

APPLICATION FOR CERTIFICATION

On Behalf of

HTC Corporation

Media Link HD

Model No. : DG H200

FCC ID : NM8DGH200

IC: 4115B-DGH200

Brand : hTC

Prepared for : HTC Corporation
No. 23, Xinghua Rd., Taoyuan City,
Taoyuan 330, Taiwan

Prepared by : AUDIX Technology Corporation
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TEST REPORT CERTIFICATION

Applicant : HTC Corporation
Manufacturer : HTC Corporation
EUT Description : Media Link HD
FCC ID : NM8DGH200
IC : 4115B-DGH200
(A) Model No. : DG H200
(B) Serial No. : N/A
(C) Brand : hTC
(D) Power Supply : DC 5V
(E) Test Voltage : AC 120V, 60Hz (Via AC Adapter)

Measurement Procedure Used:

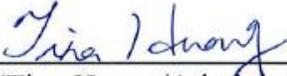
FCC Rules and Regulations Part 15 Subpart C & E, Oct. 2010
(FCC CFR 47 Part 15C & E, §15.205, §15.207, §15.209 and 15.407)
Industry Canada Rules and Regulations RSS-Gen (Issue 2), December 2010 and
RSS-210 (Issue 8), December 2010
(Canada RSS-210 §Annex 9)
AND ANSI C63.4:2003

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 and Canada RSS-210 (Issue 8) Annex 9 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 requirements of FCC Part 15 and Industry Canada RSS-Gen, RSS-210 standards.

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: Feb. 01 ~ Mar. 06, 2012 Date of Report: Mar. 06, 2012

Producer: 
(Tina Huang/Administrator)

Signatory: 
(Ben Cheng/Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

| | | |
|--------------------|---|---|
| Description | : | Media Link HD 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-F1010112. |
| Model Number | : | DG H200 |
| Serial Number | : | N/A |
| Brand | : | hTC |
| FCC ID | : | NM8DGH200 |
| IC | : | 4115B-DGH200 |
| Applicant | : | HTC Corporation No. 23, Xinghua Rd., Taoyuan City, Taoyuan 330, Taiwan |
| Manufacturer | : | HTC Corporation No. 23, Xinghua Rd., Taoyuan City, Taoyuan 330, Taiwan |
| Fundamental Range | : | 2412MHz ~ 2462MHz and 5180MHz ~ 5240MHz and 5745MHz ~ 5825MHz |
| Radio Technology | : | 802.11b: DSSS Modulation (DBPSK/DQPSK/CCK) 802.11a/g/n-HT20/n-HT40: OFDM Modulation 1T1R, (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 150Mbps |
| Antenna Gain | : | 3.19dBi (Peak) |

| | | |
|---------------------------|---|--|
| USB Cable | : | Shielded, Detachable, 1.0m |
| HDMI Cable | : | Shielded, Detachable, 1.8m Bonded two ferrite core |
| AC Adapter | : | hTC, M/N TC U250 Input: AC 100-240V, 50-60Hz Output: DC 5V, 1.0A |
| Date of Receipt of Sample | : | Jan. 19, 2012 |
| Date of Test | : | Feb. 01 ~ 22, 2012 |

1.2. Data Rate Relative to Output Power

| NII 802.11a (5.1GHz) | | | |
|----------------------|------------|------------------|-------------|
| Channel | Modulation | Date Rate (Mbps) | Power (dBm) |
| 36 | BPSK | 6 | 14.561 |
| 36 | BPSK | 9 | 14.273 |
| 36 | QPSK | 12 | 14.432 |
| 36 | QPSK | 18 | 14.527 |
| 36 | 16-QAM | 24 | 14.483 |
| 36 | 16-QAM | 36 | 14.525 |
| 36 | 64-QAM | 48 | 14.398 |
| 36 | 64-QAM | 54 | 14.420 |

| NII 802.11n-HT20 (5.1GHz) | | | | NII 802.11n-HT40 (5.1GHz) | | | |
|---------------------------|------------|------------------|-------------|---------------------------|------------|------------------|-------------|
| Channel | Modulation | Date Rate (Mbps) | Power (dBm) | Channel | Modulation | Date Rate (Mbps) | Power (dBm) |
| 36 | BPSK | 6.5 | 14.645 | 38 | BPSK | 6.5 | 14.704 |
| 36 | QPSK | 13 | 14.375 | 38 | QPSK | 13 | 14.623 |
| 36 | QPSK | 19.5 | 14.394 | 38 | QPSK | 19.5 | 14.647 |
| 36 | 16-QAM | 26 | 14.512 | 38 | 16-QAM | 26 | 14.574 |
| 36 | 16-QAM | 39 | 14.403 | 38 | 16-QAM | 39 | 14.536 |
| 36 | 64-QAM | 52 | 14.568 | 38 | 64-QAM | 52 | 14.658 |
| 36 | 64-QAM | 58.6 | 14.519 | 38 | 64-QAM | 58.6 | 14.691 |
| 36 | 64-QAM | 65 | 14.602 | 38 | 64-QAM | 65 | 14.683 |

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. MOBIL PHONE

Model Number : Pyramid
 Serial Number : N/A
 Brand : hTC

1.4.2. LCD TV

Model Number : 22LV2500-DA
 Serial Number : N/A
 Brand : LG
 Power Cord : Non-Shielded, Detachable, 1.8m

1.4.3. POWER SOCKET

Model Number : Pyramid
 Serial Number : N/A
 Manufacturer : AUDIX
 Power Cord : Non-Shielded, Undetachable, 1.8m

1.4.4. AP SERVER

Model Number : Di-624
 Serial Number : F34U177001195
 Manufacturer : D-Link
 LAN Cable : Non-Shielded, Detachable, 6.0m
 Adapter : M/N AM-91000A
 Non-Shielded, Undetachable, 1.8m

1.4.5. NOTEBOOK PC

Model Number : N20
 Serial Number : N/A
 FCC ID : By DoC
 Brand : ASUS
 AC Adapter : ASUS, M/N SADP-65NB BB
 DC Cord: Non-Shielded, Undetachable, 1.8m
 USB to Bus Cable : Non-Shielded, Detachable, 0.8m
 Power Cord : Non-Shielded, Detachable, 1.8m

1.5. Description of Test Facility

| | | |
|---------------------------|---|--|
| Name of Firm | : | AUDIX Technology Corporation EMC Department No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C. |
| Test Site (C4/Semi-AC) | : | No. 4 Shielded Room & Semi-Anechoic Chamber No. 67-4, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C. No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C. 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 |
| Maximum peak output power | ± 0.33dBm |
| Power spectral density | ± 0.13dB |
| Peak power Excursion | ± 0.14dB |
| Occupied Bandwidth 99% Power | ± 1kHz |

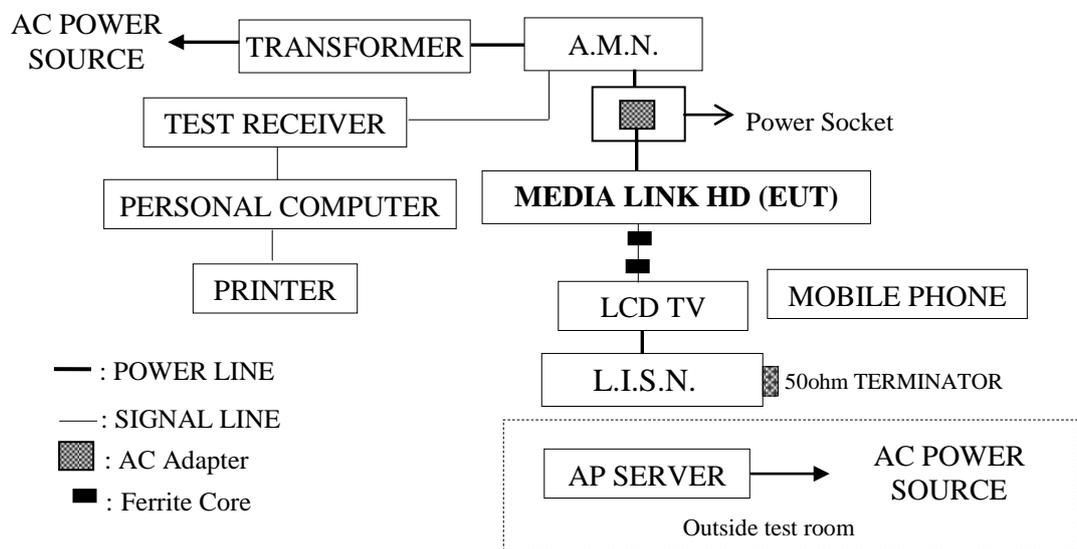
2. CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipment was used during the powerline conducted emission measurement: (No. 4 Shielded Room)

| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|---------------|--------------|-----------|------------|--------------|--------------|
| 1. | Test Receiver | R & S | ESCS 30 | 100337 | Apr. 11, 11' | Apr. 10, 12' |
| 2. | A.M.N. | R & S | ESH2-Z5 | 890485/023 | Apr. 18, 11' | Apr. 17, 12' |
| 3. | L.I.S.N. | Kyoritsu | KNW-407 | 8-1430-5 | Sep. 08, 11' | Sep. 07, 12' |

2.2. Block Diagram of Test Setup



2.3. Powerline Conducted Emission Limit [§15.207, Class B, RSS-Gen §7.2.2/Table 2]

| 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 Mobil phone sent image to AP server then through EUT (Media Link HD), the image was displayed in LCD TV via HDMI port of EUT during all testing.

2.5. Test Procedure

The EUT was placed on the table which was above the ground by 80cm and it's adapter power cord connected to the AC mains through an Artificial Mains Network (A.M.N.). This provided a 50 ohm coupling impedance for the measuring 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 simulators of the interface cables should be manipulated according to ANSI C63.4-2003, RSS-Gen and RSS-210 regulation during conducted measurement.

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

The frequency range from 150kHz to 30MHz was checked.

All the final readings from Test Receiver were measured with the 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.

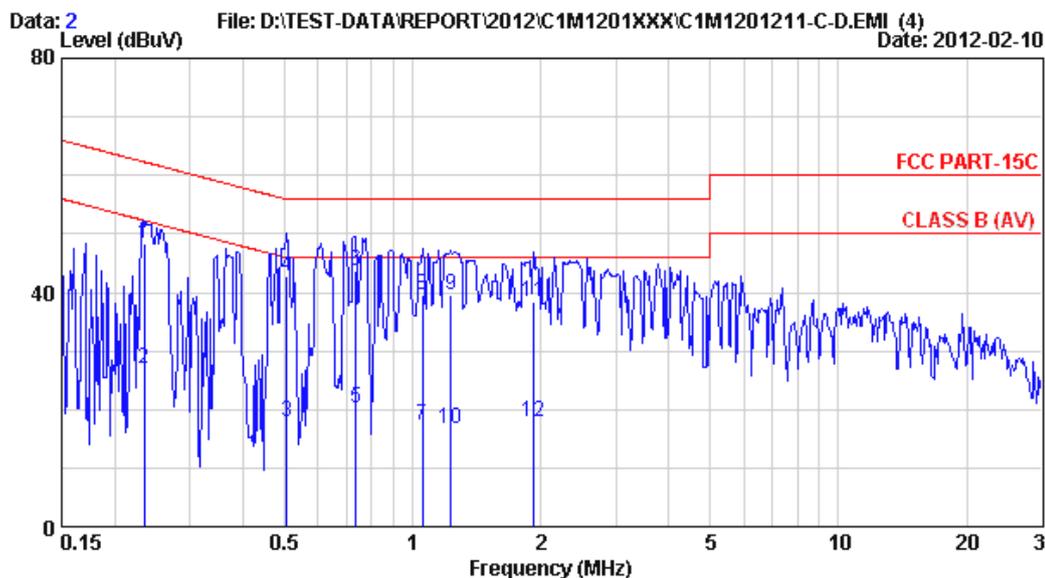
EUT : Media Link HD M/N : DG H200

Test Date : Feb. 10, 2012 Temperature : 20°C Humidity : 65%

Reference Test Data : Neutral # 2; Line # 1



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Site : NO.4 Shielded Room Data : 2
 Condition : ESH2-25 Phase : NEUTRAL
 Limit : FCC PART-15C
 Env. / Ins. : 20°C/65% ESCS30 (337) Engineer: Ken-Yang
 EUT : DG H200
 Power Rating : 120Vac / 60Hz
 Test Mode : Operating(Link)

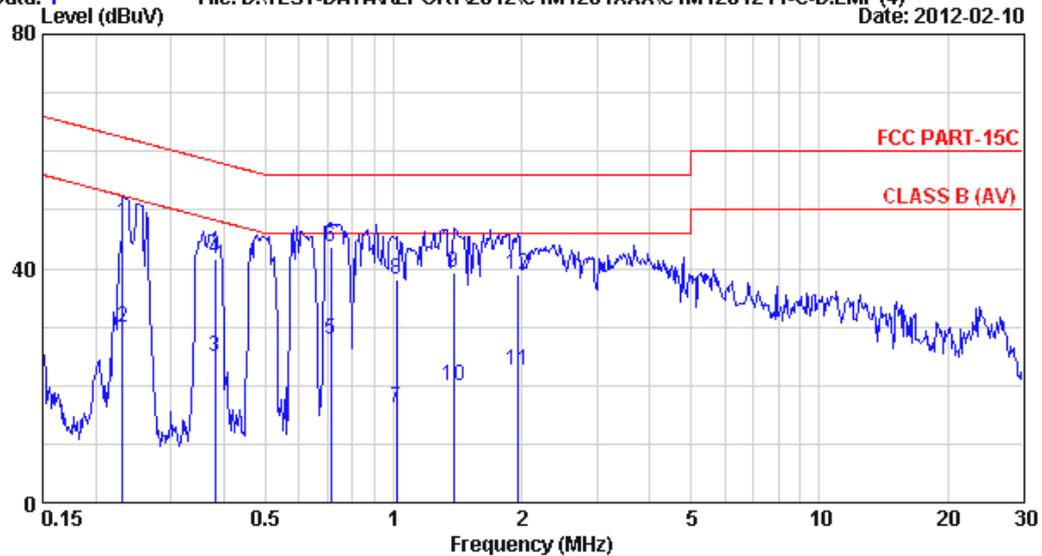
| | Freq. (MHz) | AMN Factor (dB) | Cable Loss (dB) | Emission Reading (dBµV) | Emission Level (dBµV) | Limits (dBµV) | Margin (dB) | Remark |
|----|----------------|-----------------------|-----------------------|-------------------------------|-----------------------------|------------------|----------------|---------|
| 1 | 0.234 | 0.24 | 0.27 | 47.94 | 48.45 | 62.30 | 13.85 | QP |
| 2 | 0.234 | 0.24 | 0.27 | 26.41 | 26.92 | 52.30 | 25.38 | AVERAGE |
| 3 | 0.507 | 0.27 | 0.34 | 17.14 | 17.75 | 46.00 | 28.25 | AVERAGE |
| 4 | 0.507 | 0.27 | 0.34 | 42.31 | 42.92 | 56.00 | 13.08 | QP |
| 5 | 0.735 | 0.29 | 0.37 | 19.60 | 20.26 | 46.00 | 25.74 | AVERAGE |
| 6 | 0.735 | 0.29 | 0.37 | 43.04 | 43.70 | 56.00 | 12.30 | QP |
| 7 | 1.054 | 0.31 | 0.40 | 16.62 | 17.33 | 46.00 | 28.67 | AVERAGE |
| 8 | 1.054 | 0.31 | 0.40 | 38.72 | 39.43 | 56.00 | 16.57 | QP |
| 9 | 1.229 | 0.33 | 0.40 | 38.77 | 39.50 | 56.00 | 16.50 | QP |
| 10 | 1.229 | 0.33 | 0.40 | 15.93 | 16.66 | 46.00 | 29.34 | AVERAGE |
| 11 | 1.928 | 0.39 | 0.40 | 37.68 | 38.47 | 56.00 | 17.53 | QP |
| 12 | 1.928 | 0.39 | 0.40 | 17.03 | 17.82 | 46.00 | 28.18 | AVERAGE |

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.



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Data: 1 File: D:\TEST-DATA\REPORT\2012\C1M1201XXX\C1M1201211-C-D.EMI (4) Date: 2012-02-10



Site : NO.4 Shielded Room Data : 1
 Condition : ESH2-25 Phase : LINE
 Limit : FCC PART-15C
 Env. / Ins. : 20°C/65% ESCS30 (337) Engineer: Ken-Yang
 EUT : DG H200
 Power Rating : 120Vac / 60Hz
 Test Mode : Operating(Link)

| | Freq. (MHz) | AMN Factor (dB) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark |
|----|----------------|-----------------------|-----------------------|-------------------|-----------------------------|------------------|----------------|---------|
| 1 | 0.232 | 0.24 | 0.27 | 47.29 | 47.80 | 62.39 | 14.59 | QP |
| 2 | 0.232 | 0.24 | 0.27 | 29.42 | 29.93 | 52.39 | 22.46 | AVERAGE |
| 3 | 0.381 | 0.26 | 0.32 | 24.20 | 24.77 | 48.25 | 23.48 | AVERAGE |
| 4 | 0.381 | 0.26 | 0.32 | 40.94 | 41.51 | 58.25 | 16.74 | QP |
| 5 | 0.712 | 0.29 | 0.37 | 27.18 | 27.84 | 46.00 | 18.16 | AVERAGE |
| 6 | 0.712 | 0.29 | 0.37 | 42.88 | 43.54 | 56.00 | 12.46 | QP |
| 7 | 1.016 | 0.30 | 0.40 | 15.52 | 16.22 | 46.00 | 29.78 | AVERAGE |
| 8 | 1.016 | 0.30 | 0.40 | 37.25 | 37.95 | 56.00 | 18.05 | QP |
| 9 | 1.381 | 0.35 | 0.40 | 38.57 | 39.32 | 56.00 | 16.68 | QP |
| 10 | 1.381 | 0.35 | 0.40 | 19.19 | 19.94 | 46.00 | 26.06 | AVERAGE |
| 11 | 1.959 | 0.40 | 0.40 | 21.84 | 22.64 | 46.00 | 23.36 | AVERAGE |
| 12 | 1.959 | 0.40 | 0.40 | 38.27 | 39.07 | 56.00 | 16.93 | 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)

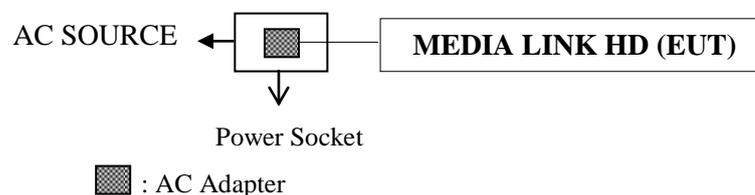
| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|----------------------|--------------|--------------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 11' | Aug. 03, 12' |
| 2. | Test Receiver | R & S | ESCS30 | 100338 | Jul. 12, 11' | Jul. 11, 12' |
| 3. | Amplifier | HP | 8447D | 2944A06305 | Feb. 10, 11' | Feb. 09, 12' |
| 4. | Log Periodic Antenna | Schwarzbeck | UHALP 9108-A | 0810 | Mar. 08, 11' | Mar. 07, 12' |
| 5. | Biconical Antenna | CHASE | VBA6106A | 1264 | Mar. 08, 11' | Mar. 07, 12' |

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

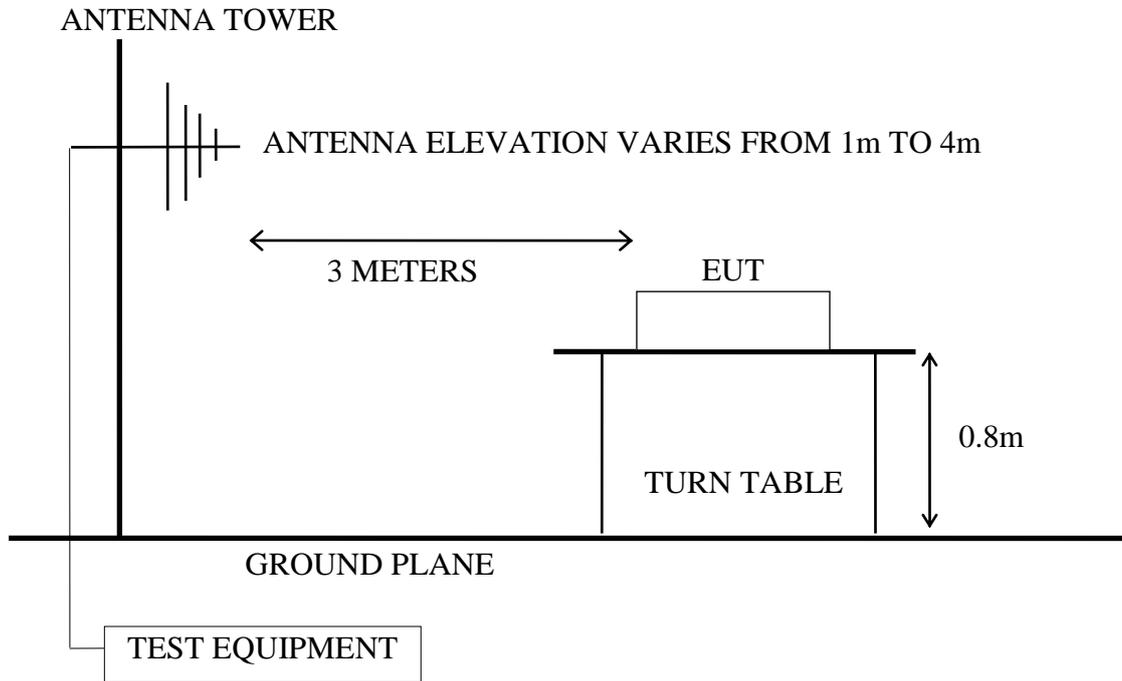
| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-------------------|--------------|-----------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | E4446A | US44300366 | Aug. 04, 11' | Aug. 03, 12' |
| 2. | Test Receiver | R & S | ESCS30 | 100338 | Jul. 12, 11' | Jul. 11, 12' |
| 3. | Amplifier | HP | 8449B | 3008A00529 | Dec. 09, 11' | Dec. 08, 12' |
| 4. | Horn Antenna | EMCO | 3115 | 9112-3775 | May 09, 11' | May 08, 12' |
| 5. | Horn Antenna | EMCO | 3116 | 2653 | Oct. 07, 11' | Oct. 06, 12' |

3.2. Test Setup

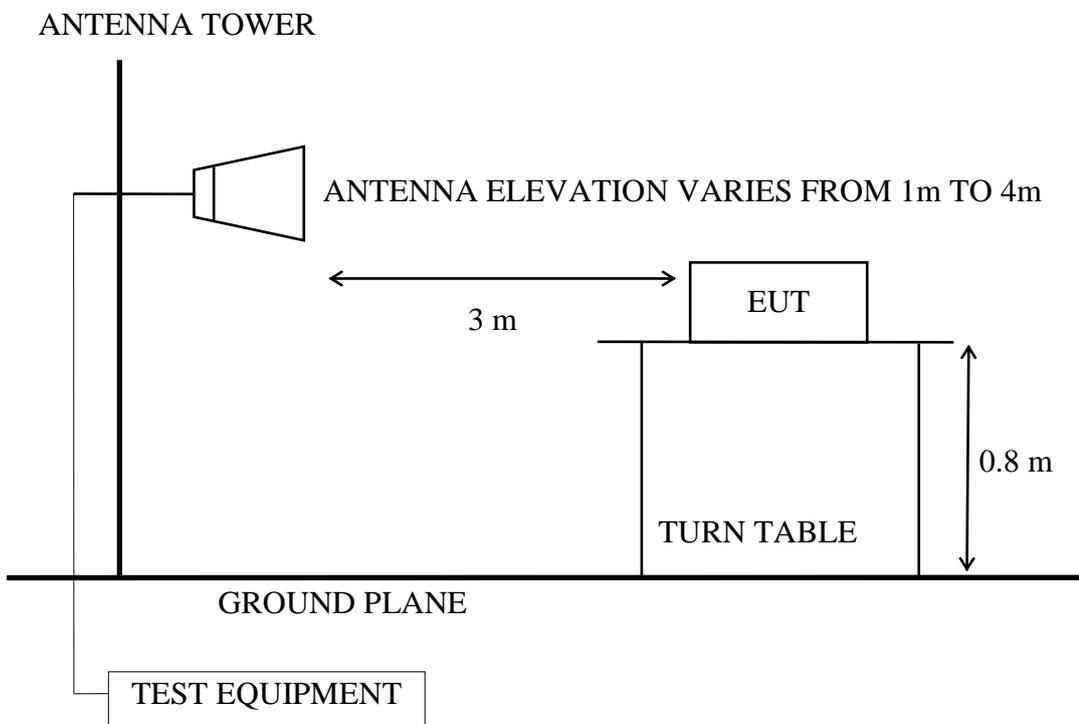
3.2.1. Block Diagram of connection between EUT and simulators



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, RSS-210 §2.7/Table 2)

| 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 (Media Link HD) 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 “hyper terminal”.
- 3.4.4. The EUT supports 802.11a/n-HT20/n-HT40 modes, we performed pre-scan high, middle, low channels for each mode for spurious emission and listed the worst channel of each mode in test report.

