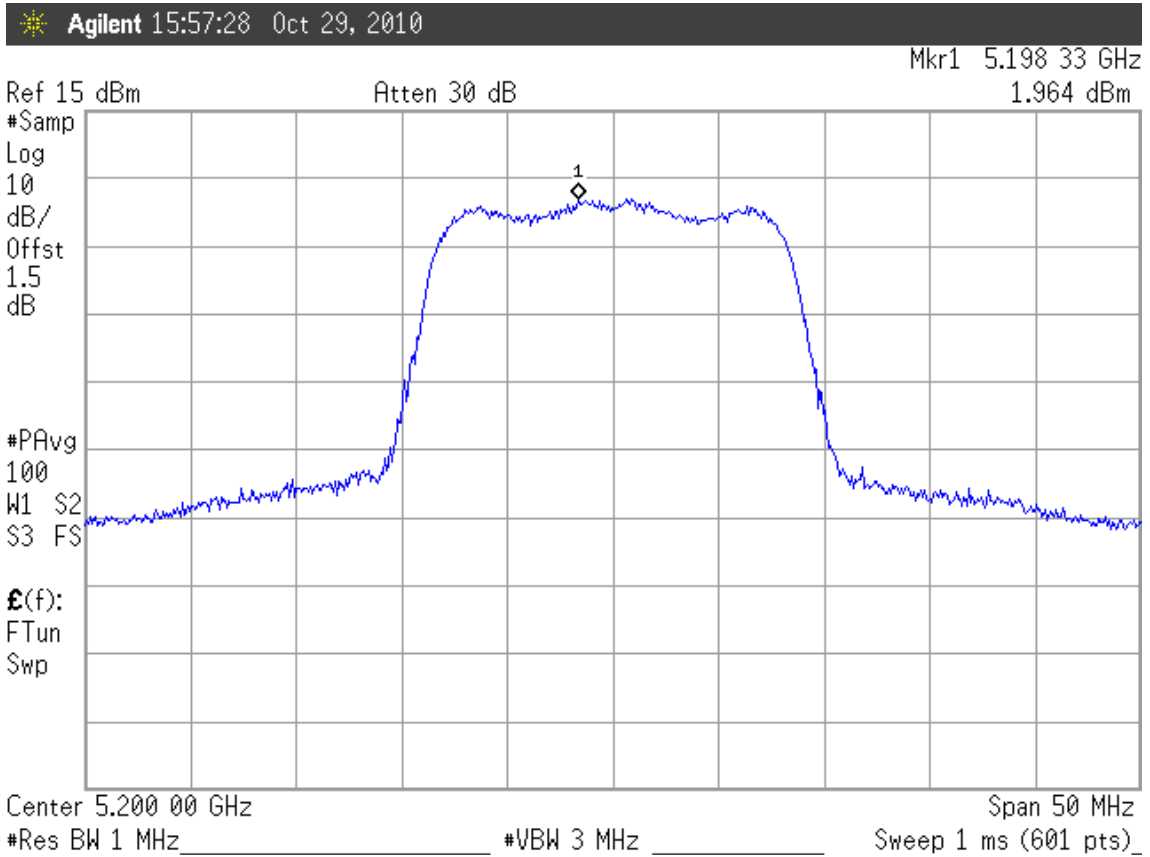
| Mode | Type of Network | Channel | Frequency | Power Spectral Density (dBm) |
|------|-----------------|---------|-----------|------------------------------|
| 1. | 802.11a | CH 36 | 5180MHz | 1.486 |
| 2. | | CH 40 | 5200MHz | 1.964 |
| 3. | | CH 48 | 5240MHz | 1.684 |
| 1. | 802.11n-HT20 | CH 36 | 5180MHz | 1.745 |
| 2. | | CH 40 | 5200MHz | 1.763 |
| 3. | | CH 48 | 5240MHz | 1.716 |
| 1. | 802.11n-HT40 | CH 38 | 5190MHz | 1.906 |
| 2. | | CH 46 | 5230MHz | 1.305 |

[Limit: 4dBm]

