# FCC REPORT

| | |
|---|---|
| **Applicant:** | Dongguan Yuanfeng Technology Co., Ltd. |
| **Address of Applicant:** | No.62, South Fumin Road, Fumin Industrial Park, Dalang Town, Dongguan City, Guangdong, P.R. China |
| **Equipment Under Test (EUT)** | |
| Product Name: | Tablet PC |
| Model No.: | MW13-1003, MW13-1001, MW13-1002, MW13-1004, MW13-1005, MW13-1006, MW13-1007, MW13-1008, MW13-1009 |
| **FCC ID:** | YNGMW13-1003 |
| **Applicable standards:** | FCC CFR Title 47 Part 15 Subpart C Section 15.247:2010 |
| **Date of sample receipt:** | October 08, 2012 |
| **Date of Test:** | October 10-15, 2012 |
| **Date of report issue:** | October 15, 2012 |
| **Test Result :** | PASS * |

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo
Laboratory Manager

## 2 Version

| Version No. | Date | Description |
|---|---|---|
| *00* | *October 15, 2012* | *Original* |
| | | |
| | | |
| | | |
| | | |

***Prepared By:***  ***Date:*** *October 15, 2012*

***Project Engineer***

***Check By:***  ***Date:*** *October 15, 2012*

***Reviewer***

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# 4 Test Summary

| Test Item | Section in CFR 47 | Result |
|---|---|---|
| Antenna requirement | 15.203/15.247 (c) | Pass |
| AC Power Line Conducted Emission | 15.207 | Pass |
| Conducted Peak Output Power | 15.247 (b)(3) | Pass |
| Channel Bandwidth | 15.247 (a)(2) | Pass |
| Power Spectral Density | 15.247 (e) | Pass |
| Band Edge | 15.247(d) | Pass |
| Spurious Emission | 15.205/15.209 | Pass |

*Pass: The EUT complies with the essential requirements in the standard.*

# 5 General Information

## 5.1 Client Information

| | |
|---|---|
| Applicant: | Dongguan Yuanfeng Technology Co., Ltd. |
| Address of Applicant: | No.62, South Fumin Road, Fumin Industrial Park, Dalang Town, Dongguan City, Guangdong, P.R. China |
| Manufacturer : | Dongguan Yuanfeng Technology Co., Ltd. |
| Address of Manufacturer : | No.62, South Fumin Road, Fumin Industrial Park, Dalang Town, Dongguan City, Guangdong, P.R. China |
| Factory: | Dongguan Yuanfeng Technology Co., Ltd. |
| Address of Factory : | No.62, South Fumin Road, Fumin Industrial Park, Dalang Town, Dongguan City, Guangdong, P.R. China |

## 5.2 General Description of E.U.T.

| | |
|---|---|
| Product Name: | Tablet PC |
| Model No.: | MW13-1003, MW13-1001, MW13-1002, MW13-1004, MW13-1005, MW13-1006, MW13-1007, MW13-1008, MW13-1009 |
| Remark: | Only the Model No. MW13-1003 was tested, since the electrical circuit design, PCB layout, Electrical Parts and Figure are identical to the basic model, except the outer decoration. |
| Operation Frequency: | 2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20))<br>2422MHz~2452MHz (802.11n(HT40)) |
| Channel numbers: | 11 for 802.11b/802.11g /802.11n(HT20)<br>7 for 802.11(HT40) |
| Channel separation: | 5MHz |
| Modulation technology: (IEEE 802.11b) | Direct Sequence Spread Spectrum (DSSS) |
| Modulation technology: (IEEE 802.11g/802.11n) | Orthogonal Frequency Division Multiplexing(OFDM) |
| Antenna Type: | Integral Antenna |
| Antenna gain: | 2.65dBi (declare by Applicant) |
| Power supply: | Model No. HNC050200X<br>Input: AC 100-240V 50/60Hz 0.35A<br>Output: DC 5V 2A<br>DC 3.7V Li-ion Battery |

| Operation Frequency each of channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 1 | 2412MHz | 4 | 2427MHz | 7 | 2442MHz | 10 | 2457MHz |
| 2 | 2417MHz | 5 | 2432MHz | 8 | 2447MHz | 11 | 2462MHz |
| 3 | 2422MHz | 6 | 2437MHz | 9 | 2452MHz | | |

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

802.11b/802.11g/802.11n(HT20)

| Channel | Frequency |
|---|---|
| The lowest channel | 2412MHz |
| The middle channel | 2437MHz |
| The Highest channel | 2462MHz |

802.11n(HT40)

| Channel | Frequency |
|---|---|
| The lowest channel | 2422MHz |
| The middle channel | 2437MHz |
| The Highest channel | 2452MHz |

## 5.3 Test mode

| | |
|---|---|
| Transmitting mode | Keep the EUT in continuously transmitting mode |

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

**Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.**

| Mode | Data rate |
|---|---|
| 802.11b | 1Mbps |
| 802.11g | 6Mbps |
| 802.11n(HT20) | 6.5Mbps |
| 802.11n(HT40) | 13Mbps |

**Final Test Mode:**

According to ANSI C63.4 standards, the test results are both the “worst case” and “worst setup” 1Mbps for 802.11b, 6Mbps for 802.11g , 6.5Mbps for 802.11n(HT20), 13Mbps for 802.11n(HT40)

## 5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **CNAS —Registration No.: CNAS L5775**

CNAS has accredited Global United Technology Services Co., Ltd. To ISO/IEC 17025 General Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

● **FCC —Registration No.: 600491**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fuly described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 600491, July 20, 2010.

● **Industry Canada (IC)**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. Has been

Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-1.

## 5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.
Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China
Tel: 0755-27798480
Fax: 0755-27798960

## 5.6 Other Information Requested by the Customer

None.

## 5.7 Description of Support Units

N/A

## 5.8 Test Instruments list

| Radiated Emission: | | | | | | |
|---|---|---|---|---|---|---|
| **Item** | **Test Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal.Date (mm-dd-yy)** | **Cal.Due date (mm-dd-yy)** |
| 1 | 3m Semi- Anechoic Chamber | ZhongYu Electron | 9.2(L)*6.2(W)* 6.4(H) | GTS250 | Mar. 30 2011 | Mar. 29 2013 |
| 2 | Control Room | ZhongYu Electron | 6.2(L)*2.5(W)* 2.4(H) | GTS251 | N/A | N/A |
| 3 | EMI Test Receiver | Rohde & Schwarz | ESU26 | GTS203 | Jul. 03 2012 | Jul. 02 2013 |
| 4 | BiConiLog Antenna | SCHWARZBECK MESS-ELEKTRONIK | VULB9163 | GTS214 | Feb. 25 2012 | Feb. 24 2013 |
| 5 | Double -ridged waveguide horn | SCHWARZBECK MESS-ELEKTRONIK | 9120D-829 | GTS208 | June 29 2012 | June 28 2013 |
| 6 | Horn Antenna | ETS-LINDGREN | 3160 | GTS217 | Mar. 30 2011 | Mar. 29 2013 |
| 7 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |
| 8 | Coaxial Cable | GTS | N/A | GTS213 | Mar. 31 2012 | Mar. 30 2013 |
| 9 | Coaxial Cable | GTS | N/A | GTS211 | Mar. 31 2012 | Mar. 30 2013 |
| 10 | Coaxial cable | GTS | N/A | GTS210 | Mar. 31 2012 | Mar. 30 2013 |
| 11 | Coaxial Cable | GTS | N/A | GTS212 | Mar. 31 2012 | Mar. 30 2013 |
| 12 | Amplifier(100kHz-3GHz) | HP | 8347A | GTS204 | Jul. 03 2012 | Jul. 02 2013 |
| 13 | Amplifier(2GHz-20GHz) | HP | 8349B | GTS206 | Jul. 03 2012 | Jul. 02 2013 |
| 14 | Amplifier (18-26GHz) | Rohde & Schwarz | AFS33-18002 650-30-8P-44 | GTS218 | June 29 2012 | June 28 2013 |
| 15 | Band filter | Amindeon | 82346 | GTS219 | Mar. 31 2012 | Mar. 30 2013 |

| Conducted Emission: | | | | | | |
|---|---|---|---|---|---|---|
| **Item** | **Test Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal.Date (mm-dd-yy)** | **Cal.Due date (mm-dd-yy)** |
| 1 | Shielding Room | ZhongYu Electron | 7.0(L)x3.0(W)x3.0(H) | GTS264 | Sep. 08 2011 | Sep. 07 2013 |
| 2 | EMI Test Receiver | Rohde & Schwarz | ESCS30 | GTS223 | Jul. 03 2012 | Jul. 02 2013 |
| 3 | 10dB Pulse Limita | Rohde & Schwarz | N/A | GTS224 | Jul. 03 2012 | Jul. 02 2013 |
| 4 | Coaxial Switch | ANRITSU CORP | MP59B | GTS225 | Jul. 03 2012 | Jul. 02 2013 |
| 5 | LISN | SCHWARZBECK MESS-ELEKTRONIK | NSLK 8127 | GTS226 | Jul. 03 2012 | Jul. 02 2013 |
| 6 | Coaxial Cable | GTS | N/A | GTS227 | Jul. 03 2012 | Jul. 02 2013 |
| 7 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |

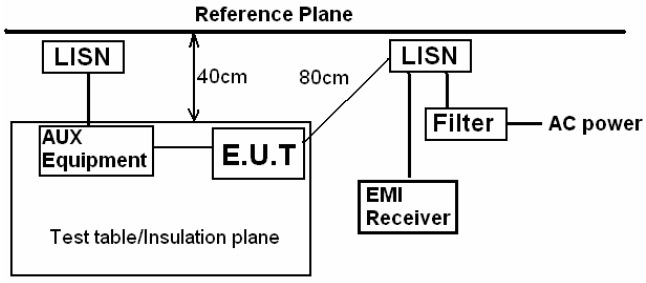
| General used equipment: | | | | | | |
|---|---|---|---|---|---|---|
| **Item** | **Test Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal.Date (dd-mm-yy)** | **Cal.Due date (dd-mm-yy)** |
| 1 | Barometer | ChangChun | DYM3 | GTS257 | July 10 2012 | July 09 2013 |

# 6 Test results and Measurement Data

## 6.1 Antenna requirement:

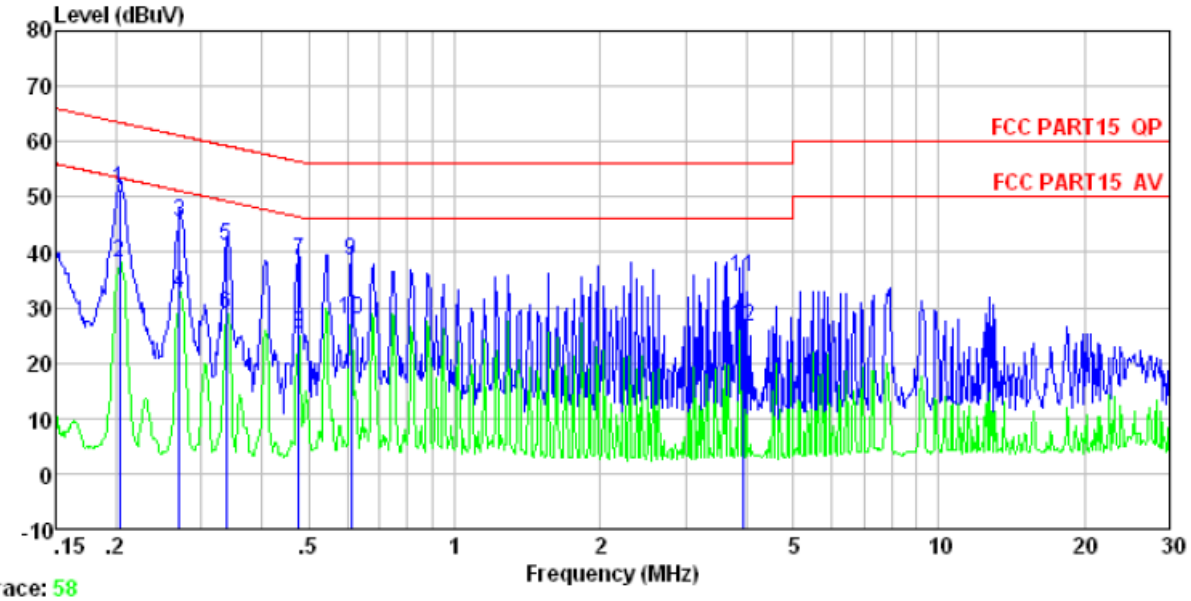
| Standard requirement: | FCC Part15 C Section 15.203 /247(c) |
|---|---|
| **15.203 requirement:** | |
| An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. | |
| **15.247(c) (1)(i) requirement:** | |
| (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi. | |
| **E.U.T Antenna:** | |
| *The antenna is Integral antenna, the best case gain of the antenna is 2.65dBi* | |

## 6.2 Conducted Emissions

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.207 |
| Test Method: | ANSI C63.4:2003 |
| Test Frequency Range: | 150KHz to 30MHz |
| Class / Severity: | Class B |
| Receiver setup: | RBW=9KHz, VBW=30KHz, Sweep time=auto |
| Limit: | Frequency range (MHz) / Limit (dBuV): Quasi-peak / Average<br>0.15-0.5: 66 to 56* / 56 to 46*<br>0.5-5: 56 / 46<br>5-30: 60 / 50<br>* Decreases with the logarithm of the frequency. |
| Test setup: |  <br>*Remark:*<br>*E.U.T: Equipment Under Test*<br>*LISN: Line Impedence Stabilization Network*<br>*Test table height=0.8m* |
| Test procedure: | 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.<br>2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).<br>3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement. |
| Test Instruments: | Refer to section 5.8 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Pass |

**Measurement data:**

**Line:**

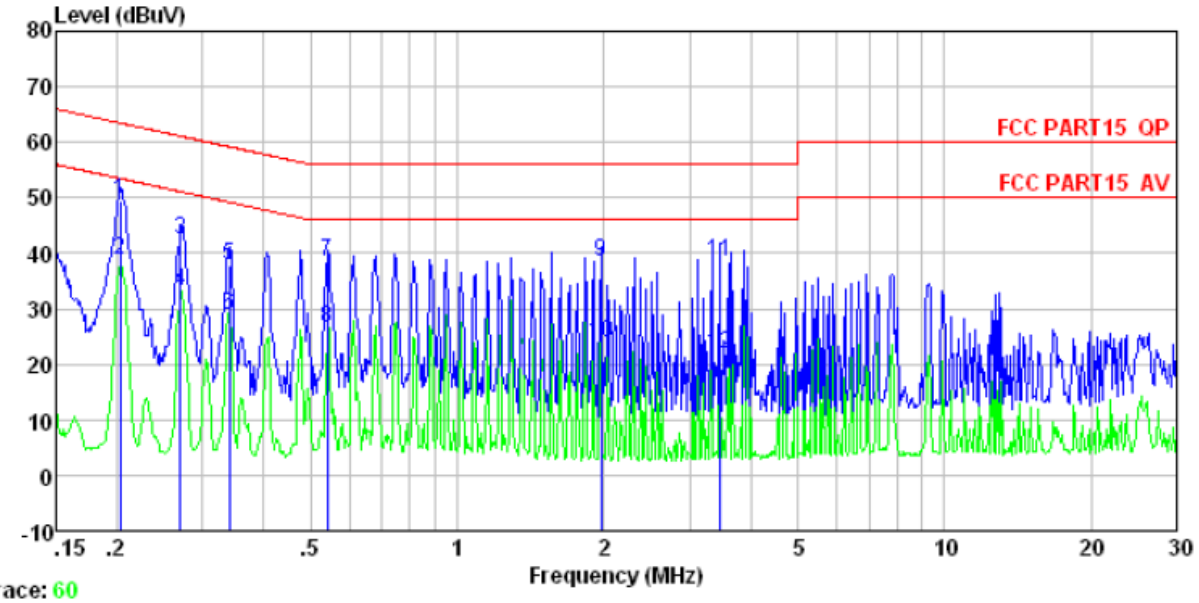



Trace: 58

Condition : FCC PART15 QP LISN-2012 LINE
Job No. : 1158RF
Test Mode : WiFi mode
Test Engineer: Edward

| | Freq | Read Level | LISN Factor | Cable Loss | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dBuV | dBuV | dB | |
| 1 | 0.203 | 51.45 | -0.23 | 0.10 | 51.32 | 63.49 | -12.17 | QP |
| 2 | 0.203 | 38.28 | -0.23 | 0.10 | 38.15 | 53.49 | -15.34 | Average |
| 3 | 0.270 | 45.54 | -0.22 | 0.10 | 45.42 | 61.12 | -15.70 | QP |
| 4 | 0.270 | 32.76 | -0.22 | 0.10 | 32.64 | 51.12 | -18.48 | Average |
| 5 | 0.337 | 41.15 | -0.22 | 0.10 | 41.03 | 59.27 | -18.24 | QP |
| 6 | 0.337 | 29.02 | -0.22 | 0.10 | 28.90 | 49.27 | -20.37 | Average |
| 7 | 0.476 | 38.55 | -0.21 | 0.10 | 38.44 | 56.41 | -17.97 | QP |
| 8 | 0.476 | 25.33 | -0.21 | 0.10 | 25.22 | 46.41 | -21.19 | Average |
| 9 | 0.611 | 38.54 | -0.20 | 0.10 | 38.44 | 56.00 | -17.56 | QP |
| 10 | 0.611 | 27.83 | -0.20 | 0.10 | 27.73 | 46.00 | -18.27 | Average |
| 11 | 3.943 | 35.55 | -0.29 | 0.10 | 35.36 | 56.00 | -20.64 | QP |
| 12 | 3.943 | 26.71 | -0.29 | 0.10 | 26.52 | 46.00 | -19.48 | Average |