The worst channel of each mode as following:

| Mode | Type of Network | Channel |
|------|------------------------------|---------|
| 1. | NII 802.11a (5.1GHz) | CH 48 |
| 2. | NII 802.11n-HT20 (5.1GHz) | CH 48 |
| 3. | NII 802.11n-HT40 (5.1GHz) | CH 46 |

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 ANSI C63.4-2003, RSS-Gen and RSS-210 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 2.68GHz 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 : Media Link HD M/N : DG H200

Test Date : Feb. 14, 2012 Temperature : 27°C Humidity : 60%

For Frequency Range 30MHz~1000MHz:

The EUT with following test modes were 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. | NII 802.11a (5.1GHz) | CH 48 | 5240MHz | Transmit | # 1 | # 2 |
| 2. | NII 802.11n-HT20 (5.1GHz) | CH 48 | 5240MHz | Transmit | # 1 | # 2 |
| 3. | NII 802.11n-HT40 (5.1GHz) | CH 46 | 5230MHz | Transmit | # 1 | # 2 |

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

For Frequency above 1GHz:

The EUT 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 |
| | | | | | Peak | Peak |
| 1. | NII 802.11a (5.1GHz) | CH 48 | 5240MHz | Transmit | # 4 | --(Note3) |
| 2. | NII 802.11n-HT20 (5.1GHz) | CH 48 | 5240MHz | | # 3 | --(Note3) |
| 3. | NII 802.11n-HT40 (5.1GHz) | CH 46 | 5230MHz | | # 4 | --(Note3) |

Note: 1. Above all final readings were measured with Peak and Average detector.

2. For measurements above 1GHz to 2.68GHz, the peak measured value complies with the average limit, it is unnecessary to perform an average measurement. (According to ANSI C63.4-2003 section 8.3.1.2)

3. There is no signal be found at vertical polarization above 1GHz.

4. The emissions (up to 40GHz) 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. | NII 802.11a (5.1GHz) | CH 36 | 5180MHz | Transmit | # 1, # 4 | # 3, # 2 |
| 2. | NII 802.11n-HT20 (5.1GHz) | CH 36 | 5180MHz | Transmit | # 1, # 2 | # 3, # 4 |
| 3. | NII 802.11n-HT40 (5.1GHz) | CH 38 | 5190MHz | Transmit | # 3, # 4 | # 1, # 2 |

3.6.1. Frequency Range 30-1000MHz

NII 802.11a (5.1GHz), Transmit, Frequency: 5240MHz

Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 27°C/60% Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 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 | 94.020 | 16.37 | 2.00 | 10.79 | 29.15 | 43.50 | 14.35 | QP |
| 2 | 354.950 | 15.69 | 4.37 | 21.99 | 42.05 | 46.00 | 3.95 | QP |
| 3 | 378.230 | 17.19 | 4.60 | 21.51 | 43.30 | 46.00 | 2.70 | QP |
| 4 | 403.450 | 17.54 | 4.90 | 19.52 | 41.96 | 46.00 | 4.04 | QP |
| 5 | 446.130 | 17.59 | 5.40 | 21.14 | 44.13 | 46.00 | 1.87 | QP |
| 6 | 497.540 | 18.71 | 6.43 | 12.69 | 37.82 | 46.00 | 8.18 | QP |
| 7 | 743.920 | 22.66 | 6.70 | 11.02 | 40.38 | 46.00 | 5.62 | QP |
| 8 | 757.500 | 23.61 | 6.73 | 12.29 | 42.63 | 46.00 | 3.37 | QP |

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. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 27°C/60% Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 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 | 137.670 | 20.01 | 2.43 | 8.25 | 30.69 | 43.50 | 12.81 | QP |
| 2 | 378.230 | 17.19 | 4.60 | 17.28 | 39.07 | 46.00 | 6.93 | QP |
| 3 | 446.130 | 17.59 | 5.40 | 18.55 | 41.54 | 46.00 | 4.46 | QP |
| 4 | 497.540 | 18.71 | 6.43 | 12.80 | 37.93 | 46.00 | 8.07 | QP |
| 5 | 544.100 | 19.13 | 6.94 | 11.10 | 37.16 | 46.00 | 8.84 | QP |
| 6 | 595.510 | 20.94 | 6.27 | 12.67 | 39.88 | 46.00 | 6.12 | QP |
| 7 | 757.500 | 23.61 | 6.73 | 5.67 | 36.01 | 46.00 | 9.99 | QP |

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

NII 802.11n-HT20 (5.1GHz), Transmit, Frequency: 5240MHz

Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 27°C/60% □Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5240 (802.11n HT-20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 94.020 | 16.37 | 2.00 | 8.31 | 26.67 | 43.50 | 16.83 | QP |
| 2 | 354.950 | 15.69 | 4.37 | 19.32 | 39.38 | 46.00 | 6.62 | QP |
| 3 | 378.230 | 17.19 | 4.60 | 19.05 | 40.84 | 46.00 | 5.16 | QP |
| 4 | 403.450 | 17.54 | 4.90 | 18.07 | 40.51 | 46.00 | 5.49 | QP |
| 5 | 446.130 | 17.59 | 5.40 | 19.17 | 42.16 | 46.00 | 3.84 | QP |
| 6 | 757.500 | 23.61 | 6.73 | 11.10 | 41.44 | 46.00 | 4.56 | QP |
| 7 | 969.930 | 26.83 | 7.69 | 1.67 | 36.20 | 54.00 | 17.80 | QP |

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. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 27°C/60% □Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5240 (802.11n HT-20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 57.160 | 13.77 | 1.60 | 14.35 | 29.72 | 40.00 | 10.28 | QP |
| 2 | 378.230 | 17.19 | 4.60 | 14.77 | 36.56 | 46.00 | 9.44 | QP |
| 3 | 446.130 | 17.59 | 5.40 | 17.13 | 40.12 | 46.00 | 5.88 | QP |
| 4 | 497.540 | 18.71 | 6.43 | 11.36 | 36.49 | 46.00 | 9.51 | QP |
| 5 | 544.100 | 19.13 | 6.94 | 9.86 | 35.92 | 46.00 | 10.08 | QP |
| 6 | 595.510 | 20.94 | 6.27 | 10.53 | 37.74 | 46.00 | 8.26 | QP |
| 7 | 743.920 | 22.66 | 6.70 | 3.58 | 32.94 | 46.00 | 13.06 | QP |

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

NII 802.11n-HT40 (5.1GHz), Transmit, Frequency: 5230MHz

Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 27°C/60% Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5230 (802.11n HT-40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 94.020 | 16.37 | 2.00 | 8.26 | 26.62 | 43.50 | 16.88 | QP |
| 2 | 298.690 | 26.72 | 3.90 | 4.49 | 35.11 | 46.00 | 10.89 | QP |
| 3 | 354.950 | 15.69 | 4.37 | 20.01 | 40.07 | 46.00 | 5.93 | QP |
| 4 | 378.230 | 17.19 | 4.60 | 19.49 | 41.28 | 46.00 | 4.72 | QP |
| 5 | 446.130 | 17.59 | 5.40 | 18.82 | 41.81 | 46.00 | 4.19 | QP |
| 6 | 497.540 | 18.71 | 6.43 | 10.47 | 35.60 | 46.00 | 10.40 | QP |
| 7 | 756.530 | 23.59 | 6.73 | 10.44 | 40.76 | 46.00 | 5.24 | QP |

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. : 2
 Dis. / Ant. : 3m VBA6106A/UHALP9108A Ant. pol. : VERTICAL
 Limit : FCC PART-15C
 Env. / Ins. : E4446A 27°C/60% Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5230 (802.11n HT-40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 57.160 | 13.77 | 1.60 | 15.05 | 30.42 | 40.00 | 9.58 | QP |
| 2 | 380.170 | 17.25 | 4.60 | 15.50 | 37.35 | 46.00 | 8.65 | QP |
| 3 | 446.130 | 17.59 | 5.40 | 16.31 | 39.30 | 46.00 | 6.70 | QP |
| 4 | 497.540 | 18.71 | 6.43 | 11.25 | 36.38 | 46.00 | 9.62 | QP |
| 5 | 595.510 | 20.94 | 6.27 | 10.39 | 37.60 | 46.00 | 8.40 | QP |
| 6 | 757.500 | 23.61 | 6.73 | 3.31 | 33.65 | 46.00 | 12.35 | QP |

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

NII 802.11a (5.1GHz), Transmit, Frequency: 5240MHz

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 27°C/60% □Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 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 | 1040.320 | 24.40 | 4.26 | 6.92 | 35.58 | 54.00 | 18.42 | Peak |
| 2 | 1241.920 | 24.98 | 4.66 | 7.05 | 36.69 | 54.00 | 17.31 | Peak |

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

NII 802.11n-HT20 (5.1GHz), Transmit, Frequency: 5240MHz

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 27°C/60% □Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5240 (802.11n HT-20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBµV) | Emission Level (dBµV/m) | Limits (dBµV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 1132.720 | 24.69 | 4.46 | 12.10 | 41.24 | 54.00 | 12.76 | Peak |
| 2 | 1241.920 | 24.98 | 4.66 | 11.25 | 40.88 | 54.00 | 13.12 | Peak |

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

3.6.3. Restricted Bands Measurement Results

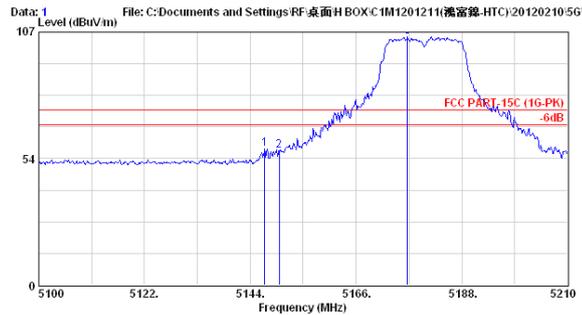
Date of Test : Feb. 14, 2012 Temperature : 27°C

EUT : Media Link HD Humidity : 60%

Test Mode : NII 802.11a (5.1GHz), Transmit, Channel: 36, Frequency: 5180MHz



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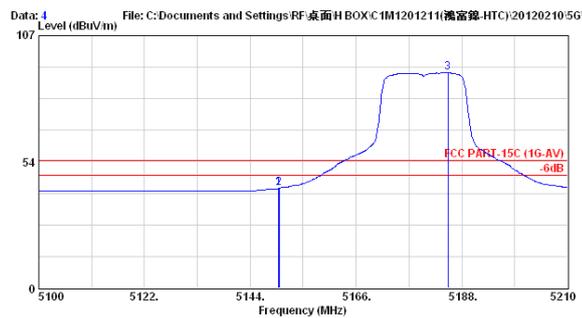
Site no. : A/C Chamber Data no. : 1
Dis. / Ant. : 3m 3115(3775) Ant. pol. : HORIZONTAL
Limit : FCC PART-15C (1G-PK)
Env. / Ins. : E4446A 27°C/60% Dvic Fong
EUT : DG H200
Power Rating : AC 120/60Hz
Test Mode : TX5180 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|-------------|--------------------|-----------------|-------------------------|-------------------------|-----------------|-------------|--------|
| 1 | 5146.970 | 33.45 | 9.43 | 14.80 | 57.68 | 74.00 | 16.32 | Peak |
| 2 | 5150.050 | 33.45 | 9.43 | 13.98 | 56.87 | 74.00 | 17.13 | Peak |
| 3 | 5176.670 | 33.48 | 9.46 | 61.94 | 104.88 | 74.00 | -30.88 | 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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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 27°C/60% Dvic Fong
EUT : DG H200
Power Rating : AC 120/60Hz
Test Mode : TX5180 (802.11a)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|-------------|--------------------|-----------------|-------------------------|-------------------------|-----------------|-------------|---------|
| 1 | 5149.940 | 33.45 | 9.43 | -0.41 | 42.47 | 54.00 | 11.53 | Average |
| 2 | 5150.050 | 33.45 | 9.43 | -0.40 | 42.49 | 54.00 | 11.51 | Average |
| 3 | 5185.140 | 33.48 | 9.46 | 48.32 | 91.26 | 54.00 | -37.26 | Average |

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

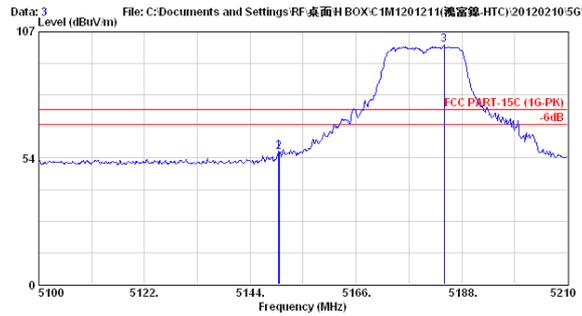
Date of Test : Feb. 14, 2012 Temperature : 27°C

EUT : Media Link HD Humidity : 60%

Test Mode : NII 802.11a (5.1GHz), Transmit, Channel: 36, Frequency: 5180MHz



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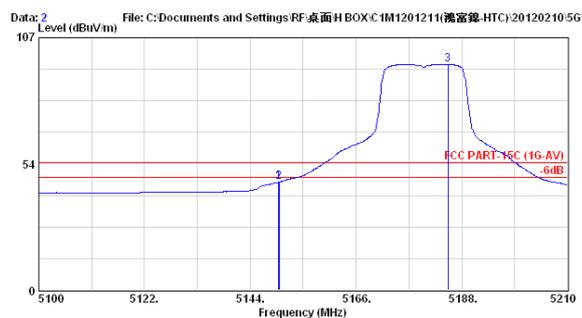
Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 27°C/60% □Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5180 (802.11a)

| | Ant. Factor (dB/m) | Cable Loss (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|--------------------|-----------------|-------------------------|-------------------------|-----------------|-------------|-------------|
| 1 | 5149.940 | 33.45 | 9.43 | 13.42 | 56.30 | 74.00 | 17.70 Peak |
| 2 | 5150.050 | 33.45 | 9.43 | 13.19 | 56.08 | 74.00 | 17.92 Peak |
| 3 | 5184.370 | 33.48 | 9.46 | 58.56 | 101.51 | 74.00 | -27.51 Peak |

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



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Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 27°C/60% □Vic Fong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5180 (802.11a)

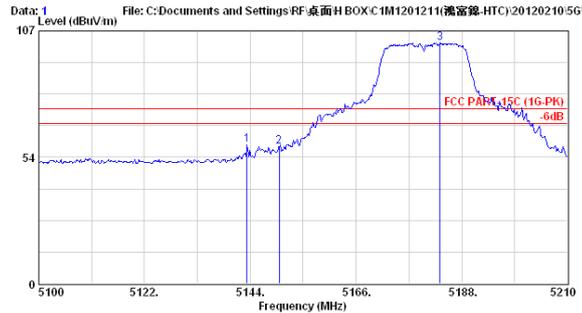
| | Ant. Factor (dB/m) | Cable Loss (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|--------------------|-----------------|-------------------------|-------------------------|-----------------|-------------|----------------|
| 1 | 5149.940 | 33.45 | 9.43 | 2.92 | 45.80 | 54.00 | 8.20 Average |
| 2 | 5150.050 | 33.45 | 9.43 | 2.97 | 45.85 | 54.00 | 8.15 Average |
| 3 | 5185.140 | 33.48 | 9.46 | 52.89 | 95.83 | 54.00 | -41.83 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 : Feb. 14, 2012 Temperature : 27°C
 EUT : Media Link HD Humidity : 60%
 Test Mode : NII 802.11n-HT20 (5.1GHz), Transmit, Channel: 36, Frequency: 5180MHz



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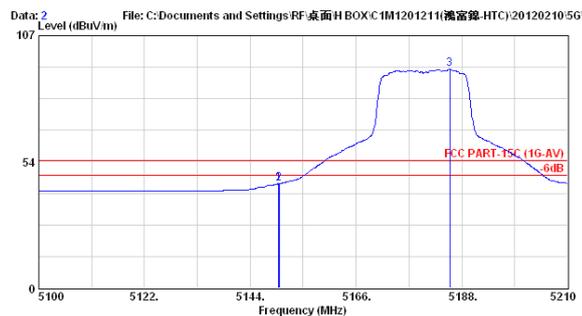
Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 27°C/60% Vic Pong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5180 (802.11n HT-20)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 5143.340 | 33.45 | 9.43 | 15.81 | 58.69 | 74.00 | 15.31 | Peak |
| 2 | 5150.050 | 33.45 | 9.43 | 15.22 | 58.10 | 74.00 | 15.90 | Peak |
| 3 | 5183.490 | 33.48 | 9.46 | 59.00 | 101.94 | 74.00 | -27.94 | 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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Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 27°C/60% Vic Pong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5180 (802.11n HT-20)

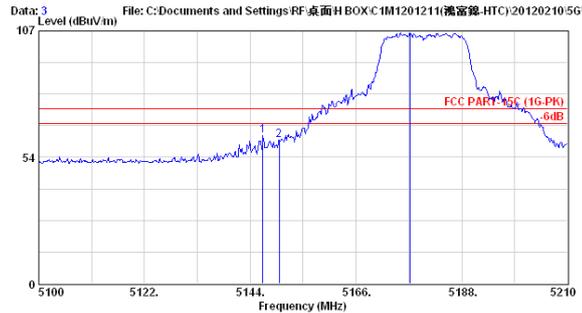
| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 5149.940 | 33.45 | 9.43 | 1.39 | 44.27 | 54.00 | 9.73 | Average |
| 2 | 5150.050 | 33.45 | 9.43 | 1.43 | 44.31 | 54.00 | 9.69 | Average |
| 3 | 5185.470 | 33.48 | 9.46 | 49.78 | 92.72 | 54.00 | -38.72 | 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 : Feb. 14, 2012 Temperature : 27°C
 EUT : Media Link HD Humidity : 60%
 Test Mode : NII 802.11n-HT20 (5.1GHz), Transmit, Channel: 36, Frequency: 5180MHz



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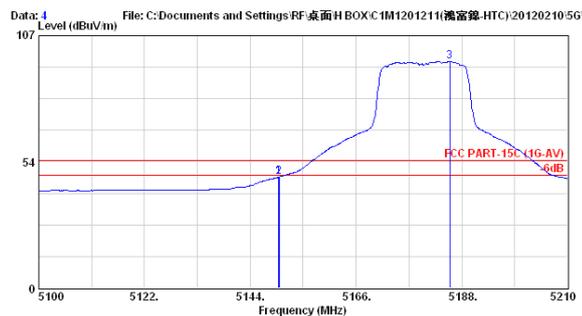
Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 27°C/60% □Vic Pong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5180 (802.11n HT-20)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1 5146.640 | 33.45 | 9.43 | 19.90 | 62.78 | 74.00 | 11.22 | Peak |
| 2 5150.050 | 33.45 | 9.43 | 17.72 | 60.61 | 74.00 | 13.39 | Peak |
| 3 5177.220 | 33.48 | 9.46 | 63.17 | 106.11 | 74.00 | -32.11 | 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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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 27°C/60% □Vic Pong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5180 (802.11n HT-20)