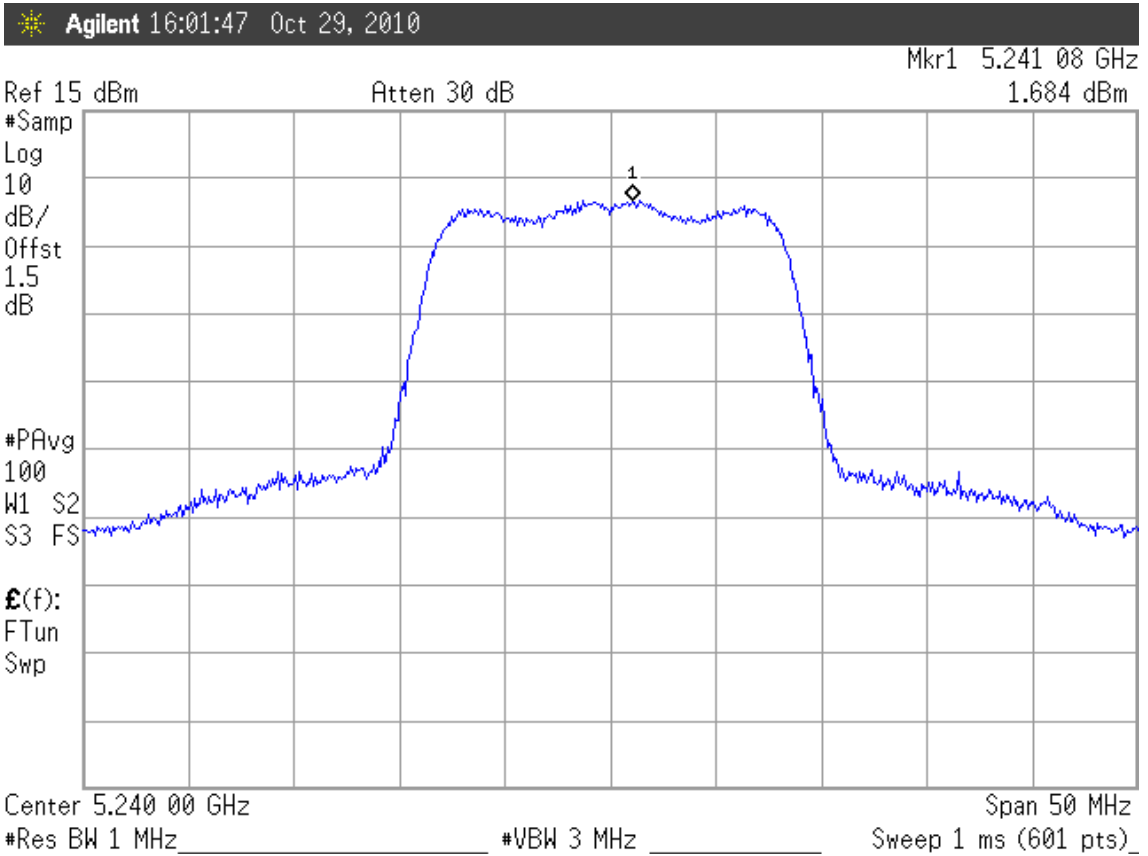
802.11a, Frequency: 5180MHz



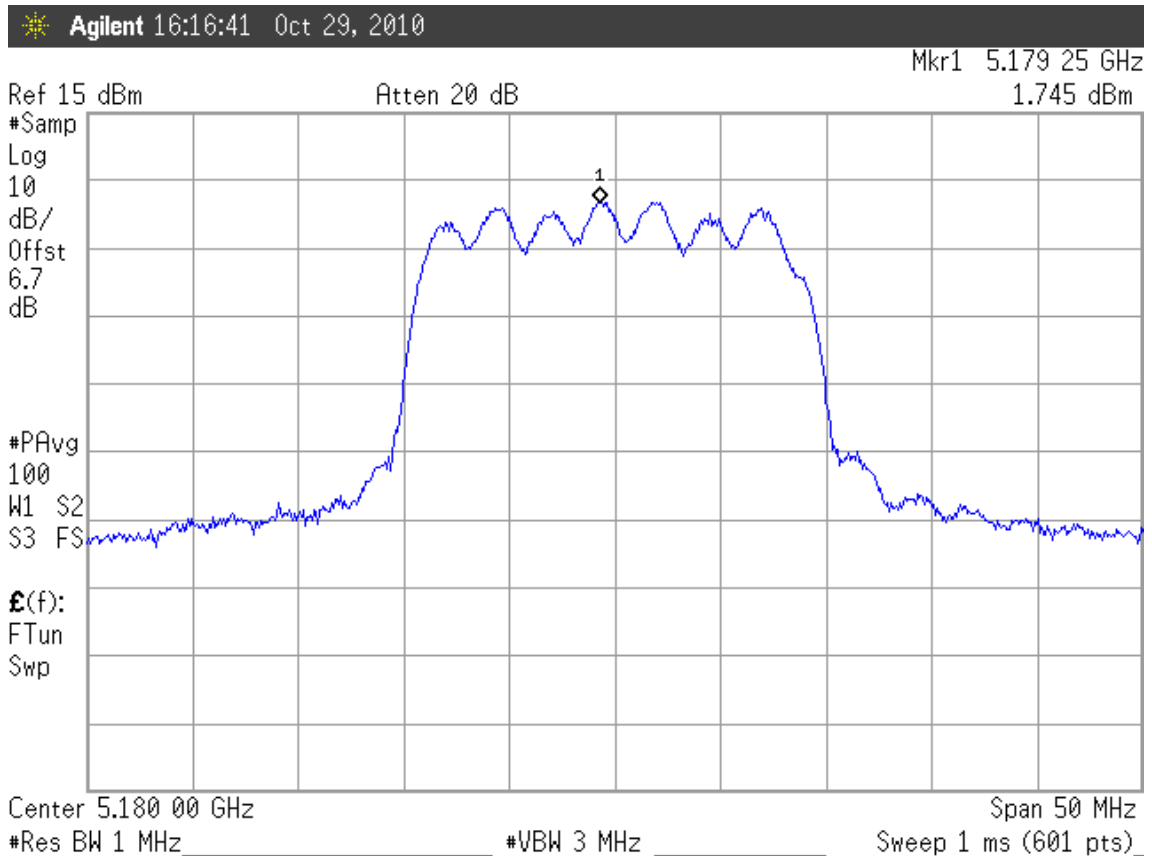
802.11a, Frequency: 5200MHz



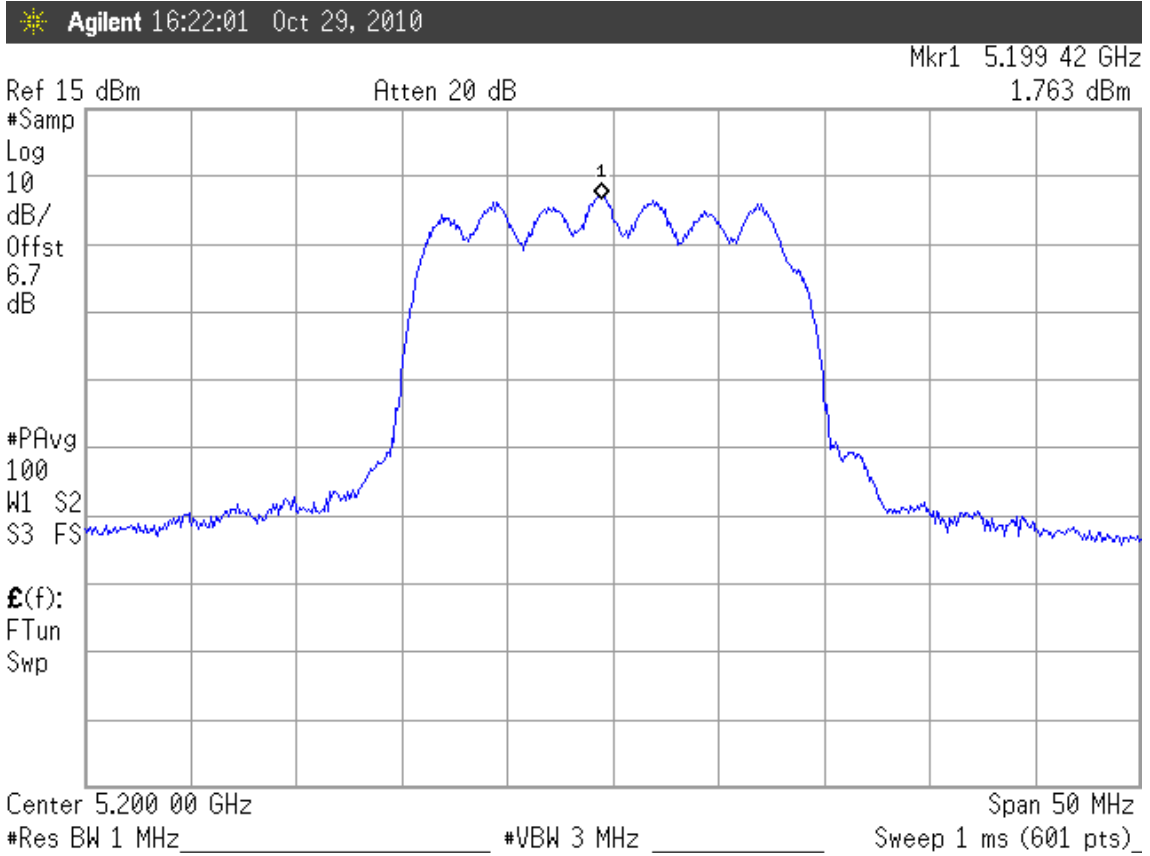
802.11a, Frequency: 5240MHz



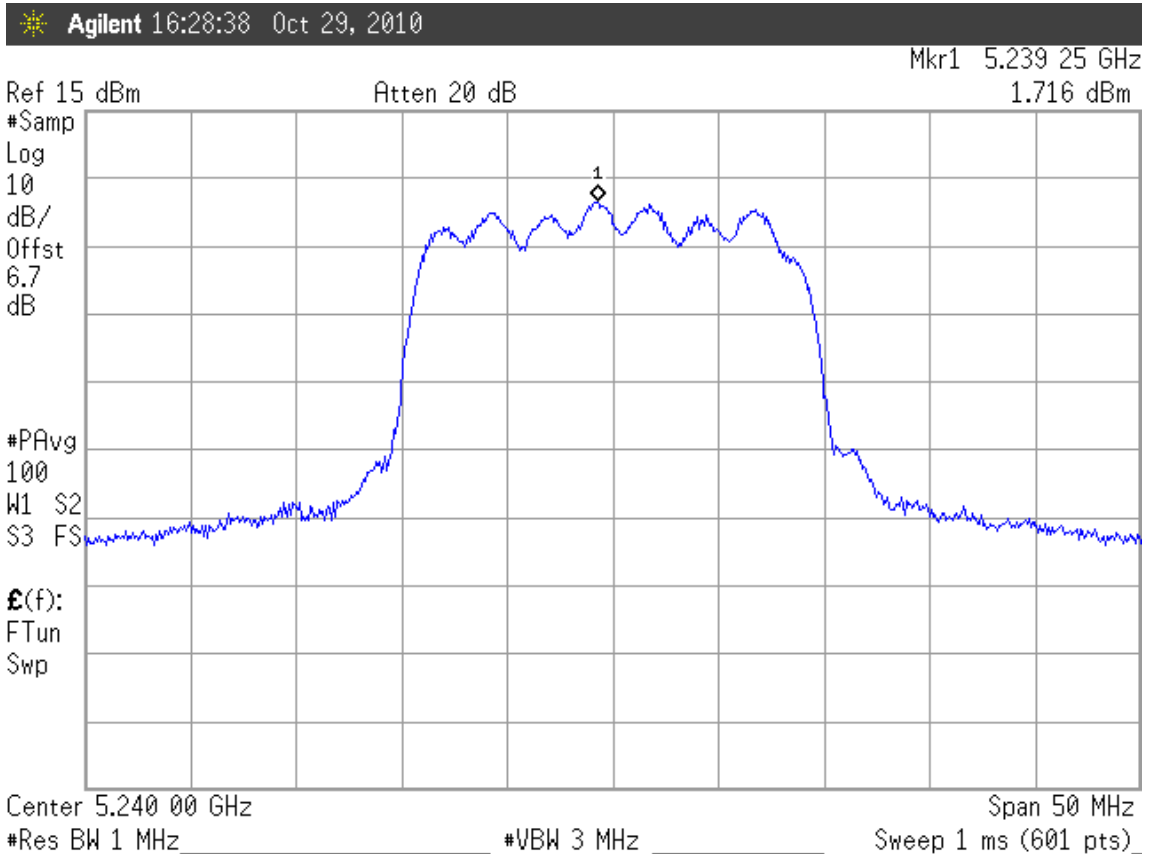
802.11n-HT20, Frequency: 5180MHz



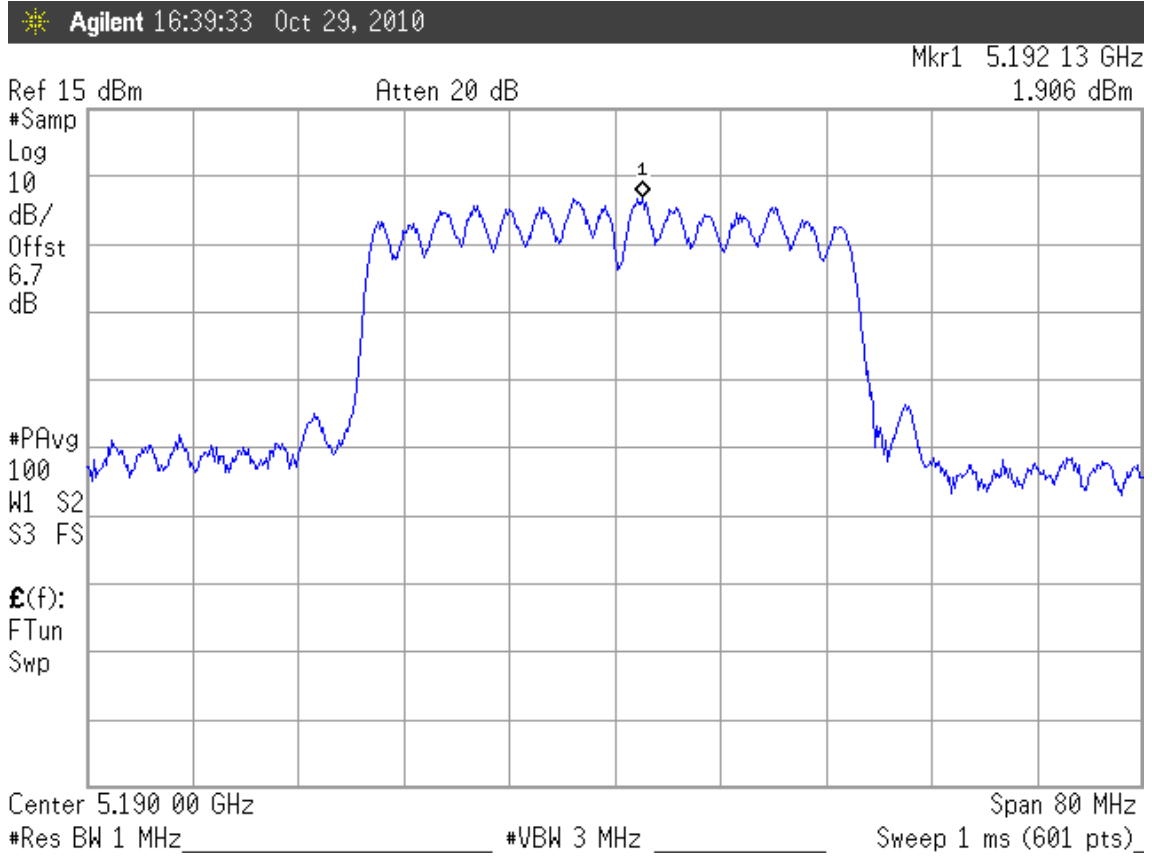
802.11n-HT20, Frequency: 5200MHz



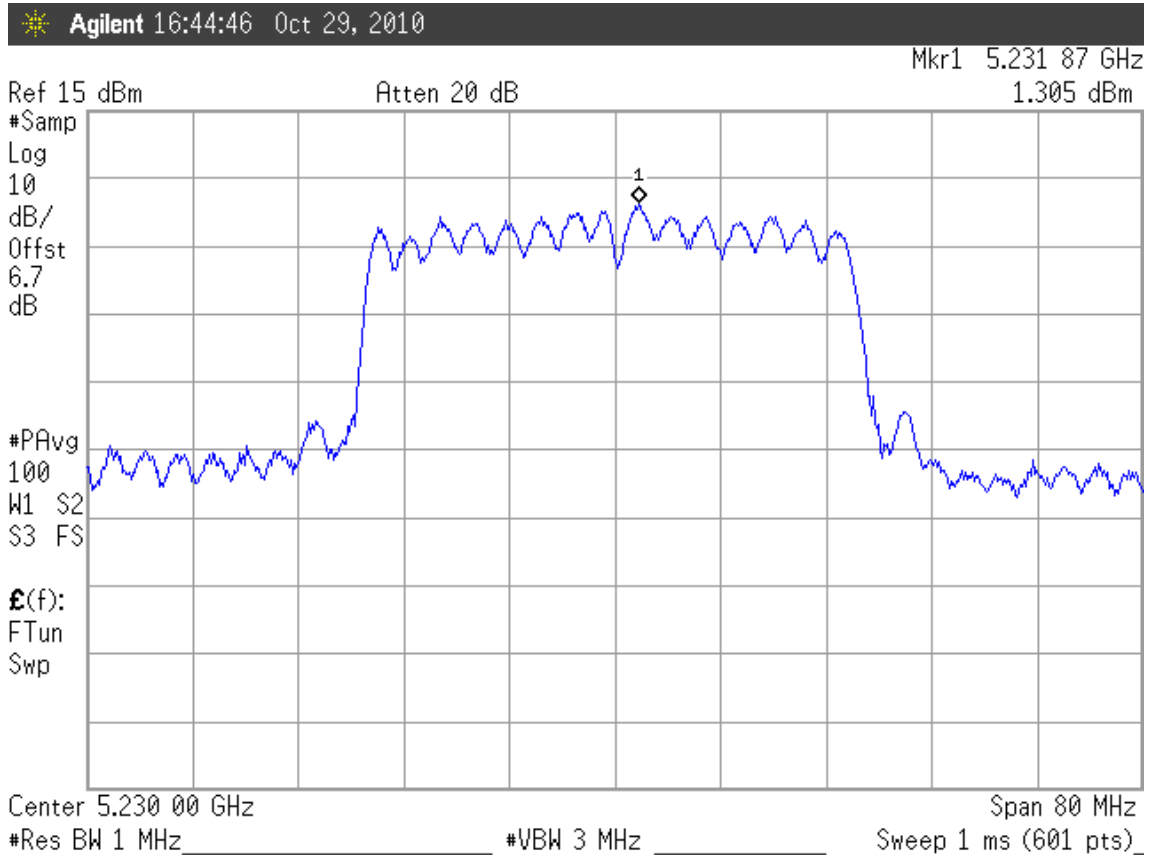
802.11n-HT20, Frequency: 5240MHz



802.11n-HT40, Frequency: 5190MHz



802.11n-HT40, Frequency: 5230MHz



8. PEAK POWER EXCURSION MEASUREMENT

8.1. Test Equipment

The following test equipment was used during the power spectral density measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-------------------|--------------|-----------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 10' | Aug. 03, 11' |

8.2. Block Diagram of Test Setup

The same as section.4.2.

8.3. Specification Limits (§15.407(a)-(6))

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

8.4. Operating Condition of EUT

The test program “Broadcom WL Command” was used to enable the EUT to transmit data at different channel frequency individually.

8.5. Test Procedure

