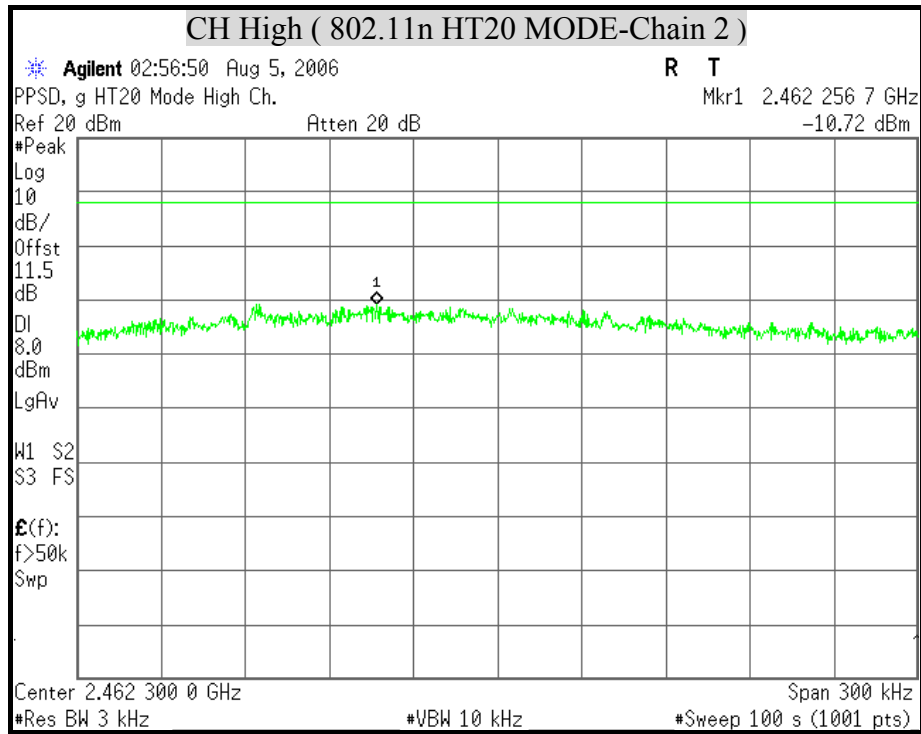
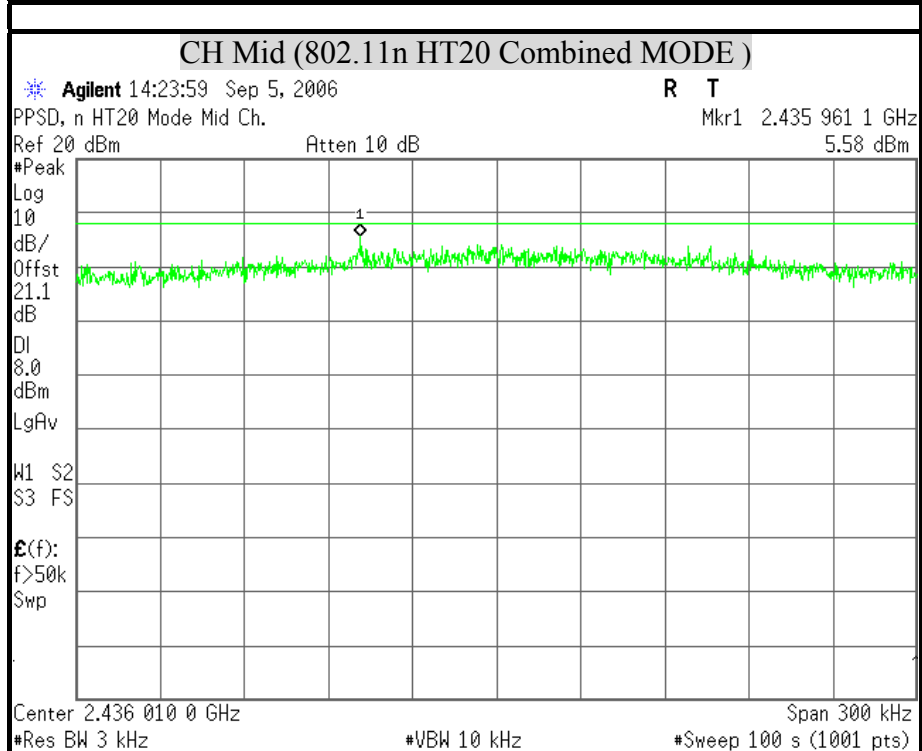
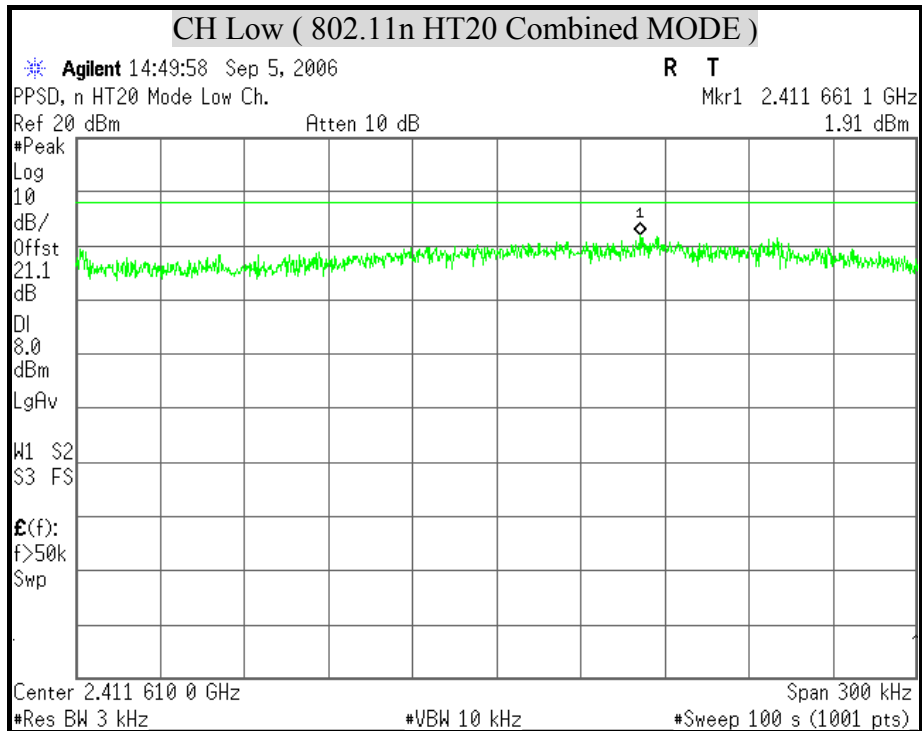
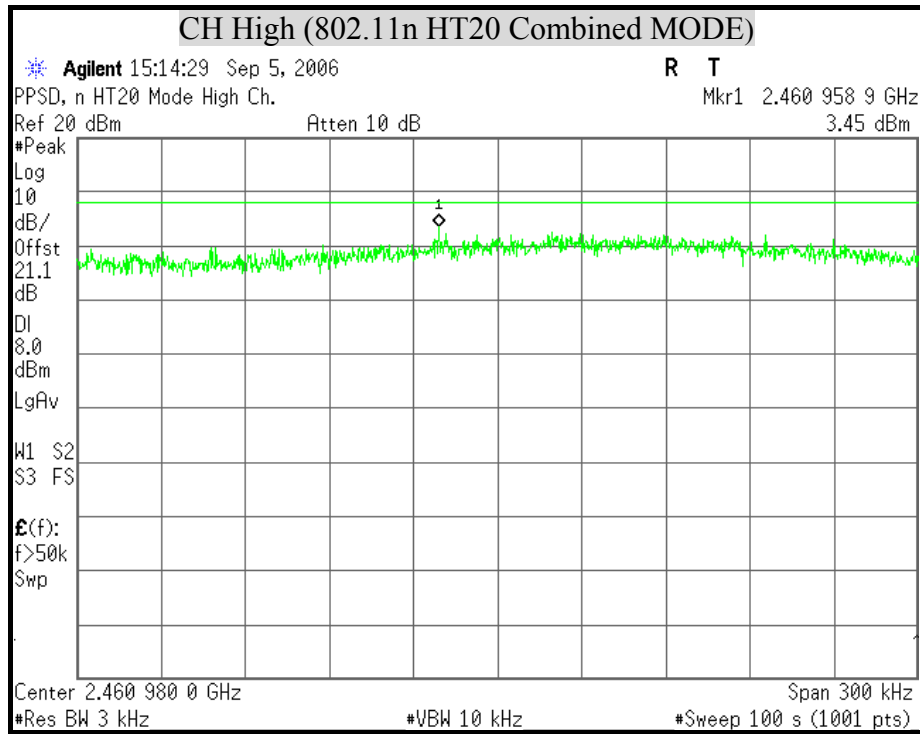