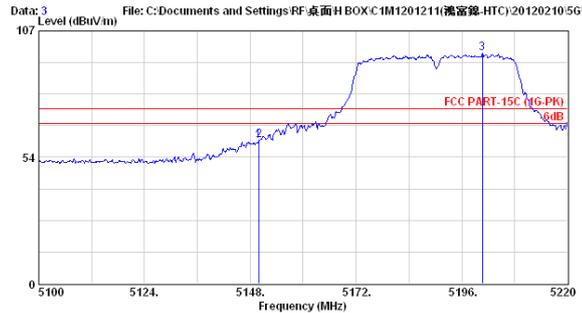
| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|---------|
| 1 5149.940 | 33.45 | 9.43 | 4.27 | 47.15 | 54.00 | 6.85 | Average |
| 2 5150.050 | 33.45 | 9.43 | 4.31 | 47.19 | 54.00 | 6.81 | Average |
| 3 5185.470 | 33.48 | 9.46 | 53.27 | 96.21 | 54.00 | -42.21 | Average |

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

Date of Test : Feb. 14, 2012 Temperature : 27°C
 EUT : Media Link HD Humidity : 60%
 Test Mode : NII 802.11n-HT40 (5.1GHz), Transmit, Channel: 38, Frequency:
 5190MHz



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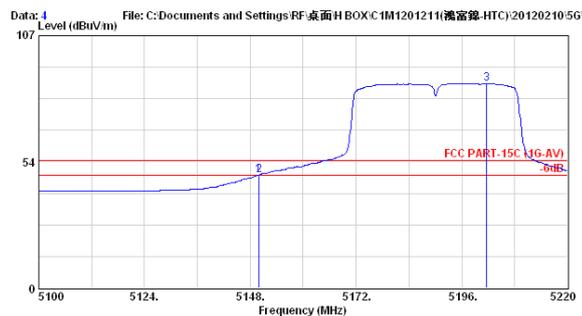
Site no. : A/C Chamber Data no. : 3
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : HORIZONTAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 27°C/60% Vic Pong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5190 (802.11n HT-40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 5149.920 | 33.45 | 9.43 | 17.39 | 60.28 | 74.00 | 13.72 | Peak |
| 2 | 5150.040 | 33.45 | 9.43 | 17.72 | 60.60 | 74.00 | 13.40 | Peak |
| 3 | 5200.680 | 33.50 | 9.48 | 54.78 | 97.75 | 74.00 | -23.75 | 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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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 27°C/60% Vic Pong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5190 (802.11n HT-40)

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 5149.920 | 33.45 | 9.43 | 4.92 | 47.81 | 54.00 | 6.19 | Average |
| 2 | 5150.040 | 33.45 | 9.43 | 4.97 | 47.85 | 54.00 | 6.15 | Average |
| 3 | 5201.640 | 33.50 | 9.48 | 43.74 | 86.71 | 54.00 | -32.71 | Average |

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

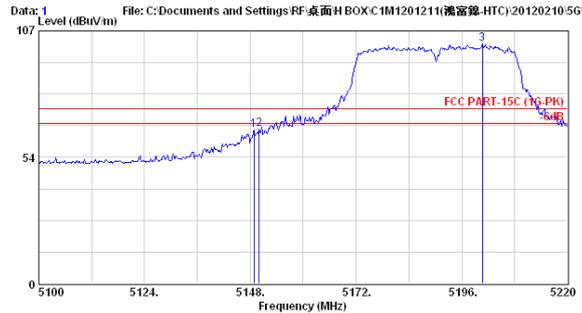
Date of Test : Feb. 14, 2012 Temperature : 27°C

EUT : Media Link HD Humidity : 60%

Test Mode : NII 802.11n-HT40 (5.1GHz), Transmit, Channel: 38, Frequency: 5190MHz



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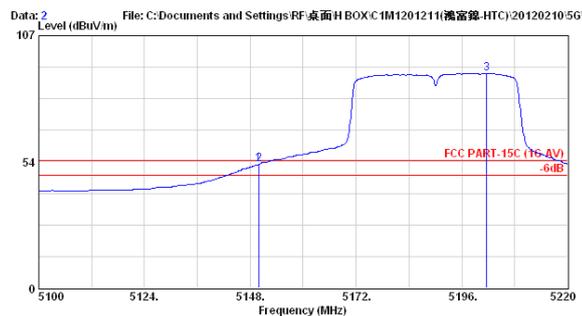
Site no. : A/C Chamber Data no. : 1
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-PK)
 Env. / Ins. : E4446A 27°C/60% □Vic Pong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5190 (802.11n HT-40)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|-------------------------|-------------------------|-----------------|-------------|--------|
| 1 5148.840 | 33.45 | 9.43 | 22.06 | 64.94 | 74.00 | 9.06 | Peak |
| 2 5150.040 | 33.45 | 9.43 | 22.70 | 65.58 | 74.00 | 8.42 | Peak |
| 3 5200.680 | 33.50 | 9.48 | 58.40 | 101.37 | 74.00 | -27.37 | 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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Site no. : A/C Chamber Data no. : 2
 Dis. / Ant. : 3m 3115(3775) Ant. pol. : VERTICAL
 Limit : FCC PART-15C (1G-AV)
 Env. / Ins. : E4446A 27°C/60% □Vic Pong
 EUT : DG H200
 Power Rating : AC 120/60Hz
 Test Mode : TX5190 (802.11n HT-40)

| Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-------------|--------------------|-----------------|-------------------------|-------------------------|-----------------|-------------|---------|
| 1 5149.920 | 33.45 | 9.43 | 9.48 | 52.36 | 54.00 | 1.64 | Average |
| 2 5150.040 | 33.45 | 9.43 | 9.55 | 52.43 | 54.00 | 1.57 | Average |
| 3 5201.640 | 33.50 | 9.48 | 47.98 | 90.95 | 54.00 | -36.95 | Average |

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

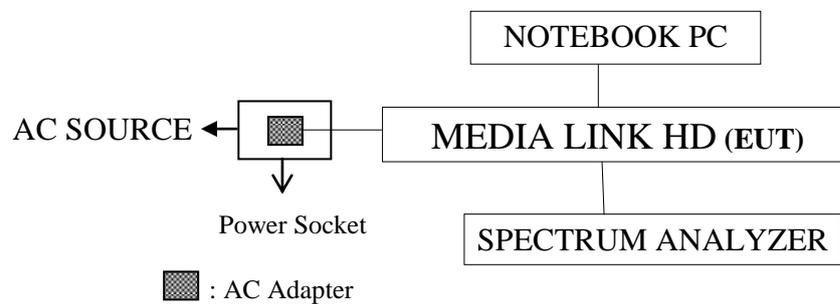
4. 26dB BANDWIDTH MEASUREMENT

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 | N9030A-544 | US51350140 | Oct. 14, 11' | Oct. 13, 12' |

4.2. Block Diagram of Test Setup



4.3. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

4.4. Test Procedure

1. Set RBW=approximately 1% of the emission bandwidth.
2. Set the VBW>RBW
3. Detector=Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26dB down from the peak of the emission. Compare this with RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The measurement guideline was according to KDB789033 D01

The measurement guideline was according to RSS-Gen.

4.5. Test Results

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

Test Date : Feb. 02, 2012 Temperature : 24°C Humidity : 52%

4.5.1. For NII 802.11a (5.1GHz)

| Mode | Type of Network | Channel | Frequency | 26dB Bandwidth |
|------|-------------------------|---------|-----------|-----------------|
| 1. | NII 802.11a (5.1GHz) | CH 36 | 5180MHz | 20.80MHz |
| 2. | | CH 40 | 5200MHz | 22.00MHz |
| 3. | | CH 48 | 5240MHz | 21.95MHz |

4.5.2. For NII 802.11n-HT20 (5.1GHz)

| Mode | Type of Network | Channel | Frequency | 26dB Bandwidth |
|------|------------------------------|---------|-----------|-----------------|
| 1. | NII 802.11n-HT20 (5.1GHz) | CH 36 | 5180MHz | 24.05MHz |
| 2. | | CH 40 | 5200MHz | 23.60MHz |
| 3. | | CH 48 | 5240MHz | 24.90MHz |

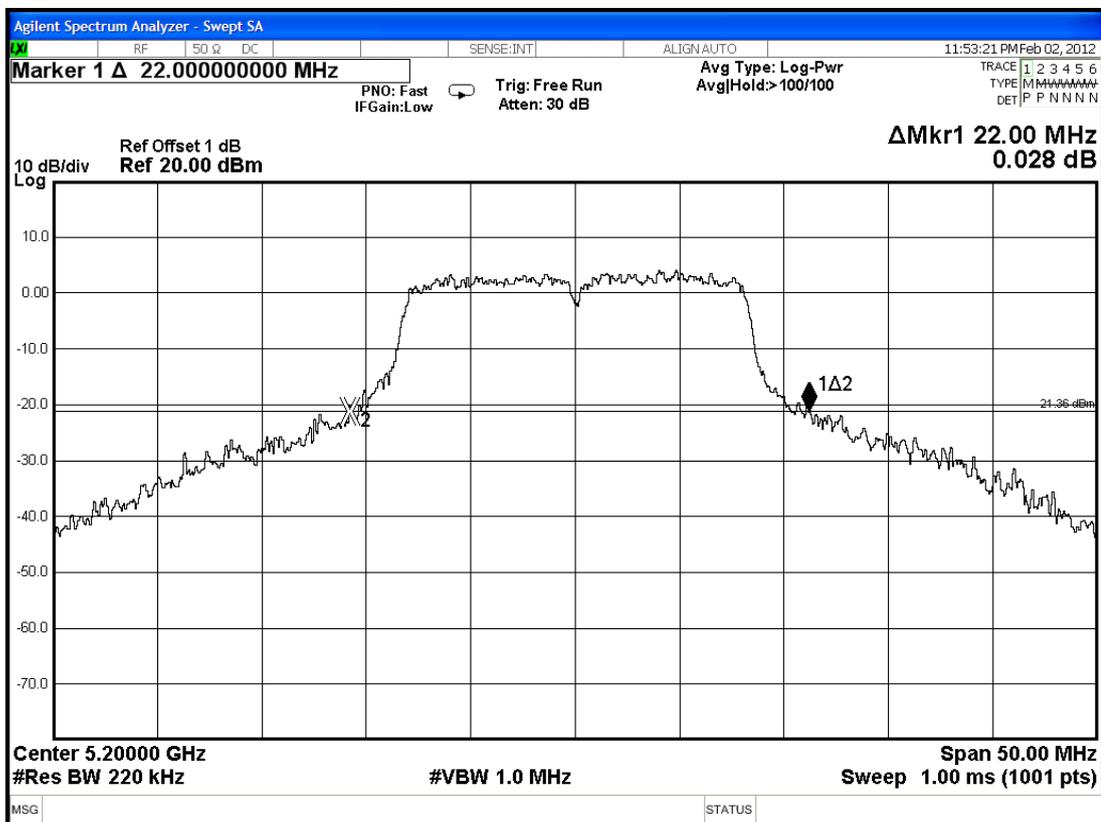
4.5.3. For NII 802.11n-HT40 (5.1GHz)

| Mode | Type of Network | Channel | Frequency | 26dB Bandwidth |
|------|------------------------------|---------|-----------|-----------------|
| 1. | NII 802.11n-HT40 (5.1GHz) | CH 38 | 5190MHz | 43.44MHz |
| 2. | | CH 46 | 5230MHz | 45.44MHz |

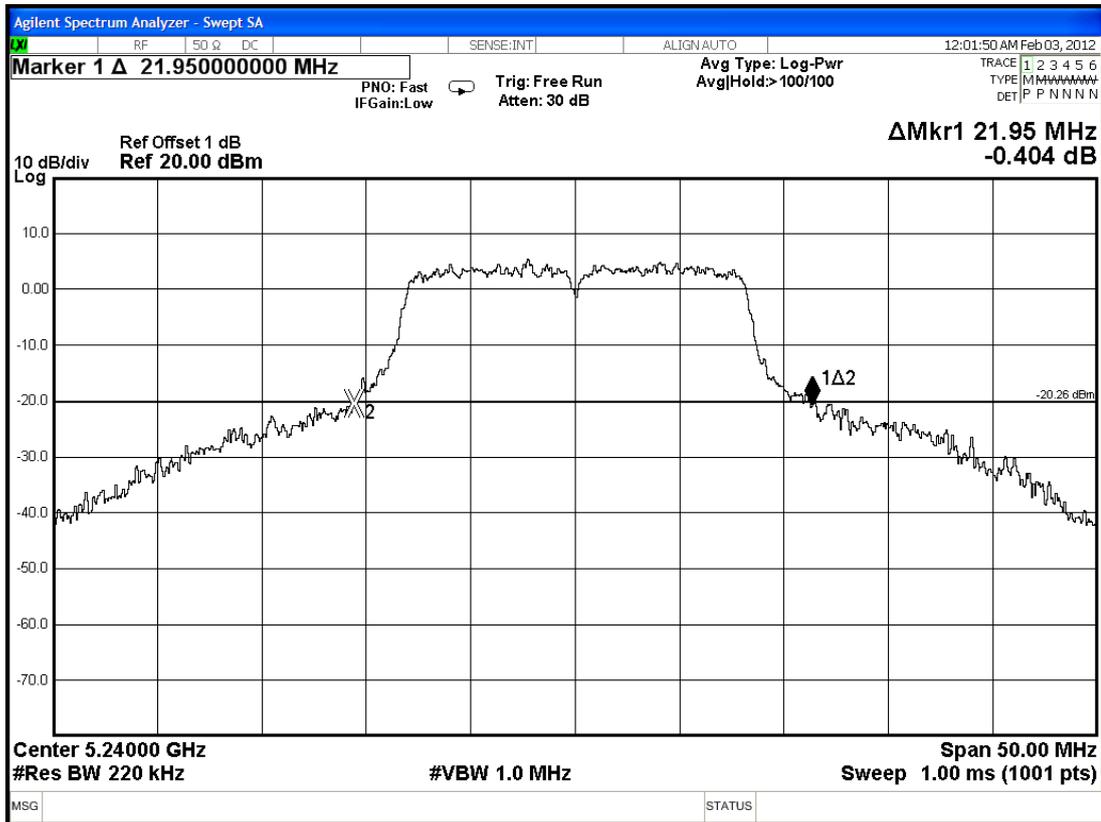
NII 802.11a (5.1GHz), Frequency: 5180MHz



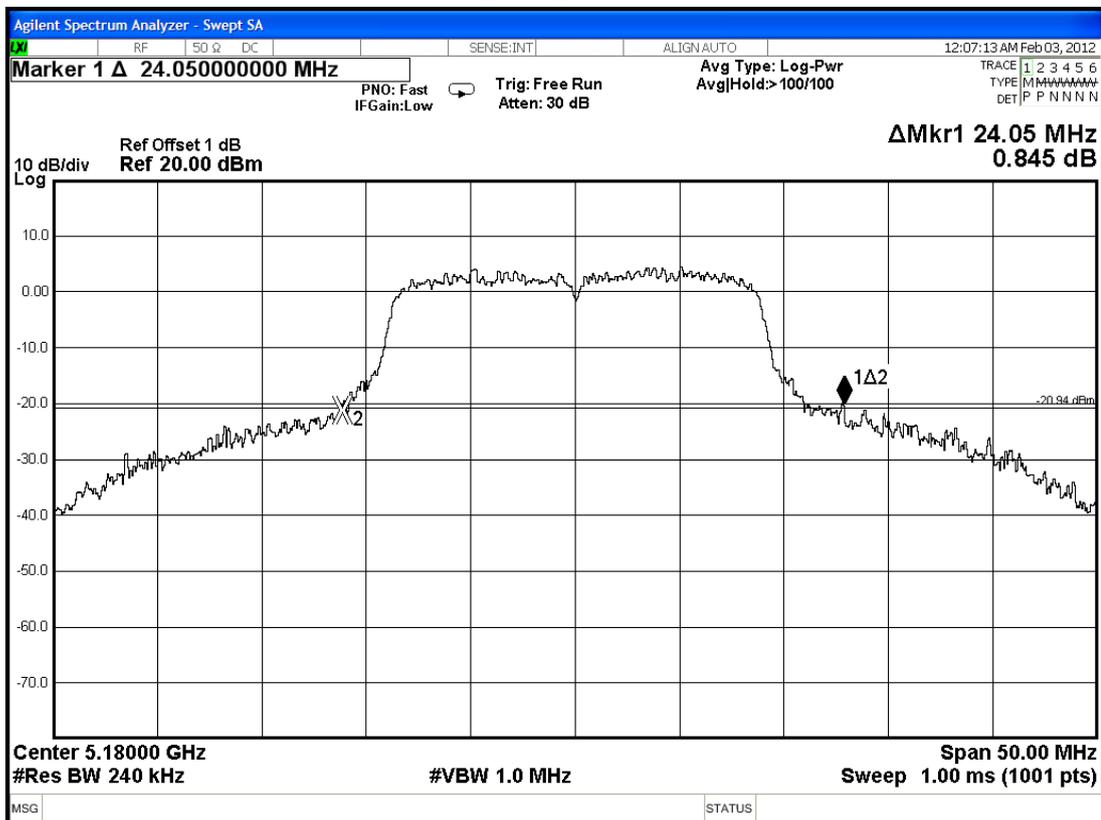
NII 802.11a (5.1GHz), Frequency: 5200MHz



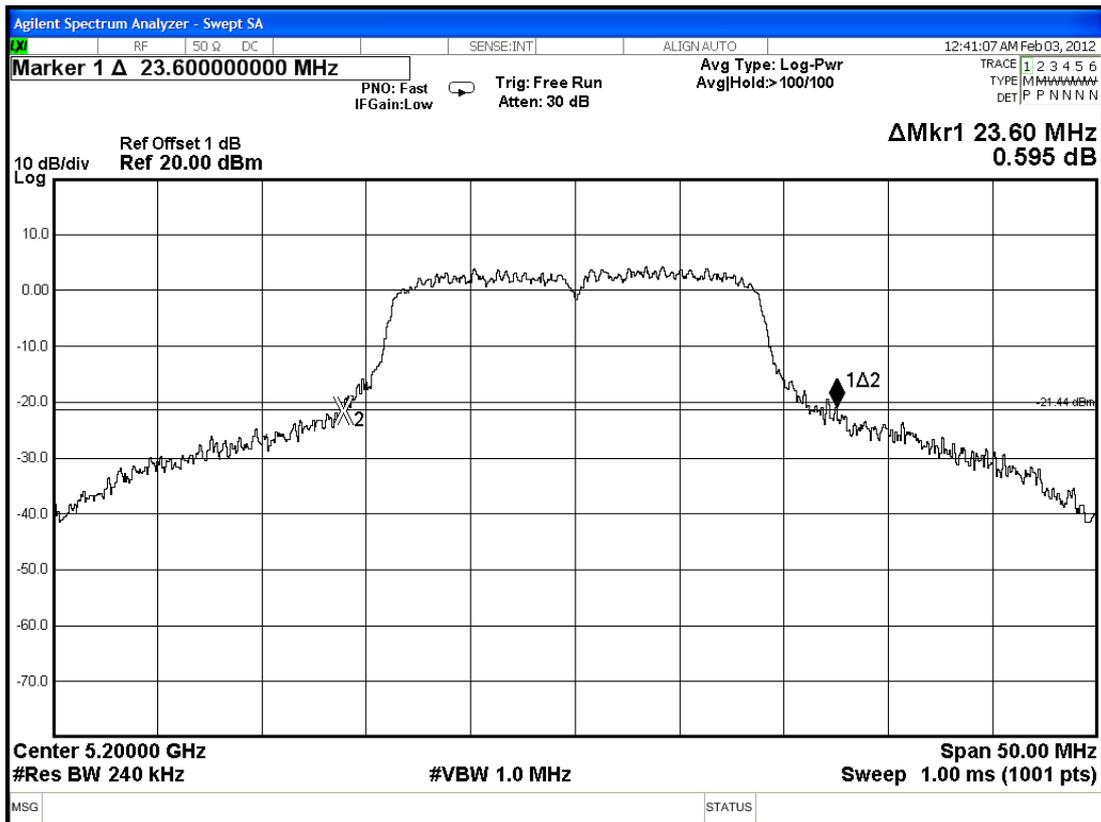
NII 802.11a (5.1GHz), Frequency: 5240MHz



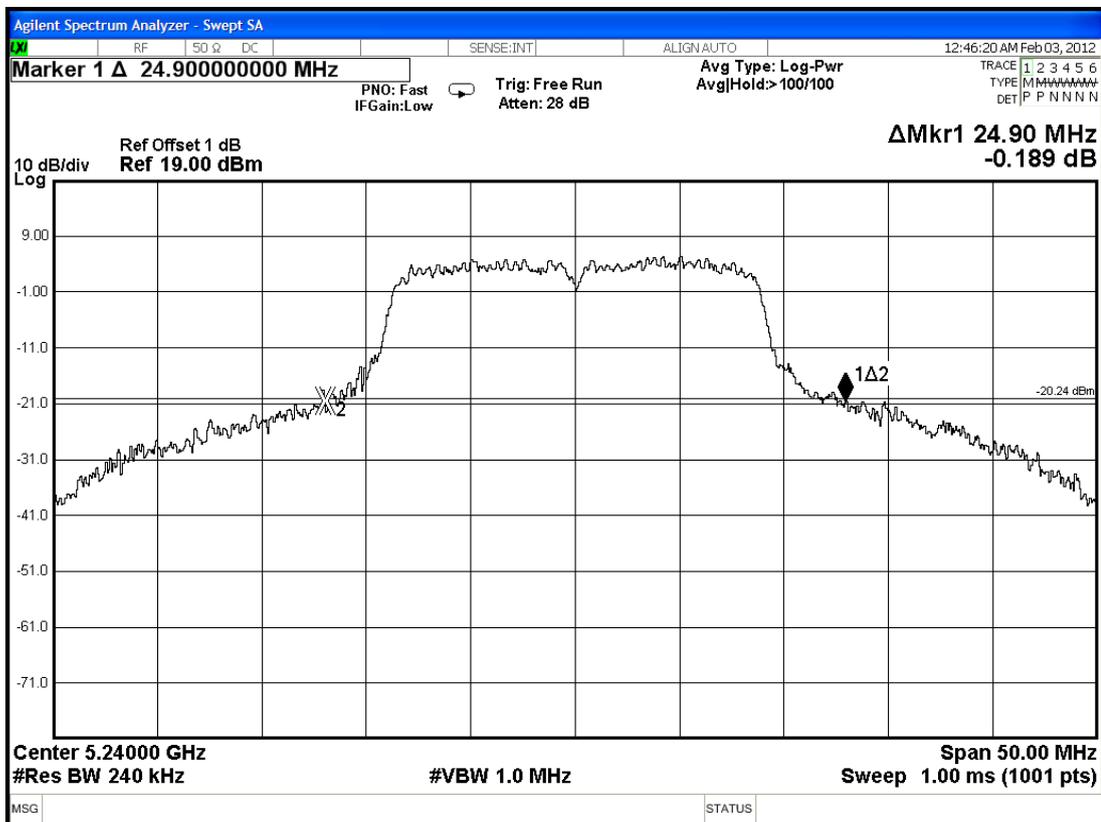
NII 802.11n-HT20 (5.1GHz), Frequency: 5180MHz