Transmitter output was connected to the spectrum analyzer. Using peak detector and Max-hold function for Trace 1 (RBW=1MHz, VBW=3MHz) and Trace 2 (RBW=1MHz, VBW=300kHz).

The measurement guideline was according to DA-02-2138

8.6. Test Results

PASSED. All the test results are attached in next pages.

(Test Date : Oct. 29, 2010 Temperature : 26°C Humidity : 55%)

(Test Date : Nov. 05, 2010 Temperature : 24°C Humidity : 58%)

8.6.1. For 802.11a

| Mode | Type of Network | Channel | Frequency | Peak Power Excursion |
|------|-----------------|---------|-----------|----------------------|
| 1. | 802.11a | CH 36 | 5180MHz | -7.14dB |
| 2. | | CH 40 | 5200MHz | -4.48dB |
| 3. | | CH 48 | 5240MHz | -5.22dB |

[Limit: 13dB]

8.6.2. For 802.11n-HT20

| Mode | Type of Network | Channel | Frequency | Peak Power Excursion | |
|------|-----------------|---------|-----------|----------------------|----------------|
| | | | | Ant. 0 | Ant.1 |
| 1. | 802.11n-HT20 | CH 36 | 5180MHz | -5.58dB | -4.24dB |
| 2. | | CH 40 | 5200MHz | -6.41dB | -4.97dB |
| 3. | | CH 48 | 5240MHz | -4.22dB | -5.26dB |

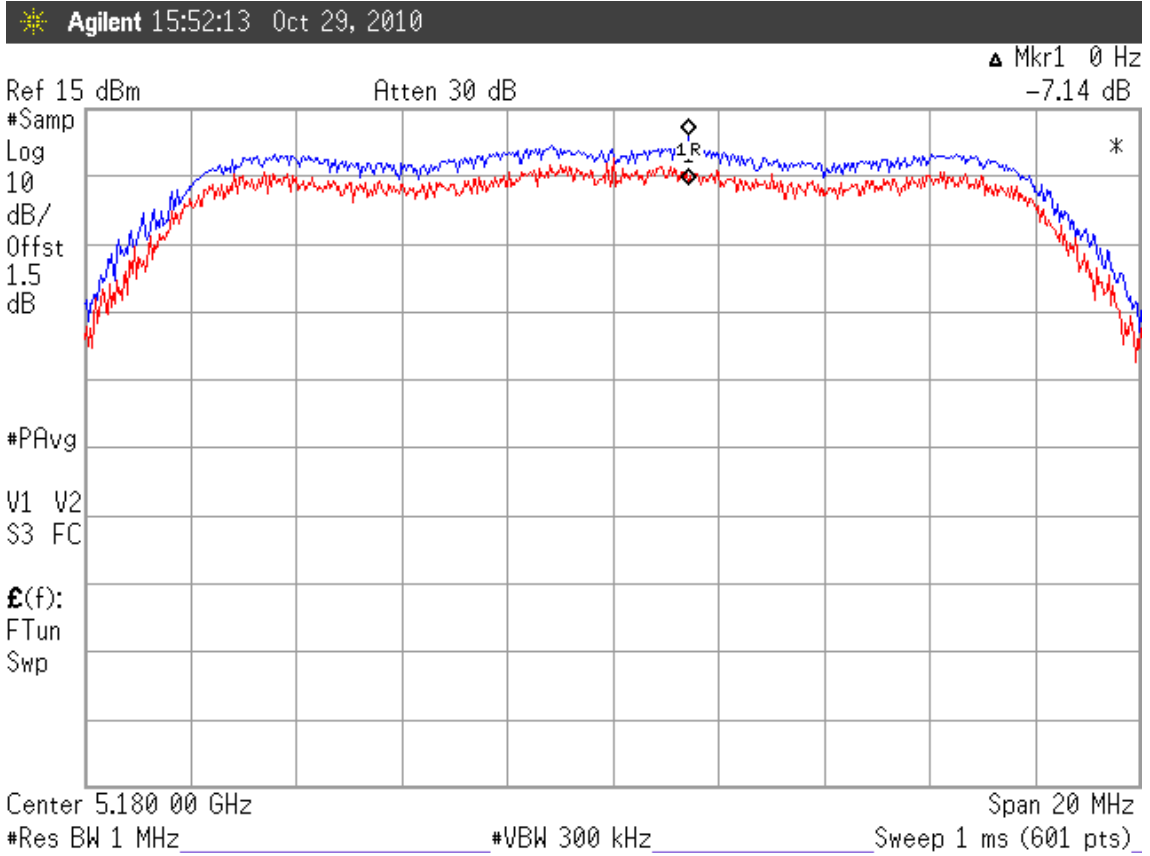
[Limit: 13dB]