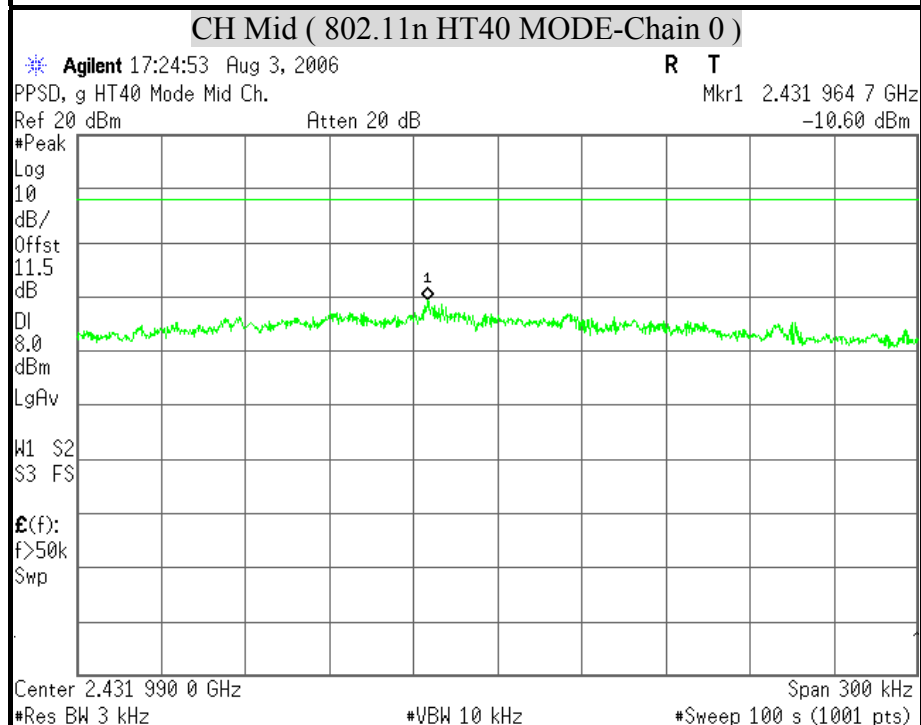
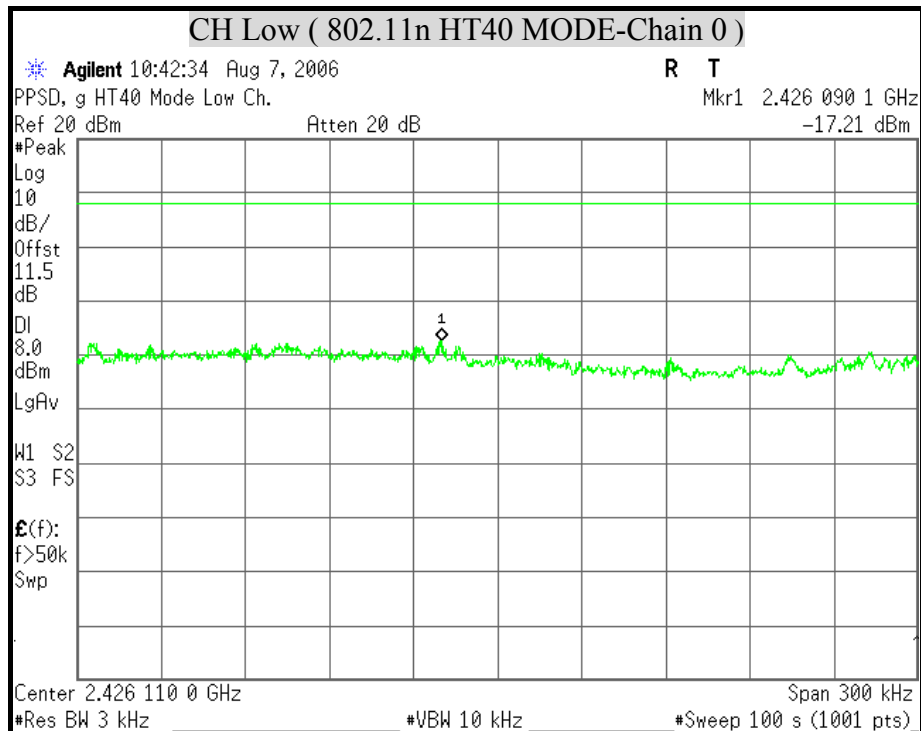
## 2dBi Antenna