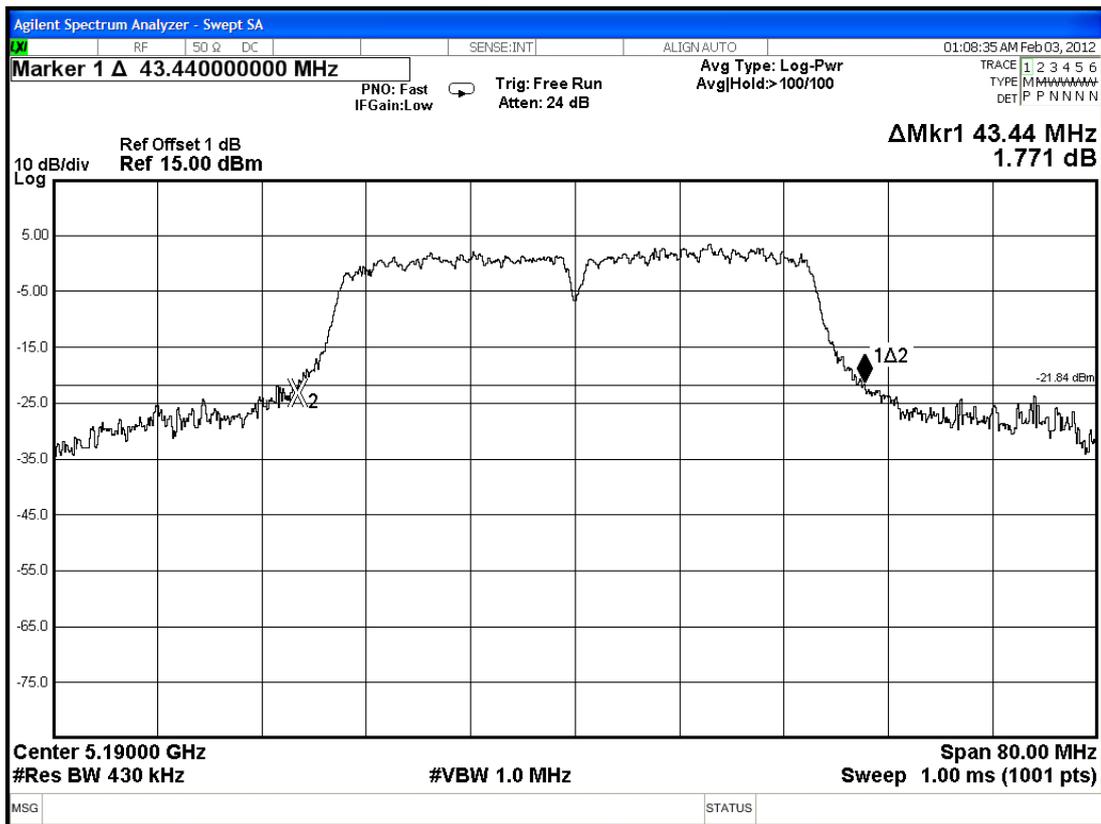
NII 802.11n-HT20 (5.1GHz), Frequency: 5200MHz



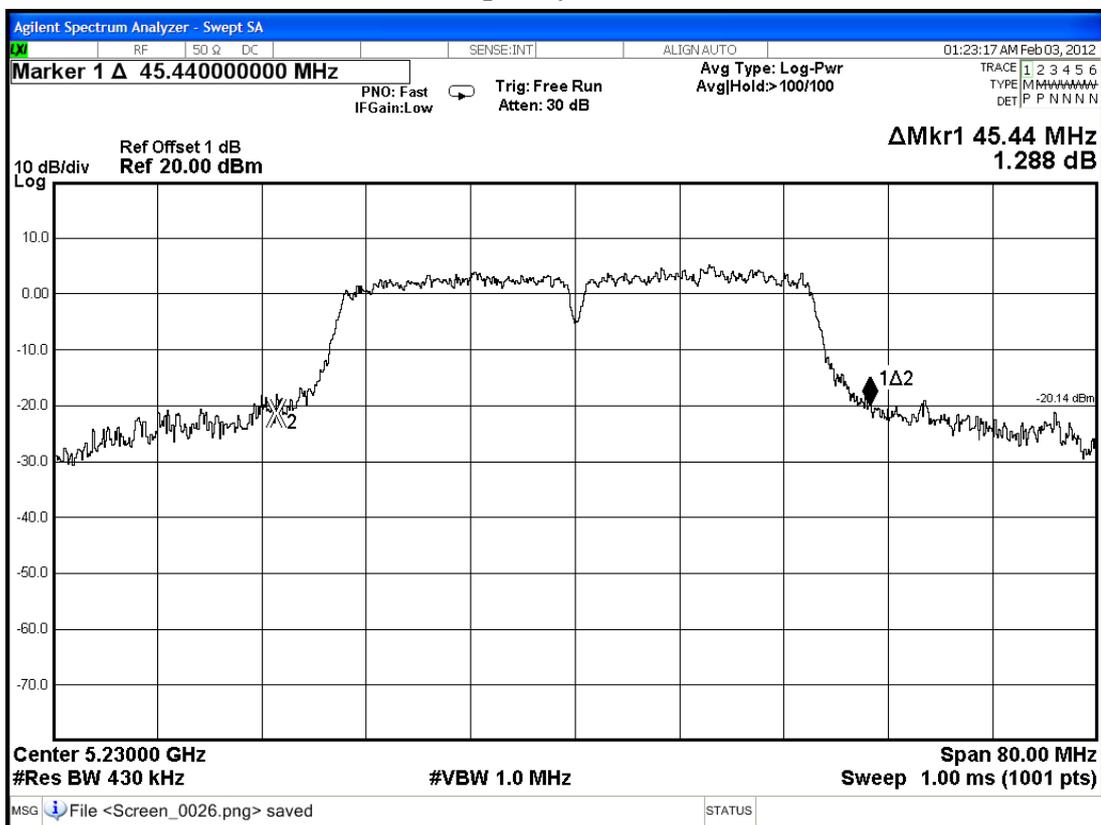
NII 802.11n-HT20 (5.1GHz), Frequency: 5240MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5190MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5230MHz



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 | N9030A-544 | US51350140 | Oct. 14, 11' | Oct. 13, 12' |

5.2. Block Diagram of Test Setup

The same as section.4.2.

5.3. Specification Limits [§15.407(a)-(1), RSS-210 A9.2 (1)]

5.3.1. For NII 802.11a (5.1GHz)

| Frequency | Limit 1 | Limit 2 (4dBm+10log B) |
|--------------|--------------|------------------------|
| 5150~5250MHz | 50mW (17dBm) | 17.42dBm |

Remark: B= 26dB Bandwidth

5.3.2. For NII 802.11n-HT20 (5.1GHz)

| Frequency | Limit 1 | Limit 2 (4dBm+10log B) |
|--------------|--------------|------------------------|
| 5150~5250MHz | 50mW (17dBm) | 17.96dBm |

Remark: B= 26dB Bandwidth

5.3.3. For NII 802.11n-HT40 (5.1GHz)

| Frequency | Limit 1 | Limit 2 (4dBm+10log B) |
|--------------|--------------|------------------------|
| 5150~5250MHz | 50mW (17dBm) | 20.57dBm |

Remark: B= 26dB Bandwidth

5.4. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

5.5. Test Procedure

6. Set span to encompass the entire emission bandwidth (EBW) of the signal.
7. Set RBW=1MHz
8. Set VBW \geq 3MHz
9. Detector=RMS (i.e., power averaging), if available, Otherwise, use sample detector mode.
10. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
11. Sum the spectrum levels (in power units) at 1MHz intervals extending across the 26dB EBW of the spectrum.

The measurement guideline was according to KDB789033 D01

The measurement guideline was according to RSS-Gen.

5.6. Test Results

PASSED. All the test results are listed below.

Test Date : Feb. 02, 2012 Temperature : 24°C Humidity : 52%

5.6.1. For NII 802.11a (5.1GHz)

| Mode | Type of Network | Channel | Frequency | Peak Output Power |
|------|-------------------------|---------|-----------|-------------------|
| 1. | NII 802.11a (5.1GHz) | CH 36 | 5180MHz | 12.964dBm |
| 2. | | CH 40 | 5200MHz | 13.624dBm |
| 3. | | CH 48 | 5240MHz | 14.561dBm |

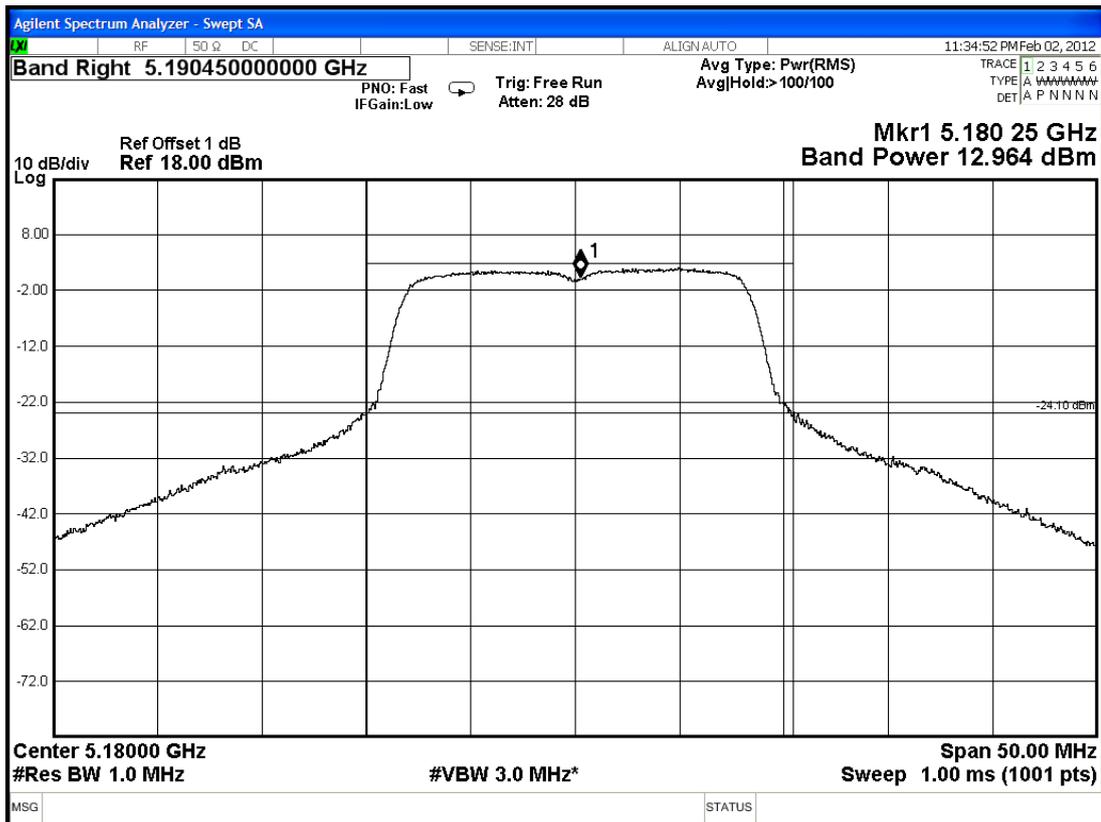
5.6.2. For NII 802.11n-HT20 (5.1GHz)

| Mode | Type of Network | Channel | Frequency | Peak Output Power |
|------|------------------------------|---------|-----------|-------------------|
| 1. | NII 802.11n-HT20 (5.1GHz) | CH 36 | 5180MHz | 14.028dBm |
| 2. | | CH 40 | 5200MHz | 13.907dBm |
| 3. | | CH 48 | 5240MHz | 14.645dBm |

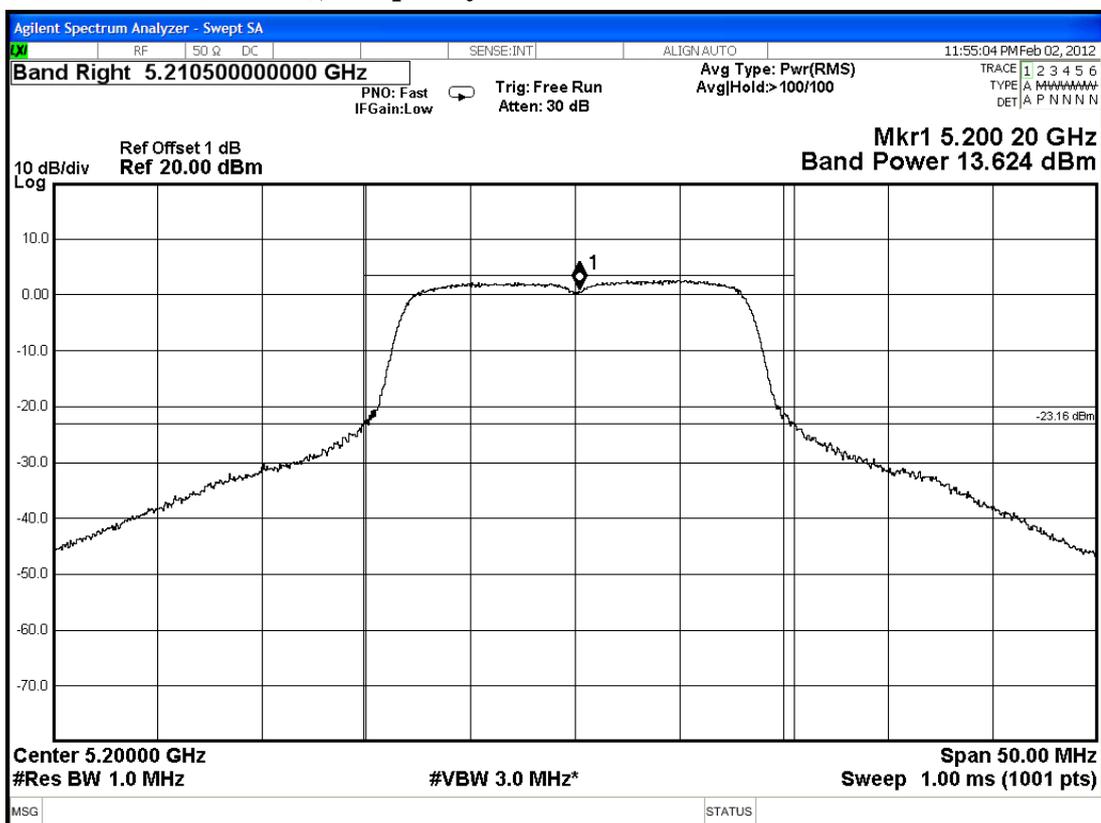
5.6.3. For NII 802.11n-HT40 (5.1GHz)

| Mode | Type of Network | Channel | Frequency | Peak Output Power |
|------|------------------------------|---------|-----------|-------------------|
| 1. | NII 802.11n-HT40 (5.1GHz) | CH 38 | 5190MHz | 12.990dBm |
| 2. | | CH 46 | 5230MHz | 14.704dBm |

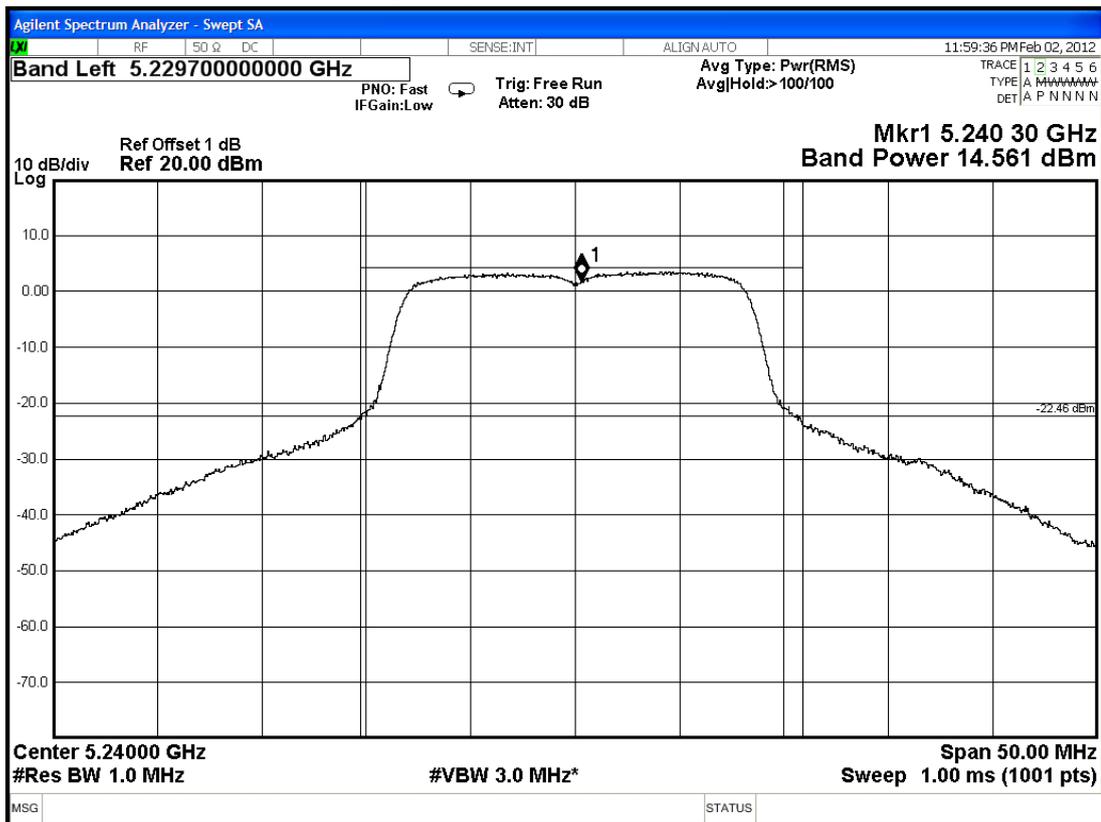
NII 802.11a (5.1GHz), Frequency: 5180MHz



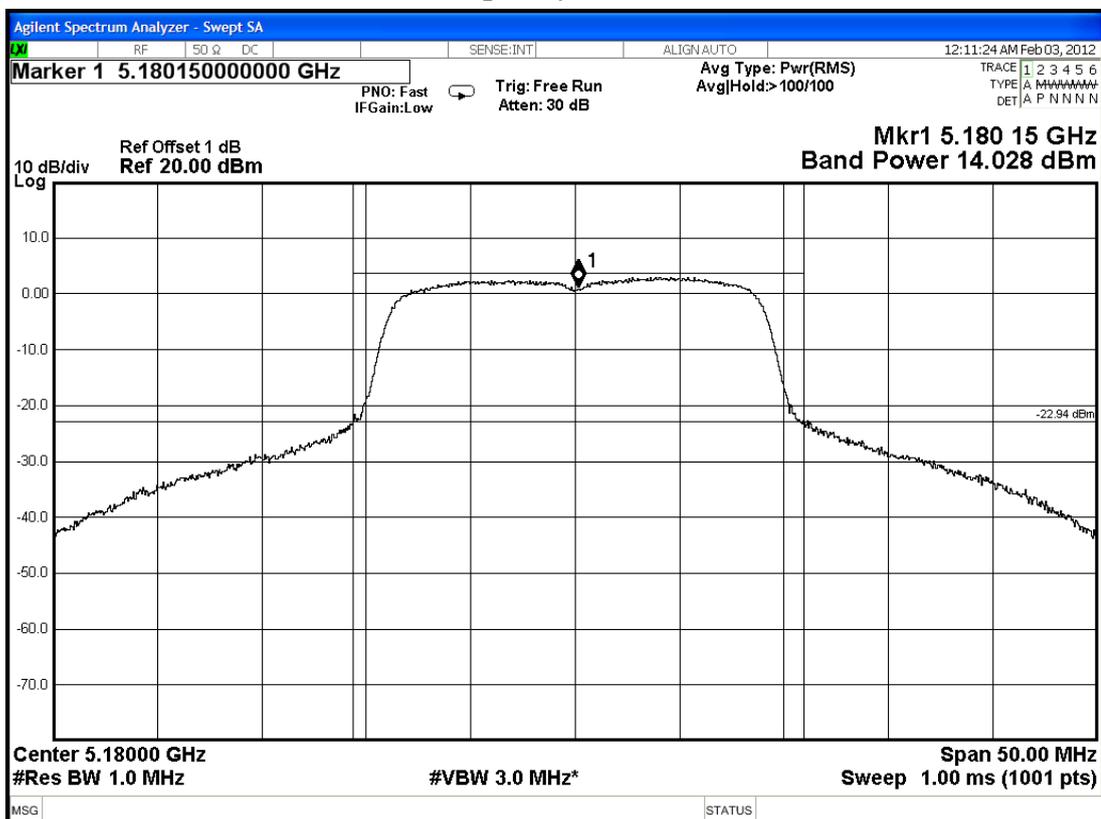
NII 802.11a (5.1GHz), Frequency: 5200MHz