**Neutral:**




Trace: 60

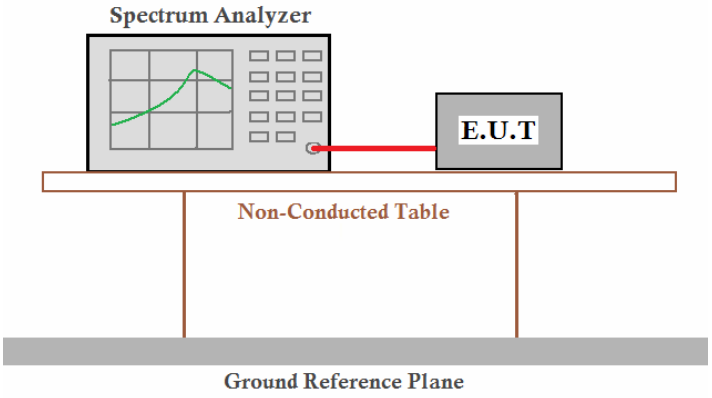
Condition : FCC PART15 QP LISN-2012 NEUTRAL
Job No. : 1158RF
Test Mode : WiFi mode
Test Engineer: Edward

| | Freq | Read Level | LISN Factor | Cable Loss | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dBuV | dBuV | dB | |
| 1 | 0.203 | 49.55 | -0.09 | 0.10 | 49.56 | 63.49 | -13.93 | QP |
| 2 | 0.203 | 38.89 | -0.09 | 0.10 | 38.90 | 53.49 | -14.59 | Average |
| 3 | 0.270 | 42.52 | -0.09 | 0.10 | 42.53 | 61.12 | -18.59 | QP |
| 4 | 0.270 | 33.00 | -0.09 | 0.10 | 33.01 | 51.12 | -18.11 | Average |
| 5 | 0.341 | 37.87 | -0.09 | 0.10 | 37.88 | 59.18 | -21.30 | QP |
| 6 | 0.341 | 29.00 | -0.09 | 0.10 | 29.01 | 49.18 | -20.17 | Average |
| 7 | 0.541 | 38.55 | -0.08 | 0.10 | 38.57 | 56.00 | -17.43 | QP |
| 8 | 0.541 | 26.46 | -0.08 | 0.10 | 26.48 | 46.00 | -19.52 | Average |
| 9 | 1.970 | 38.56 | -0.11 | 0.10 | 38.55 | 56.00 | -17.45 | QP |
| 10 | 1.970 | 23.92 | -0.11 | 0.10 | 23.91 | 46.00 | -22.09 | Average |
| 11 | 3.454 | 38.45 | -0.13 | 0.10 | 38.42 | 56.00 | -17.58 | QP |
| 12 | 3.454 | 21.76 | -0.13 | 0.10 | 21.73 | 46.00 | -24.27 | Average |

*Notes:*

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Loss

## 6.3 Conducted Peak Output Power

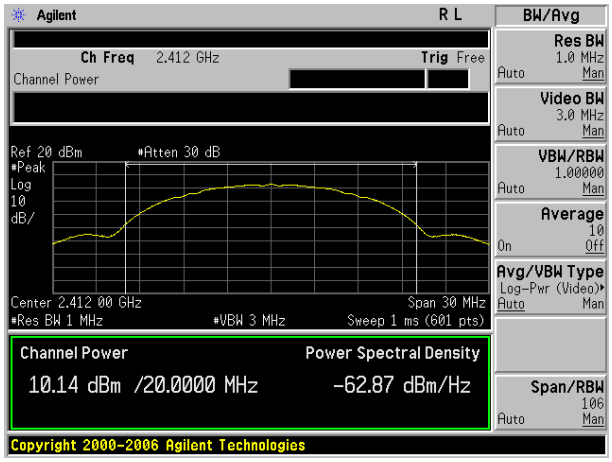
| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (b)(3) |
| Test Method: | ANSI C63.4:2003 and KDB558074 D01 Meas Guidance |
| Limit: | 30dBm |
| Test setup: |  |
| Test Instruments: | Refer to section 5.8 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Pass |

**Measurement Data**

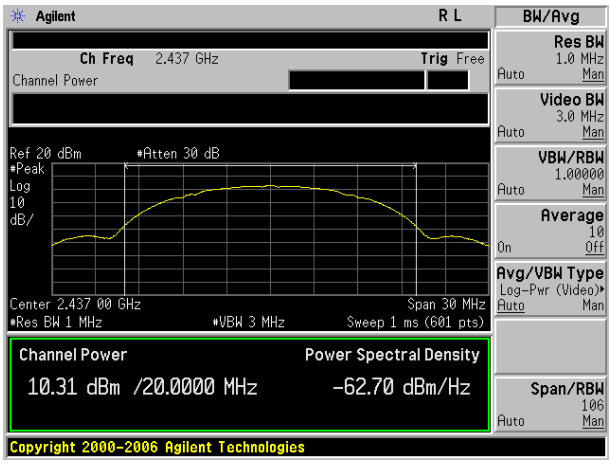
| Test CH | Peak Output Power (dBm) | | | | Limit(dBm) | Result |
|---|---|---|---|---|---|---|
| | 802.11b | 802.11g | 802.11n(HT20) | 802.11n(HT40) | | |
| Lowest | 10.14 | 6.77 | 7.28 | 6.98 | 30.00 | Pass |
| Middle | 10.31 | 7.30 | 7.10 | 6.90 | | |
| Highest | 10.38 | 7.13 | 7.12 | 6.74 | | |

**Test plot as follows:**

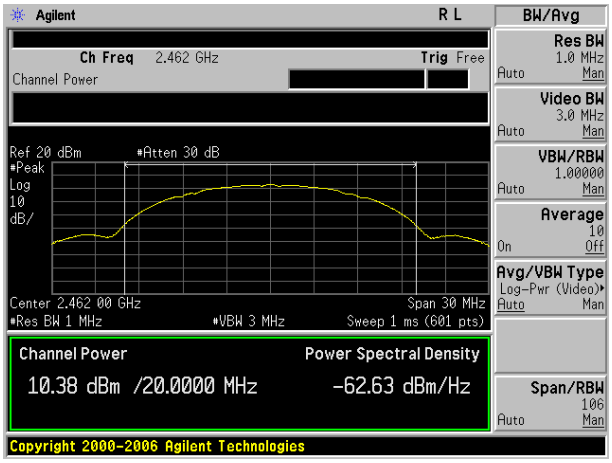
| Test mode: | 802.11b |
|---|---|




Lowest channel

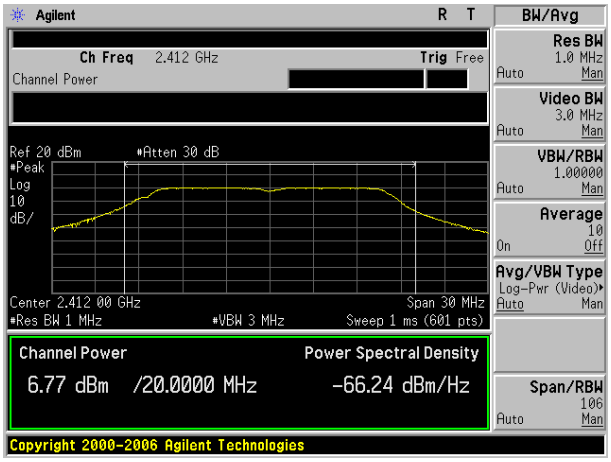



Middle channel

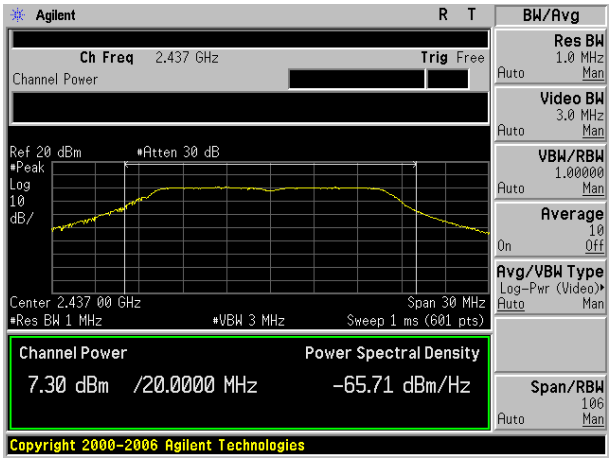



Highest channel

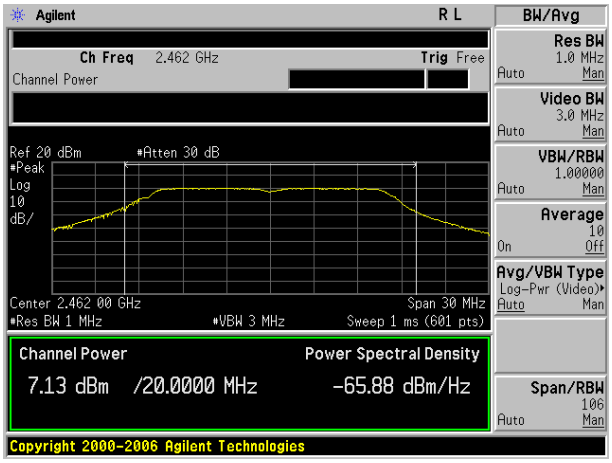
| Test mode: | 802.11g |
|---|---|




Lowest channel

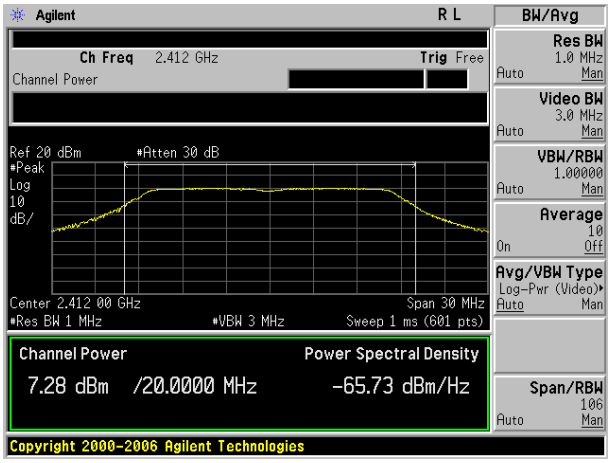



Middle channel

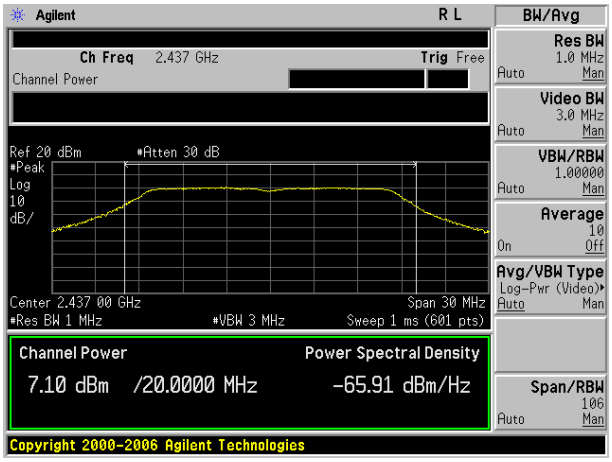



Highest channel

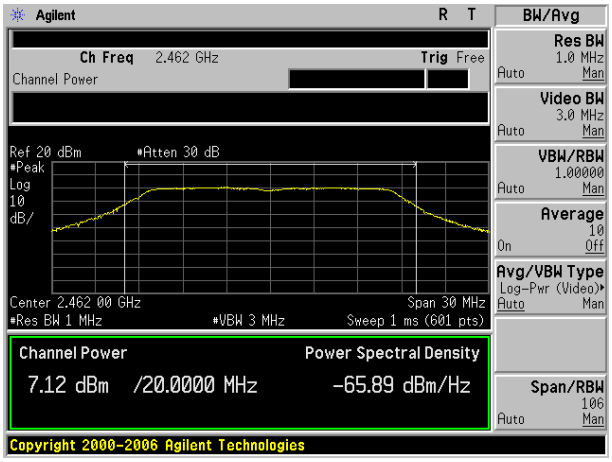
| Test mode: | 802.11n(HT20) |
|---|---|




Lowest channel

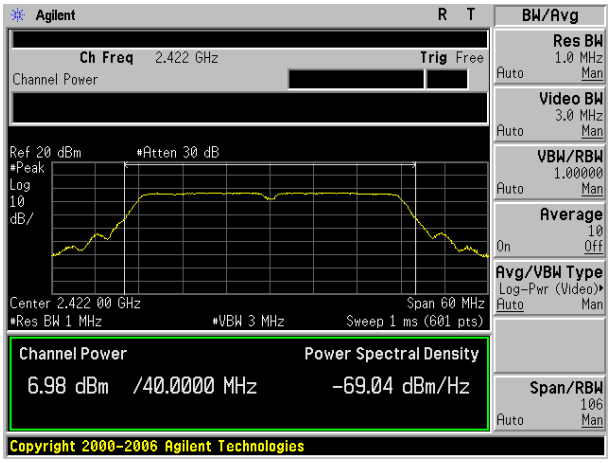



Middle channel

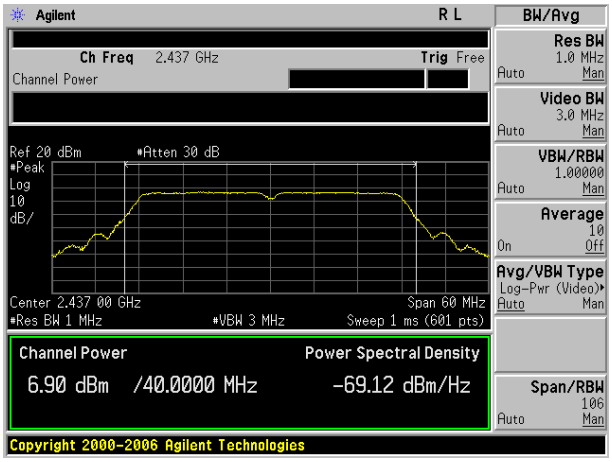



Highest channel

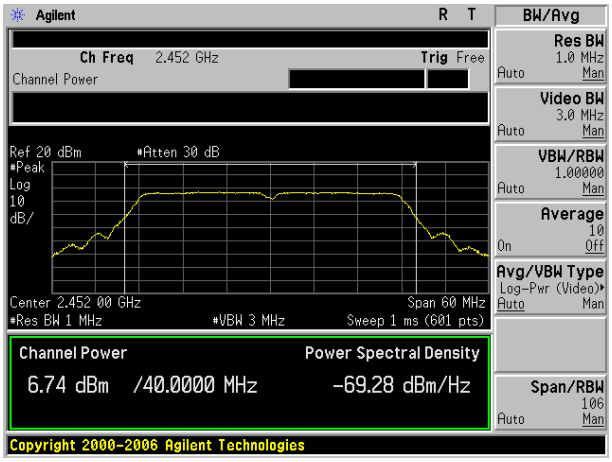
| Test mode: | 802.11n(HT40) |
|---|---|




Lowest channel

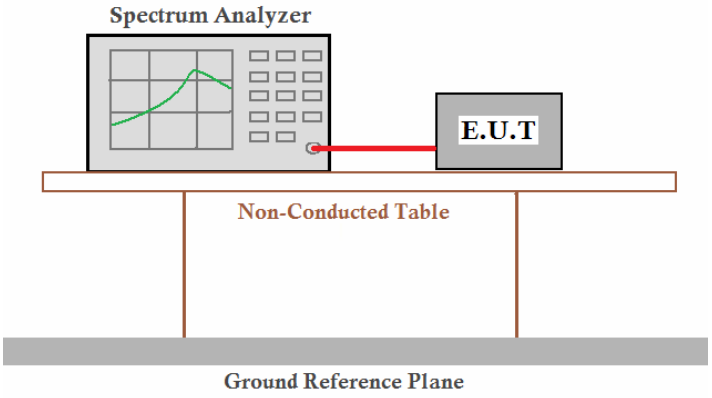



Middle channel




Highest channel

## 6.4 Channel Bandwidth

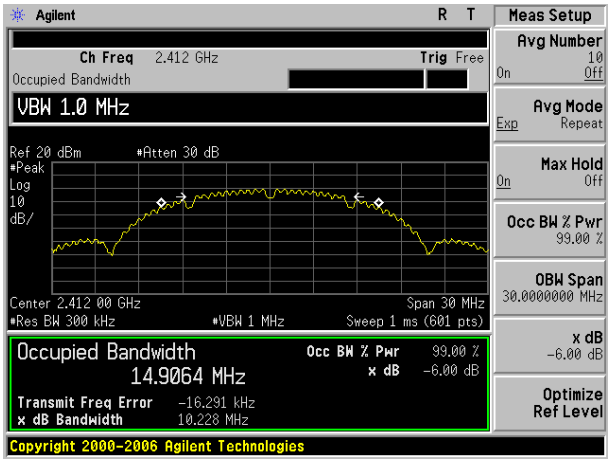
| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (a)(2) |
| Test Method: | ANSI C63.4:2003 and KDB558074 D01 Meas Guidance |
| Limit: | >500KHz |
| Test setup: |  |
| Test Instruments: | Refer to section 5.8 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Pass |