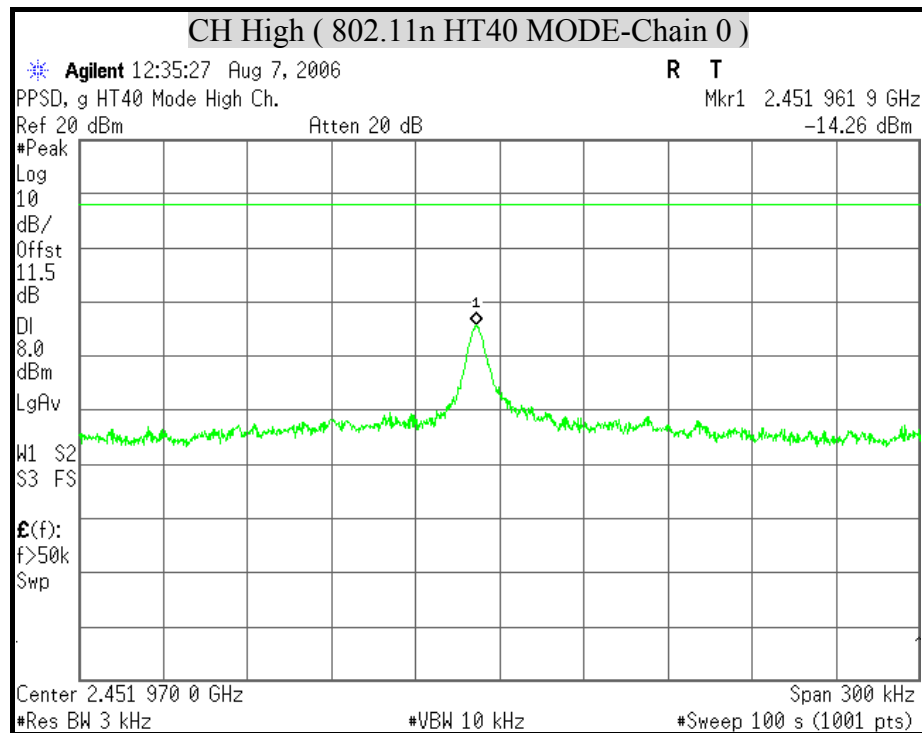




**POWER SPECTRAL DENSITY ( 802.11n HT40 MODE )**

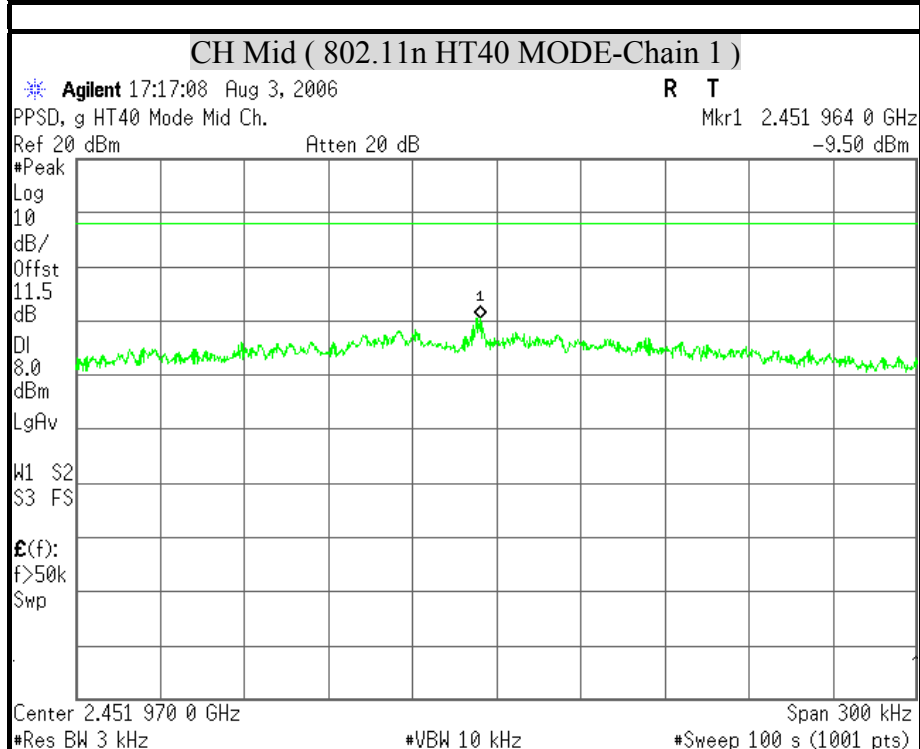
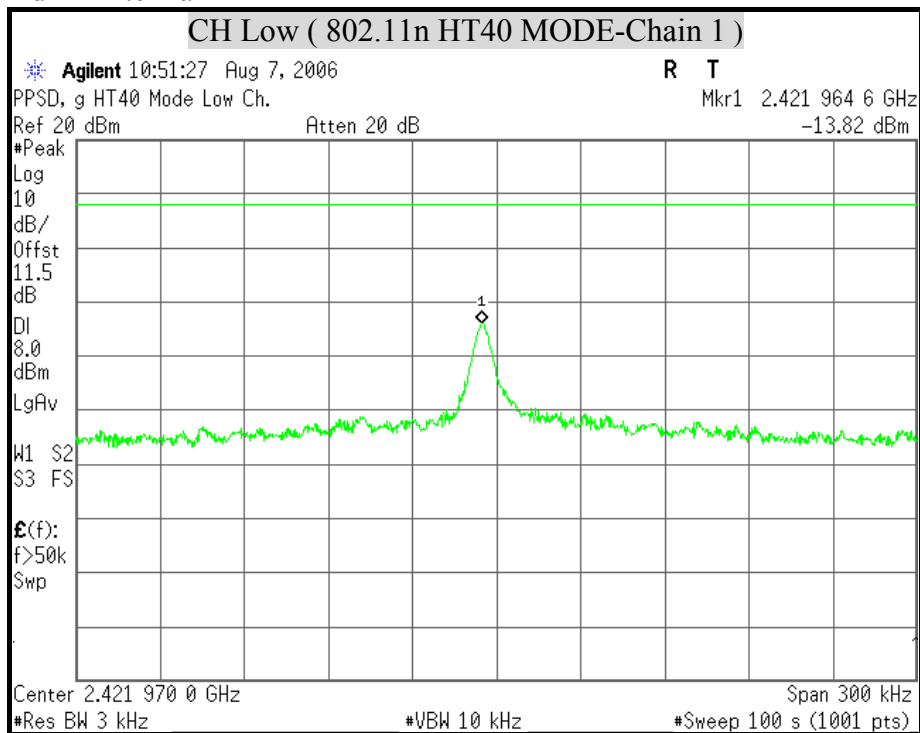
2dBi Antenna