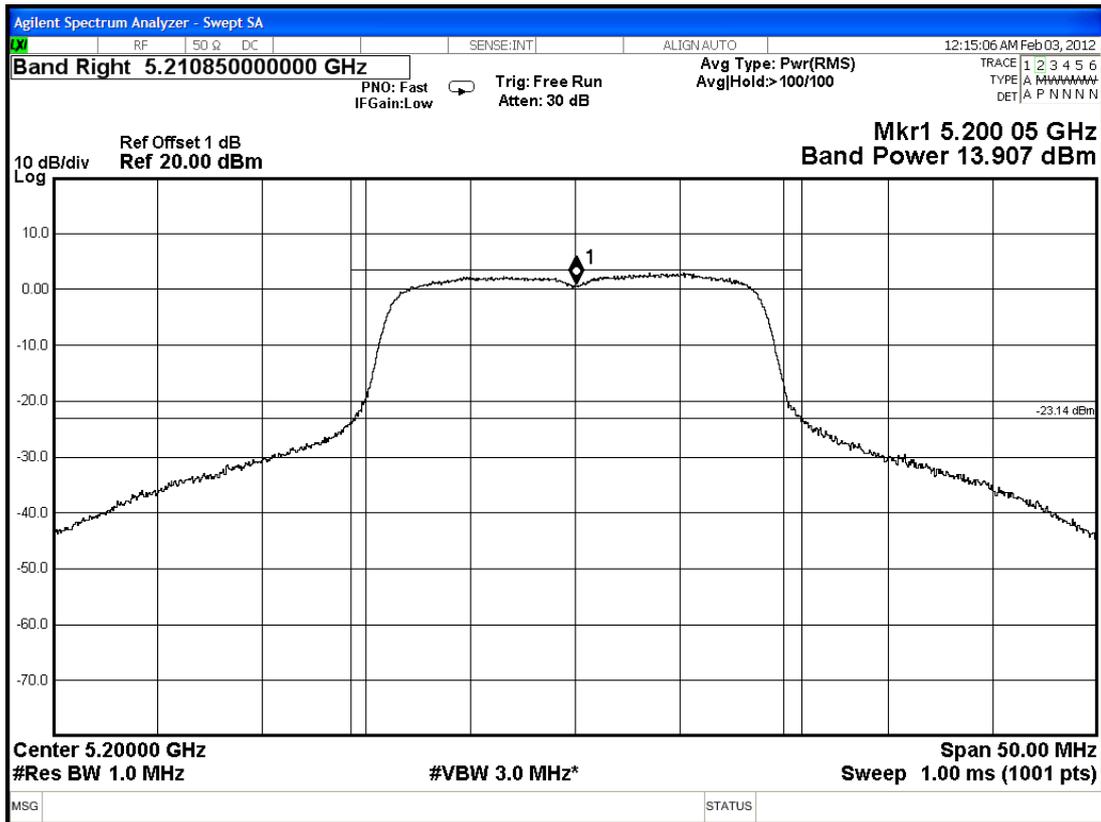
NII 802.11a (5.1GHz), Frequency: 5240MHz



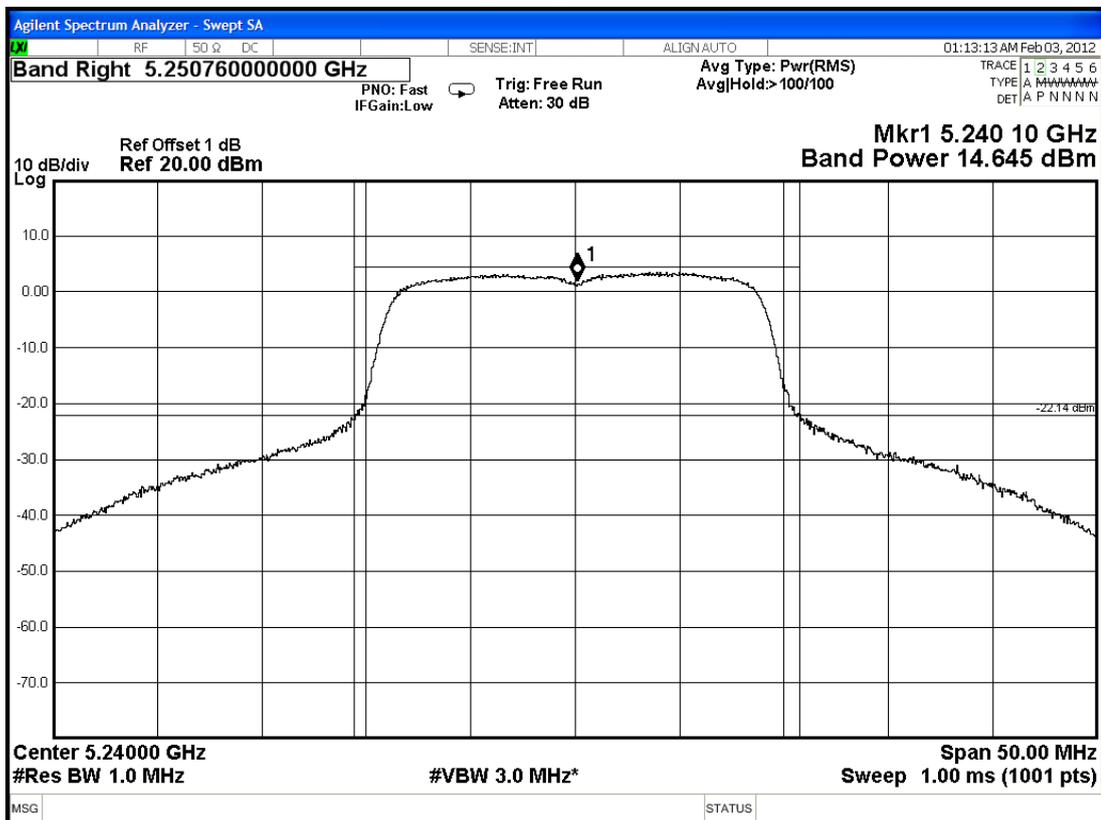
NII 802.11n-HT20 (5.1GHz), Frequency: 5180MHz



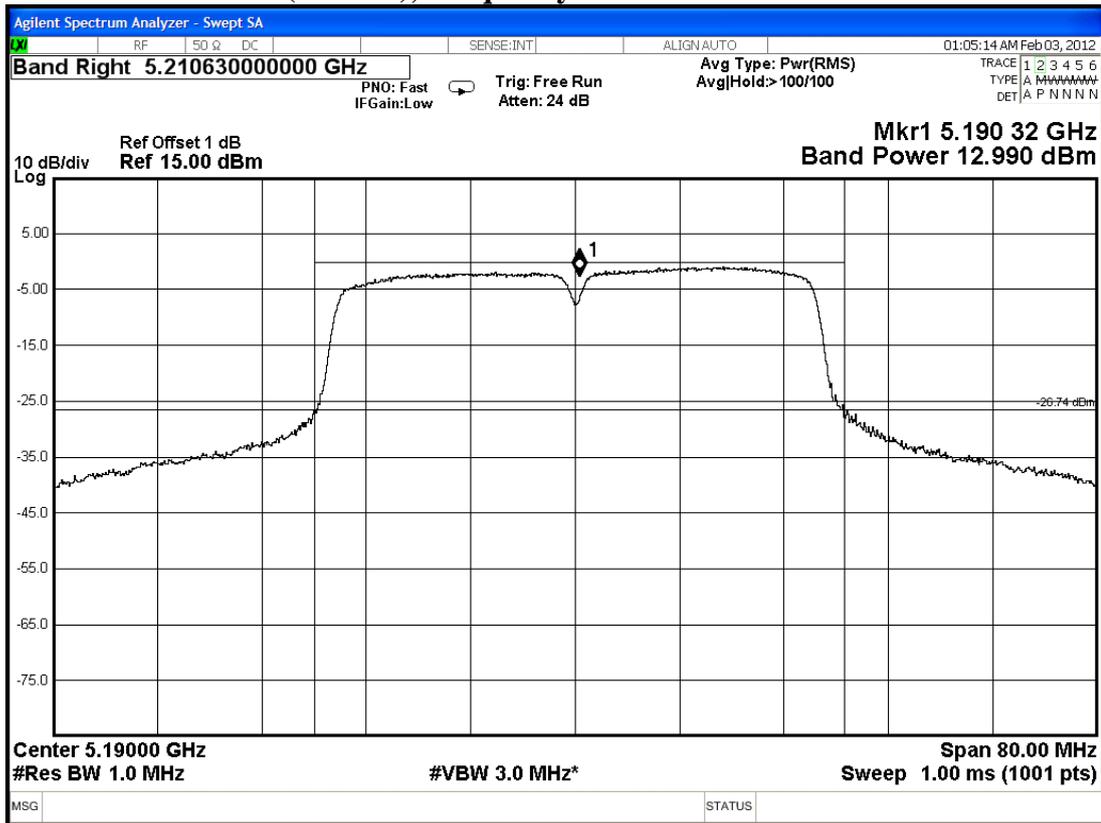
NII 802.11n-HT20 (5.1GHz), Frequency: 5200MHz



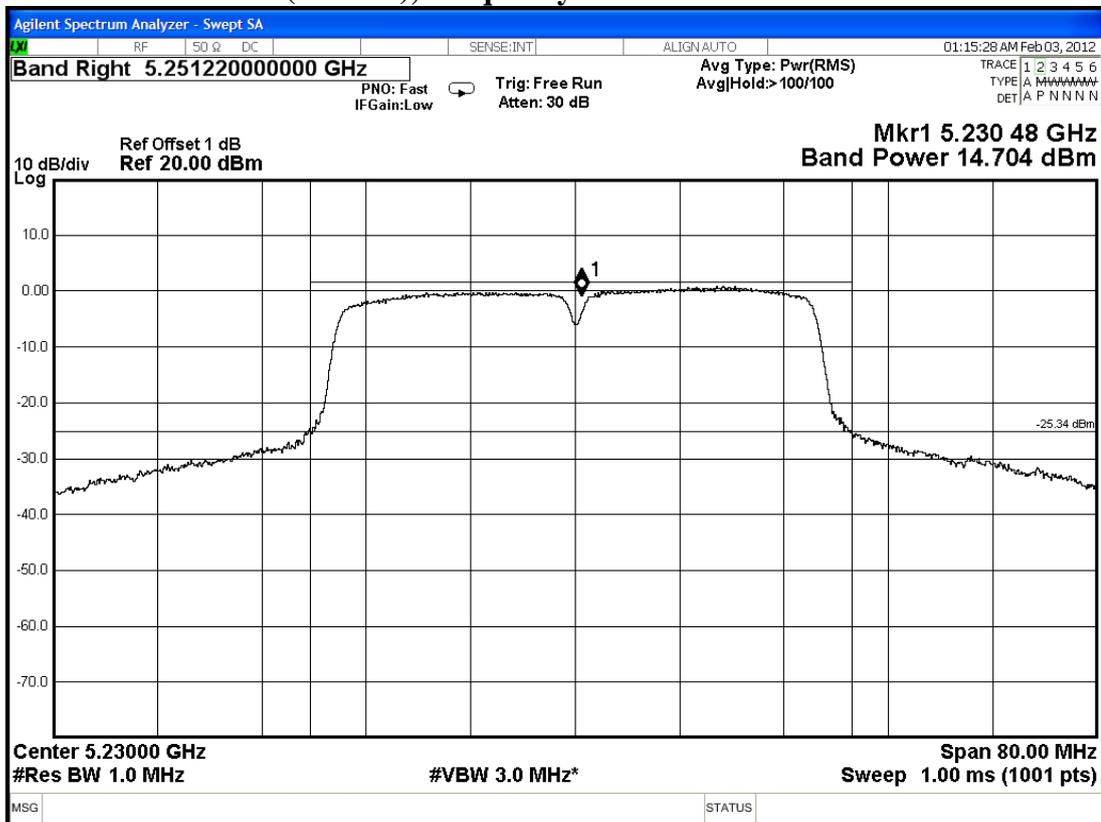
NII 802.11n-HT20 (5.1GHz), Frequency: 5240MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5190MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5230MHz



6. POWER SPECTRAL DENSITY MEASUREMENT

6.1. 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 | N9030A-544 | US51350140 | Oct. 14, 11' | Oct. 13, 12' |

6.2. Block Diagram of Test Setup

The same as section.4.2.

6.3. Specification Limits [§15.407(a)-(1), RSS-210 A9.2 (1)]

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

6.4. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

6.5. Test Procedure

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW=1MHz
3. Set VBW≥3MHz
4. Detector=RMS (i.e., power averaging), if available, Otherwise, use sample detector mode.
5. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
6. Use the peak search function on the spectrum analyzer to find the peak of the spectrum.

The measurement guideline was according to KDB789033 D01

The measurement guideline was according to RSS-Gen.

6.6. Test Results

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

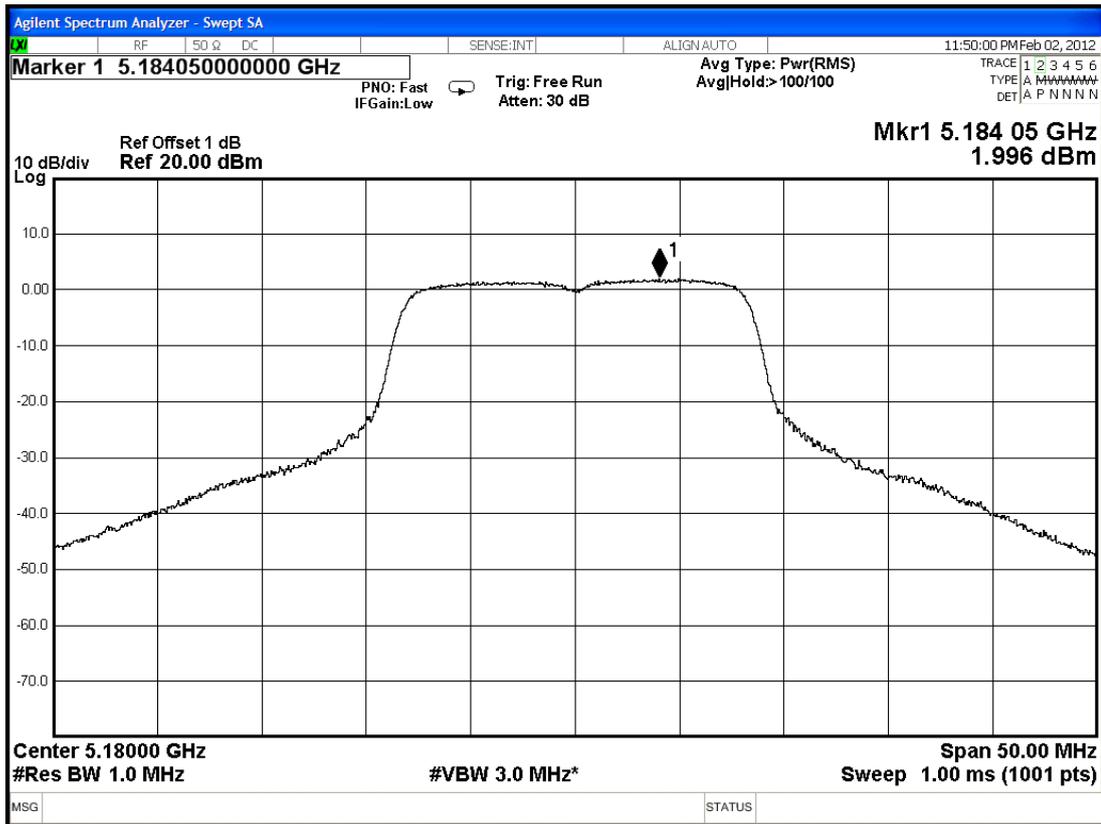
Test Date : Feb. 02, 2012 Temperature : 24°C Humidity : 52%

Test Date : Feb. 03, 2012 Temperature : 25°C Humidity : 50%

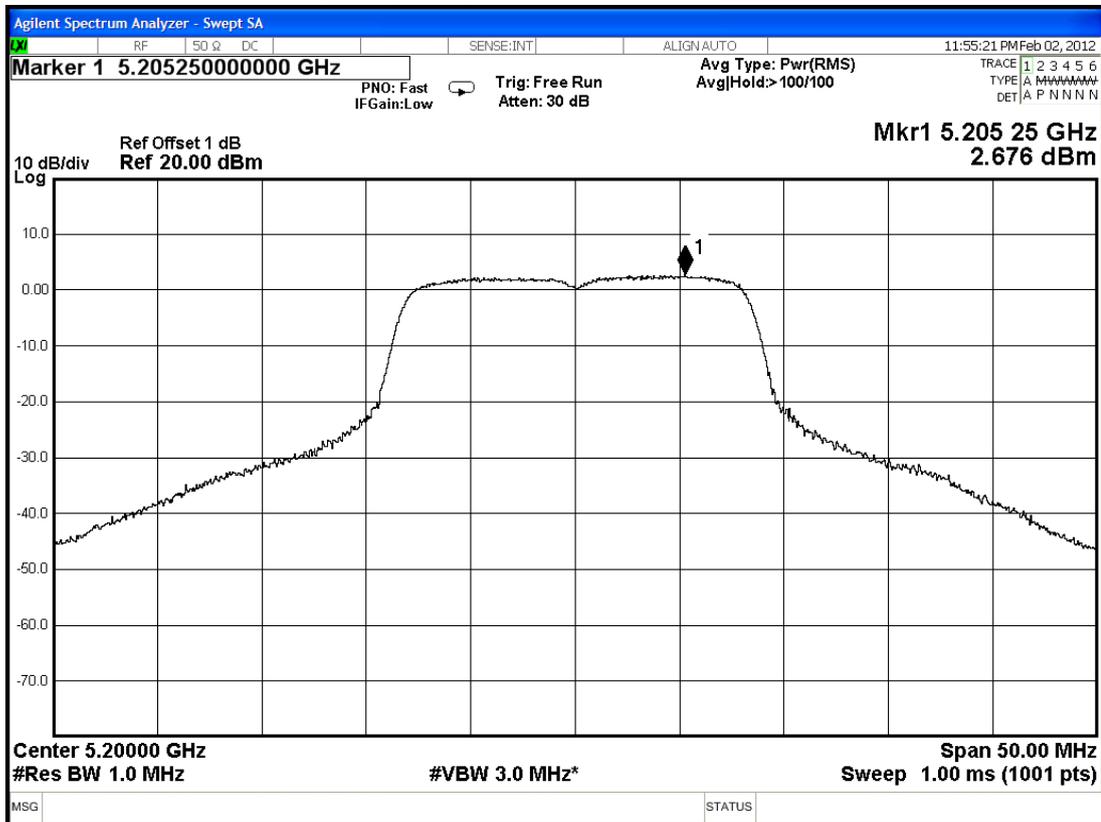
| Mode | Type of Network | Channel | Frequency | Power Spectral Density (dBm) |
|------|------------------------------|---------|-----------|------------------------------|
| 1. | NII 802.11a (5.1GHz) | CH 36 | 5180MHz | 1.996 |
| 2. | | CH 40 | 5200MHz | 2.676 |
| 3. | | CH 48 | 5240MHz | 3.546 |
| 4. | NII 802.11n-HT20 (5.1GHz) | CH 36 | 5180MHz | 2.926 |
| 5. | | CH 40 | 5200MHz | 2.720 |
| 6. | | CH 48 | 5240MHz | 3.516 |
| 7. | NII 802.11n-HT40 (5.1GHz) | CH 38 | 5190MHz | -0.901 |
| 8. | | CH 46 | 5230MHz | 0.730 |

[Limit: 4dBm]

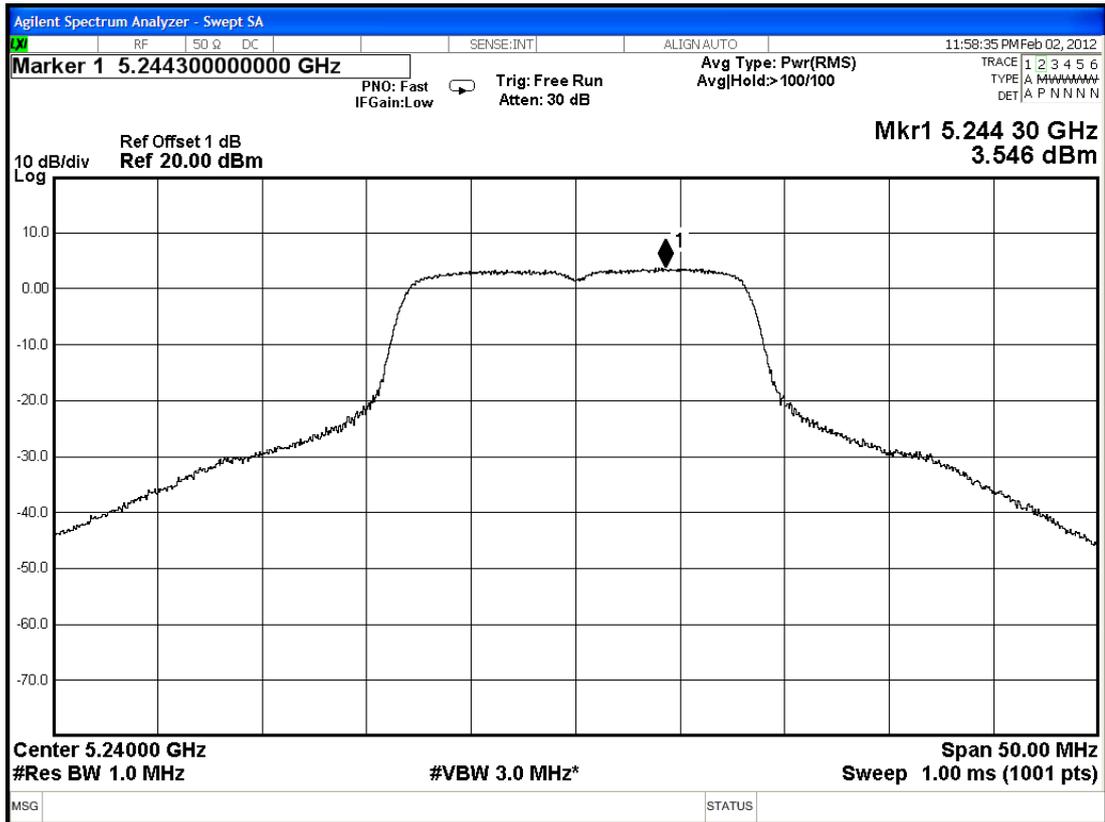
NII 802.11a (5.1GHz), Frequency: 5180MHz