**Measurement Data**

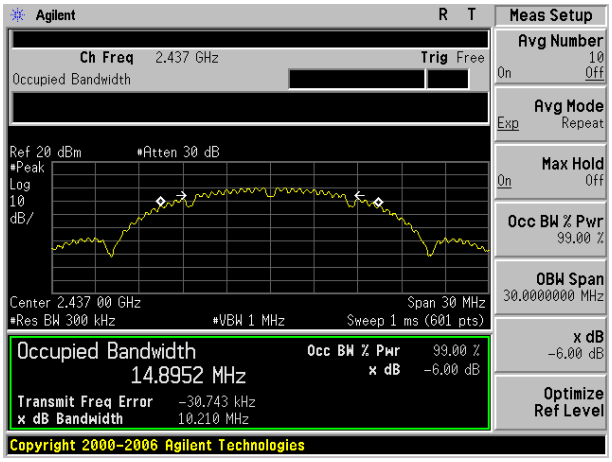
| Test CH | Channel Bandwidth (MHz) | | | | Limit(KHz) | Result |
|---|---|---|---|---|---|---|
| | 802.11b | 802.11g | 802.11n(HT20) | 802.11n(HT40) | | |
| Lowest | 10.228 | 16.392 | 17.610 | 36.271 | >500 | Pass |
| Middle | 10.210 | 16.442 | 17.658 | 36.300 | | |
| Highest | 10.216 | 16.433 | 17.626 | 36.263 | | |

**Test plot as follows:**

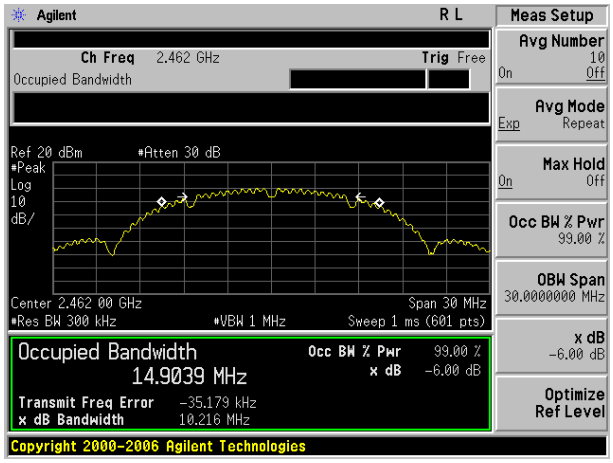
| Test mode: | 802.11b |
|---|---|




Lowest channel

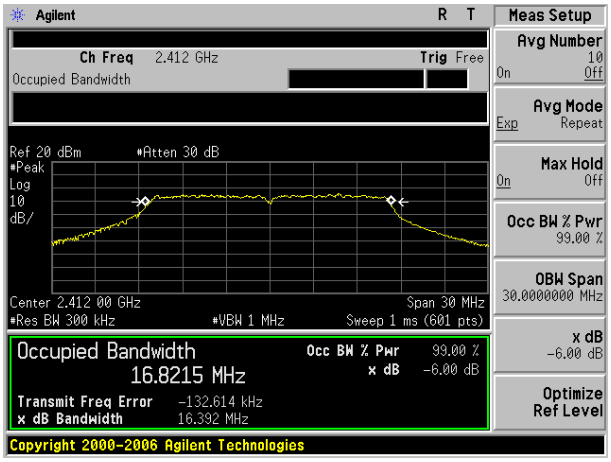



Middle channel

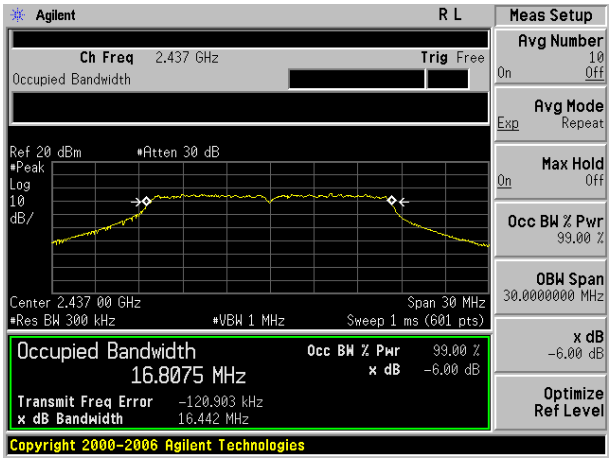



Highest channel

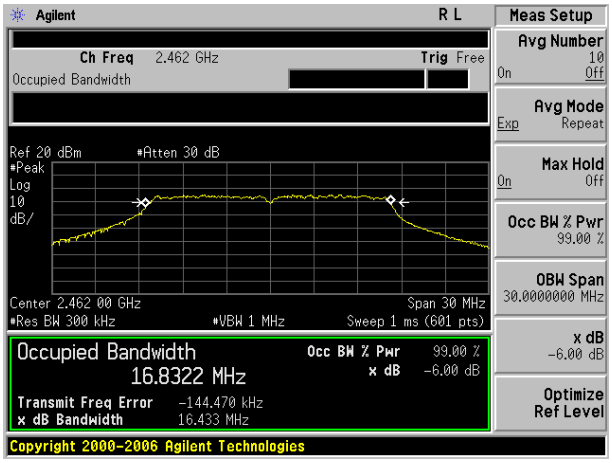
| Test mode: | 802.11g |
|---|---|




Lowest channel

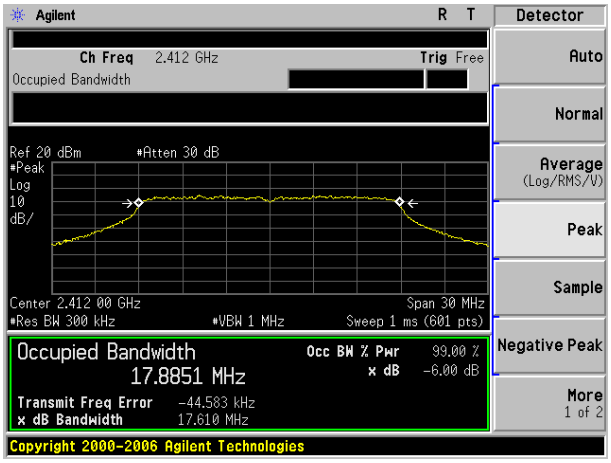



Middle channel

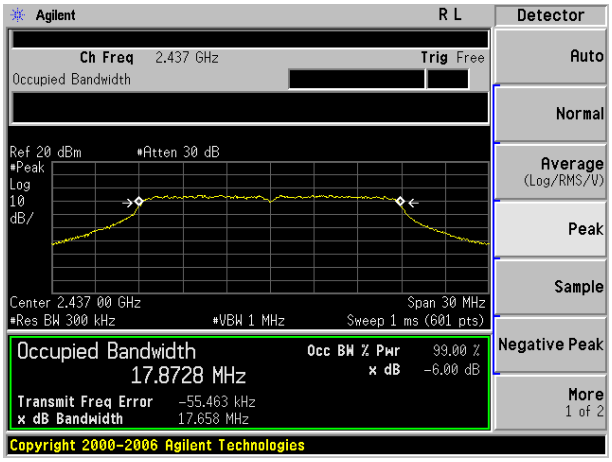



Highest channel

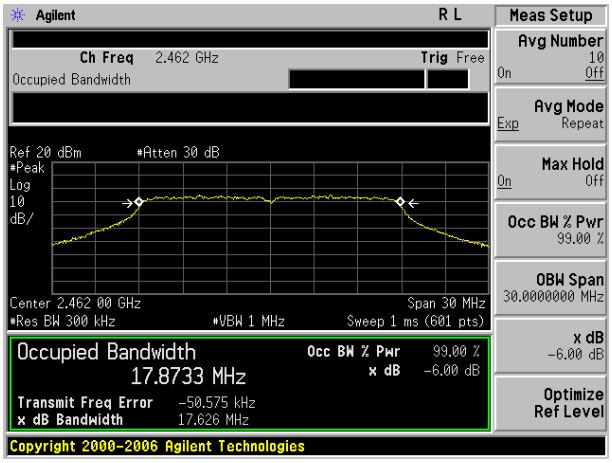
| Test mode: | 802.11n(HT20) |
|---|---|




Lowest channel

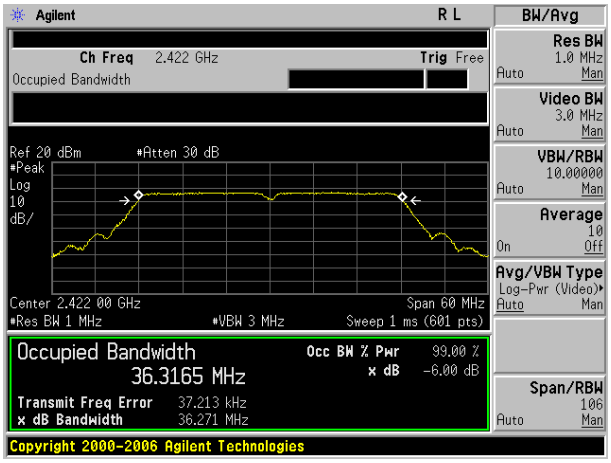



Middle channel

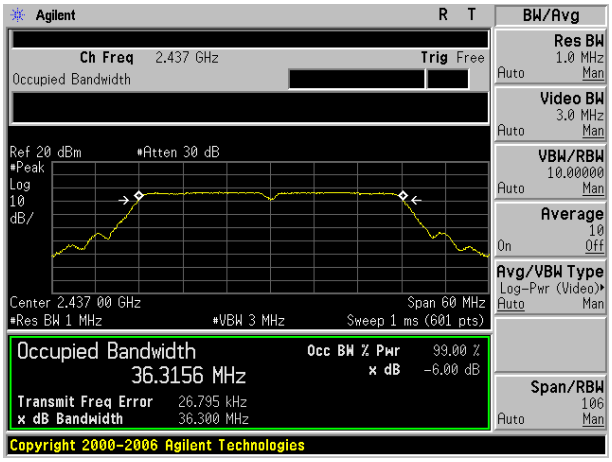



Highest channel

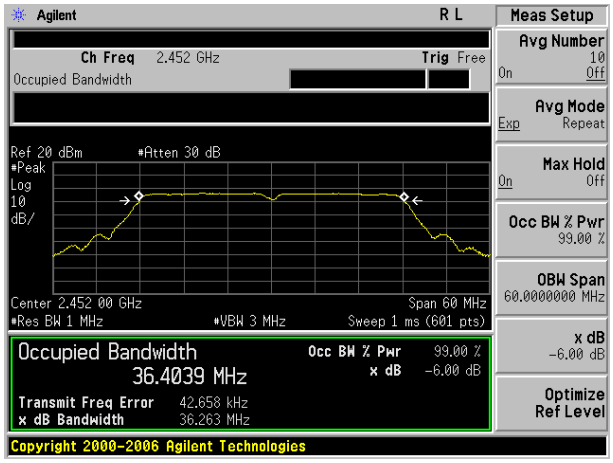
| Test mode: | 802.11n(HT40) |
|---|---|




Lowest channel

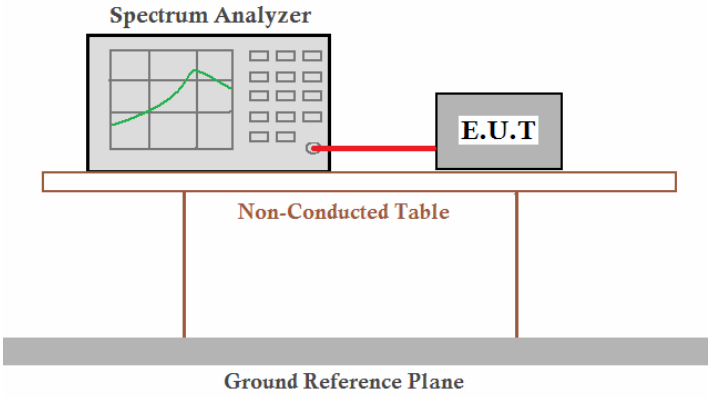



Middle channel




Highest channel

## 6.5 Power Spectral Density

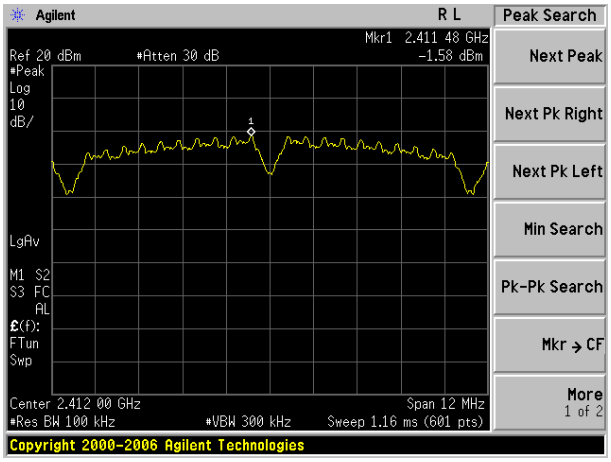
| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (e) |
| Test Method: | ANSI C63.4:2003 and KDB558074 D01 Meas Guidance |
| Limit: | 8dBm |
| Test setup: |  |
| Test Instruments: | Refer to section 5.8 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Pass |

**Measurement Data**

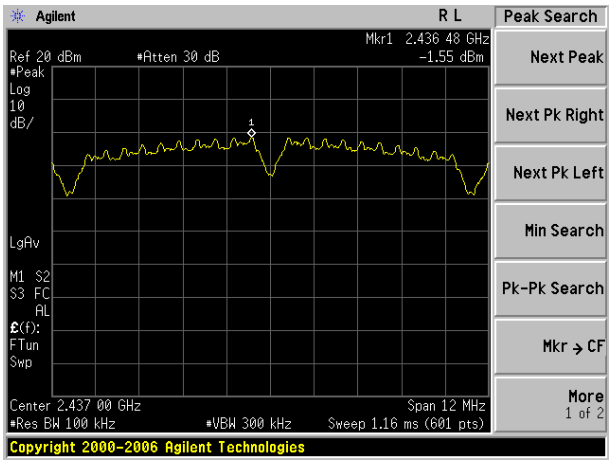
| Test CH | Power Spectral Density (dBm/100KHz) | | | | Limit(KHz) | Result |
|---|---|---|---|---|---|---|
| | 802.11b | 802.11g | 802.11n(HT20) | 802.11n(HT40) | | |
| Lowest | -1.58 | -10.41 | -10.07 | -13.69 | 8.00 | Pass |
| Middle | -1.55 | -10.09 | -10.11 | -14.04 | | |
| Highest | -2.10 | -10.25 | -10.38 | -13.99 | | |