8.6.3. For 802.11n-HT40

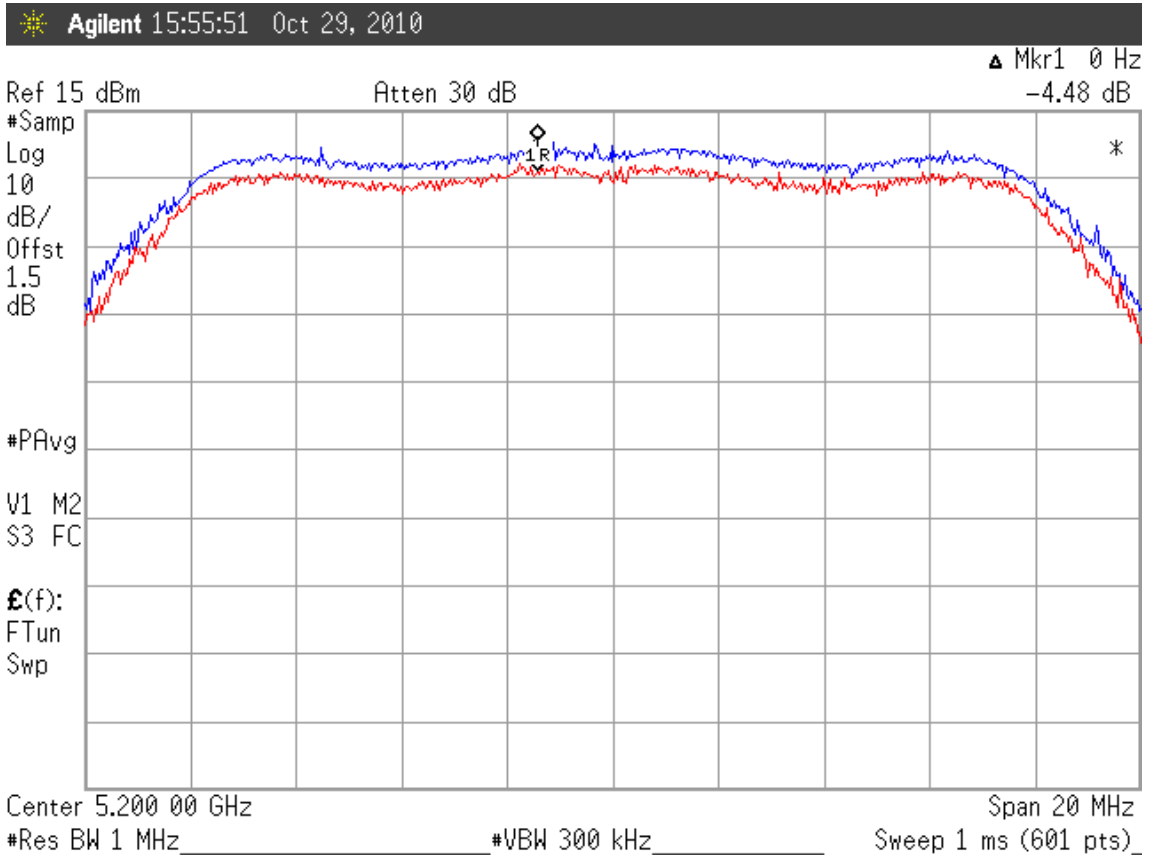
| Mode | Type of Network | Channel | Frequency | Peak Power Excursion | |
|------|-----------------|---------|-----------|----------------------|----------------|
| | | | | Ant. 0 | Ant.1 |
| 1. | 802.11n-HT40 | CH 38 | 5190MHz | -3.18dB | -4.66dB |
| 2. | | CH 46 | 5230MHz | -4.89dB | -2.34dB |

[Limit: 13dB]