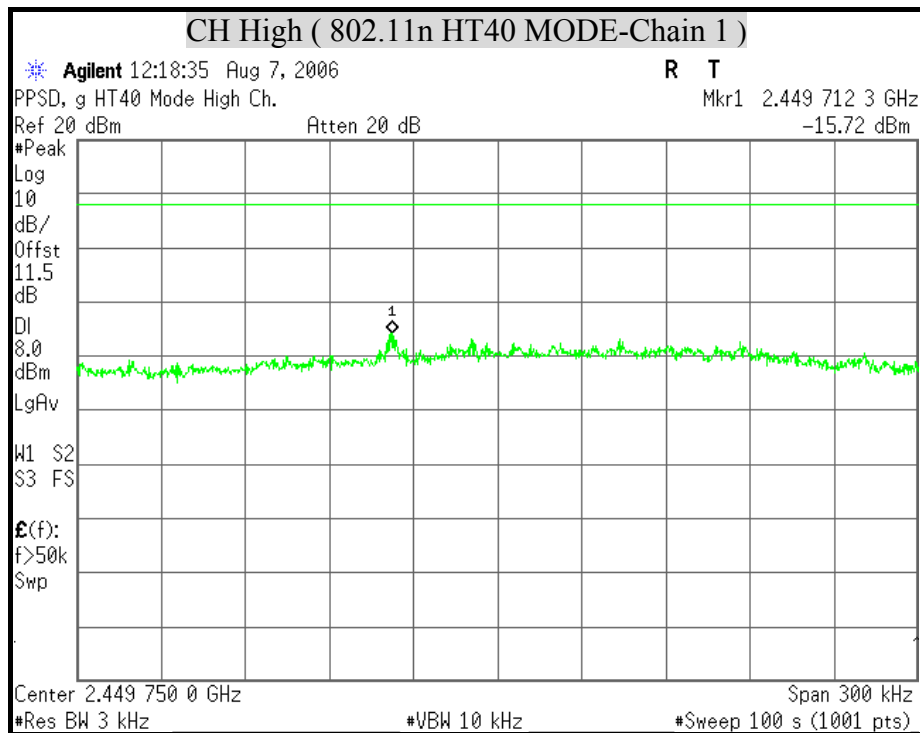






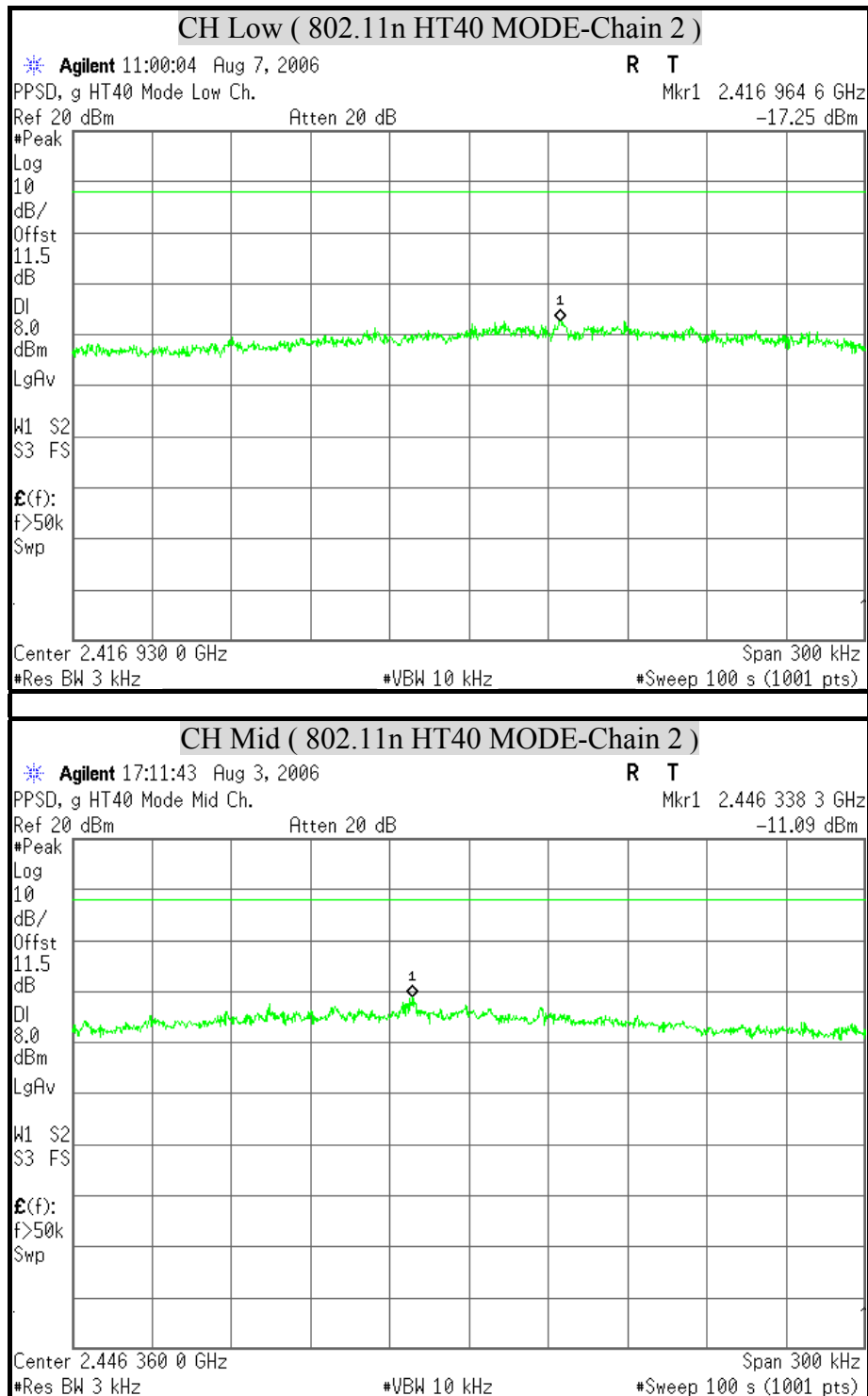
## 2dBi Antenna

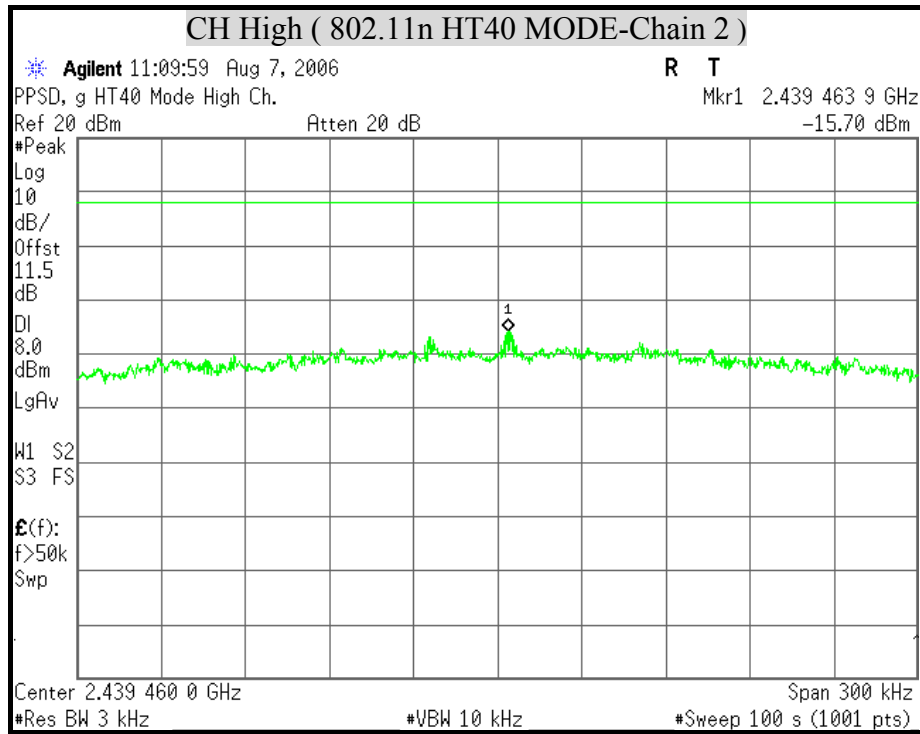






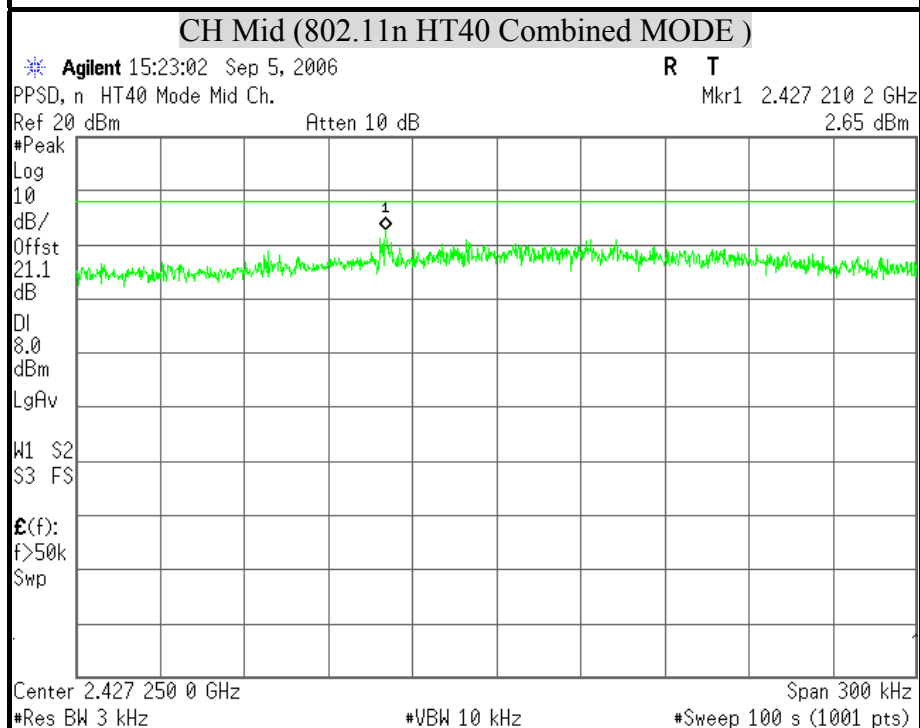
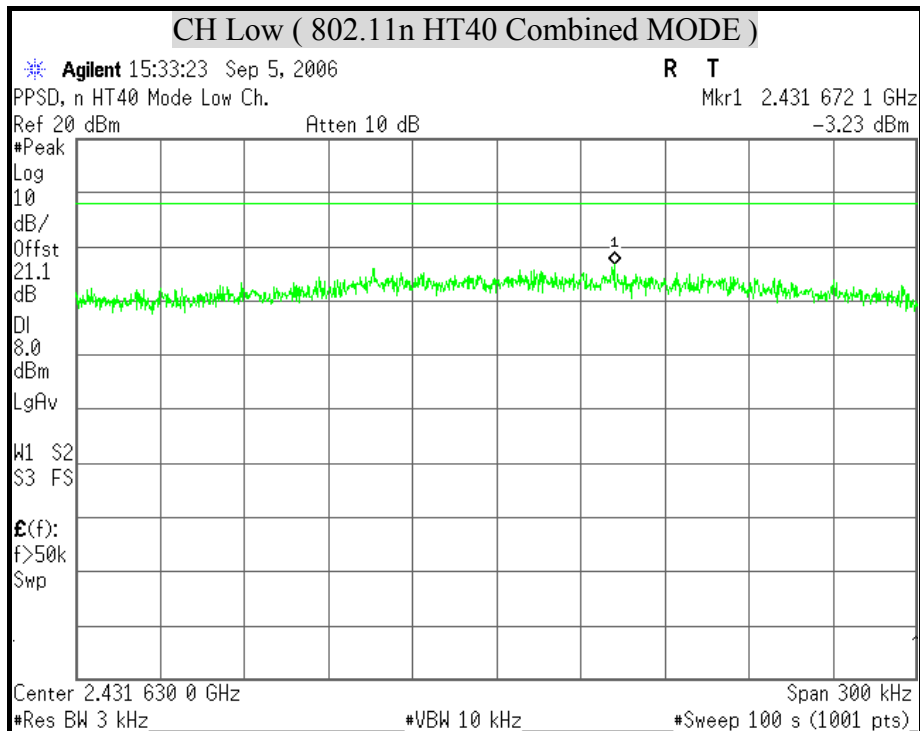
## 2dBi Antenna