**Test plot as follows:**

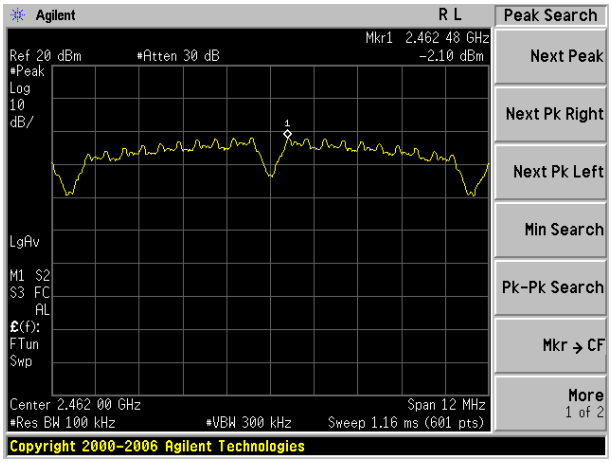
| Test mode: | 802.11b |
|---|---|




Lowest channel

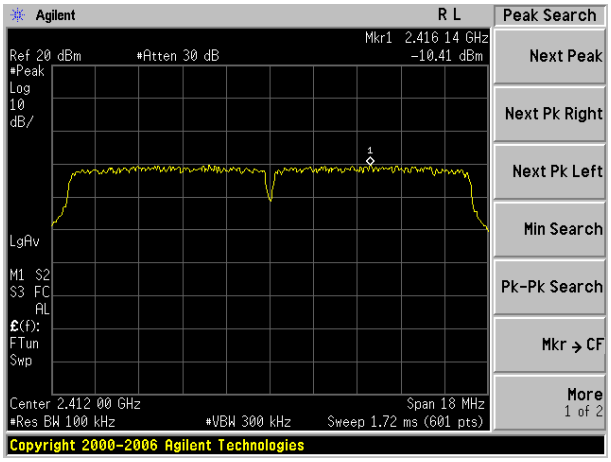



Middle channel

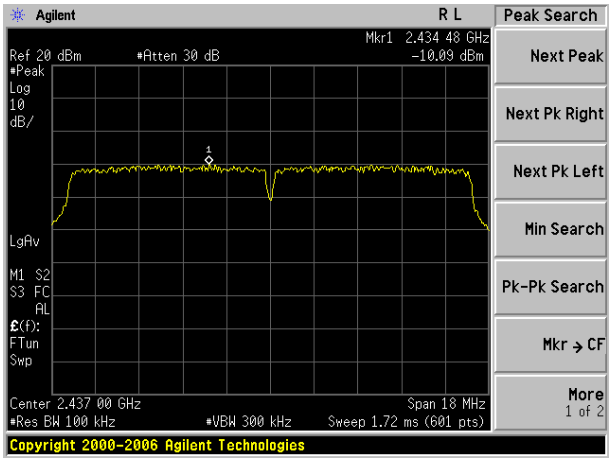



Highest channel

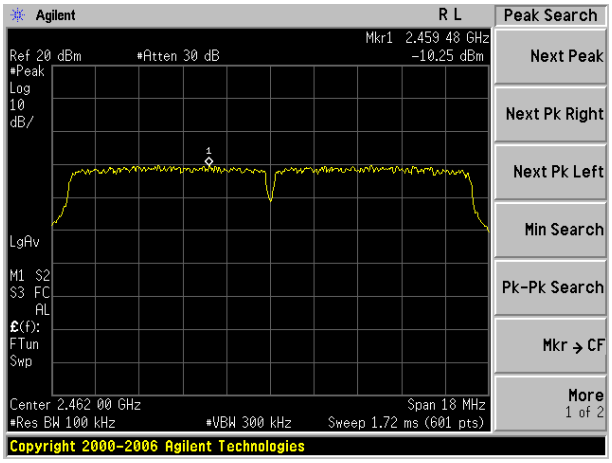
| Test mode: | 802.11g |
|---|---|




Lowest channel

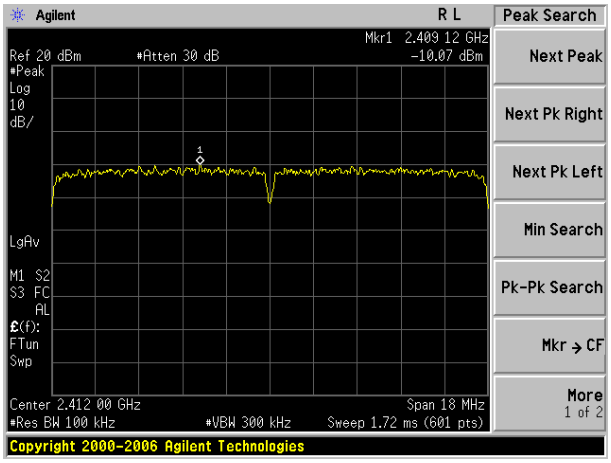



Middle channel

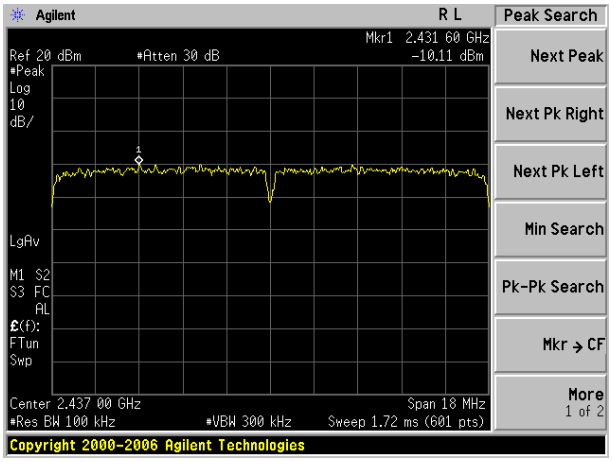



Highest channel

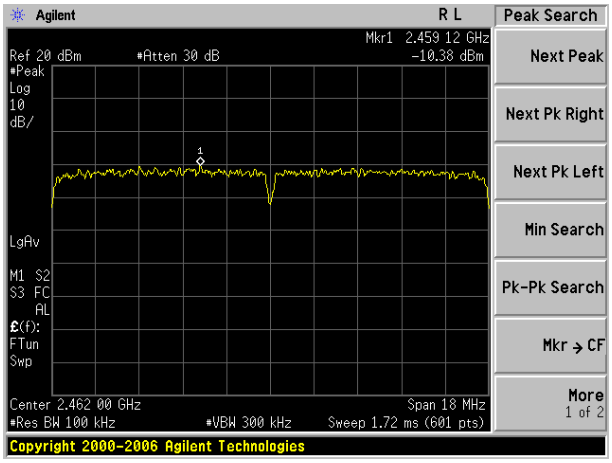
| Test mode: | 802.11n(HT20) |
|---|---|




Lowest channel

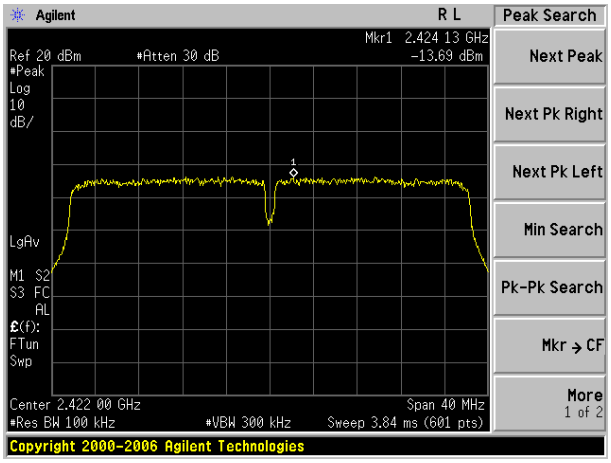



Middle channel

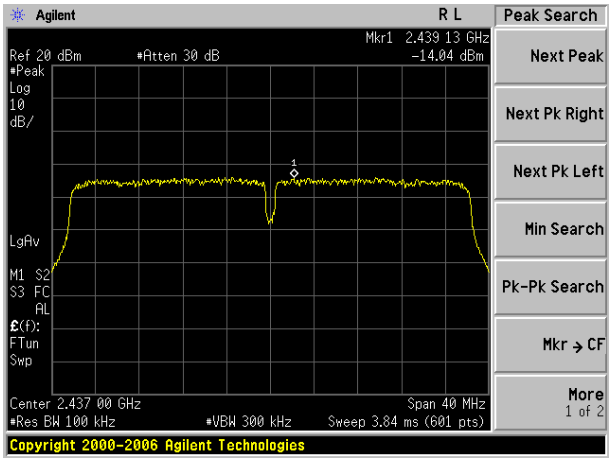



Highest channel

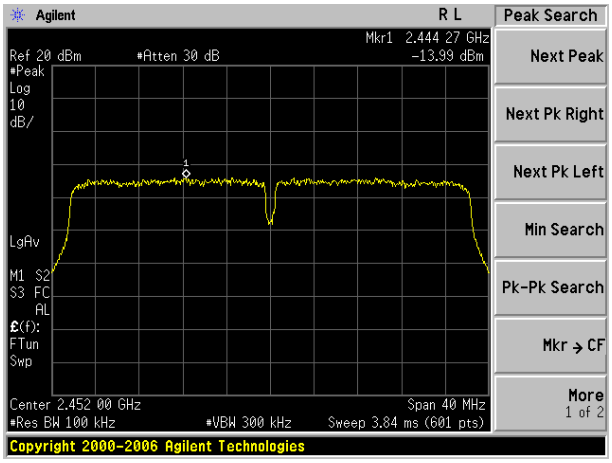
| Test mode: | 802.11n(HT40) |
|---|---|




Lowest channel



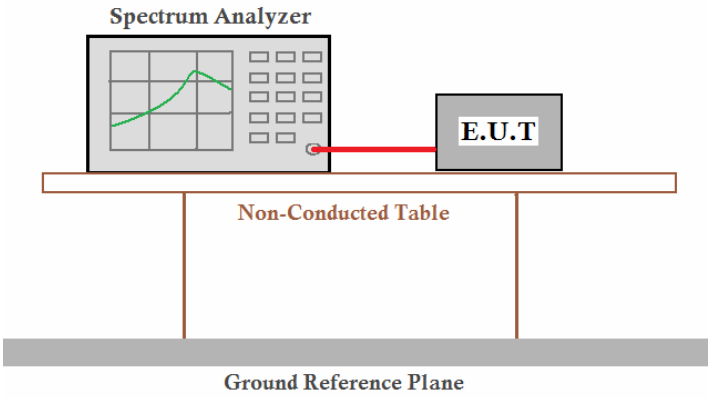

Middle channel




Highest channel

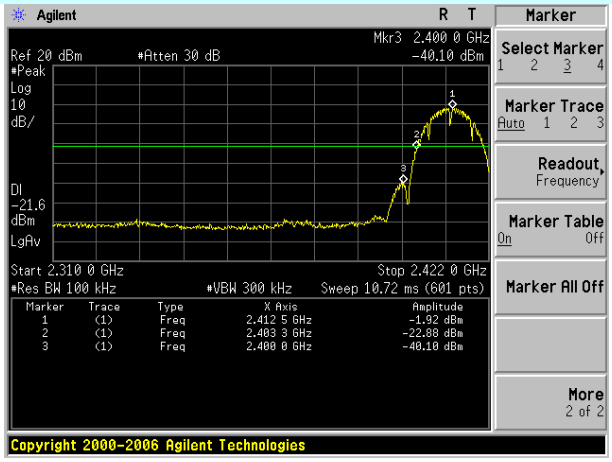
## 6.6 Band edges

### 6.6.1 Conducted Emission Method

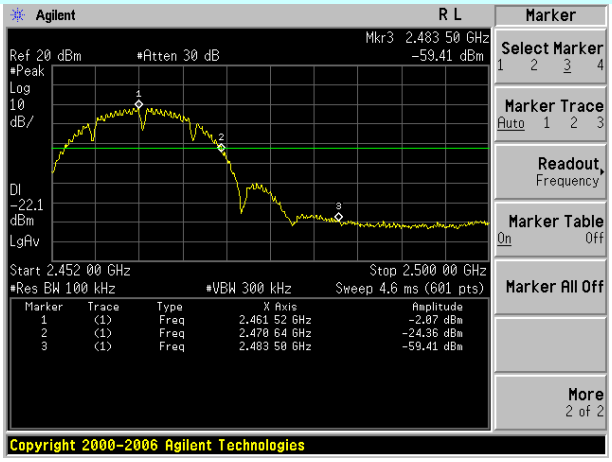
| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (d) |
| Test Method: | ANSI C63.4:2003 and KDB558074 D01 Meas Guidance |
| Limit: | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. |
| Test setup: |  |
| Test Instruments: | Refer to section 5.8 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Pass |

**Test plot as follows:**

Test mode: 802.11b

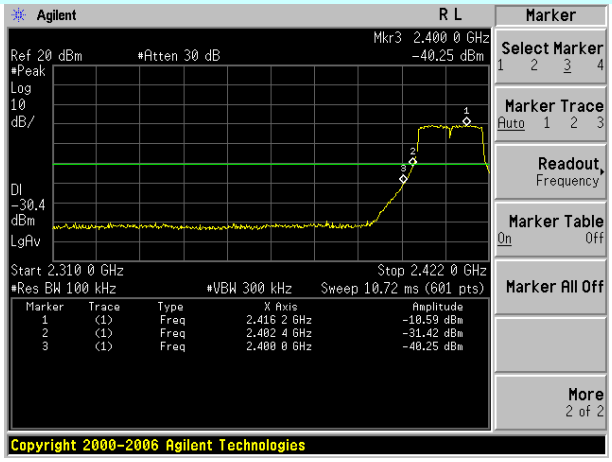



Lowest channel

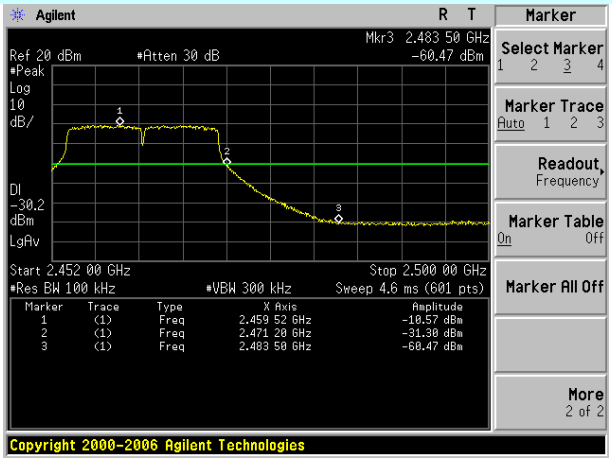



Highest channel

Test mode: 802.11g

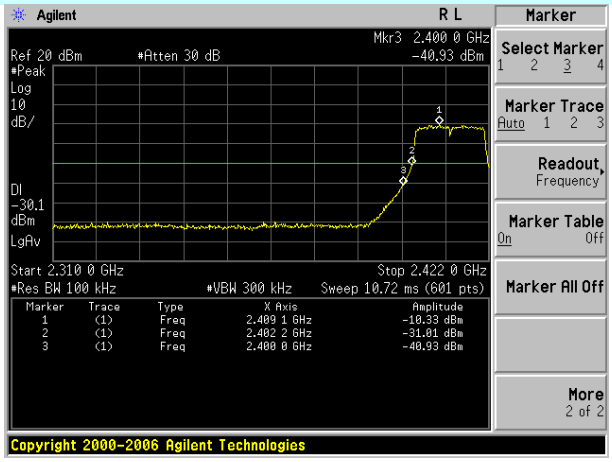



Lowest channel

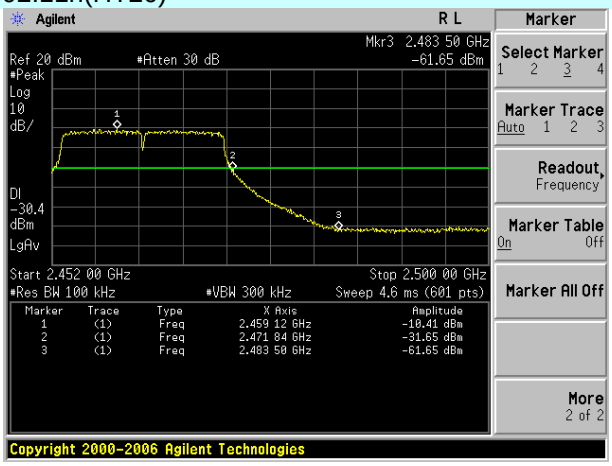



Highest channel

Test mode: 802.11n(HT20)

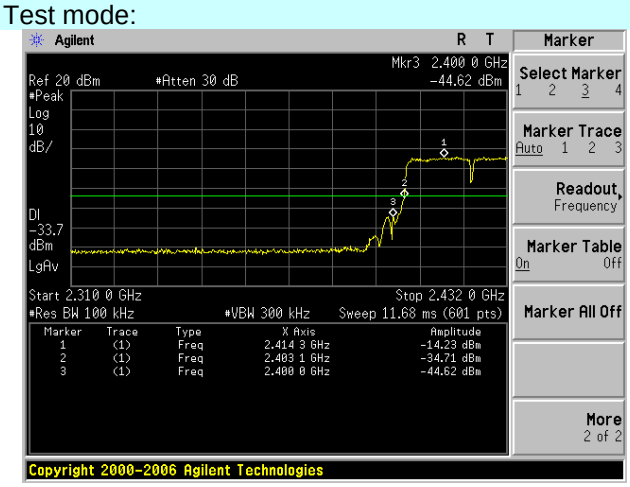



Lowest channel

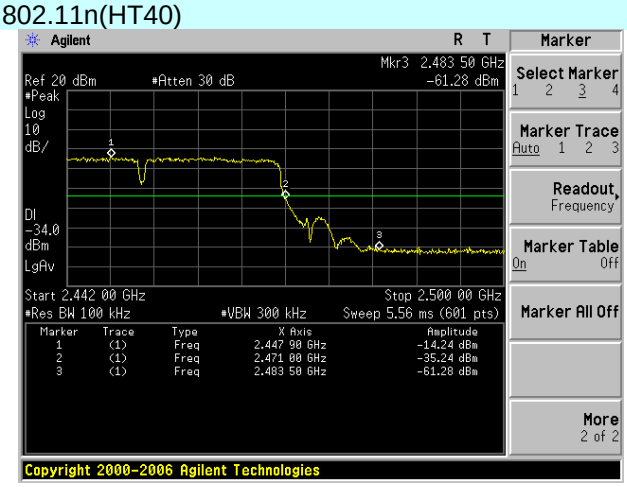



Highest channel

Test mode: 802.11n(HT40)