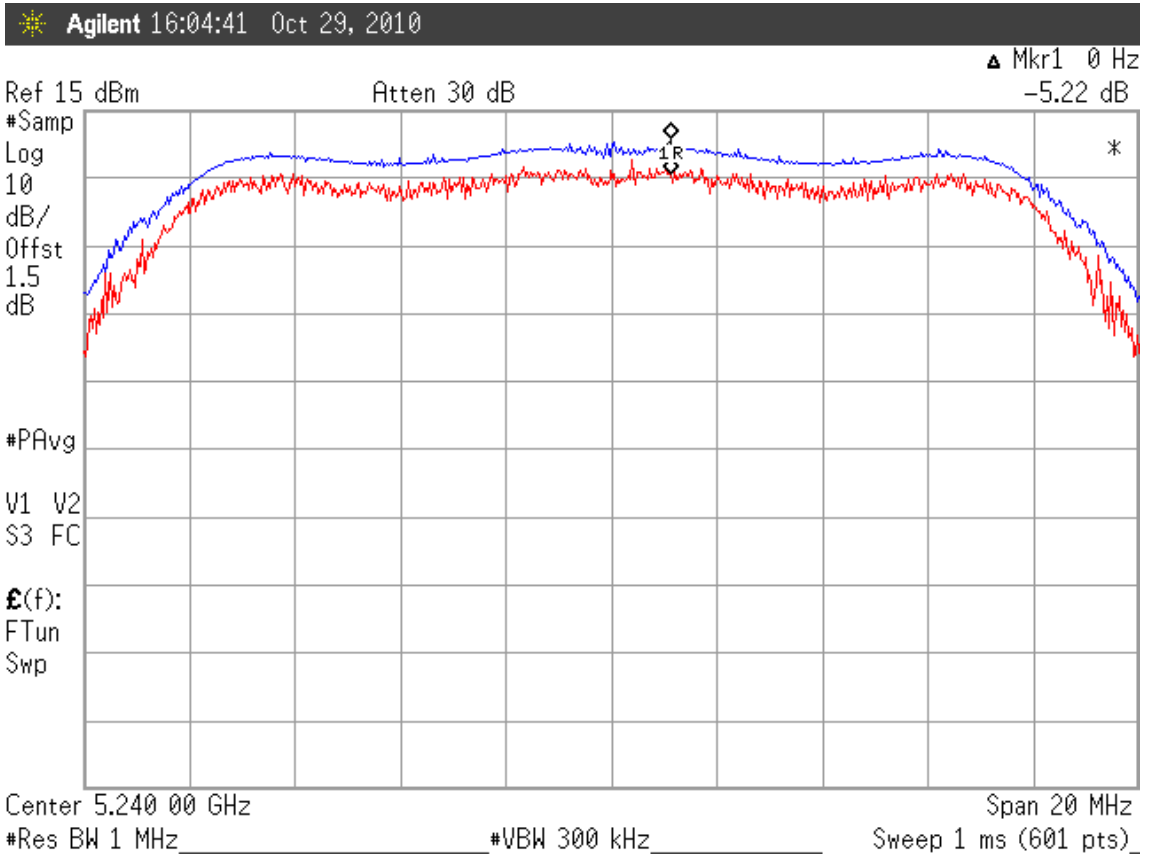
802.11a, Frequency: 5180MHz



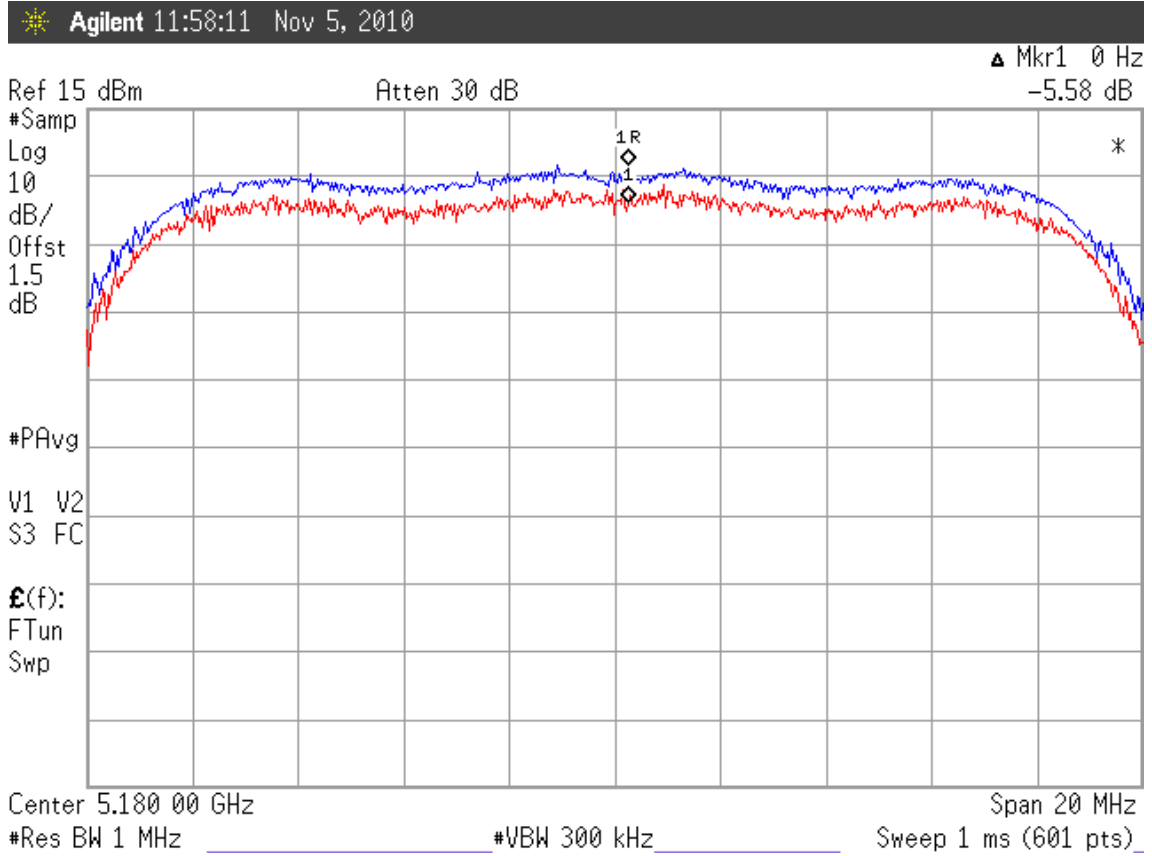
802.11a, Frequency: 5200MHz



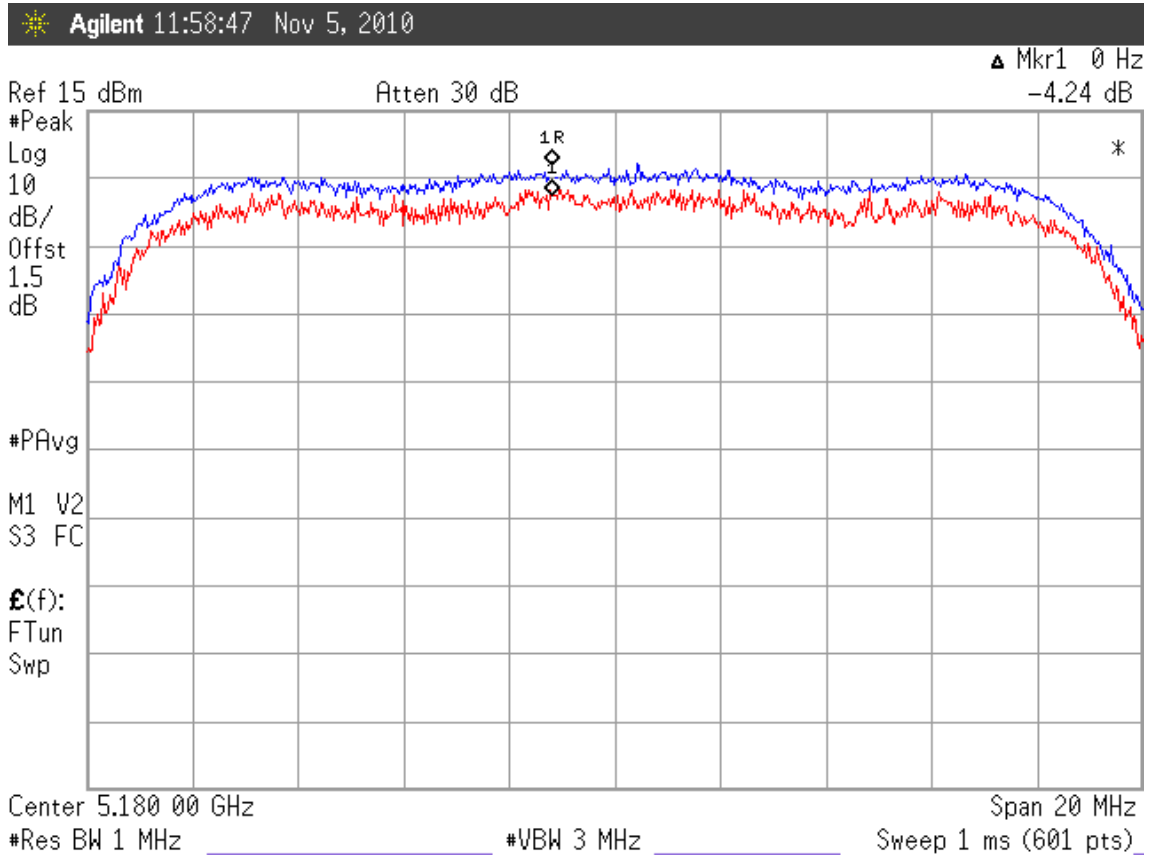
802.11a, Frequency: 5240MHz



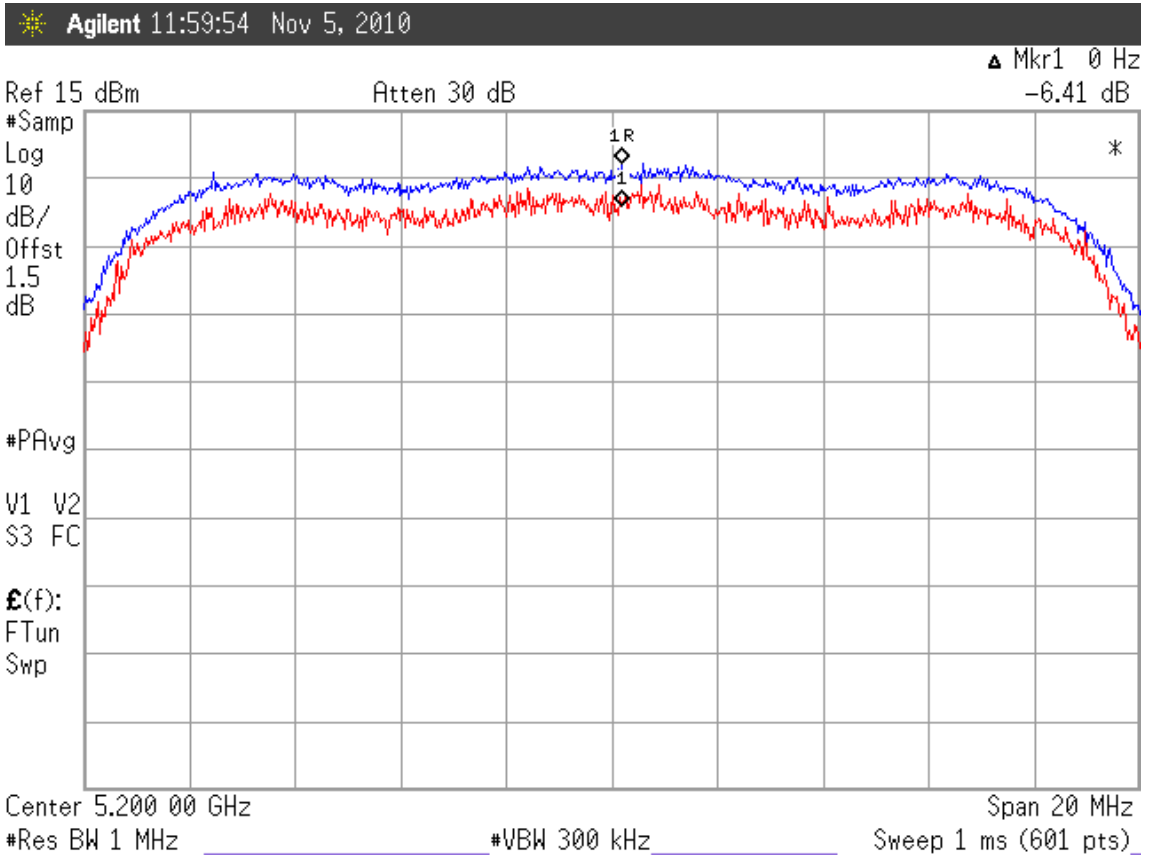
802.11n-HT20, Frequency: 5180MHz (Ant. 0)



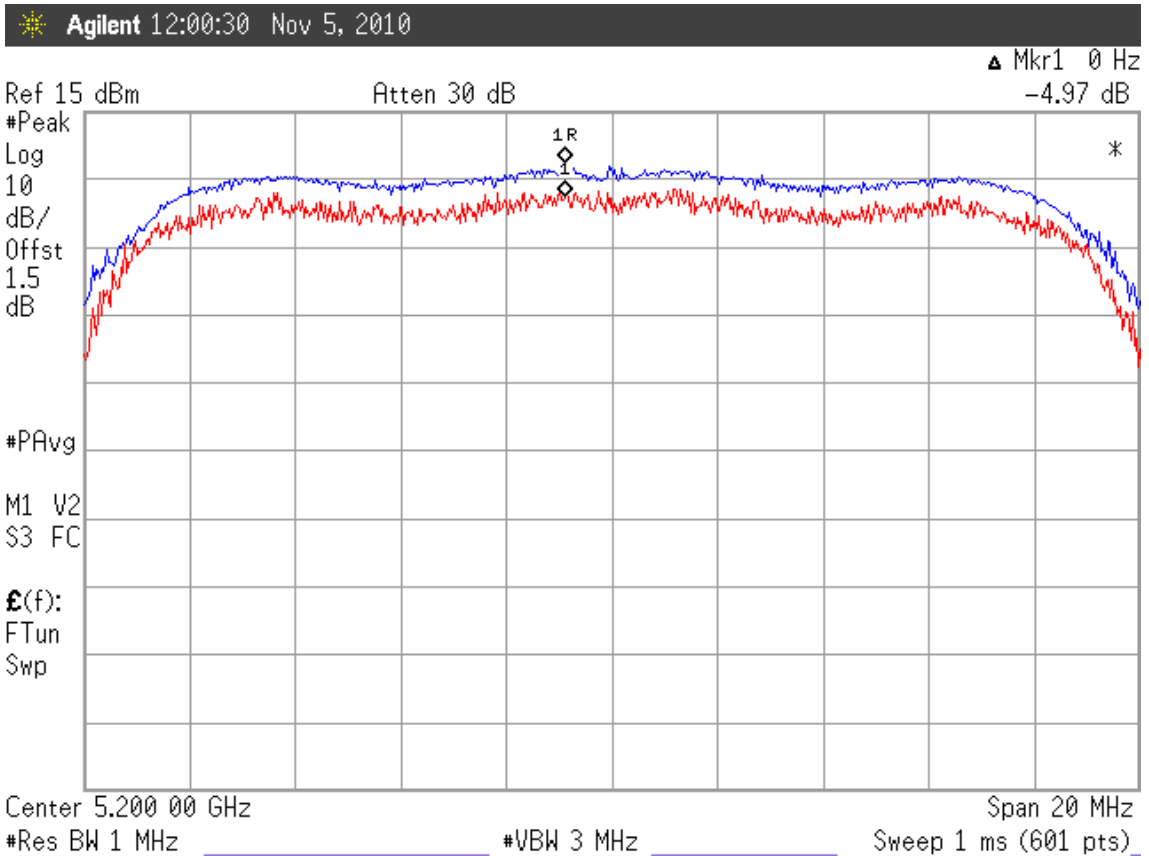
802.11n-HT20, Frequency: 5180MHz (Ant. 1)