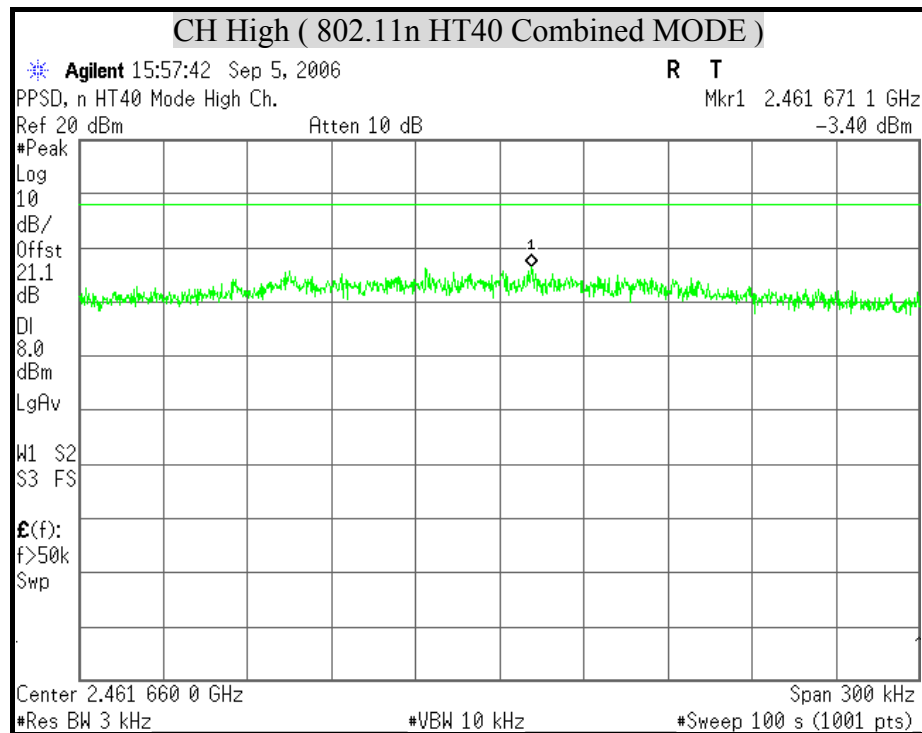






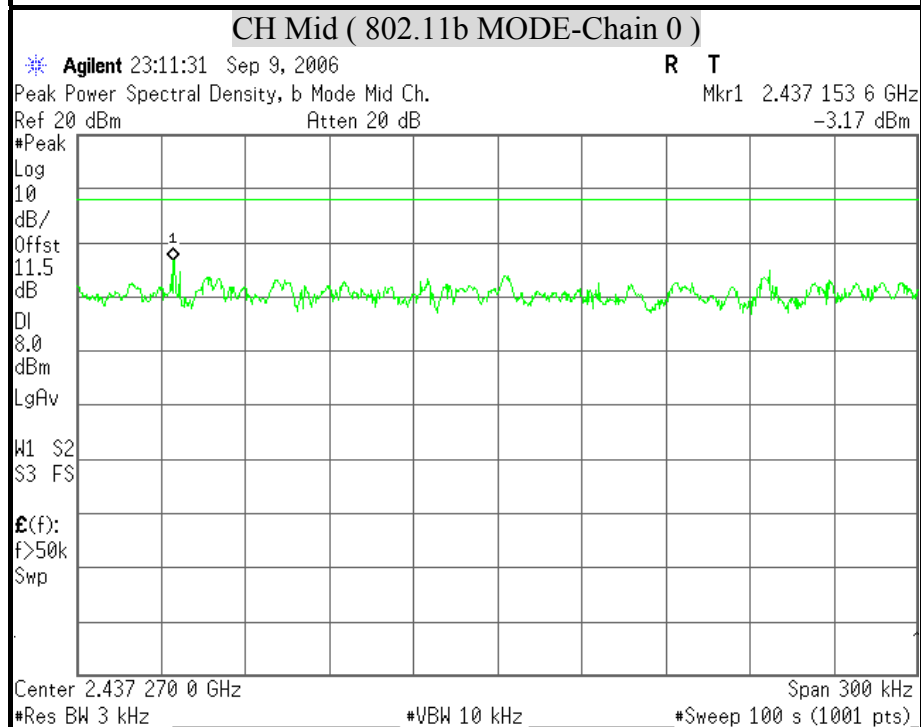
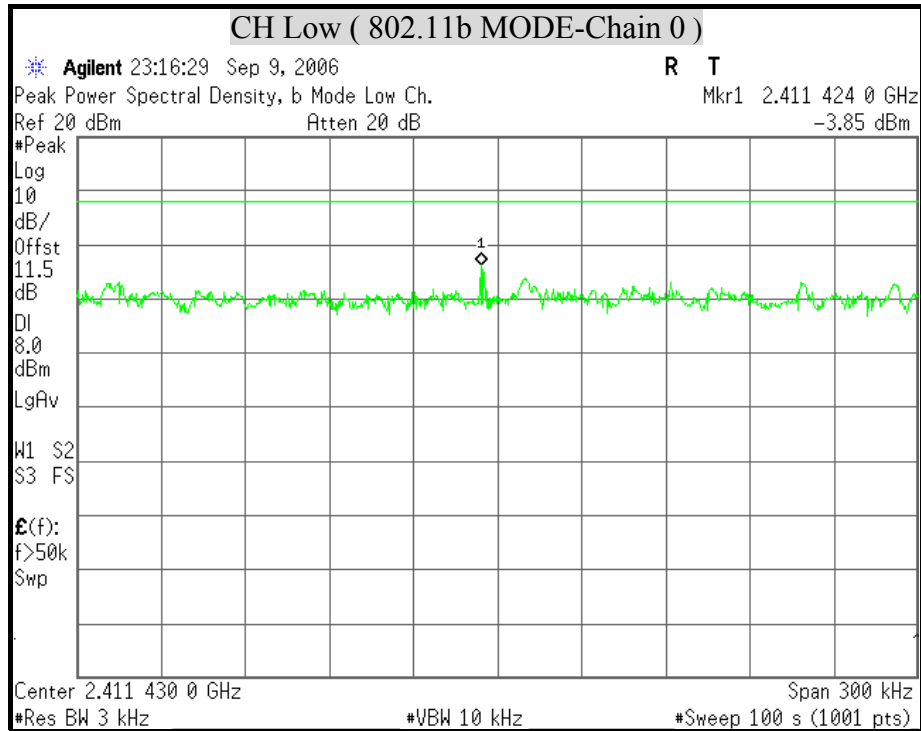
## 2dBi Antenna