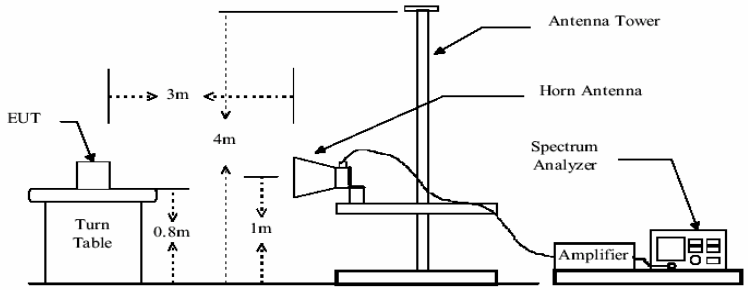



Lowest channel




Highest channel

6.6.2 Radiated Emission Method

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209 and 15.205</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4: 2003</td></tr>
<tr><td>Test Frequency Range:</td><td>30MHz to 25GHz, only worse case is reported</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>AV</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td>Frequency</td><td>Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>54.00</td><td>Average Value</td></tr>
<tr><td>74.00</td><td>Peak Value</td></tr>
</table>
</td></tr>
<tr><td>Test setup:</td><td> 
</td></tr>
<tr><td>Test Procedure:</td><td>1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.<br>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.<br>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.<br>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.<br>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.<br>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</td></tr>
<tr><td>Test Instruments:</td><td>Refer to section 5.8 for details</td></tr>
<tr><td>Test mode:</td><td>Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td>Pass</td></tr>
</table>

*Remark:*

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

**Measurement data:**

| Test mode: | 802.11b | Test channel: | Lowest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2390.00 | 49.98 | 27.38 | 3.91 | 34.83 | 46.44 | 74.00 | -27.56 | Horizontal |
| 2400.00 | 53.08 | 27.38 | 3.93 | 34.83 | 49.56 | 74.00 | -24.44 | Horizontal |
| 2390.00 | 51.92 | 27.38 | 3.91 | 34.83 | 48.38 | 74.00 | -25.62 | Vertical |
| 2400.00 | 53.92 | 27.38 | 3.93 | 34.83 | 50.40 | 74.00 | -23.60 | Vertical |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2390.00 | 38.72 | 27.38 | 3.91 | 34.83 | 35.18 | 54.00 | -18.82 | Horizontal |
| 2400.00 | 41.16 | 27.38 | 3.93 | 34.83 | 37.64 | 54.00 | -16.36 | Horizontal |
| 2390.00 | 39.63 | 27.38 | 3.91 | 34.83 | 36.09 | 54.00 | -17.91 | Vertical |
| 2400.00 | 42.81 | 27.38 | 3.93 | 34.83 | 39.29 | 54.00 | -14.71 | Vertical |

| Test mode: | 802.11b | Test channel: | Highest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2483.50 | 51.31 | 27.32 | 3.99 | 34.86 | 47.76 | 74.00 | -26.24 | Horizontal |
| 2500.00 | 48.89 | 27.35 | 4.00 | 34.87 | 45.37 | 74.00 | -28.63 | Horizontal |
| 2483.50 | 52.15 | 27.32 | 3.99 | 34.86 | 48.60 | 74.00 | -25.40 | Vertical |
| 2500.00 | 50.68 | 27.35 | 4.00 | 34.87 | 47.16 | 74.00 | -26.84 | Vertical |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2483.50 | 36.99 | 27.32 | 3.99 | 34.86 | 33.44 | 54.00 | -20.56 | Horizontal |
| 2500.00 | 32.75 | 27.35 | 4.00 | 34.87 | 29.23 | 54.00 | -24.77 | Horizontal |
| 2483.50 | 39.01 | 27.32 | 3.99 | 34.86 | 35.46 | 54.00 | -18.54 | Vertical |
| 2500.00 | 34.42 | 27.35 | 4.00 | 34.87 | 30.90 | 54.00 | -23.10 | Vertical |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

| Test mode: | 802.11g | Test channel: | Lowest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2390.00 | 48.76 | 27.38 | 3.91 | 34.83 | 45.22 | 74.00 | -28.78 | Horizontal |
| 2400.00 | 50.86 | 27.38 | 3.93 | 34.83 | 47.34 | 74.00 | -26.66 | Horizontal |
| 2390.00 | 50.82 | 27.38 | 3.91 | 34.83 | 47.28 | 74.00 | -26.72 | Vertical |
| 2400.00 | 52.45 | 27.38 | 3.93 | 34.83 | 48.93 | 74.00 | -25.07 | Vertical |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2390.00 | 34.25 | 27.38 | 3.91 | 34.83 | 30.71 | 54.00 | -23.29 | Horizontal |
| 2400.00 | 36.21 | 27.38 | 3.93 | 34.83 | 32.69 | 54.00 | -21.31 | Horizontal |
| 2390.00 | 34.83 | 27.38 | 3.91 | 34.83 | 31.29 | 54.00 | -22.71 | Vertical |
| 2400.00 | 36.55 | 27.38 | 3.93 | 34.83 | 33.03 | 54.00 | -20.97 | Vertical |

| Test mode: | 802.11g | Test channel: | Highest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2483.50 | 48.61 | 27.32 | 3.99 | 34.86 | 45.06 | 74.00 | -28.94 | Horizontal |
| 2500.00 | 45.29 | 27.35 | 4.00 | 34.87 | 41.77 | 74.00 | -32.23 | Horizontal |
| 2483.50 | 50.46 | 27.32 | 3.99 | 34.86 | 46.91 | 74.00 | -27.09 | Vertical |
| 2500.00 | 48.25 | 27.35 | 4.00 | 34.87 | 44.73 | 74.00 | -29.27 | Vertical |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2483.50 | 34.96 | 27.32 | 3.99 | 34.86 | 31.41 | 54.00 | -22.59 | Horizontal |
| 2500.00 | 32.42 | 27.35 | 4.00 | 34.87 | 28.90 | 54.00 | -25.10 | Horizontal |
| 2483.50 | 36.90 | 27.32 | 3.99 | 34.86 | 33.35 | 54.00 | -20.65 | Vertical |
| 2500.00 | 34.42 | 27.35 | 4.00 | 34.87 | 30.90 | 54.00 | -23.10 | Vertical |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

| Test mode: | 802.11n(HT20) | Test channel: | Lowest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2390.00 | 48.71 | 27.38 | 3.91 | 34.83 | 45.17 | 74.00 | -28.83 | Horizontal |
| 2400.00 | 50.39 | 27.38 | 3.93 | 34.83 | 46.87 | 74.00 | -27.13 | Horizontal |
| 2390.00 | 44.95 | 27.38 | 3.91 | 34.83 | 41.41 | 74.00 | -32.59 | Vertical |
| 2400.00 | 46.79 | 27.38 | 3.93 | 34.83 | 43.27 | 74.00 | -30.73 | Vertical |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2390.00 | 35.55 | 27.38 | 3.91 | 34.83 | 32.01 | 54.00 | -21.99 | Horizontal |
| 2400.00 | 37.69 | 27.38 | 3.93 | 34.83 | 34.17 | 54.00 | -19.83 | Horizontal |
| 2390.00 | 30.40 | 27.38 | 3.91 | 34.83 | 26.86 | 54.00 | -27.14 | Vertical |
| 2400.00 | 32.98 | 27.38 | 3.93 | 34.83 | 29.46 | 54.00 | -24.54 | Vertical |

| Test mode: | 802.11n(HT20) | Test channel: | Highest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2483.50 | 47.11 | 27.32 | 3.99 | 34.86 | 43.56 | 74.00 | -30.44 | Horizontal |
| 2500.00 | 45.36 | 27.35 | 4.00 | 34.87 | 41.84 | 74.00 | -32.16 | Horizontal |
| 2483.50 | 49.35 | 27.32 | 3.99 | 34.86 | 45.80 | 74.00 | -28.20 | Vertical |
| 2500.00 | 46.41 | 27.35 | 4.00 | 34.87 | 42.89 | 74.00 | -31.11 | Vertical |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2483.50 | 34.49 | 27.32 | 3.99 | 34.86 | 30.94 | 54.00 | -23.06 | Horizontal |
| 2500.00 | 31.82 | 27.35 | 4.00 | 34.87 | 28.30 | 54.00 | -25.70 | Horizontal |
| 2483.50 | 35.45 | 27.32 | 3.99 | 34.86 | 31.90 | 54.00 | -22.10 | Vertical |
| 2500.00 | 33.26 | 27.35 | 4.00 | 34.87 | 29.74 | 54.00 | -24.26 | Vertical |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

| Test mode: | 802.11n(HT40) | Test channel: | Lowest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2390.00 | 49.90 | 27.38 | 3.91 | 34.83 | 46.36 | 74.00 | -27.64 | Horizontal |
| 2400.00 | 50.69 | 27.38 | 3.93 | 34.83 | 47.17 | 74.00 | -26.83 | Horizontal |
| 2390.00 | 51.15 | 27.38 | 3.91 | 34.83 | 47.61 | 74.00 | -26.39 | Vertical |
| 2400.00 | 54.55 | 27.38 | 3.93 | 34.83 | 51.03 | 74.00 | -22.97 | Vertical |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2390.00 | 36.65 | 27.38 | 3.91 | 34.83 | 33.11 | 54.00 | -20.89 | Horizontal |
| 2400.00 | 39.69 | 27.38 | 3.93 | 34.83 | 36.17 | 54.00 | -17.83 | Horizontal |
| 2390.00 | 36.83 | 27.38 | 3.91 | 34.83 | 33.29 | 54.00 | -20.71 | Vertical |
| 2400.00 | 39.41 | 27.38 | 3.93 | 34.83 | 35.89 | 54.00 | -18.11 | Vertical |

| Test mode: | 802.11n(HT40) | Test channel: | Highest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2483.50 | 51.69 | 27.32 | 3.99 | 34.86 | 48.14 | 74.00 | -25.86 | Horizontal |
| 2500.00 | 48.06 | 27.35 | 4.00 | 34.87 | 44.54 | 74.00 | -29.46 | Horizontal |
| 2483.50 | 51.55 | 27.32 | 3.99 | 34.86 | 48.00 | 74.00 | -26.00 | Vertical |
| 2500.00 | 48.45 | 27.35 | 4.00 | 34.87 | 44.93 | 74.00 | -29.07 | Vertical |

**Average value:**

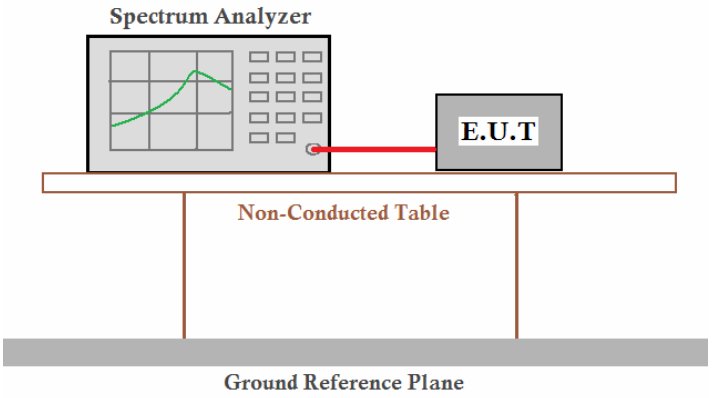
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|---|---|---|---|---|---|---|---|---|
| 2483.50 | 36.69 | 27.32 | 3.99 | 34.86 | 33.14 | 54.00 | -20.86 | Horizontal |
| 2500.00 | 34.83 | 27.35 | 4.00 | 34.87 | 31.31 | 54.00 | -22.69 | Horizontal |
| 2483.50 | 36.95 | 27.32 | 3.99 | 34.86 | 33.40 | 54.00 | -20.60 | Vertical |
| 2500.00 | 34.80 | 27.35 | 4.00 | 34.87 | 31.28 | 54.00 | -22.72 | Vertical |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

## 6.7 Spurious Emission

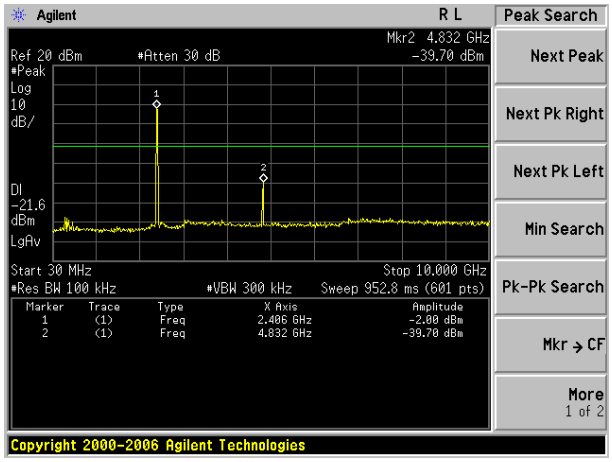
### 6.7.1 Conducted Emission Method

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (d) |
| Test Method: | ANSI C63.4:2003 and KDB558074 D01 Meas Guidance |
| Limit: | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. |
| Test setup: |  |
| Test Instruments: | Refer to section 5.8 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Pass |