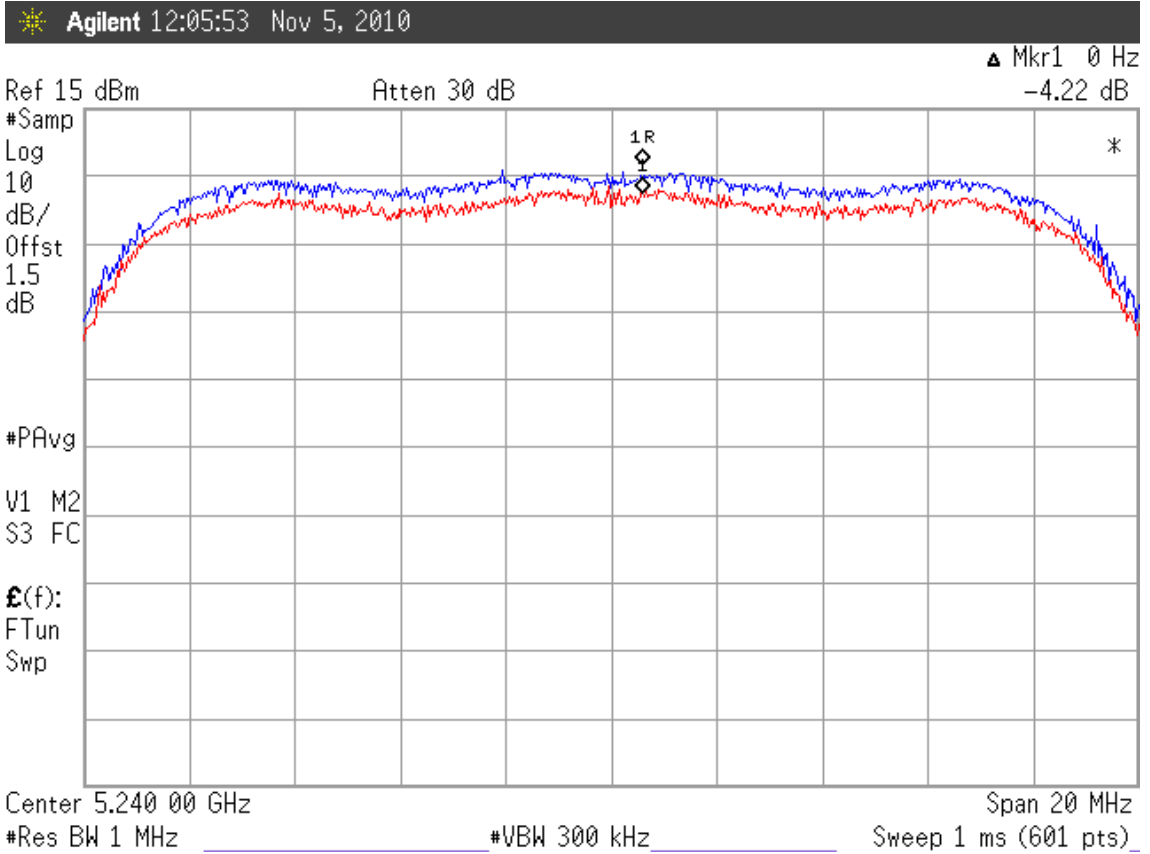
802.11n-HT20, Frequency: 5200MHz (Ant. 0)



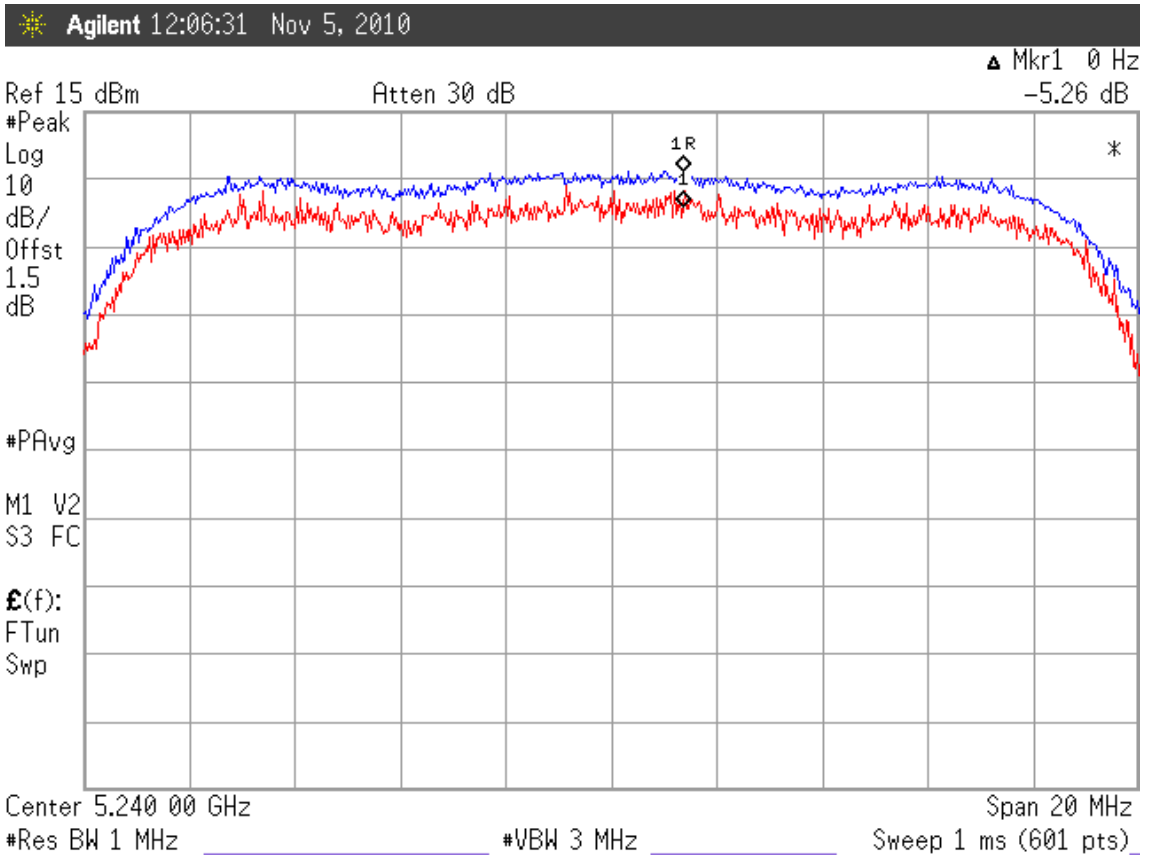
802.11n-HT20, Frequency: 5200MHz (Ant. 1)



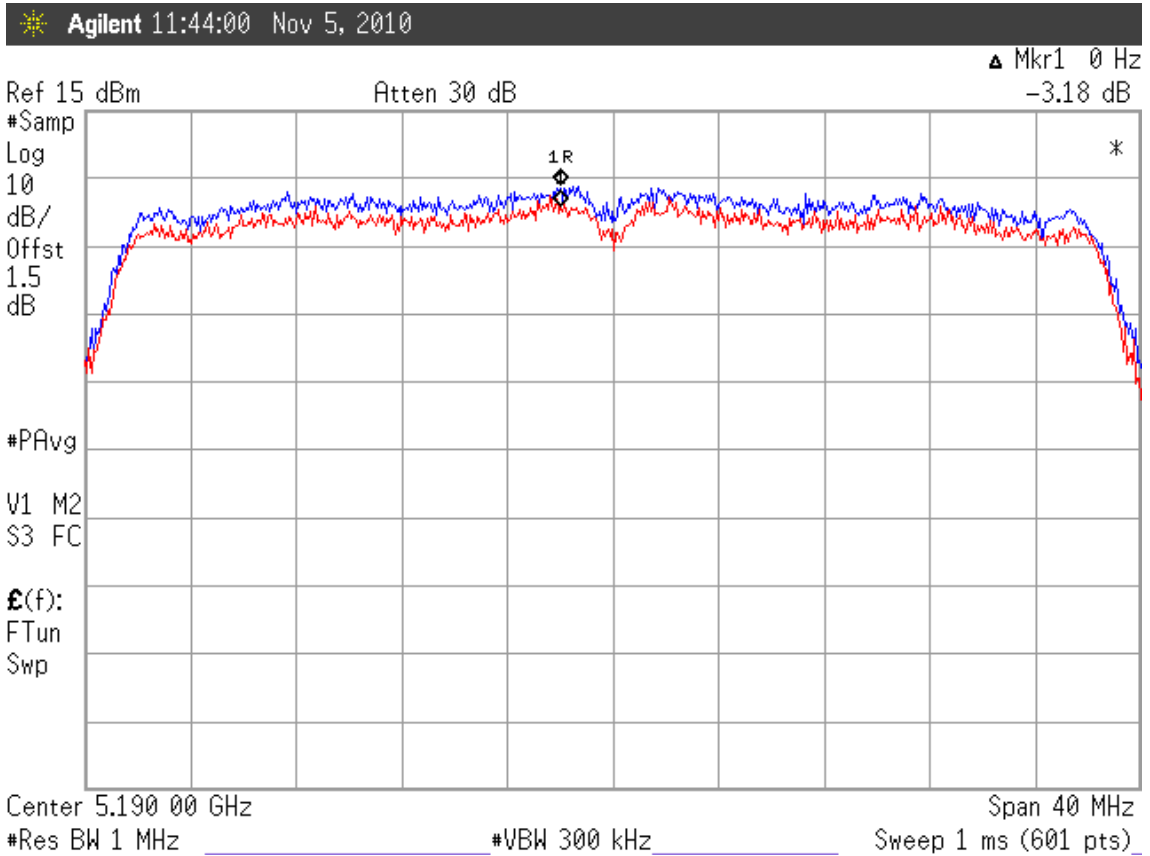
802.11n-HT20, Frequency: 5240MHz (Ant. 0)