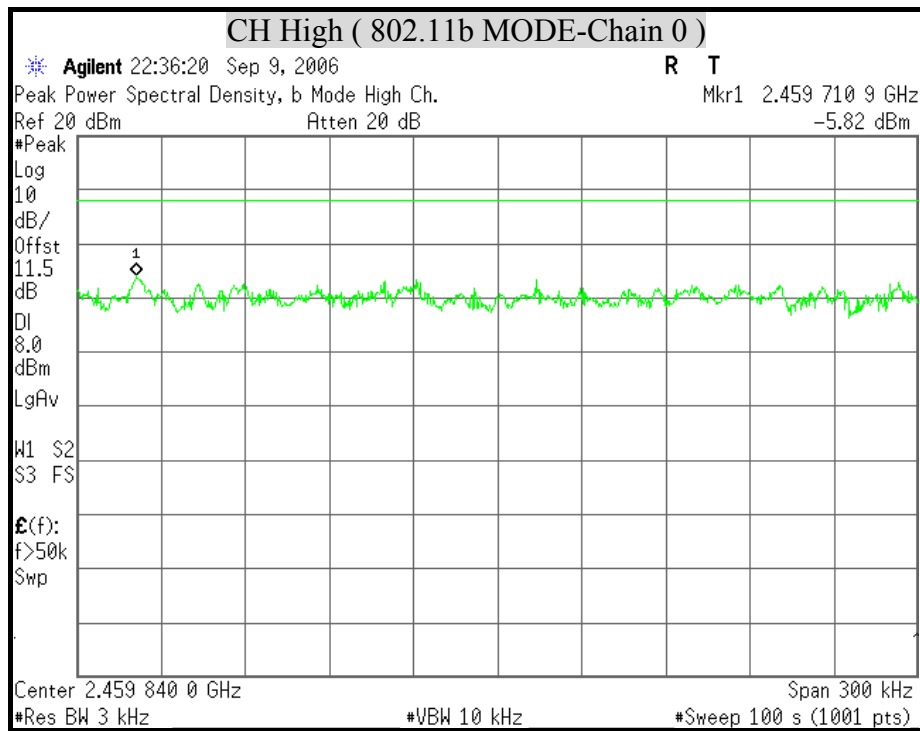




**POWER SPECTRAL DENSITY ( IEEE 802.11b MODE)**

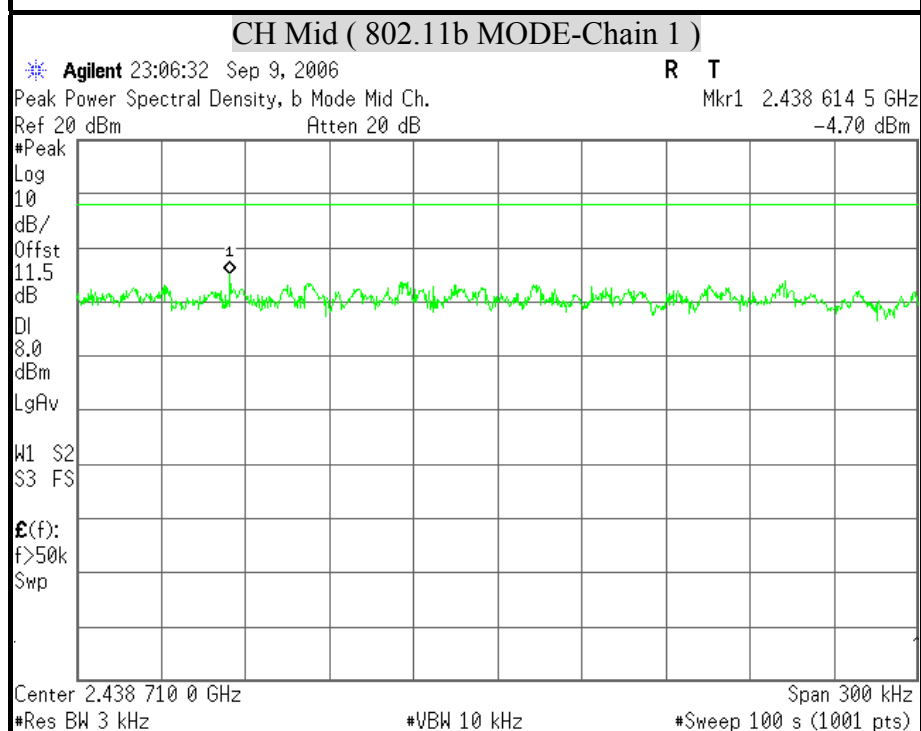
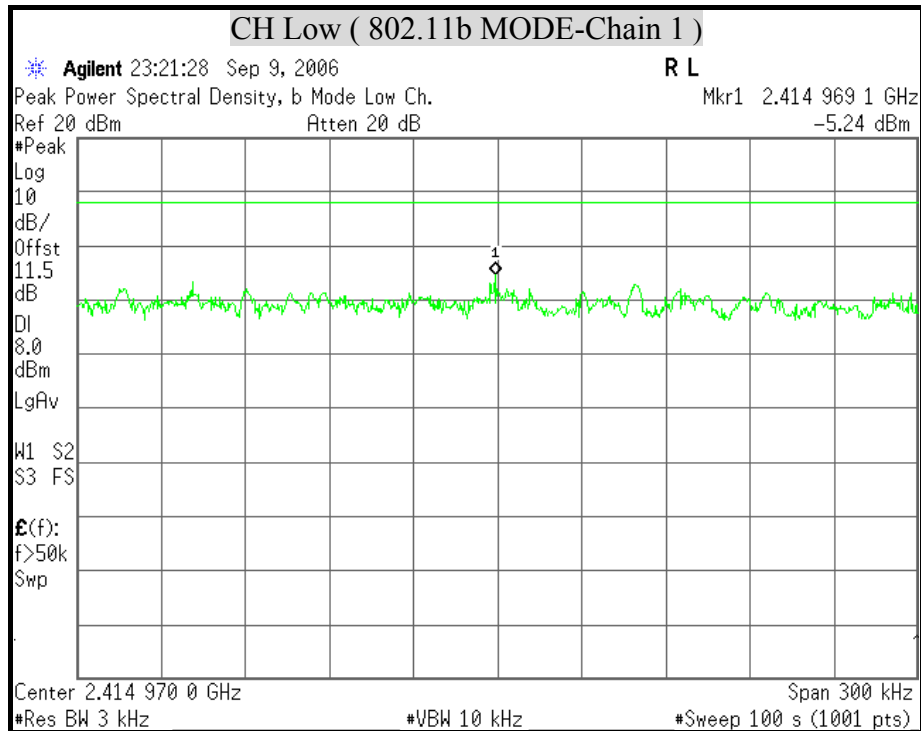
3dBi Antenna