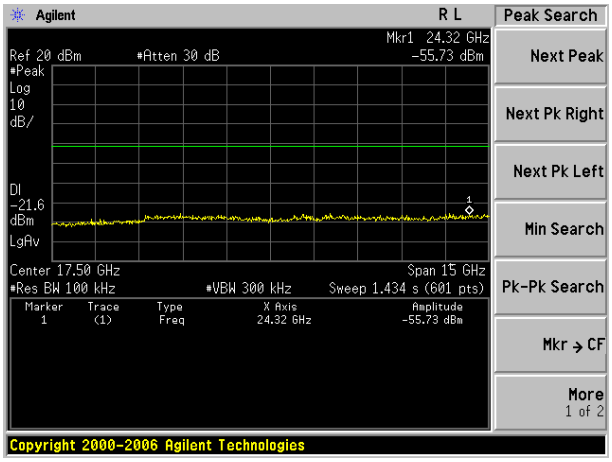
**Test plot as follows:**

| Test mode: | 802.11b |
|---|---|

Lowest channel

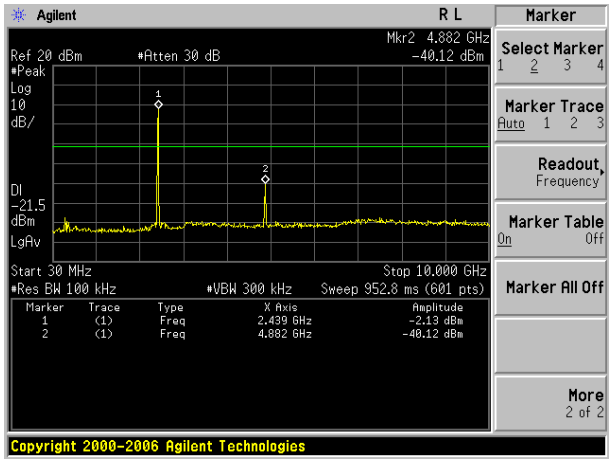



30MHz~10GHz

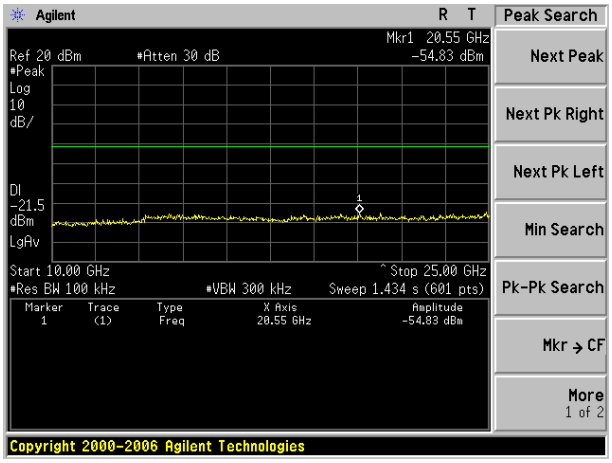



10GHz~25GHz

Middle channel

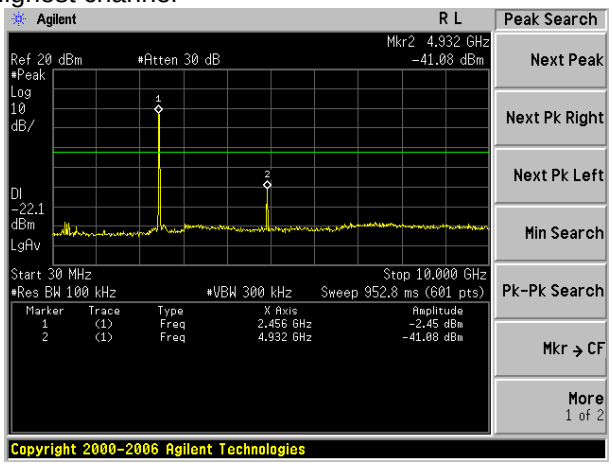



30MHz~10GHz

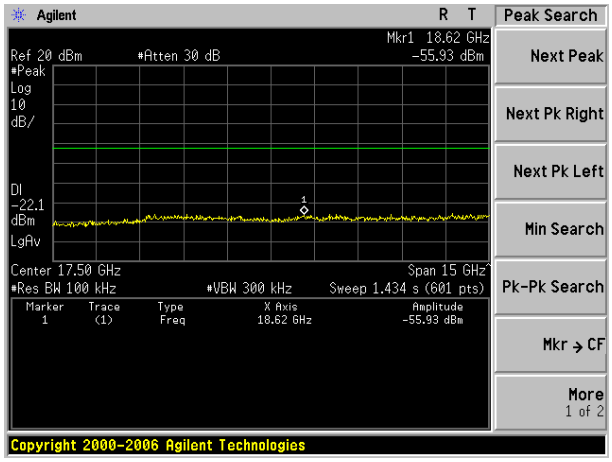



10GHz~25GHz

Highest channel



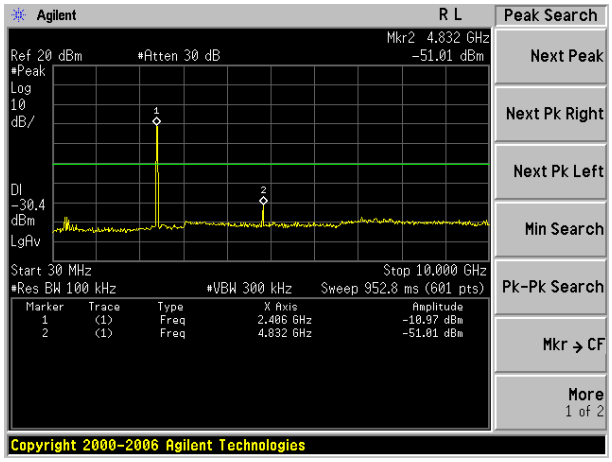

30MHz~10GHz



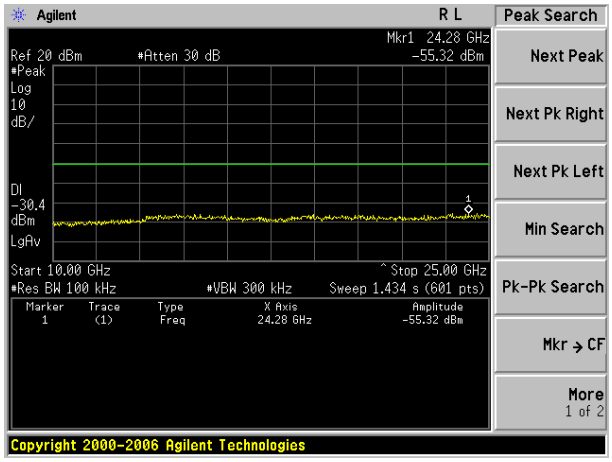

10GHz~25GHz

| Test mode: | 802.11g |
|---|---|

Lowest channel

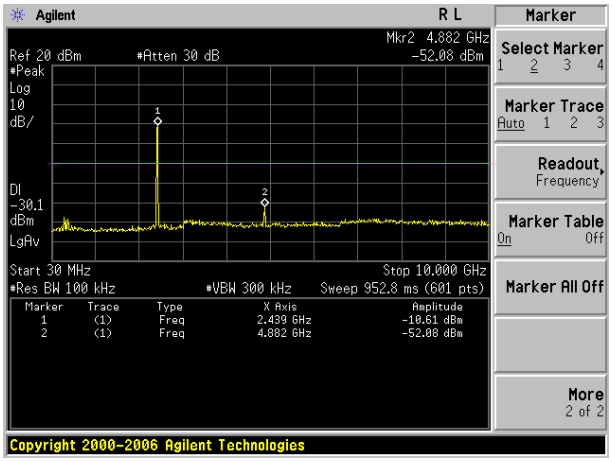



30MHz~10GHz

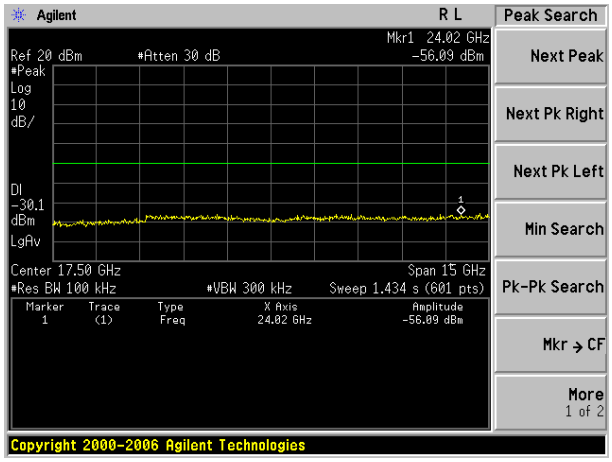



10GHz~25GHz

Middle channel

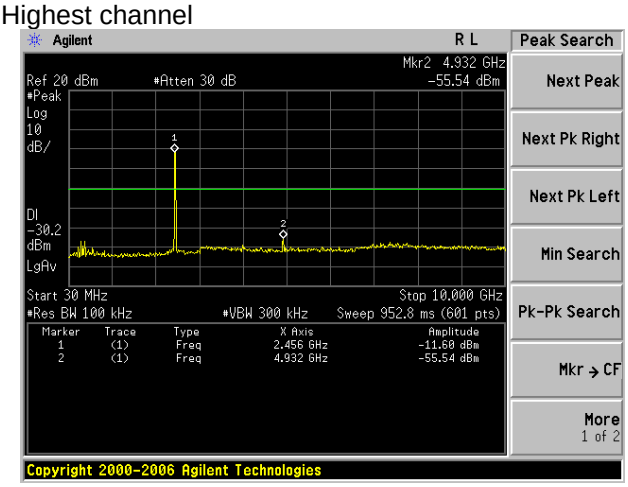



30MHz~10GHz

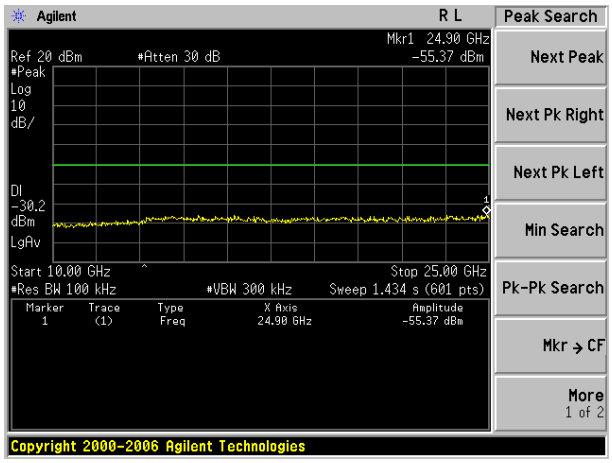



10GHz~25GHz

Highest channel



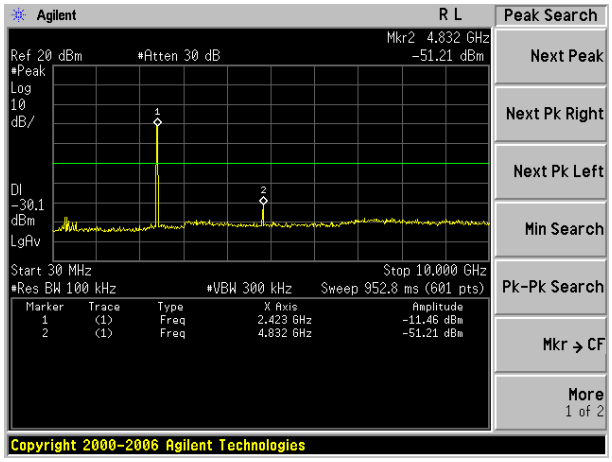

30MHz~10GHz



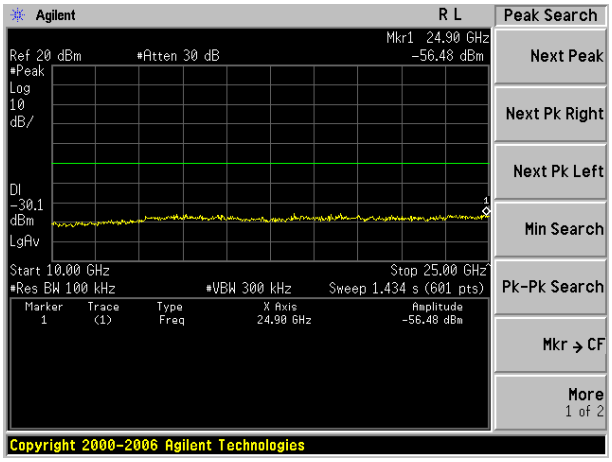

10GHz~25GHz

| Test mode: | 802.11n(HT20) |
|---|---|

Lowest channel

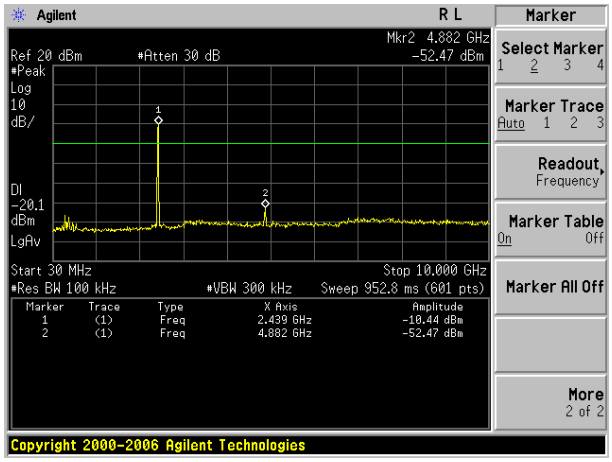



30MHz~10GHz

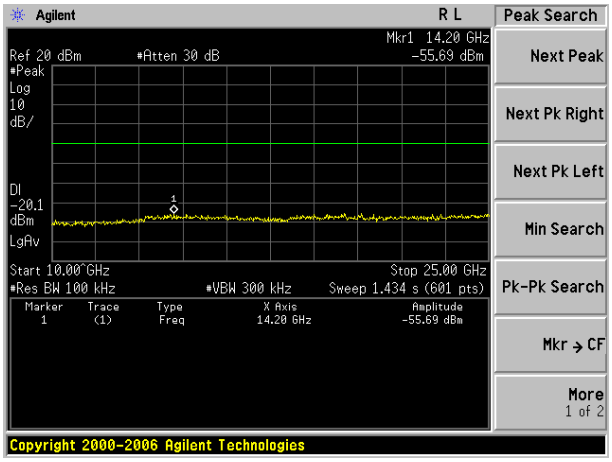



10GHz~25GHz

Middle channel

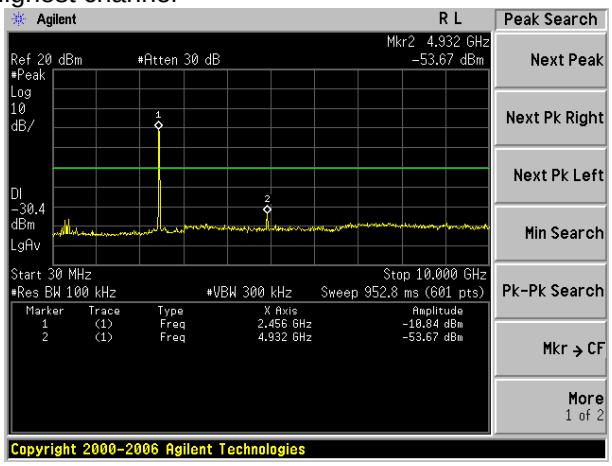



30MHz~10GHz

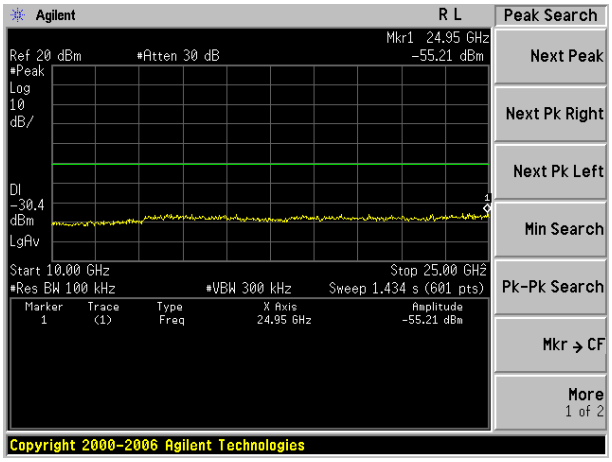



10GHz~25GHz

Highest channel



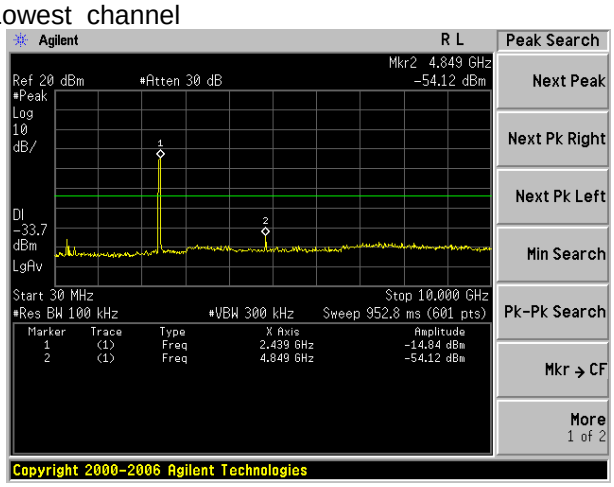

30MHz~10GHz



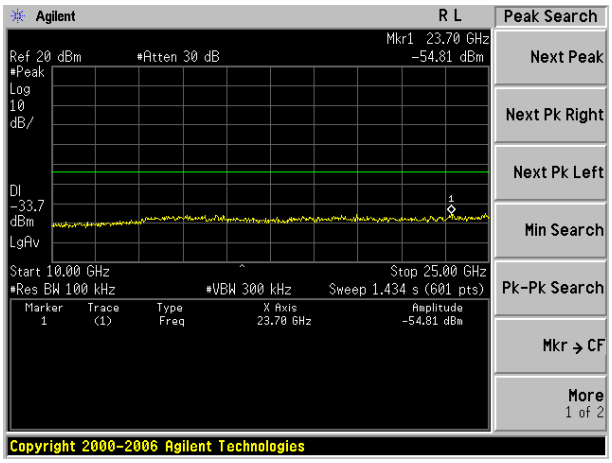

10GHz~25GHz

| Test mode: | 802.11n(HT40) |
|---|---|

Lowest channel

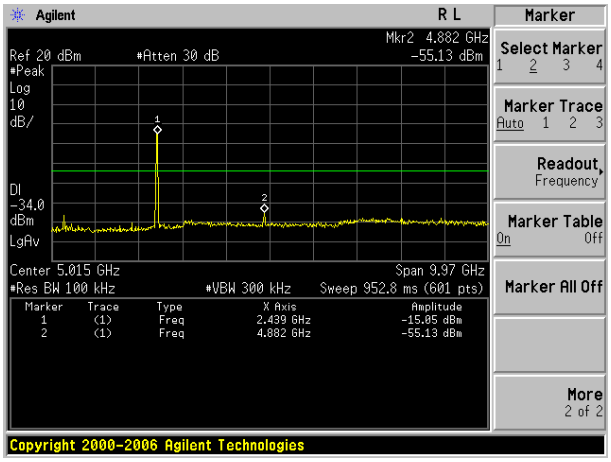



30MHz~10GHz

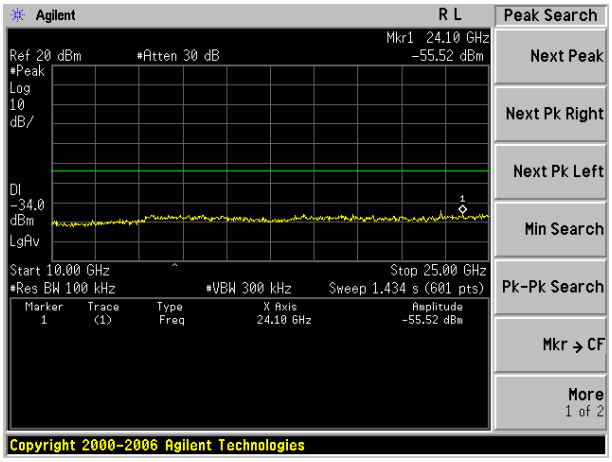



10GHz~25GHz

Middle channel

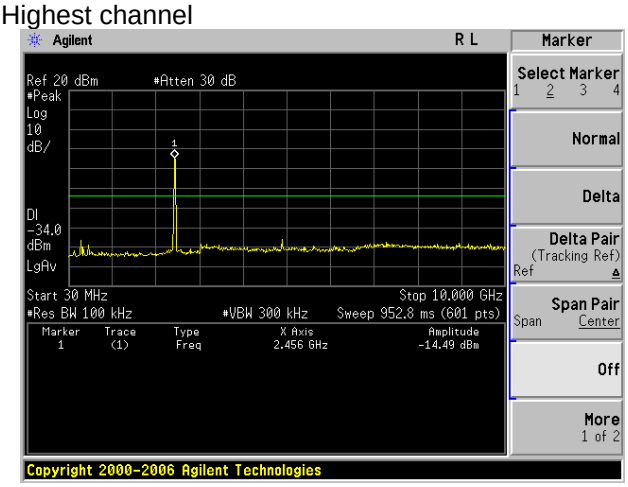



30MHz~10GHz

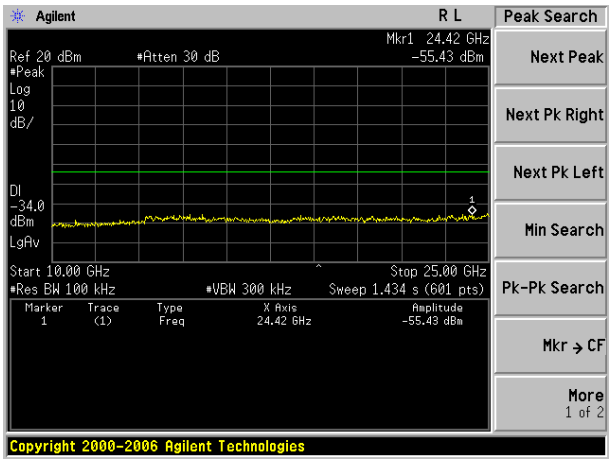



10GHz~25GHz

Highest channel




30MHz~10GHz




10GHz~25GHz

6.7.2 Radiated Emission Method

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.209 |
| Test Method: | ANSI C63.4: 2003 |
| Test Frequency Range: | 30MHz to 25GHz |
| Test site: | Measurement Distance: 3m |