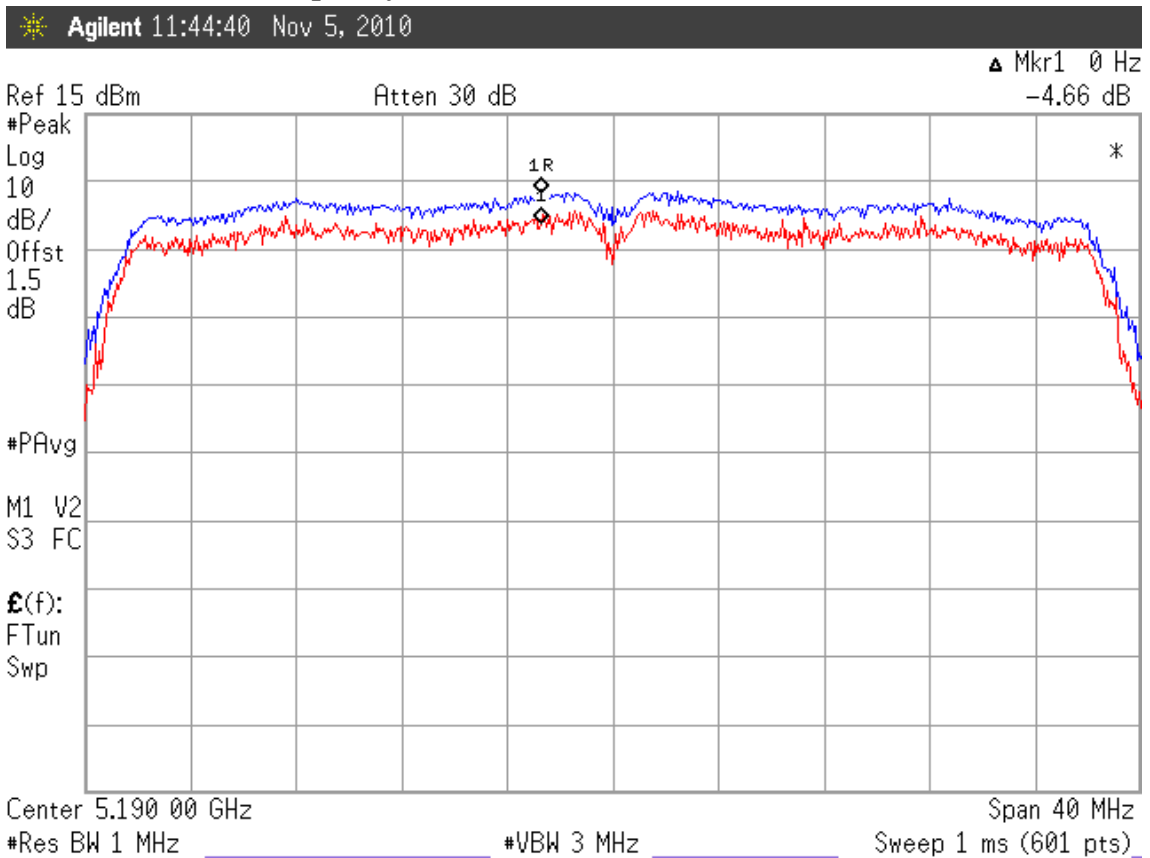
802.11n-HT20, Frequency: 5240MHz (Ant. 1)



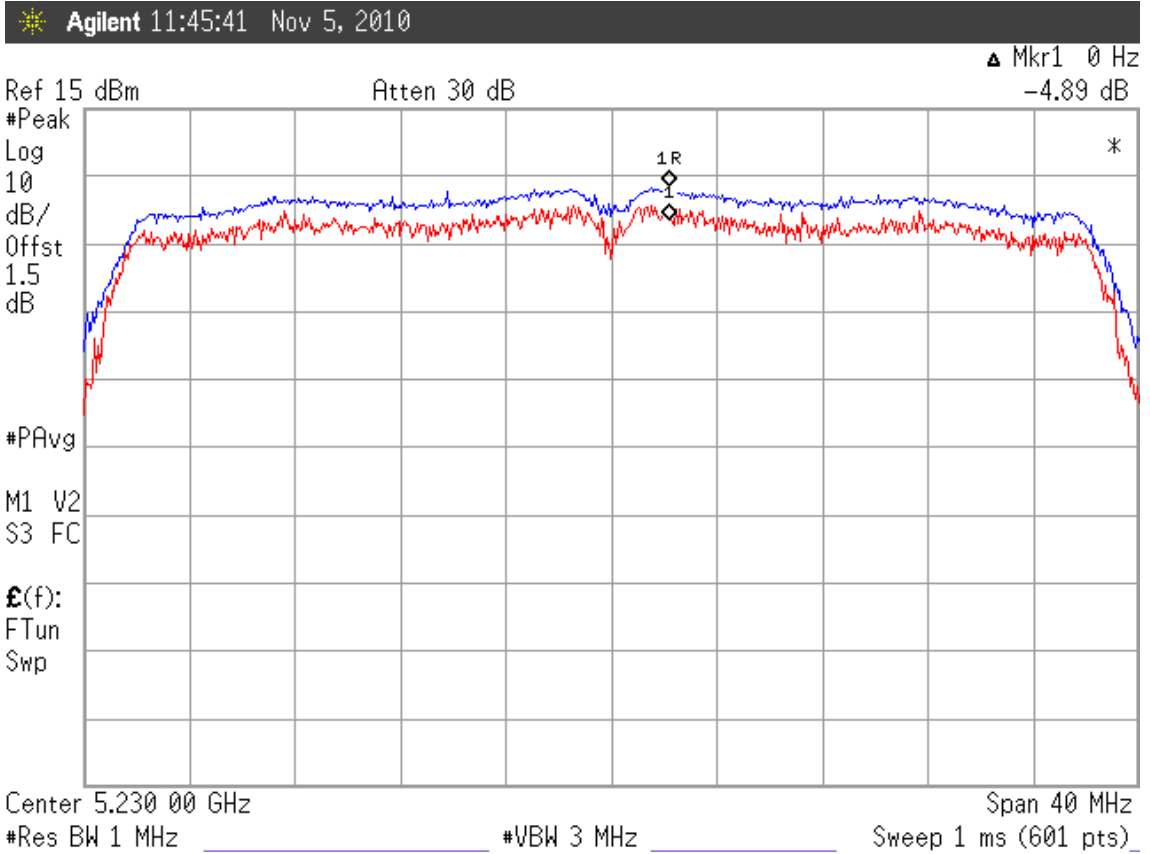
802.11n-HT40, Frequency: 5190MHz (Ant. 0)



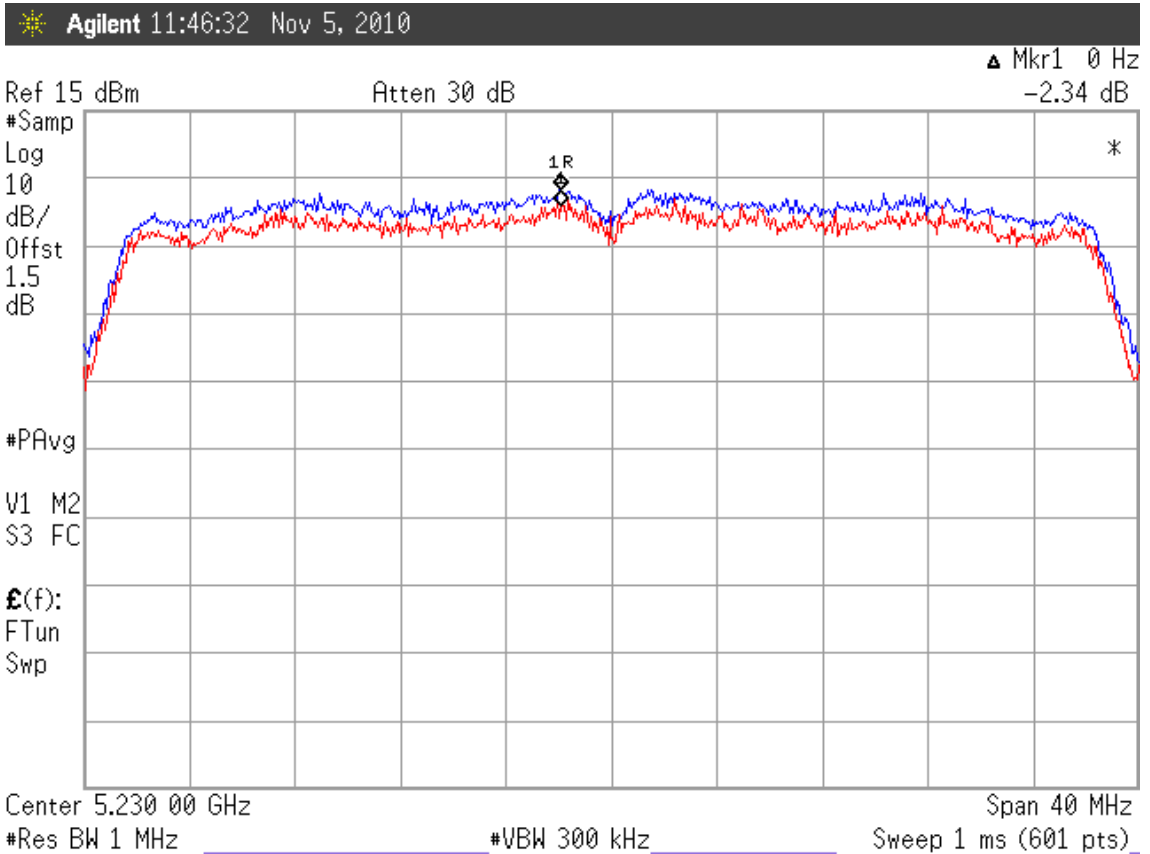
802.11n-HT40, Frequency: 5190MHz (Ant. 1)