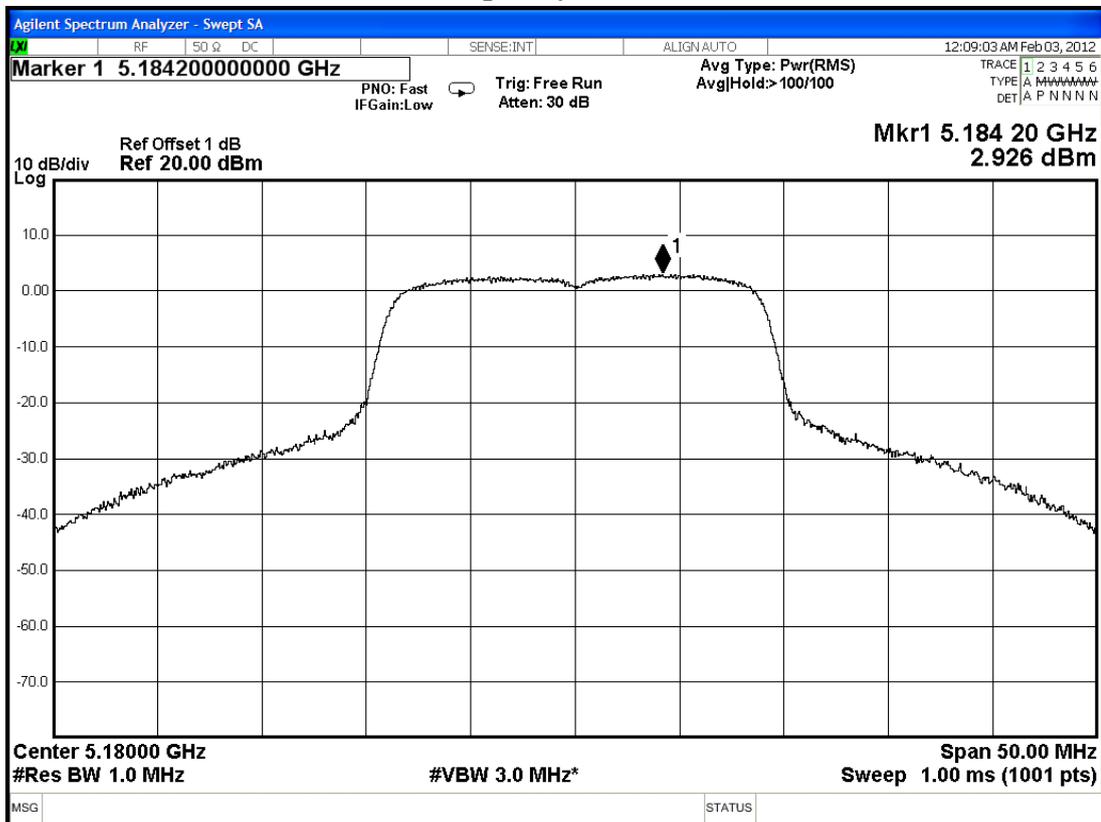
NII 802.11a (5.1GHz), Frequency: 5200MHz



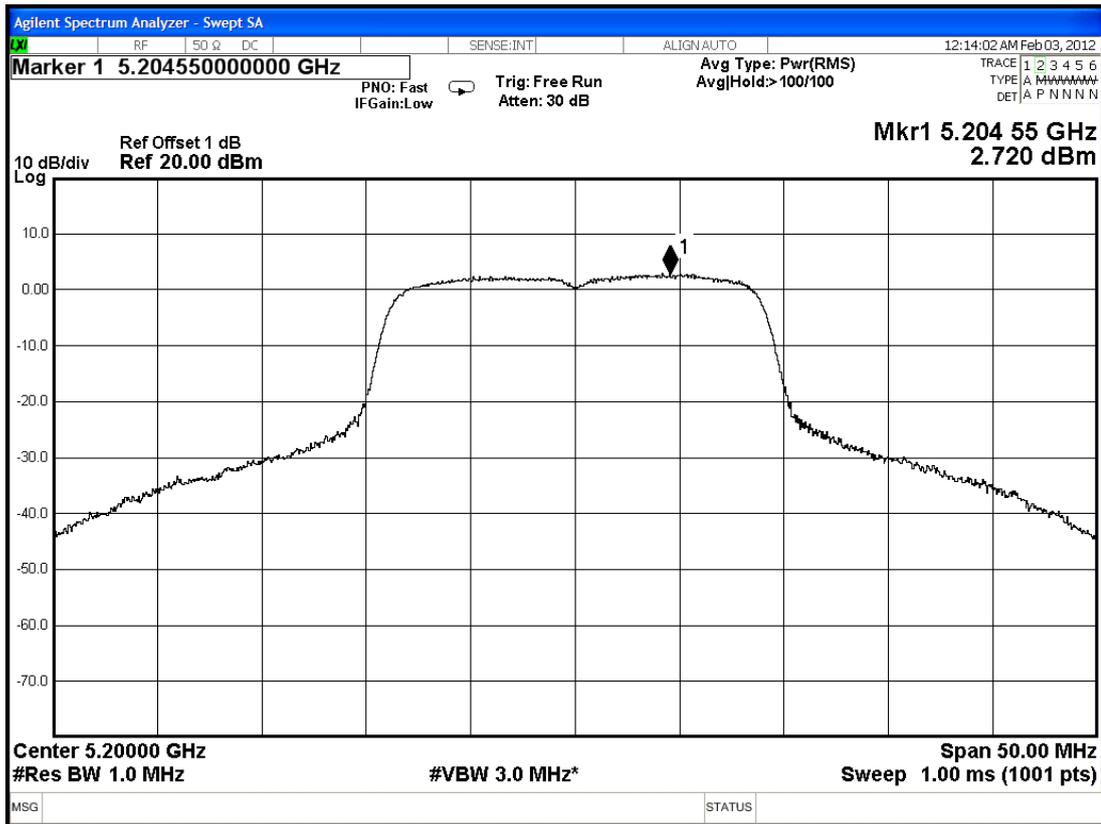
NII 802.11a (5.1GHz), Frequency: 5240MHz



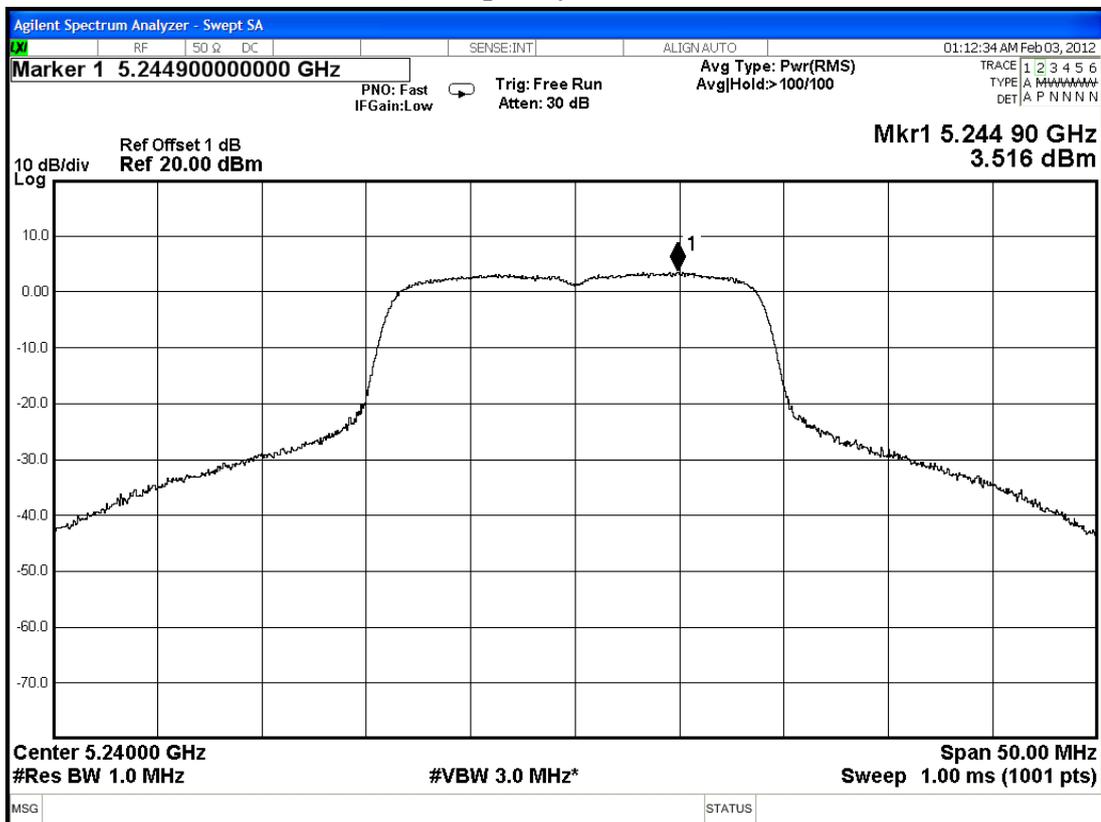
NII 802.11n-HT20 (5.1GHz), Frequency: 5180MHz



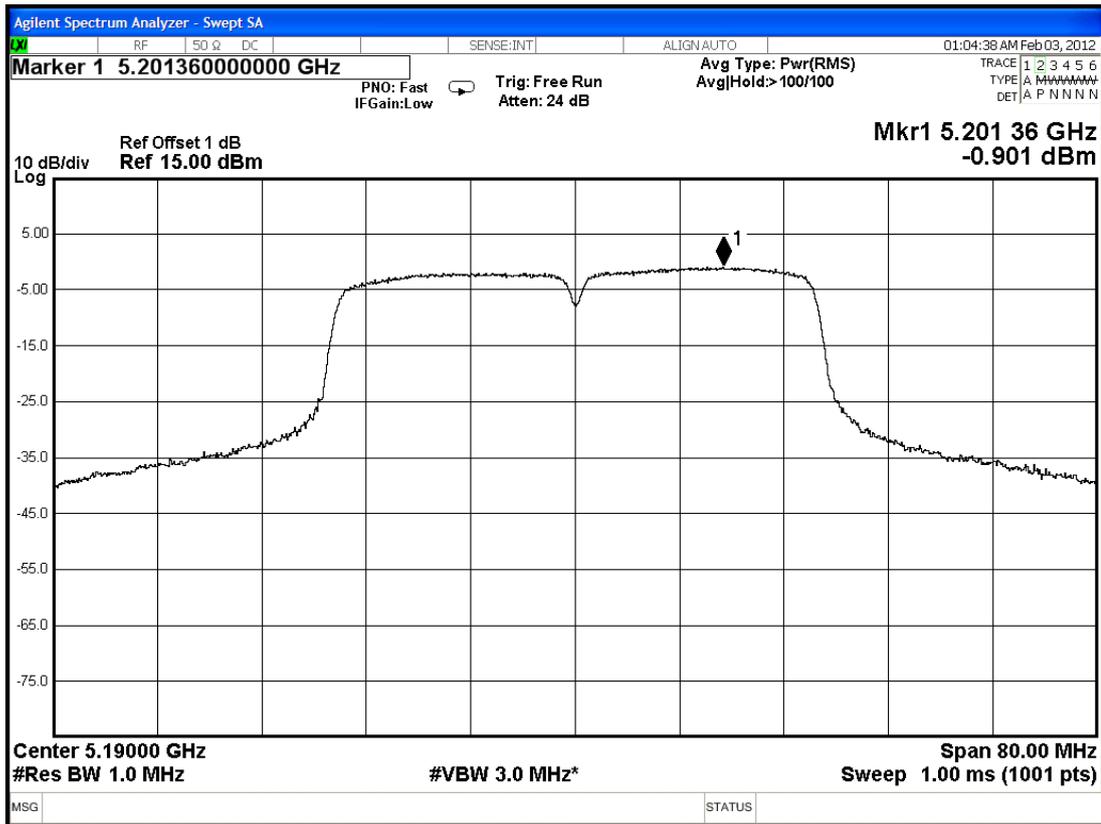
NII 802.11n-HT20 (5.1GHz), Frequency: 5200MHz



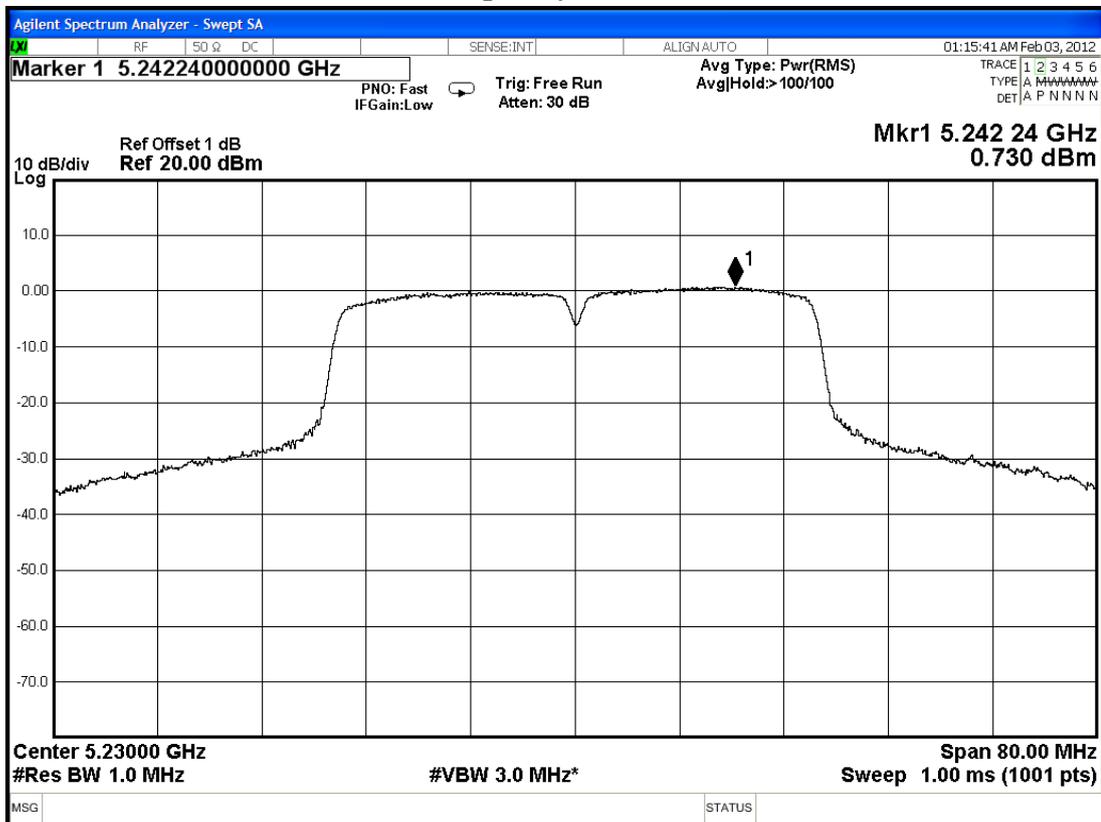
NII 802.11n-HT20 (5.1GHz), Frequency: 5240MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5190MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5230MHz



7. PEAK POWER EXCURSION 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 | N9030A-544 | US51350140 | Oct. 14, 11' | Oct. 13, 12' |

7.2. Block Diagram of Test Setup

The same as section.4.2.

7.3. 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.

7.4. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

7.5. Test Procedure

For 1st trace:

Find the maximum of the peak-max-hold spectrum.

1. Set RBW=1MHz
2. Set VBW \leq 3MHz
3. Detector=peak.
4. Trace mode=max-hold.
5. Allow the sweeps to continue until the trace stabilizes.
6. Use the peak serch function to find the peak of the spectrum.

For 2st trace:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW=1MHz
3. Set VBW \geq 3MHz
4. Detector=RMS (i.e., power averaging), if available, Otherwise, use sample detector mode.
5. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
6. Use the peak search function on the spectrum analyzer to find the peak of the spectrum.

The measurement guideline was according to KDB789033 D01

The measurement guideline was according to RSS-Gen.

7.6. Test Results

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

Test Date : Feb. 02, 2012 Temperature : 24°C Humidity : 52%

Test Date : Feb. 03, 2012 Temperature : 25°C Humidity : 50%

7.6.1. For NII 802.11a (5.1GHz)

| Mode | Type of Network | Channel | Frequency | Peak Power Excursion |
|------|-------------------------|---------|-----------|----------------------|
| 1. | NII 802.11a (5.1GHz) | CH 36 | 5180MHz | 7.657dB |
| 2. | | CH 40 | 5200MHz | 7.275dB |
| 3. | | CH 48 | 5240MHz | 7.525dB |

[Limit: 13dB]

7.6.2. For NII 802.11n-HT20 (5.1GHz)

| Mode | Type of Network | Channel | Frequency | Peak Power Excursion |
|------|------------------------------|---------|-----------|----------------------|
| 1. | NII 802.11n-HT20 (5.1GHz) | CH 36 | 5180MHz | 7.472dB |
| 2. | | CH 40 | 5200MHz | 7.501dB |
| 3. | | CH 48 | 5240MHz | 7.295dB |

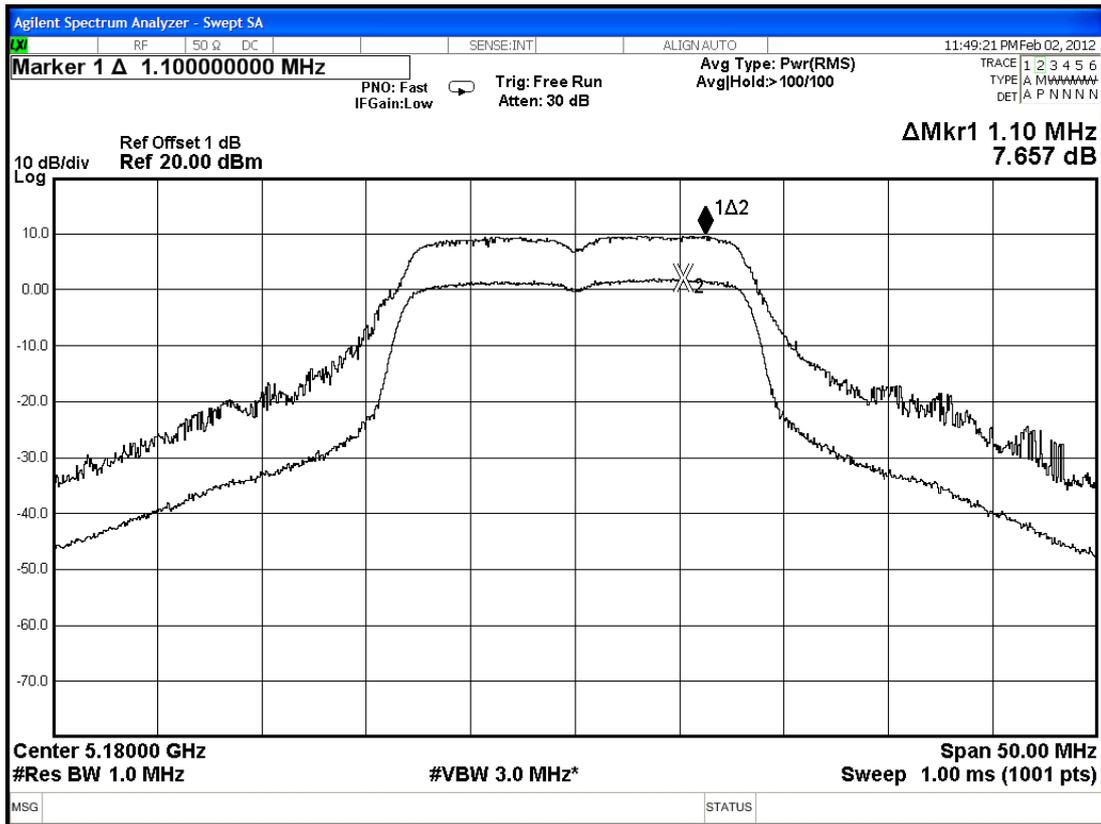
[Limit: 13dB]

7.6.3. For NII 802.11n-HT40 (5.1GHz)

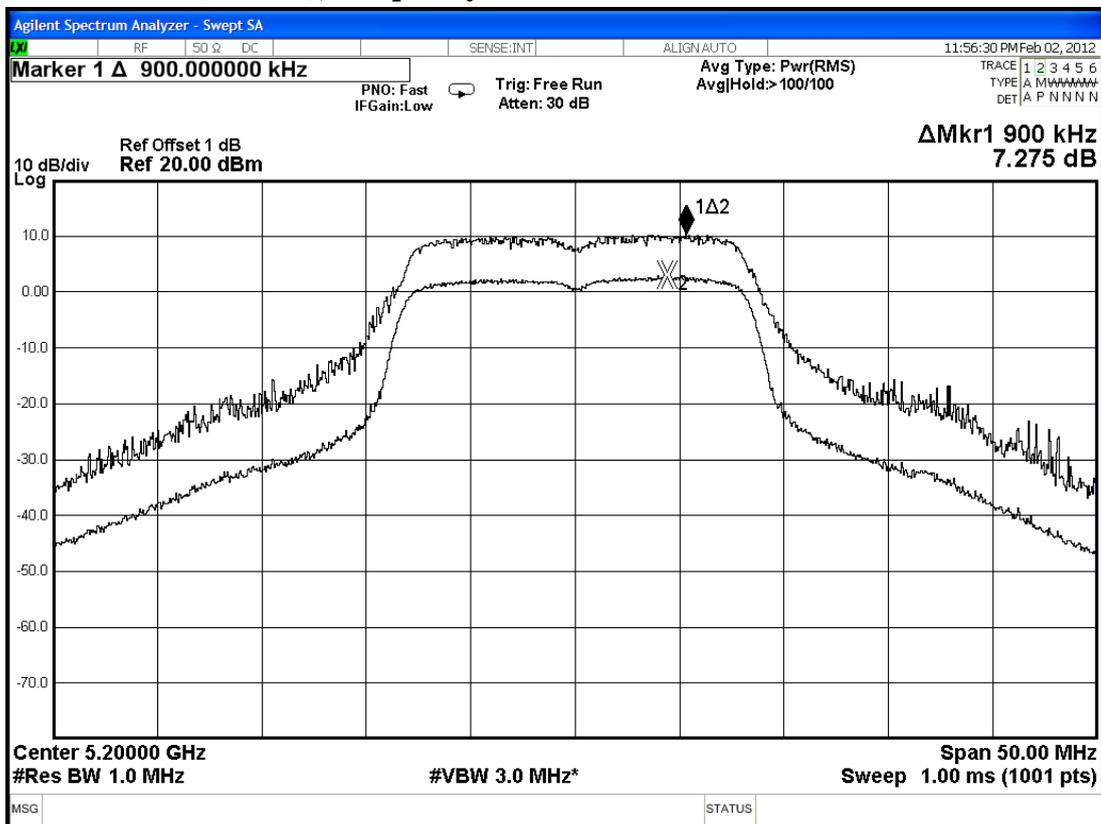
| Mode | Type of Network | Channel | Frequency | Peak Power Excursion |
|------|------------------------------|---------|-----------|----------------------|
| 1. | NII 802.11n-HT40 (5.1GHz) | CH 38 | 5190MHz | 7.701dB |
| 2. | | CH 46 | 5230MHz | 7.825dB |