Receiver setup:

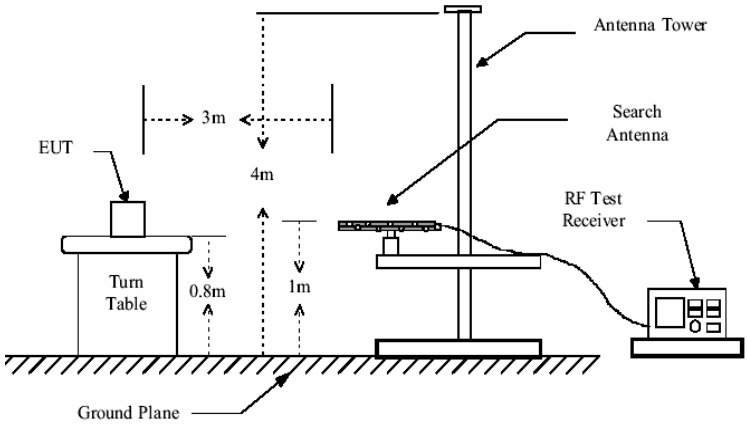
| Frequency | Detector | RBW | VBW | Remark |
|---|---|---|---|---|
| 30MHz-1GHz | Quasi-peak | 100KHz | 300KHz | Quasi-peak Value |
| Above 1GHz | Peak | 1MHz | 3MHz | Peak Value |
| | AV | 1MHz | 10Hz | Average Value |

Limit:

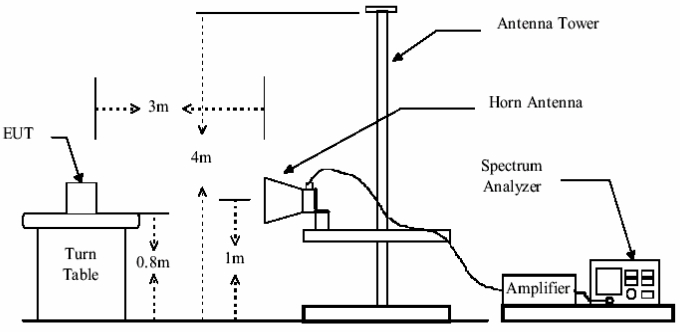
| Frequency | Limit (dBuV/m @3m) | Remark |
|---|---|---|
| 30MHz-88MHz | 40.0 | Quasi-peak Value |
| 88MHz-216MHz | 43.5 | Quasi-peak Value |
| 216MHz-960MHz | 46.0 | Quasi-peak Value |
| 960MHz-1GHz | 54.0 | Quasi-peak Value |
| Above 1GHz | 54.0 | Average Value |
| | 74.0 | Peak Value |

Test setup:

Below 1GHz




Above 1GHz



| | |
|---|---|
| Test Procedure: | 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.<br>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.<br>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.<br>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.<br>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.<br>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. |
| Test Instruments: | Refer to section 5.8 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Pass |

*Remark:*

*Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.*

**Measurement Data**

■ **Below 1GHz**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 44.12 | 42.16 | 16.57 | 0.71 | 32.02 | 27.42 | 40.00 | -12.58 | Vertical |
| 121.55 | 42.25 | 13.36 | 1.37 | 31.87 | 25.11 | 43.50 | -18.39 | Vertical |
| 239.99 | 41.08 | 15.07 | 2.07 | 32.16 | 26.06 | 46.00 | -19.94 | Vertical |
| 564.64 | 39.61 | 19.88 | 3.58 | 31.22 | 31.85 | 46.00 | -14.15 | Vertical |
| 760.70 | 39.70 | 22.58 | 4.32 | 31.27 | 35.33 | 46.00 | -10.67 | Vertical |
| 46.83 | 39.47 | 16.55 | 0.74 | 31.99 | 24.77 | 40.00 | -15.23 | Horizontal |
| 89.59 | 42.63 | 15.01 | 1.11 | 31.72 | 27.03 | 43.50 | -16.47 | Horizontal |
| 239.99 | 47.10 | 15.07 | 2.07 | 32.16 | 32.08 | 46.00 | -13.92 | Horizontal |
| 300.37 | 44.10 | 16.08 | 2.36 | 32.17 | 30.37 | 46.00 | -15.63 | Horizontal |
| 530.10 | 39.04 | 19.23 | 3.44 | 31.40 | 30.31 | 46.00 | -15.69 | Horizontal |

■ **Above 1GHz**

| Test mode: | 802.11b | Test channel: | Lowest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4824.00 | 37.49 | 31.28 | 8.62 | 24.17 | 53.22 | 74.00 | -20.78 | Vertical |
| 7236.00 | 30.74 | 35.36 | 11.68 | 26.52 | 51.26 | 74.00 | -22.74 | Vertical |
| 9648.00 | 31.09 | 37.44 | 14.16 | 25.44 | 57.25 | 74.00 | -16.75 | Vertical |
| 12060.00 | | | | | | 74.00 | | Vertical |
| 14472.00 | | | | | | 74.00 | | Vertical |
| 16884.00 | | | | | | 74.00 | | Vertical |
| 4824.00 | 32.83 | 31.28 | 8.62 | 24.17 | 48.56 | 74.00 | -25.44 | Horizontal |
| 7236.00 | 27.74 | 35.36 | 11.68 | 26.52 | 48.26 | 74.00 | -25.74 | Horizontal |
| 9648.00 | 27.97 | 37.44 | 14.16 | 25.44 | 54.13 | 74.00 | -19.87 | Horizontal |
| 12060.00 | | | | | | 74.00 | | Horizontal |
| 14472.00 | | | | | | 74.00 | | Horizontal |
| 16884.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4824.00 | 27.80 | 31.28 | 8.62 | 24.17 | 43.53 | 54.00 | -10.47 | Vertical |
| 7236.00 | 23.45 | 35.36 | 11.68 | 26.52 | 43.97 | 54.00 | -10.03 | Vertical |
| 9648.00 | 18.59 | 37.44 | 14.16 | 25.44 | 44.75 | 54.00 | -9.25 | Vertical |
| 12060.00 | | | | | | 54.00 | | Vertical |
| 14472.00 | | | | | | 54.00 | | Vertical |
| 16884.00 | | | | | | 54.00 | | Vertical |
| 4824.00 | 22.81 | 31.28 | 8.62 | 24.17 | 38.54 | 54.00 | -15.46 | Horizontal |
| 7236.00 | 19.33 | 35.36 | 11.68 | 26.52 | 39.85 | 54.00 | -14.15 | Horizontal |
| 9648.00 | 20.36 | 37.44 | 14.16 | 25.44 | 46.52 | 54.00 | -7.48 | Horizontal |
| 12060.00 | | | | | | 54.00 | | Horizontal |
| 14472.00 | | | | | | 54.00 | | Horizontal |
| 16884.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11b | Test channel: | Middle |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4874.00 | 37.72 | 32.02 | 8.66 | 24.12 | 54.28 | 74.00 | -19.72 | Vertical |
| 7311.00 | 31.01 | 36.64 | 11.71 | 26.71 | 52.65 | 74.00 | -21.35 | Vertical |
| 9748.00 | 30.33 | 38.54 | 14.25 | 25.38 | 57.74 | 74.00 | -16.26 | Vertical |
| 12185.00 | | | | | | 74.00 | | Vertical |
| 14622.00 | | | | | | 74.00 | | Vertical |
| 17059.00 | | | | | | 74.00 | | Vertical |
| 4874.00 | 34.15 | 32.02 | 8.66 | 24.12 | 50.71 | 74.00 | -23.29 | Horizontal |
| 7311.00 | 27.67 | 36.64 | 11.71 | 26.71 | 49.31 | 74.00 | -24.69 | Horizontal |
| 9748.00 | 28.36 | 38.54 | 14.25 | 25.38 | 55.77 | 74.00 | -18.23 | Horizontal |
| 12185.00 | | | | | | 74.00 | | Horizontal |
| 14622.00 | | | | | | 74.00 | | Horizontal |
| 17059.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4874.00 | 28.06 | 32.02 | 8.66 | 24.12 | 44.62 | 54.00 | -9.38 | Vertical |
| 7311.00 | 23.42 | 36.64 | 11.71 | 26.71 | 45.06 | 54.00 | -8.94 | Vertical |
| 9748.00 | 17.73 | 38.54 | 14.25 | 25.38 | 45.14 | 54.00 | -8.86 | Vertical |
| 12185.00 | | | | | | 54.00 | | Vertical |
| 14622.00 | | | | | | 54.00 | | Vertical |
| 17059.00 | | | | | | 54.00 | | Vertical |
| 4874.00 | 24.24 | 32.02 | 8.66 | 24.12 | 40.80 | 54.00 | -13.20 | Horizontal |
| 7311.00 | 19.24 | 36.64 | 11.71 | 26.71 | 40.88 | 54.00 | -13.12 | Horizontal |
| 9748.00 | 19.73 | 38.54 | 14.25 | 25.38 | 47.14 | 54.00 | -6.86 | Horizontal |
| 12185.00 | | | | | | 54.00 | | Horizontal |
| 14622.00 | | | | | | 54.00 | | Horizontal |
| 17059.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11b | Test channel: | Highest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4924.00 | 38.26 | 32.14 | 8.70 | 24.05 | 55.05 | 74.00 | -18.95 | Vertical |
| 7386.00 | 30.83 | 36.75 | 11.76 | 26.90 | 52.44 | 74.00 | -21.56 | Vertical |
| 9848.00 | 30.01 | 38.79 | 14.31 | 25.30 | 57.81 | 74.00 | -16.19 | Vertical |
| 12310.00 | | | | | | 74.00 | | Vertical |
| 14772.00 | | | | | | 74.00 | | Vertical |
| 17234.00 | | | | | | 74.00 | | Vertical |
| 4924.00 | 33.71 | 32.14 | 8.70 | 24.05 | 50.50 | 74.00 | -23.50 | Horizontal |
| 7386.00 | 28.01 | 36.75 | 11.76 | 26.90 | 49.62 | 74.00 | -24.38 | Horizontal |
| 9848.00 | 25.58 | 38.79 | 14.31 | 25.30 | 53.38 | 74.00 | -20.62 | Horizontal |
| 12310.00 | | | | | | 74.00 | | Horizontal |
| 14772.00 | | | | | | 74.00 | | Horizontal |
| 17234.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4924.00 | 27.60 | 32.14 | 8.70 | 24.05 | 44.39 | 54.00 | -9.61 | Vertical |
| 7386.00 | 23.04 | 36.75 | 11.76 | 26.90 | 44.65 | 54.00 | -9.35 | Vertical |
| 9848.00 | 16.31 | 38.79 | 14.31 | 25.30 | 44.11 | 54.00 | -9.89 | Vertical |
| 12310.00 | | | | | | 54.00 | | Vertical |
| 14772.00 | | | | | | 54.00 | | Vertical |
| 17234.00 | | | | | | 54.00 | | Vertical |
| 4924.00 | 23.00 | 32.14 | 8.70 | 24.05 | 39.79 | 54.00 | -14.21 | Horizontal |
| 7386.00 | 19.42 | 36.75 | 11.76 | 26.90 | 41.03 | 54.00 | -12.97 | Horizontal |
| 9848.00 | 16.95 | 38.79 | 14.31 | 25.30 | 44.75 | 54.00 | -9.25 | Horizontal |
| 12310.00 | | | | | | 54.00 | | Horizontal |
| 14772.00 | | | | | | 54.00 | | Horizontal |
| 17234.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11g | Test channel: | lowest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4824.00 | 38.76 | 31.28 | 8.62 | 24.17 | 54.49 | 74.00 | -19.51 | Vertical |
| 7236.00 | 32.33 | 35.36 | 11.68 | 26.52 | 52.85 | 74.00 | -21.15 | Vertical |
| 9648.00 | 30.84 | 37.44 | 14.16 | 25.44 | 57.00 | 74.00 | -17.00 | Vertical |
| 12060.00 | | | | | | 74.00 | | Vertical |
| 14472.00 | | | | | | 74.00 | | Vertical |
| 16884.00 | | | | | | 74.00 | | Vertical |
| 4824.00 | 38.01 | 31.28 | 8.62 | 24.17 | 53.74 | 74.00 | -20.26 | Horizontal |
| 7236.00 | 31.89 | 35.36 | 11.68 | 26.52 | 52.41 | 74.00 | -21.59 | Horizontal |
| 9648.00 | 33.86 | 37.44 | 14.16 | 25.44 | 60.02 | 74.00 | -13.98 | Horizontal |
| 12060.00 | | | | | | 74.00 | | Horizontal |
| 14472.00 | | | | | | 74.00 | | Horizontal |
| 16884.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4824.00 | 29.16 | 31.28 | 8.62 | 24.17 | 44.89 | 54.00 | -9.11 | Vertical |
| 7236.00 | 26.54 | 35.36 | 11.68 | 26.52 | 47.06 | 54.00 | -6.94 | Vertical |
| 9648.00 | 20.44 | 37.44 | 14.16 | 25.44 | 46.60 | 54.00 | -7.40 | Vertical |
| 12060.00 | | | | | | 54.00 | | Vertical |
| 14472.00 | | | | | | 54.00 | | Vertical |
| 16884.00 | | | | | | 54.00 | | Vertica |
| 4824.00 | 24.73 | 31.28 | 8.62 | 24.17 | 40.46 | 54.00 | -13.54 | Horizontal |
| 7236.00 | 25.82 | 35.36 | 11.68 | 26.52 | 46.34 | 54.00 | -7.66 | Horizontal |
| 9648.00 | 20.41 | 37.44 | 14.16 | 25.44 | 46.57 | 54.00 | -7.43 | Horizontal |
| 12060.00 | | | | | | 54.00 | | Horizontal |
| 14472.00 | | | | | | 54.00 | | Horizontal |
| 16884.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11g | Test channel: | Middle |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4874.00 | 37.23 | 32.02 | 8.66 | 24.12 | 53.79 | 74.00 | -20.21 | Vertical |
| 7311.00 | 31.32 | 36.64 | 11.71 | 26.71 | 52.96 | 74.00 | -21.04 | Vertical |
| 9748.00 | 30.62 | 38.54 | 14.25 | 25.38 | 58.03 | 74.00 | -15.97 | Vertical |
| 12185.00 | | | | | | 74.00 | | Vertical |
| 14622.00 | | | | | | 74.00 | | Vertical |
| 17059.00 | | | | | | 74.00 | | Vertical |
| 4874.00 | 34.34 | 32.02 | 8.66 | 24.12 | 50.90 | 74.00 | -23.10 | Horizontal |
| 7311.00 | 30.73 | 36.64 | 11.71 | 26.71 | 52.37 | 74.00 | -21.63 | Horizontal |
| 9748.00 | 31.16 | 38.54 | 14.25 | 25.38 | 58.57 | 74.00 | -15.43 | Horizontal |
| 12185.00 | | | | | | 74.00 | | Horizontal |
| 14622.00 | | | | | | 74.00 | | Horizontal |
| 17059.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4874.00 | 28.66 | 32.02 | 8.66 | 24.12 | 45.22 | 54.00 | -8.78 | Vertical |
| 7311.00 | 23.83 | 36.64 | 11.71 | 26.71 | 45.47 | 54.00 | -8.53 | Vertical |
| 9748.00 | 19.32 | 38.54 | 14.25 | 25.38 | 46.73 | 54.00 | -7.27 | Vertical |
| 12185.00 | | | | | | 54.00 | | Vertical |
| 14622.00 | | | | | | 54.00 | | Vertical |
| 17059.00 | | | | | | 54.00 | | Vertical |
| 4874.00 | 25.67 | 32.02 | 8.66 | 24.12 | 42.23 | 54.00 | -11.77 | Horizontal |
| 7311.00 | 21.84 | 36.64 | 11.71 | 26.71 | 43.48 | 54.00 | -10.52 | Horizontal |
| 9748.00 | 18.41 | 38.54 | 14.25 | 25.38 | 45.82 | 54.00 | -8.18 | Horizontal |
| 12185.00 | | | | | | 54.00 | | Horizontal |
| 14622.00 | | | | | | 54.00 | | Horizontal |
| 17059.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11g | Test channel: | Highest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4924.00 | 39.80 | 32.14 | 8.70 | 24.05 | 56.59 | 74.00 | -17.41 | Vertical |
| 7386.00 | 32.65 | 36.75 | 11.76 | 26.90 | 54.26 | 74.00 | -19.74 | Vertical |
| 9848.00 | 31.24 | 38.79 | 14.31 | 25.30 | 59.04 | 74.00 | -14.96 | Vertical |
| 12310.00 | | | | | | 74.00 | | Vertical |
| 14772.00 | | | | | | 74.00 | | Vertical |
| 17234.00 | | | | | | 74.00 | | Vertical |
| 4924.00 | 37.46 | 32.14 | 8.70 | 24.05 | 54.25 | 74.00 | -19.75 | Horizontal |
| 7386.00 | 30.88 | 36.75 | 11.76 | 26.90 | 52.49 | 74.00 | -21.51 | Horizontal |
| 9848.00 | 30.20 | 38.79 | 14.31 | 25.30 | 58.00 | 74.00 | -16.00 | Horizontal |
| 12310.00 | | | | | | 74.00 | | Horizontal |
| 14772.00 | | | | | | 74.00 | | Horizontal |
| 17234.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4924.00 | 28.87 | 32.14 | 8.70 | 24.05 | 45.66 | 54.00 | -8.34 | Vertical |
| 7386.00 | 24.66 | 36.75 | 11.76 | 26.90 | 46.27 | 54.00 | -7.73 | Vertical |
| 9848.00 | 18.64 | 38.79 | 14.31 | 25.30 | 46.44 | 54.00 | -7.56 | Vertical |
| 12310.00 | | | | | | 54.00 | | Vertical |
| 14772.00 | | | | | | 54.00 | | Vertical |
| 17234.00 | | | | | | 54.00 | | Vertical |
| 4924.00 | 25.78 | 32.14 | 8.70 | 24.05 | 42.57 | 54.00 | -11.43 | Horizontal |
| 7386.00 | 22.72 | 36.75 | 11.76 | 26.90 | 44.33 | 54.00 | -9.67 | Horizontal |
| 9848.00 | 18.85 | 38.79 | 14.31 | 25.30 | 46.65 | 54.00 | -7.35 | Horizontal |
| 12310.00 | | | | | | 54.00 | | Horizontal |
| 14772.00 | | | | | | 54.00 | | Horizontal |
| 17234.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11n(HT20) | Test channel: | Lowest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4824.00 | 38.14 | 31.28 | 8.62 | 24.17 | 53.87 | 74.00 | -20.13 | Vertical |
| 7236.00 | 30.64 | 35.36 | 11.68 | 26.52 | 51.16 | 74.00 | -22.84 | Vertical |
| 9648.00 | 30.43 | 37.44 | 14.16 | 25.44 | 56.59 | 74.00 | -17.41 | Vertical |
| 12060.00 | | | | | | 74.00 | | Vertical |
| 14472.00 | | | | | | 74.00 | | Vertical |
| 16884.00 | | | | | | 74.00 | | Vertical |
| 4824.00 | 35.84 | 31.28 | 8.62 | 24.17 | 51.57 | 74.00 | -22.43 | Horizontal |
| 7236.00 | 29.32 | 35.36 | 11.68 | 26.52 | 49.84 | 74.00 | -24.16 | Horizontal |
| 9648.00 | 29.26 | 37.44 | 14.16 | 25.44 | 55.42 | 74.00 | -18.58 | Horizontal |
| 12060.00 | | | | | | 74.00 | | Horizontal |
| 14472.00 | | | | | | 74.00 | | Horizontal |
| 16884.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4824.00 | 29.27 | 31.28 | 8.62 | 24.17 | 45.00 | 54.00 | -9.00 | Vertical |
| 7236.00 | 24.96 | 35.36 | 11.68 | 26.52 | 45.48 | 54.00 | -8.52 | Vertical |
| 9648.00 | 21.00 | 37.44 | 14.16 | 25.44 | 47.16 | 54.00 | -6.84 | Vertical |
| 12060.00 | | | | | | 54.00 | | Vertical |
| 14472.00 | | | | | | 54.00 | | Vertical |
| 16884.00 | | | | | | 54.00 | | Vertical |
| 4824.00 | 25.42 | 31.28 | 8.62 | 24.17 | 41.15 | 54.00 | -12.85 | Horizontal |
| 7236.00 | 22.79 | 35.36 | 11.68 | 26.52 | 43.31 | 54.00 | -10.69 | Horizontal |
| 9648.00 | 17.90 | 37.44 | 14.16 | 25.44 | 44.06 | 54.00 | -9.94 | Horizontal |
| 12060.00 | | | | | | 54.00 | | Horizontal |
| 14472.00 | | | | | | 54.00 | | Horizontal |
| 16884.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11n(HT20) | Test channel: | Middle |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4874.00 | 37.31 | 32.02 | 8.66 | 24.12 | 53.87 | 74.00 | -20.13 | Vertical |
| 7311.00 | 31.40 | 36.64 | 11.71 | 26.71 | 53.04 | 74.00 | -20.96 | Vertical |
| 9748.00 | 31.91 | 38.54 | 14.25 | 25.38 | 59.32 | 74.00 | -14.68 | Vertical |
| 12185.00 | | | | | | 74.00 | | Vertical |
| 14622.00 | | | | | | 74.00 | | Vertical |
| 17059.00 | | | | | | 74.00 | | Vertical |
| 4874.00 | 36.97 | 32.02 | 8.66 | 24.12 | 53.53 | 74.00 | -20.47 | Horizontal |
| 7311.00 | 28.84 | 36.64 | 11.71 | 26.71 | 50.48 | 74.00 | -23.52 | Horizontal |
| 9748.00 | 28.75 | 38.54 | 14.25 | 25.38 | 56.16 | 74.00 | -17.84 | Horizontal |
| 12185.00 | | | | | | 74.00 | | Horizontal |
| 14622.00 | | | | | | 74.00 | | Horizontal |
| 17059.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4874.00 | 27.60 | 32.02 | 8.66 | 24.12 | 44.16 | 54.00 | -9.84 | Vertical |
| 7311.00 | 23.48 | 36.64 | 11.71 | 26.71 | 45.12 | 54.00 | -8.88 | Vertical |
| 9748.00 | 20.43 | 38.54 | 14.25 | 25.38 | 47.84 | 54.00 | -6.16 | Vertical |
| 12185.00 | | | | | | 54.00 | | Vertical |
| 14622.00 | | | | | | 54.00 | | Vertical |
| 17059.00 | | | | | | 54.00 | | Vertical |
| 4874.00 | 25.19 | 32.02 | 8.66 | 24.12 | 41.75 | 54.00 | -12.25 | Horizontal |
| 7311.00 | 22.27 | 36.64 | 11.71 | 26.71 | 43.91 | 54.00 | -10.09 | Horizontal |
| 9748.00 | 15.80 | 38.54 | 14.25 | 25.38 | 43.21 | 54.00 | -10.79 | Horizontal |
| 12185.00 | | | | | | 54.00 | | Horizontal |
| 14622.00 | | | | | | 54.00 | | Horizontal |
| 17059.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11n(HT20) | Test channel: | Highest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4924.00 | 37.59 | 32.14 | 8.70 | 24.05 | 54.38 | 74.00 | -19.62 | Vertical |
| 7386.00 | 31.59 | 36.75 | 11.76 | 26.90 | 53.20 | 74.00 | -20.80 | Vertical |
| 9848.00 | 31.14 | 38.79 | 14.31 | 25.30 | 58.94 | 74.00 | -15.06 | Vertical |
| 12310.00 | | | | | | 74.00 | | Vertical |
| 14772.00 | | | | | | 74.00 | | Vertical |
| 17234.00 | | | | | | 74.00 | | Vertical |
| 4924.00 | 35.73 | 32.14 | 8.70 | 24.05 | 52.52 | 74.00 | -21.48 | Horizontal |
| 7386.00 | 28.80 | 36.75 | 11.76 | 26.90 | 50.41 | 74.00 | -23.59 | Horizontal |
| 9848.00 | 28.31 | 38.79 | 14.31 | 25.30 | 56.11 | 74.00 | -17.89 | Horizontal |
| 12310.00 | | | | | | 74.00 | | Horizontal |
| 14772.00 | | | | | | 74.00 | | Horizontal |
| 17234.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4924.00 | 29.30 | 32.14 | 8.70 | 24.05 | 46.09 | 54.00 | -7.91 | Vertical |
| 7386.00 | 25.76 | 36.75 | 11.76 | 26.90 | 47.37 | 54.00 | -6.63 | Vertical |
| 9848.00 | 19.82 | 38.79 | 14.31 | 25.30 | 47.62 | 54.00 | -6.38 | Vertical |
| 12310.00 | | | | | | 54.00 | | Vertical |
| 14772.00 | | | | | | 54.00 | | Vertical |
| 17234.00 | | | | | | 54.00 | | Vertical |
| 4924.00 | 25.90 | 32.14 | 8.70 | 24.05 | 42.69 | 54.00 | -11.31 | Horizontal |
| 7386.00 | 22.53 | 36.75 | 11.76 | 26.90 | 44.14 | 54.00 | -9.86 | Horizontal |
| 9848.00 | 15.36 | 38.79 | 14.31 | 25.30 | 43.16 | 54.00 | -10.84 | Horizontal |
| 12310.00 | | | | | | 54.00 | | Horizontal |
| 14772.00 | | | | | | 54.00 | | Horizontal |
| 17234.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