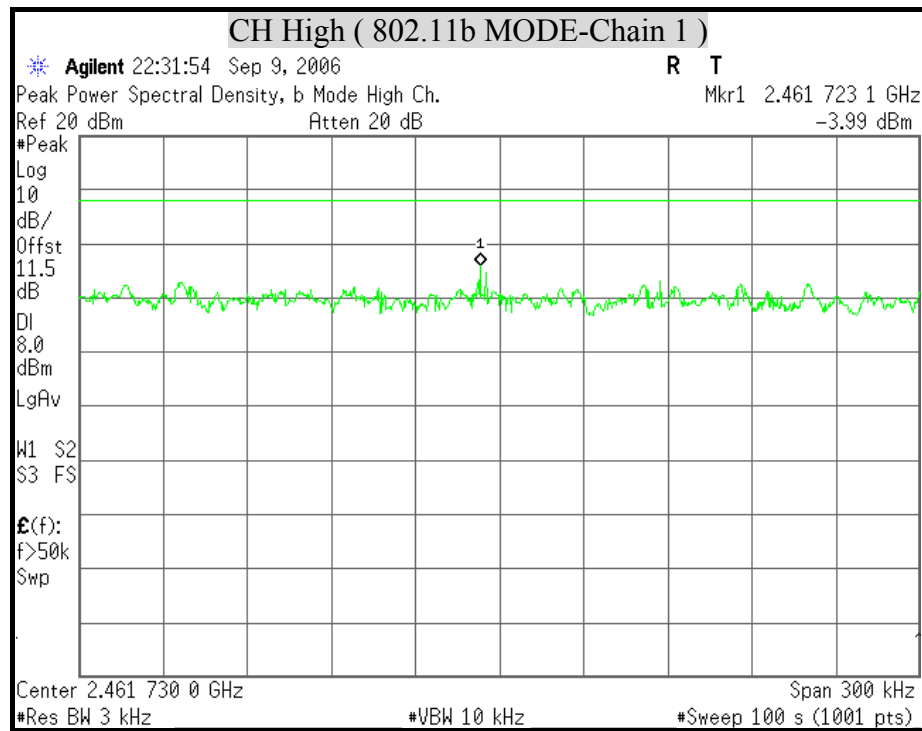






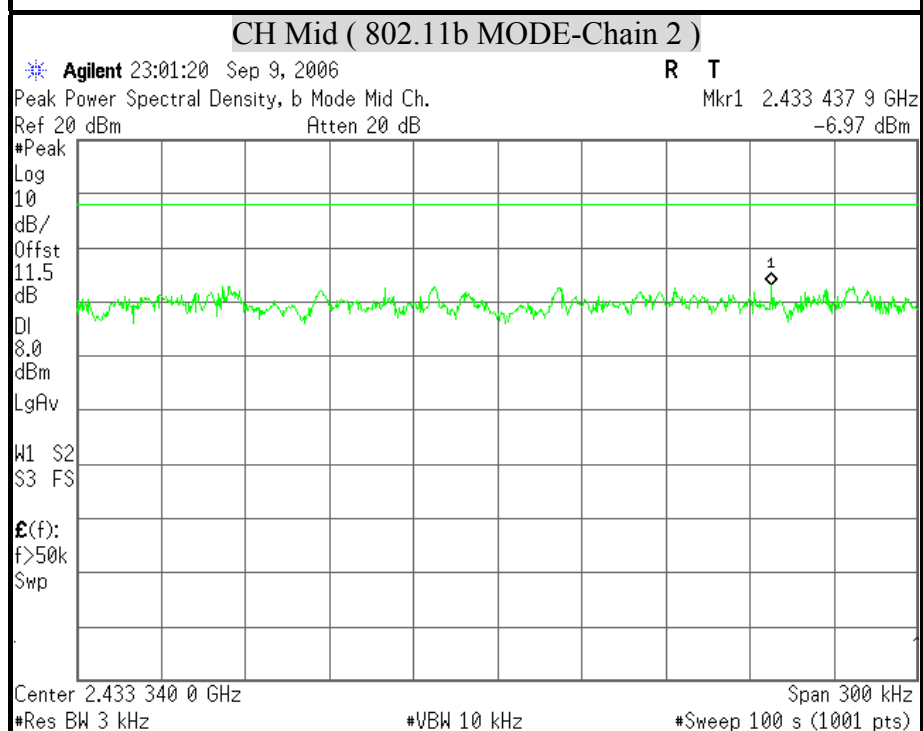
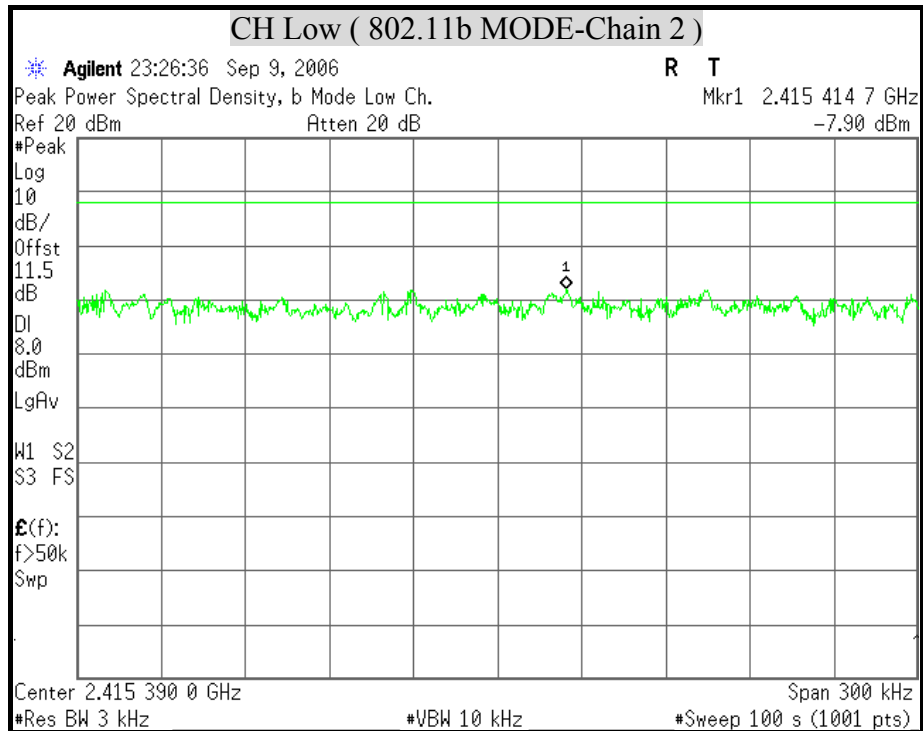
## 3dBi Antenna