[Limit: 13dB]

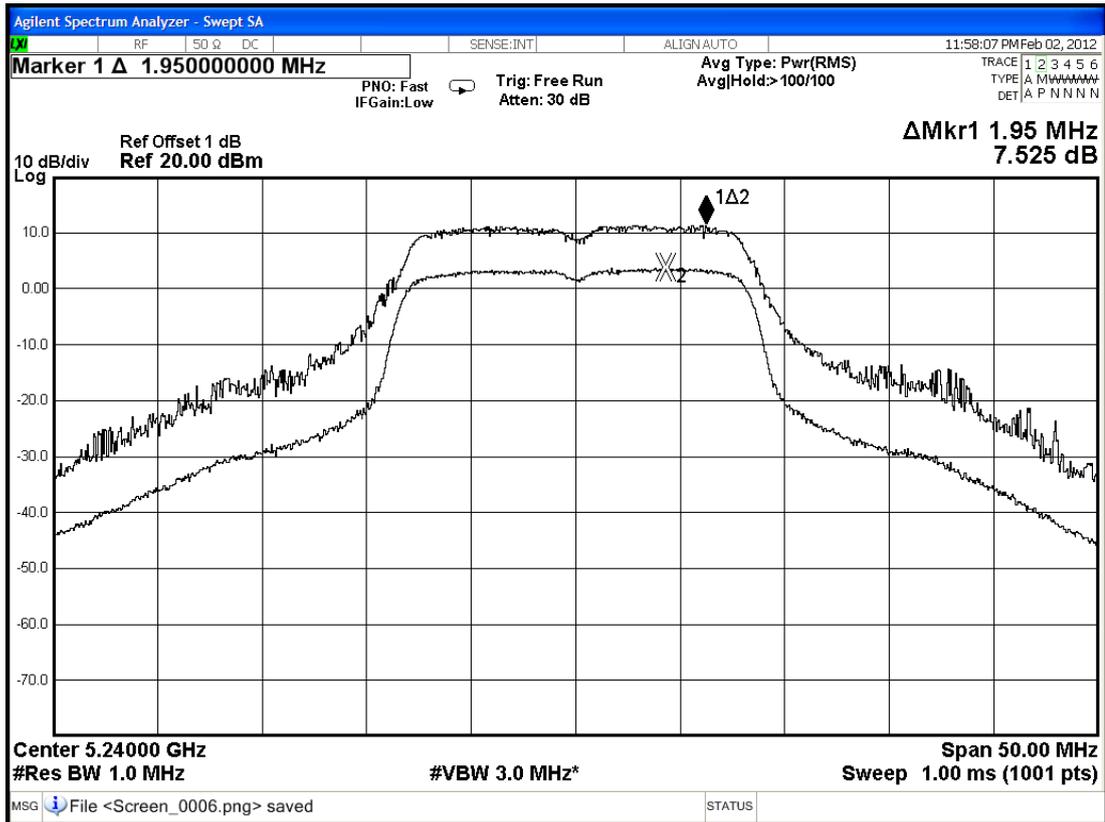
NII 802.11a (5.1GHz), Frequency: 5180MHz



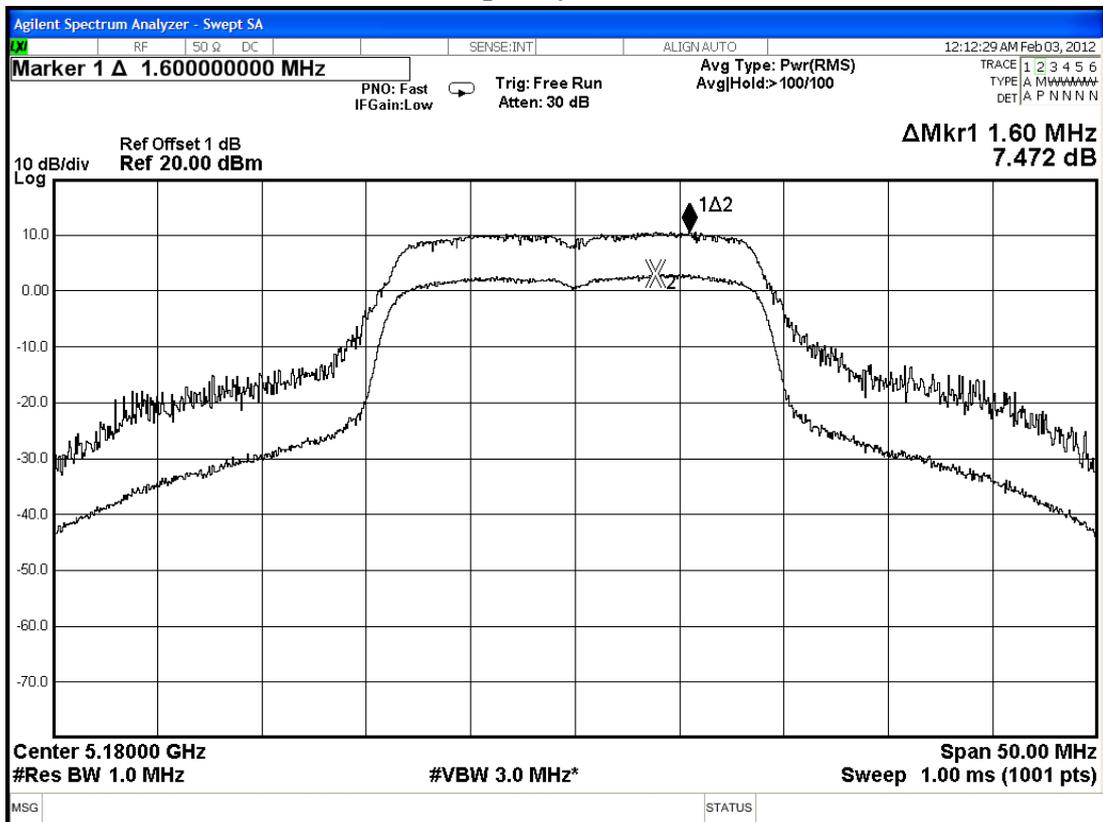
NII 802.11a (5.1GHz), Frequency: 5200MHz



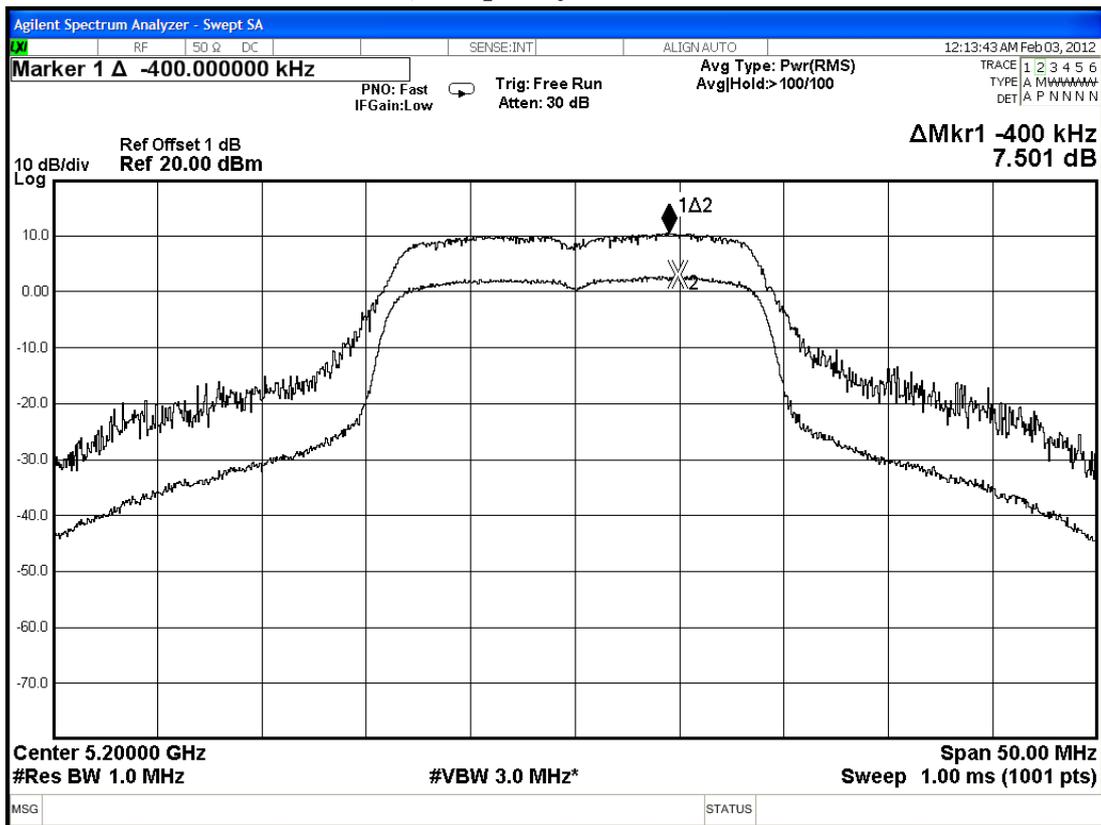
NII 802.11a (5.1GHz), Frequency: 5240MHz



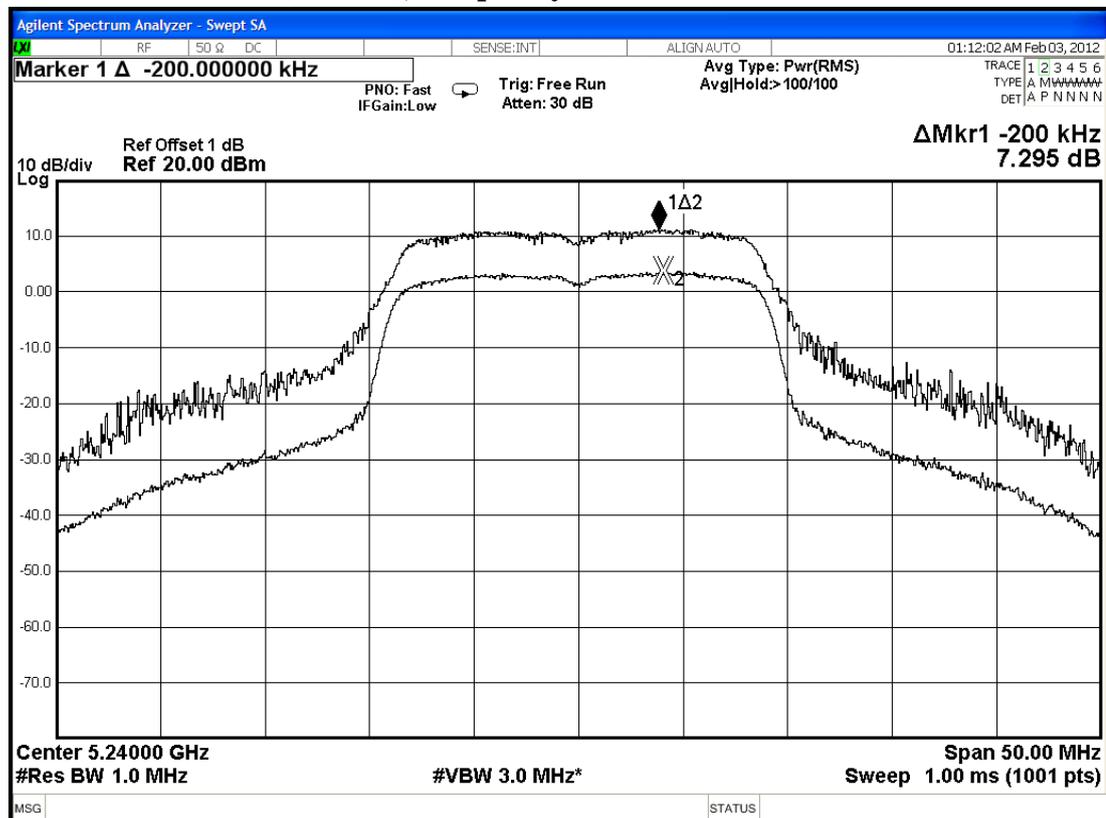
NII 802.11n-HT20 (5.1GHz), Frequency: 5180MHz



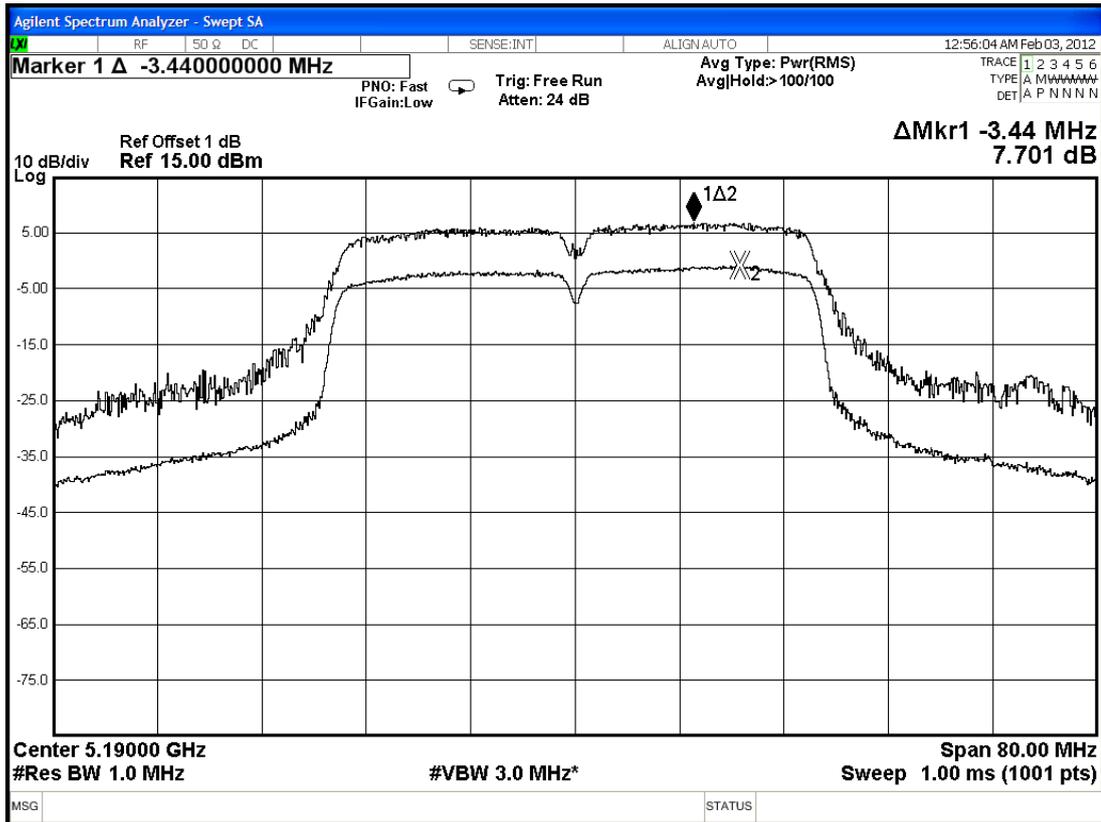
NII 802.11n-HT20 (5.1GHz), Frequency: 5200MHz



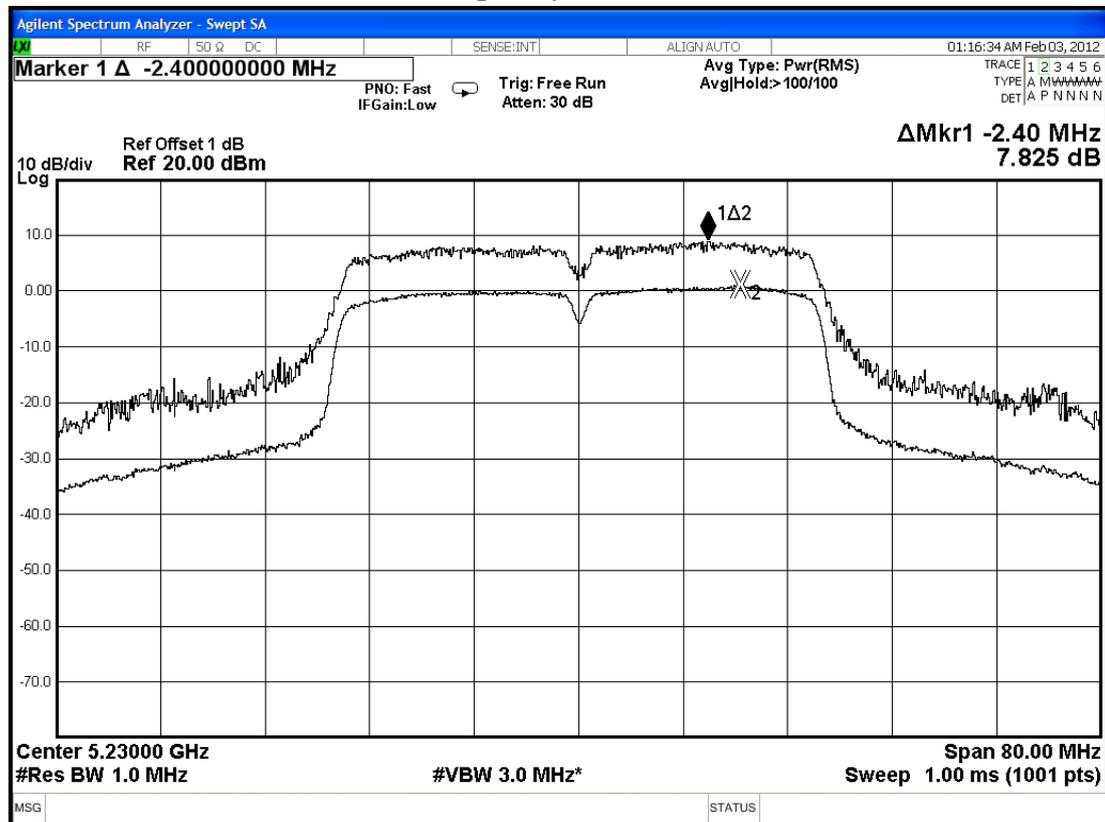
NII 802.11n-HT20 (5.1GHz), Frequency: 5240MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5190MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5230MHz



8. OCCUPIED BANDWIDTH 99% POWER MEASUREMENT

8.1. Test Equipment

The following test equipment was used during the occupied bandwidth 99% power measurement:

| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|------|-------------------|--------------|------------|------------|--------------|--------------|
| 1. | Spectrum Analyzer | Agilent | N9030A-544 | US51350140 | Oct. 14, 11' | Oct. 13, 12' |

8.2. Block Diagram of Test Setup

The same as section.4.2.

8.3. Specification [RSS-Gen §4.6.1]

The emission bandwidth may be taken as the bandwidth within which is 99% of the transmitter output power. The 20 dB bandwidth may also be used instead, when the spectral density has decreased by 20 dB from the in band spectral density. For the determination of the 20 dB bandwidth, the measurement bandwidth should be in the order of 1.0% of the emission bandwidth and VBW=3 times RBW.

8.4. Operating Condition of EUT

The test program “hyper terminal” was used to enable the EUT to transmit data at different channel frequency individually.

8.5. Test Procedure

The RF output of EUT was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using 20kHz RBW and 62kHz VBW, set span = 15MHz and sweep time = auto.

The measurement guideline was according to RSS-Gen.