*1 Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*

*2 "*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11n(HT40) | Test channel: | Lowest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4844.00 | 36.72 | 31.40 | 8.63 | 24.04 | 52.71 | 74.00 | -21.29 | Vertical |
| 7266.00 | 30.09 | 35.96 | 11.69 | 26.47 | 51.27 | 74.00 | -22.73 | Vertical |
| 9688.00 | 30.02 | 37.71 | 14.21 | 25.30 | 56.64 | 74.00 | -17.36 | Vertical |
| 12060.00 | | | | | | 74.00 | | Vertical |
| 14472.00 | | | | | | 74.00 | | Vertical |
| 16884.00 | | | | | | 74.00 | | Vertical |
| 4844.00 | 35.42 | 31.40 | 8.63 | 24.04 | 51.41 | 74.00 | -22.59 | Horizontal |
| 7266.00 | 30.09 | 35.96 | 11.69 | 26.47 | 51.27 | 74.00 | -22.73 | Horizontal |
| 9688.00 | 30.09 | 37.71 | 14.21 | 25.30 | 56.71 | 74.00 | -17.29 | Horizontal |
| 12060.00 | | | | | | 74.00 | | Horizontal |
| 14472.00 | | | | | | 74.00 | | Horizontal |
| 16884.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4844.00 | 28.65 | 31.40 | 8.63 | 24.04 | 44.64 | 54.00 | -9.36 | Vertical |
| 7266.00 | 21.50 | 35.96 | 11.69 | 26.47 | 42.68 | 54.00 | -11.32 | Vertical |
| 9688.00 | 17.62 | 37.71 | 14.21 | 25.30 | 44.24 | 54.00 | -9.76 | Vertical |
| 12060.00 | | | | | | 54.00 | | Vertical |
| 14472.00 | | | | | | 54.00 | | Vertical |
| 16884.00 | | | | | | 54.00 | | Vertical |
| 4844.00 | 25.97 | 31.40 | 8.63 | 24.04 | 41.96 | 54.00 | -12.04 | Horizontal |
| 7266.00 | 19.63 | 35.96 | 11.69 | 26.47 | 40.81 | 54.00 | -13.19 | Horizontal |
| 9688.00 | 16.84 | 37.71 | 14.21 | 25.30 | 43.46 | 54.00 | -10.54 | Horizontal |
| 12060.00 | | | | | | 54.00 | | Horizontal |
| 14472.00 | | | | | | 54.00 | | Horizontal |
| 16884.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11n(HT40) | Test channel: | Middle |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4874.00 | 38.31 | 32.02 | 8.66 | 24.12 | 54.87 | 74.00 | -19.13 | Vertical |
| 7311.00 | 28.85 | 36.64 | 11.71 | 26.71 | 50.49 | 74.00 | -23.51 | Vertical |
| 9748.00 | 28.62 | 38.54 | 14.25 | 25.38 | 56.03 | 74.00 | -17.97 | Vertical |
| 12185.00 | | | | | | 74.00 | | Vertical |
| 14622.00 | | | | | | 74.00 | | Vertical |
| 17059.00 | | | | | | 74.00 | | Vertical |
| 4874.00 | 37.03 | 32.02 | 8.66 | 24.12 | 53.59 | 74.00 | -20.41 | Horizontal |
| 7311.00 | 29.76 | 36.64 | 11.71 | 26.71 | 51.40 | 74.00 | -22.60 | Horizontal |
| 9748.00 | 29.14 | 38.54 | 14.25 | 25.38 | 56.55 | 74.00 | -17.45 | Horizontal |
| 12185.00 | | | | | | 74.00 | | Horizontal |
| 14622.00 | | | | | | 74.00 | | Horizontal |
| 17059.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4874.00 | 27.46 | 32.02 | 8.66 | 24.12 | 44.02 | 54.00 | -9.98 | Vertical |
| 7311.00 | 22.86 | 36.64 | 11.71 | 26.71 | 44.50 | 54.00 | -9.50 | Vertical |
| 9748.00 | 17.92 | 38.54 | 14.25 | 25.38 | 45.33 | 54.00 | -8.67 | Vertical |
| 12185.00 | | | | | | 54.00 | | Vertical |
| 14622.00 | | | | | | 54.00 | | Vertical |
| 17059.00 | | | | | | 54.00 | | Vertical |
| 4874.00 | 24.18 | 32.02 | 8.66 | 24.12 | 40.74 | 54.00 | -13.26 | Horizontal |
| 7311.00 | 22.39 | 36.64 | 11.71 | 26.71 | 44.03 | 54.00 | -9.97 | Horizontal |
| 9748.00 | 15.79 | 38.54 | 14.25 | 25.38 | 43.20 | 54.00 | -10.80 | Horizontal |
| 12185.00 | | | | | | 54.00 | | Horizontal |
| 14622.00 | | | | | | 54.00 | | Horizontal |
| 17059.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

| Test mode: | 802.11n(HT40) | Test channel: | Highest |
|---|---|---|---|

**Peak value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4904.00 | 36.06 | 32.08 | 8.68 | 23.97 | 52.85 | 74.00 | -21.15 | Vertical |
| 7356.00 | 28.67 | 36.69 | 11.74 | 26.73 | 50.37 | 74.00 | -23.63 | Vertical |
| 9808.00 | 28.95 | 38.60 | 14.29 | 25.22 | 56.62 | 74.00 | -17.38 | Vertical |
| 12310.00 | | | | | | 74.00 | | Vertical |
| 14772.00 | | | | | | 74.00 | | Vertical |
| 17234.00 | | | | | | 74.00 | | Vertical |
| 4904.00 | 35.47 | 32.08 | 8.68 | 23.97 | 52.26 | 74.00 | -21.74 | Horizontal |
| 7356.00 | 29.16 | 36.69 | 11.74 | 26.73 | 50.86 | 74.00 | -23.14 | Horizontal |
| 9808.00 | 28.94 | 38.60 | 14.29 | 25.22 | 56.61 | 74.00 | -17.39 | Horizontal |
| 12310.00 | | | | | | 74.00 | | Horizontal |
| 14772.00 | | | | | | 74.00 | | Horizontal |
| 17234.00 | | | | | | 74.00 | | Horizontal |

**Average value:**

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|---|---|---|---|---|---|---|---|---|
| 4904.00 | 28.75 | 32.08 | 8.68 | 23.97 | 45.54 | 54.00 | -8.46 | Vertical |
| 7356.00 | 23.18 | 36.69 | 11.74 | 26.73 | 44.88 | 54.00 | -9.12 | Vertical |
| 9808.00 | 16.45 | 38.60 | 14.29 | 25.22 | 44.12 | 54.00 | -9.88 | Vertical |
| 12310.00 | | | | | | 54.00 | | Vertical |
| 14772.00 | | | | | | 54.00 | | Vertical |
| 17234.00 | | | | | | 54.00 | | Vertical |
| 4904.00 | 25.69 | 32.08 | 8.68 | 23.97 | 42.48 | 54.00 | -11.52 | Horizontal |
| 7356.00 | 20.79 | 36.69 | 11.74 | 26.73 | 42.49 | 54.00 | -11.51 | Horizontal |
| 9808.00 | 17.79 | 38.60 | 14.29 | 25.22 | 45.46 | 54.00 | -8.54 | Horizontal |
| 12310.00 | | | | | | 54.00 | | Horizontal |
| 14772.00 | | | | | | 54.00 | | Horizontal |
| 17234.00 | | | | | | 54.00 | | Horizontal |

*Remark:*

*1 Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*

*2 "*", means this data is the too weak instrument of signal is unable to test.*