802.11n-HT40, Frequency: 5230MHz (Ant. 0)



802.11n-HT40, Frequency: 5230MHz (Ant. 1)



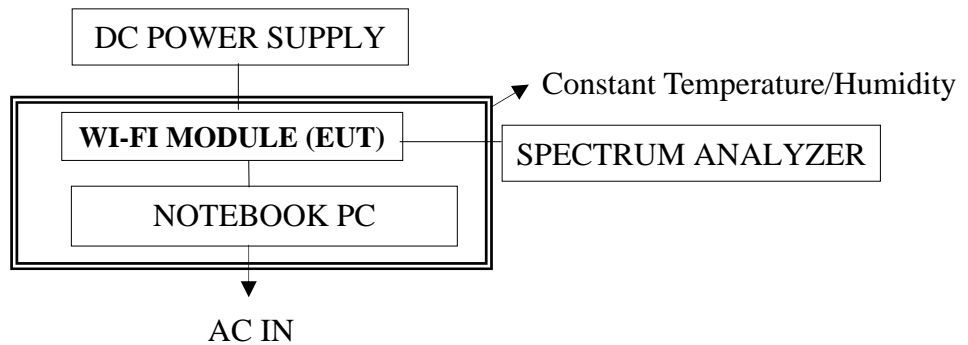
9. FREQUENCY STABILITY MEASUREMENT

9.1. Test Equipment

The following test equipment was used during the power spectral density measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-----------------------------------|--------------|-----------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 10' | Aug. 03, 11' |
| 2. | Constant Temperature/ Humidity | Taichy | MHG-120LF | 920538 | Jun. 17, 10' | Jun. 16, 11' |
| 3. | DC Power Supply | TOP WARD | 3303A | 721773 | N/A | N/A |

9.2. Block Diagram of Test Setup



9.3. Specification Limits (§15.407(g))

Manufactures 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.

9.4. Operating Condition of EUT

The test program “Broadcom WL Command” was used to enable the EUT to transmit data at different channel frequency individually.

9.5. Test Procedure

Set the EUT un-modulation mode and RBW=10kHz, VBW=10kHz.

9.6. Test Results

PASSED. All the test results are attached in next pages.

(Test Date : Oct. 29, 2010 Temperature : 26°C Humidity : 55%)

| Test Condition | | After 2minute | | |
|------------------|-------------|-----------------|-------------------------|--------------|
| Temperature (°C) | Voltage (V) | Frequency (MHz) | Measurement Value (MHz) | Result (ppm) |
| 25°C | 4.75 | 5180 | 5180.0218 | -4.21 |
| | | 5190 | 5190.023 | -4.43 |
| | | 5200 | 5200.0209 | -4.02 |
| | | 5230 | 5230.0219 | -4.19 |
| | | 5240 | 5240.0214 | -4.08 |
| | 5.25 | 5180 | 5180.0222 | -4.29 |
| | | 5190 | 5190.0223 | -4.30 |
| | | 5200 | 5200.0222 | -4.27 |
| | | 5230 | 5230.0226 | -4.32 |
| | | 5240 | 5240.0209 | -3.99 |
| -20 | 4.75 | 5180 | 5180.0268 | -5.17 |
| | | 5190 | 5190.0271 | -5.22 |
| | | 5200 | 5200.0262 | -5.04 |
| | | 5230 | 5230.0257 | -4.91 |
| | | 5240 | 5240.0259 | -4.94 |
| | 5.25 | 5180 | 5180.0266 | -5.14 |
| | | 5190 | 5190.0262 | -5.05 |
| | | 5200 | 5200.0261 | -5.02 |
| | | 5230 | 5230.0261 | -4.99 |
| | | 5240 | 5240.0267 | -5.10 |
| 55°C | 4.75 | 5180 | 5180.0211 | -4.07 |
| | | 5190 | 5190.0212 | -4.08 |
| | | 5200 | 5200.0204 | -3.92 |
| | | 5230 | 5230.0208 | -3.98 |
| | | 5240 | 5240.0198 | -3.78 |
| | 5.25 | 5180 | 5180.0194 | -3.75 |
| | | 5190 | 5190.0228 | -4.39 |
| | | 5200 | 5200.0205 | -3.94 |
| | | 5230 | 5230.0212 | -4.05 |
| | | 5240 | 5240.0214 | -4.08 |

| Test Condition | | After 5minute | | |
|------------------|-------------|-----------------|-------------------------|--------------|
| Temperature (°C) | Voltage (V) | Frequency (MHz) | Measurement Value (MHz) | Result (ppm) |
| 25°C | 4.75 | 5180 | 5180.0222 | -4.29 |
| | | 5190 | 5190.0218 | -4.20 |
| | | 5200 | 5200.0215 | -4.13 |
| | | 5230 | 5230.0216 | -4.13 |
| | | 5240 | 5240.0219 | -4.18 |
| | 5.25 | 5180 | 5180.0231 | -4.46 |
| | | 5190 | 5190.0231 | -4.45 |
| | | 5200 | 5200.0226 | -4.35 |
| | | 5230 | 5230.0214 | -4.09 |
| | | 5240 | 5240.0208 | -3.97 |
| -20 | 4.75 | 5180 | 5180.0272 | -5.25 |
| | | 5190 | 5190.0261 | -5.03 |
| | | 5200 | 5200.0269 | -5.17 |
| | | 5230 | 5230.0261 | -4.99 |
| | | 5240 | 5240.0255 | -4.87 |
| | 5.25 | 5180 | 5180.0258 | -4.98 |
| | | 5190 | 5190.0264 | -5.09 |
| | | 5200 | 5200.0262 | -5.04 |
| | | 5230 | 5230.0268 | -5.12 |
| | | 5240 | 5240.0254 | -4.85 |
| 55°C | 4.75 | 5180 | 5180.0212 | -4.09 |
| | | 5190 | 5190.0226 | -4.35 |
| | | 5200 | 5200.0209 | -4.02 |
| | | 5230 | 5230.0228 | -4.36 |
| | | 5240 | 5240.0212 | -4.05 |
| | 5.25 | 5180 | 5180.0208 | -4.02 |
| | | 5190 | 5190.0212 | -4.08 |
| | | 5200 | 5200.0181 | -3.48 |
| | | 5230 | 5230.0212 | -4.05 |
| | | 5240 | 5240.0216 | -4.12 |

| Test Condition | | After 10minute | | |
|------------------|-------------|-----------------|-------------------------|--------------|
| Temperature (°C) | Voltage (V) | Frequency (MHz) | Measurement Value (MHz) | Result (ppm) |
| 25°C | 4.75 | 5180 | 5180.0218 | -4.21 |
| | | 5190 | 5190.0223 | -4.30 |
| | | 5200 | 5200.0228 | -4.38 |
| | | 5230 | 5230.0219 | -4.19 |
| | | 5240 | 5240.0214 | -4.08 |
| | 5.25 | 5180 | 5180.0218 | -4.21 |
| | | 5190 | 5190.0216 | -4.16 |
| | | 5200 | 5200.0223 | -4.29 |
| | | 5230 | 5230.0218 | -4.17 |
| | | 5240 | 5240.0208 | -3.97 |
| -20 | 4.75 | 5180 | 5180.0272 | -5.25 |
| | | 5190 | 5190.0266 | -5.13 |
| | | 5200 | 5200.0254 | -4.88 |
| | | 5230 | 5230.0254 | -4.86 |
| | | 5240 | 5240.0258 | -4.92 |
| | 5.25 | 5180 | 5180.0271 | -5.23 |
| | | 5190 | 5190.026 | -5.01 |
| | | 5200 | 5200.0264 | -5.08 |
| | | 5230 | 5230.0254 | -4.86 |
| | | 5240 | 5240.0245 | -4.68 |
| 55°C | 4.75 | 5180 | 5180.01983 | -3.83 |
| | | 5190 | 5190.02026 | -3.90 |
| | | 5200 | 5200.0209 | -4.02 |
| | | 5230 | 5230.0219 | -4.19 |
| | | 5240 | 5240.0212 | -4.05 |
| | 5.25 | 5180 | 5180.0212 | -4.09 |
| | | 5190 | 5190.0238 | -4.59 |
| | | 5200 | 5200.0214 | -4.12 |
| | | 5230 | 5230.0216 | -4.13 |
| | | 5240 | 5240.0216 | -4.12 |

10.DEVIATION TO TEST SPECIFICATIONS

【NONE】