8.6. Test Results

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

Test Date : Mar. 06, 2012 Temperature : 26°C Humidity : 55%

8.6.1. For NII 802.11a (5.1GHz)

| Mode | Type of Network | Channel | Frequency | Occupied Bandwidth |
|------|-------------------------|---------|-----------|--------------------|
| 1. | NII 802.11a (5.1GHz) | CH 36 | 5180MHz | 16.362MHz |
| 2. | | CH 40 | 5200MHz | 16.405MHz |
| 3. | | CH 48 | 5240MHz | 16.430MHz |

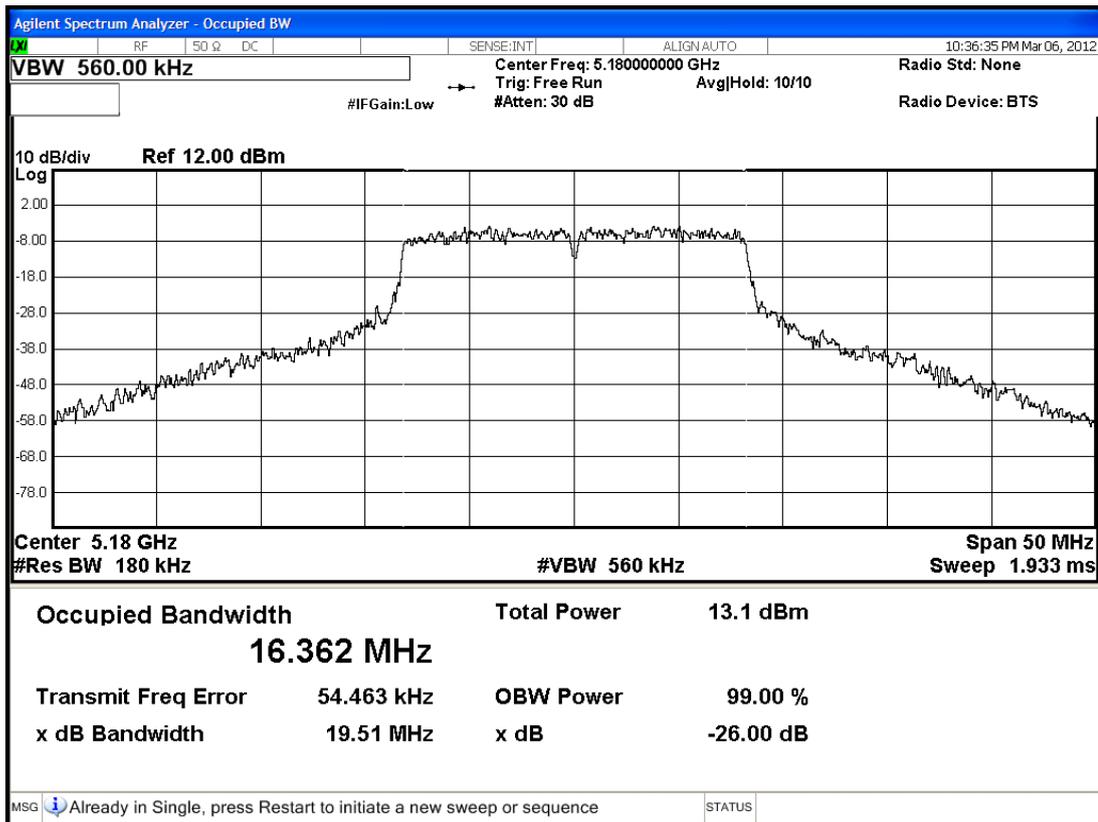
8.6.2. For NII 802.11n-HT20 (5.1GHz)

| Mode | Type of Network | Channel | Frequency | Occupied Bandwidth |
|------|---------------------------------|---------|-----------|--------------------|
| 1. | NII 802.11n-HT20 (5.1GHz) | CH 36 | 5180MHz | 17.592MHz |
| 2. | | CH 40 | 5200MHz | 17.585MHz |
| 3. | | CH 48 | 5240MHz | 17.594MHz |

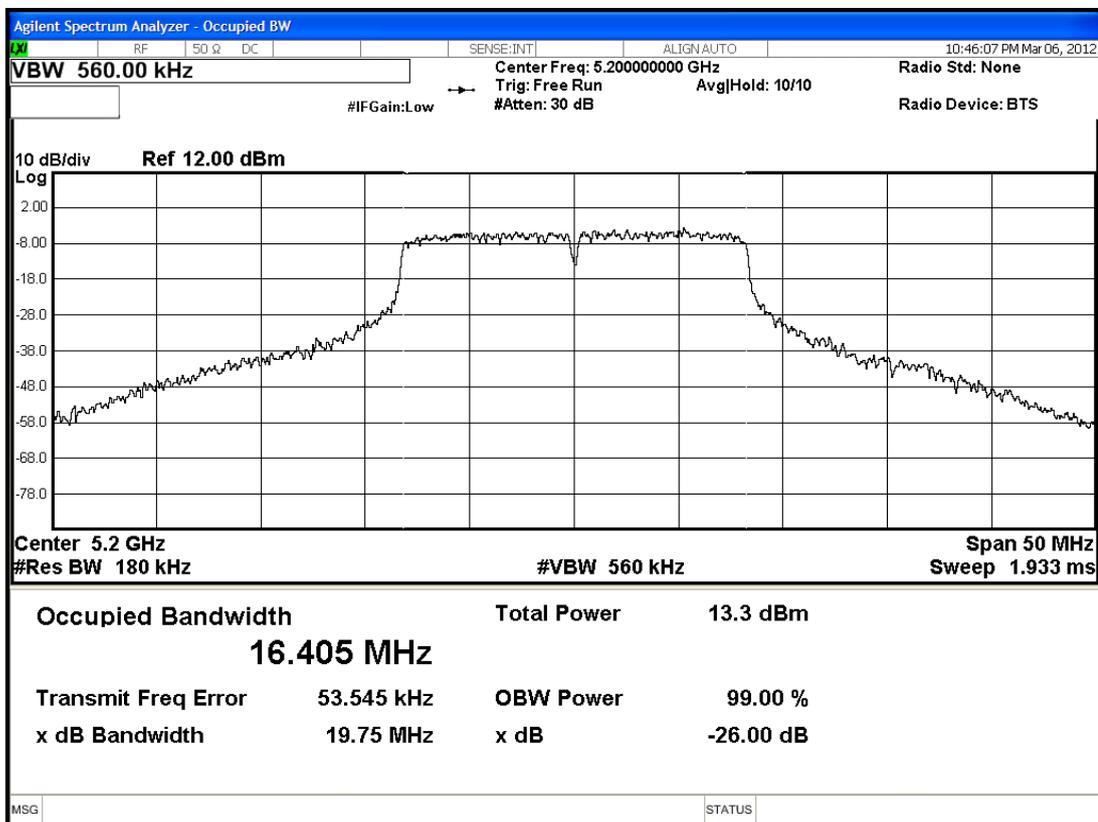
8.6.3. For NII 802.11n-HT40 (5.1GHz)

| Mode | Type of Network | Channel | Frequency | Occupied Bandwidth |
|------|---------------------------------|---------|-----------|--------------------|
| 1. | NII 802.11n-HT40 (5.1GHz) | CH 38 | 5190MHz | 36.063MHz |
| 2. | | CH 46 | 5230MHz | 36.111MHz |

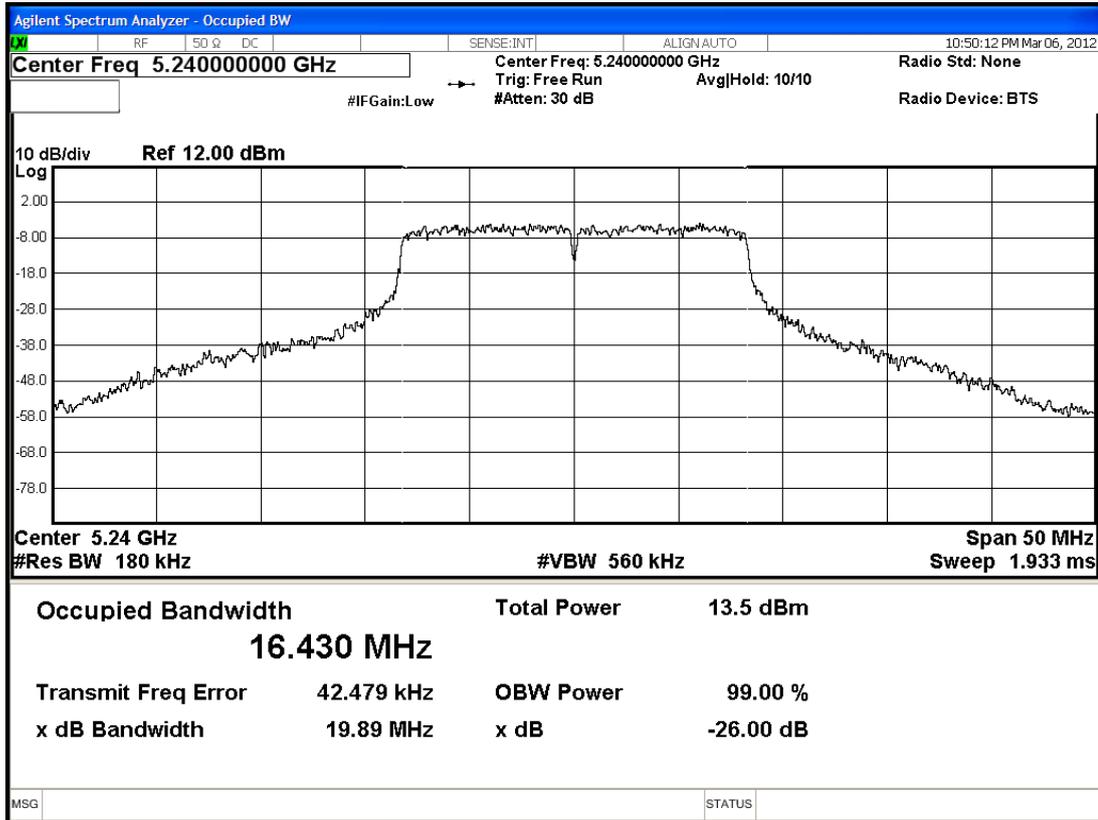
NII 802.11a (5.1GHz), Frequency: 5180MHz



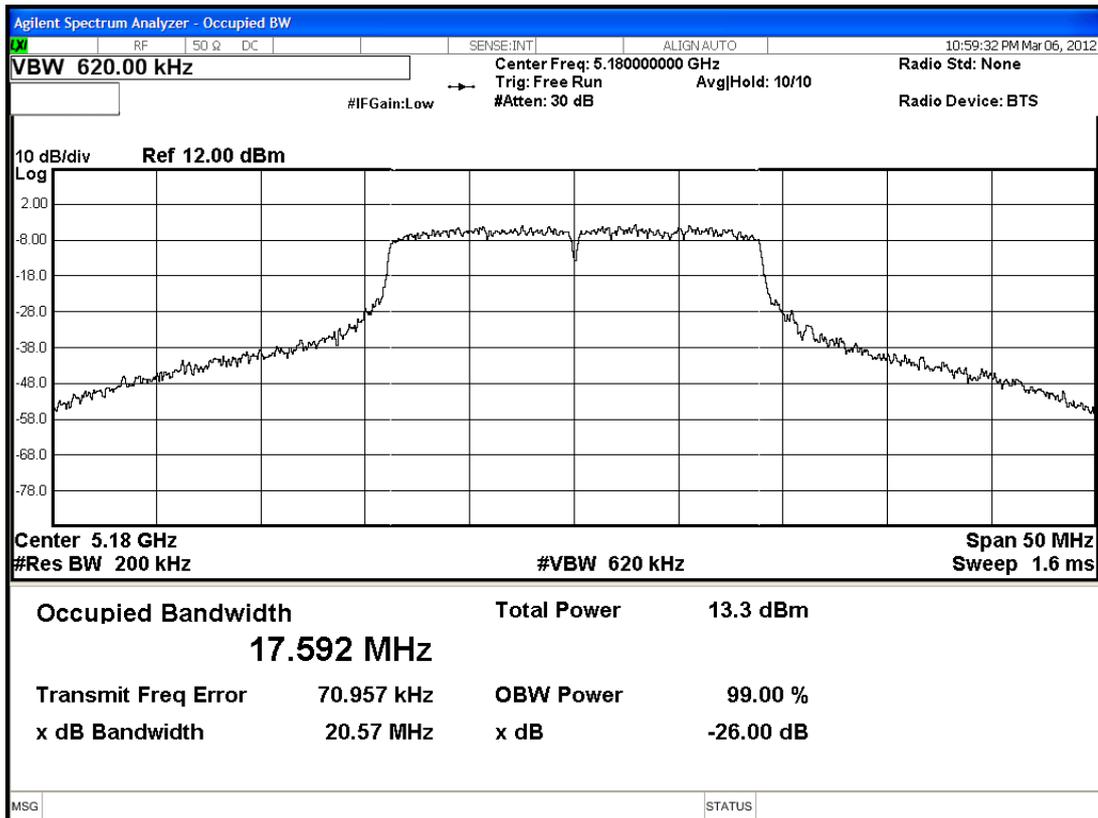
NII 802.11a (5.1GHz), Frequency: 5200MHz



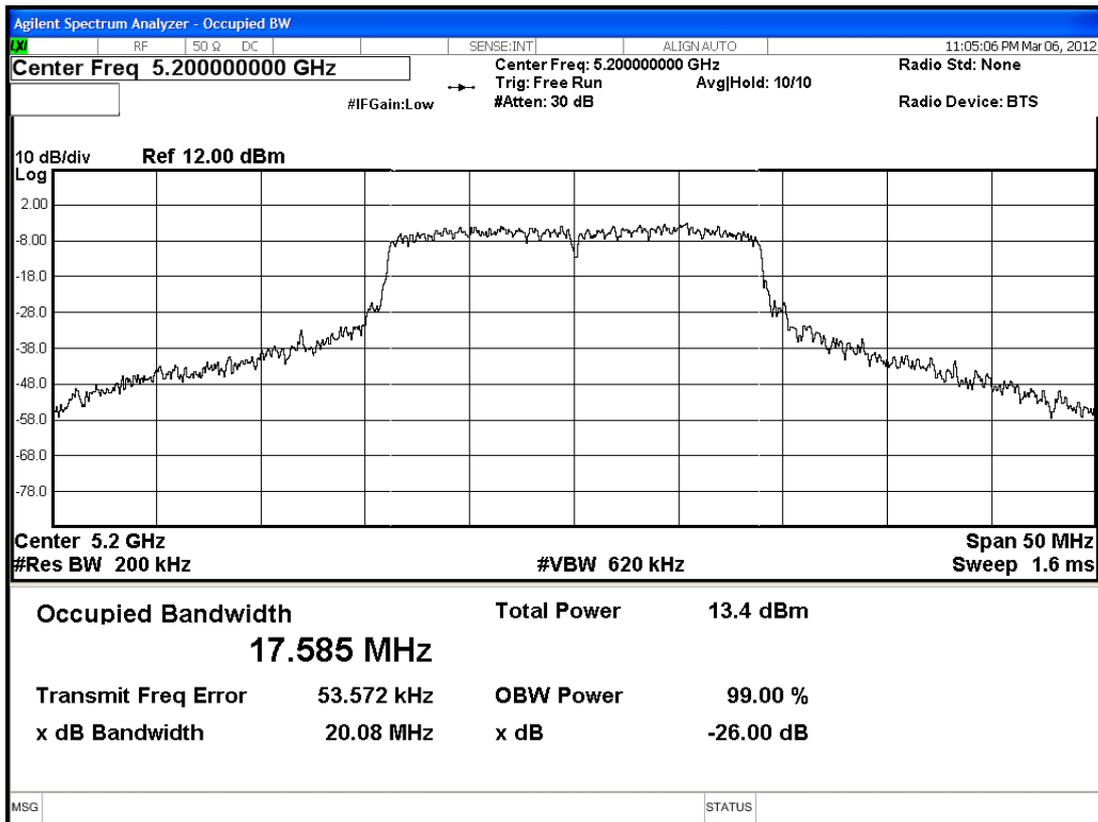
NII 802.11a (5.1GHz), Frequency: 5240MHz



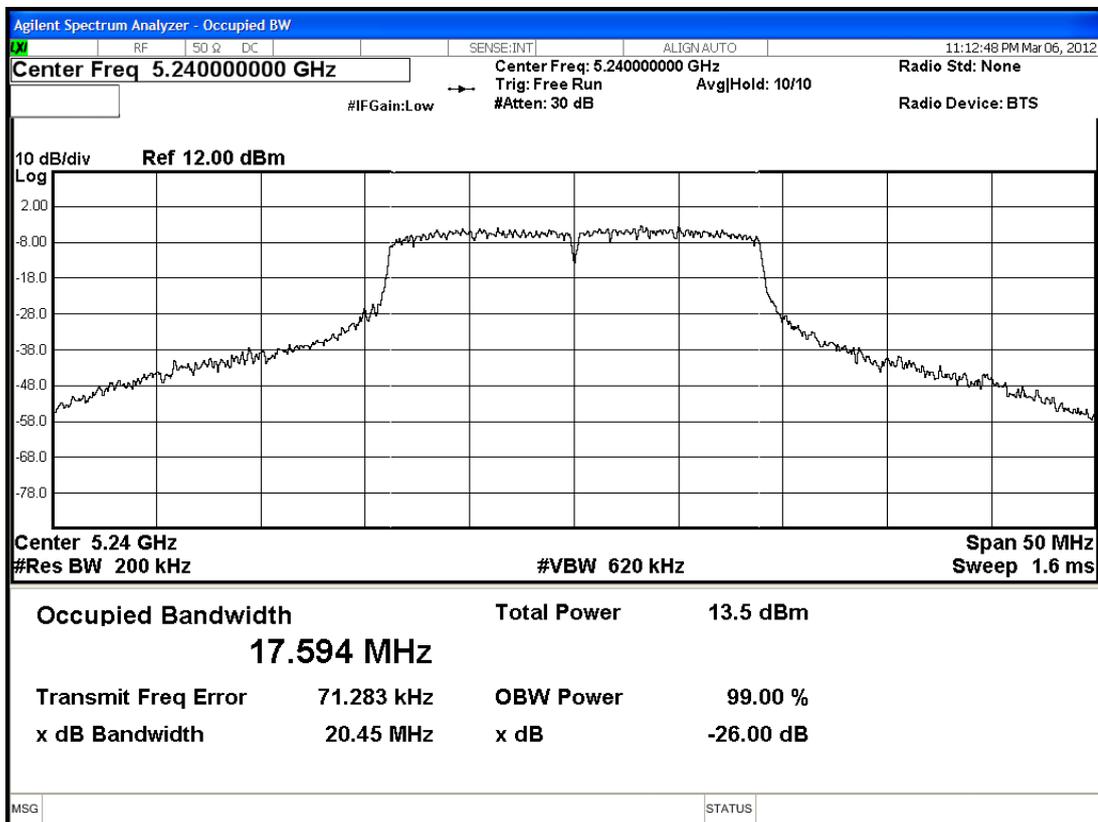
NII 802.11n-HT20 (5.1GHz), Frequency: 5180MHz



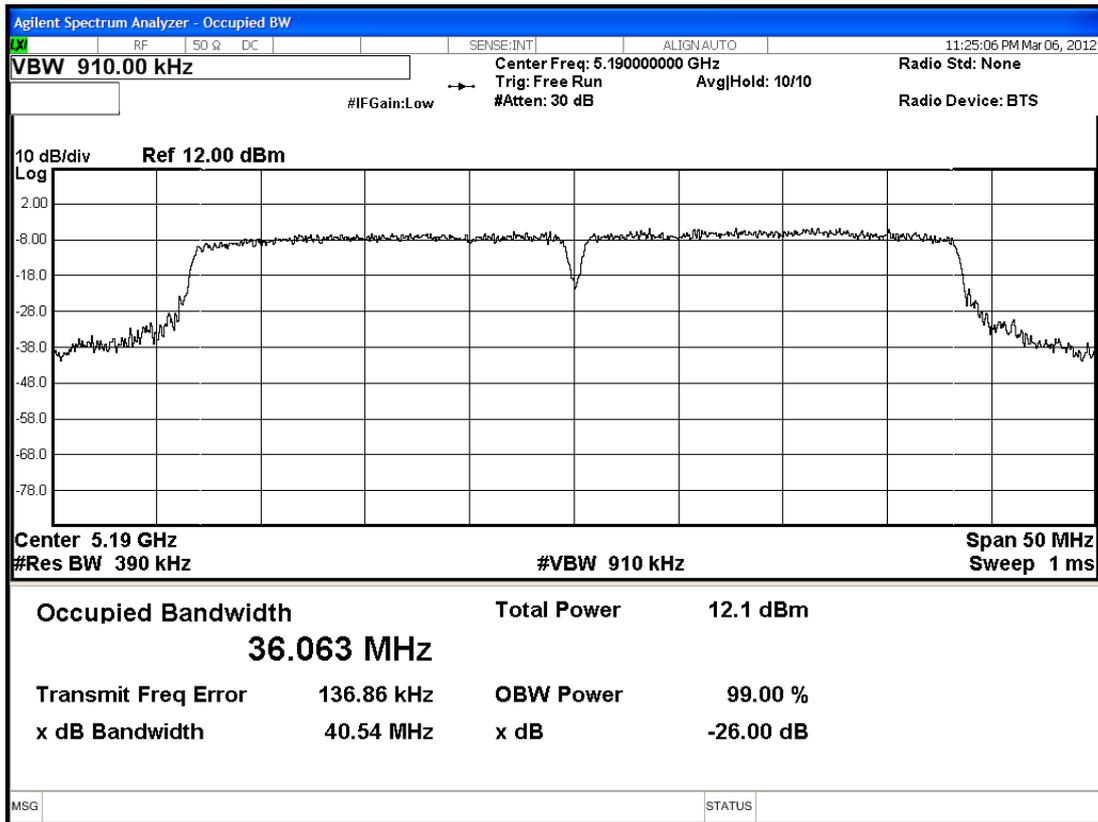
NII 802.11n-HT20 (5.1GHz), Frequency: 5200MHz



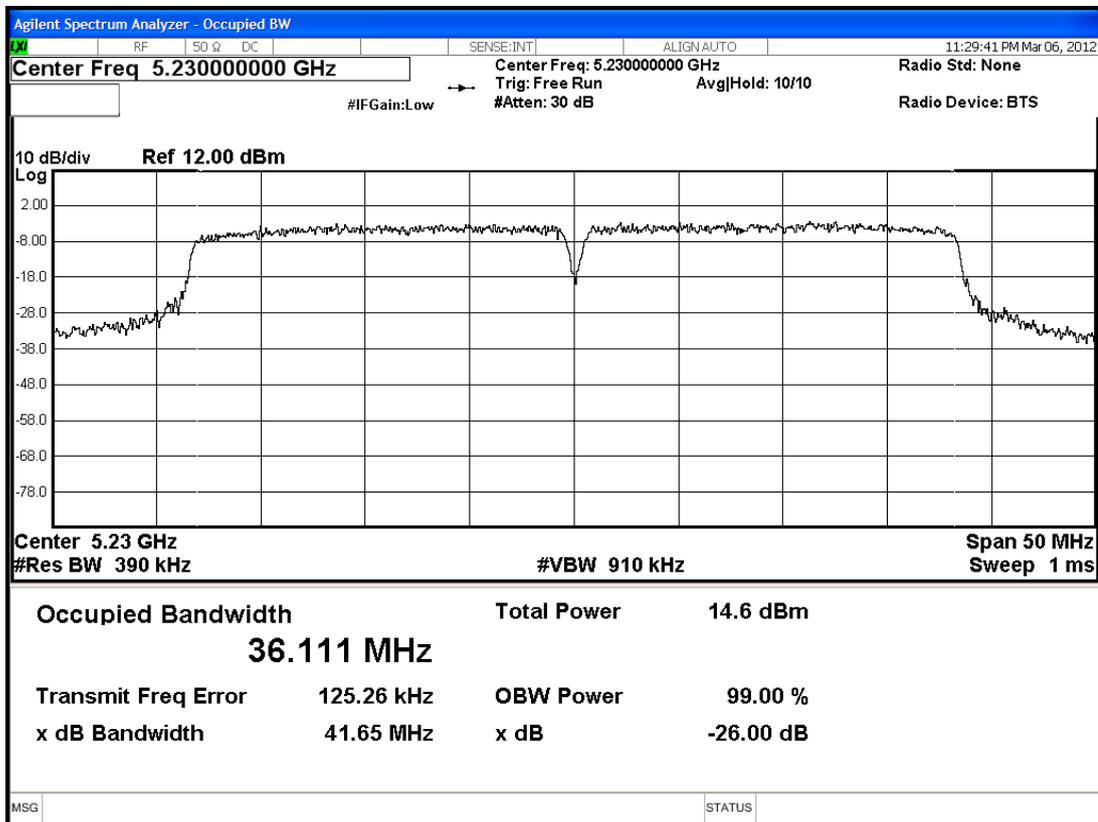
NII 802.11n-HT20 (5.1GHz), Frequency: 5240MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5190MHz



NII 802.11n-HT40 (5.1GHz), Frequency: 5230MHz



9. DEVIATION TO TEST SPECIFICATIONS

【NONE】