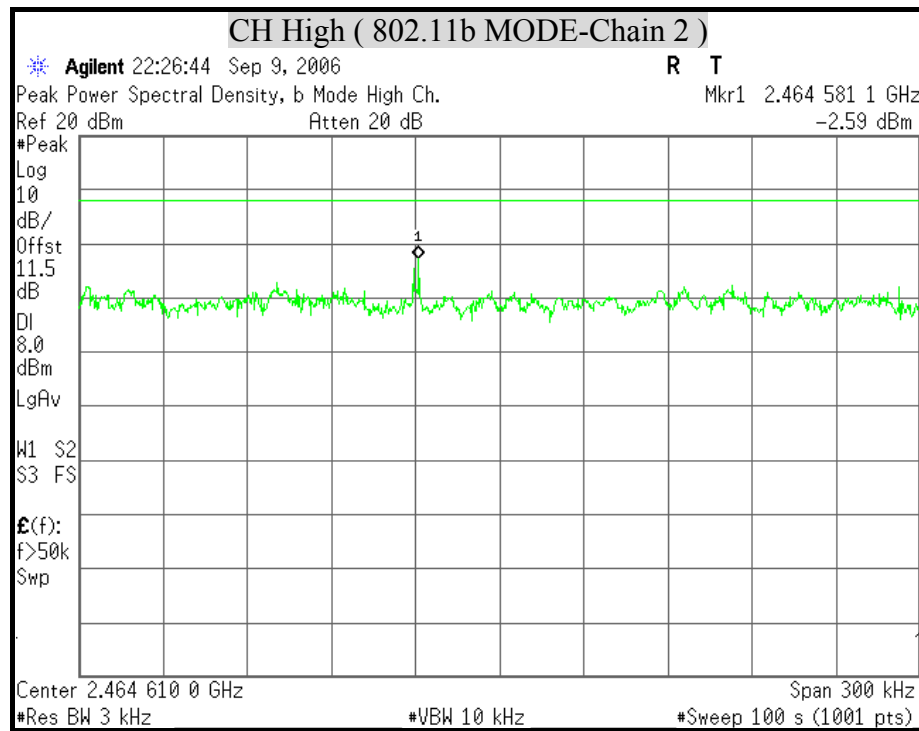






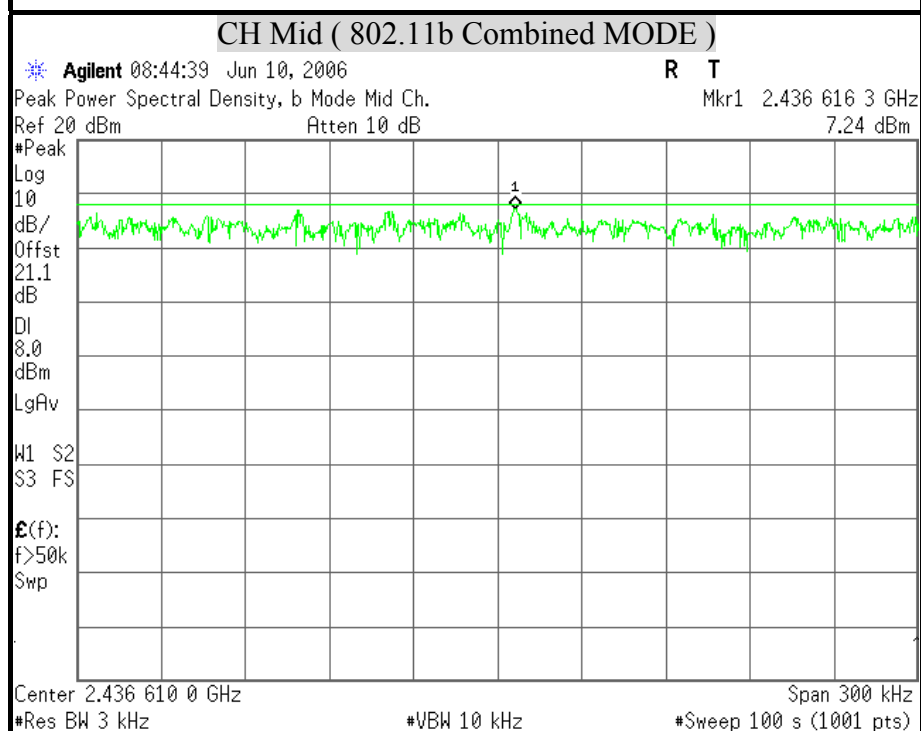
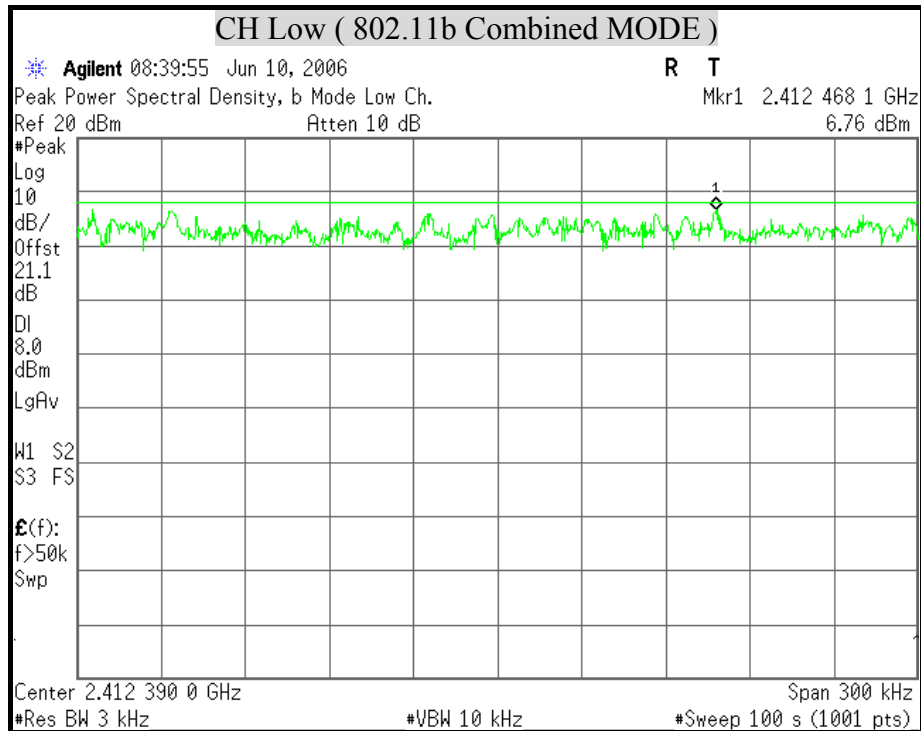
## 3dBi Antenna

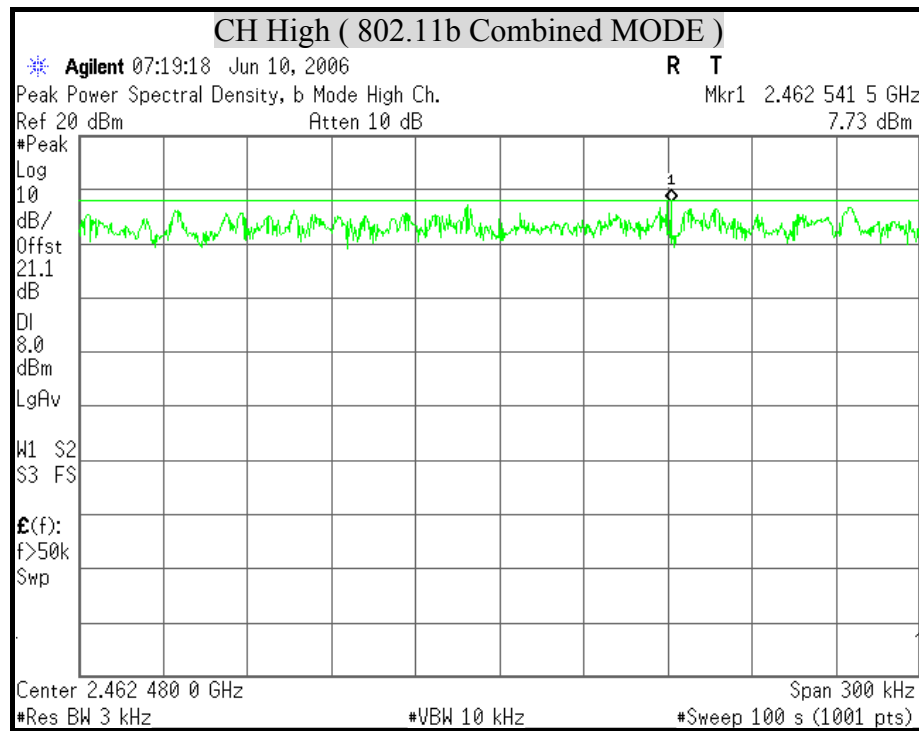






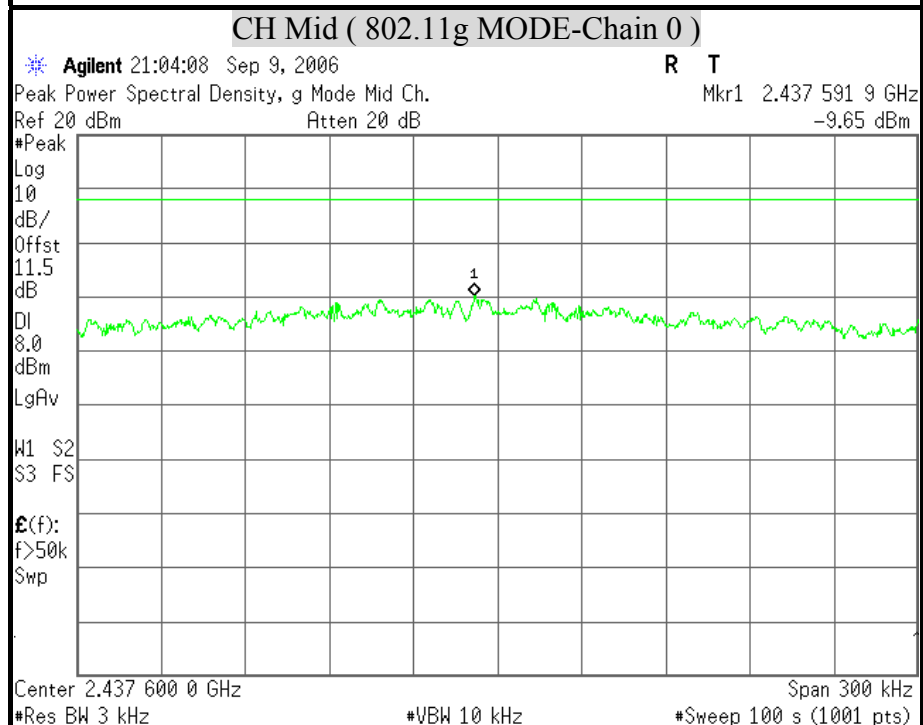
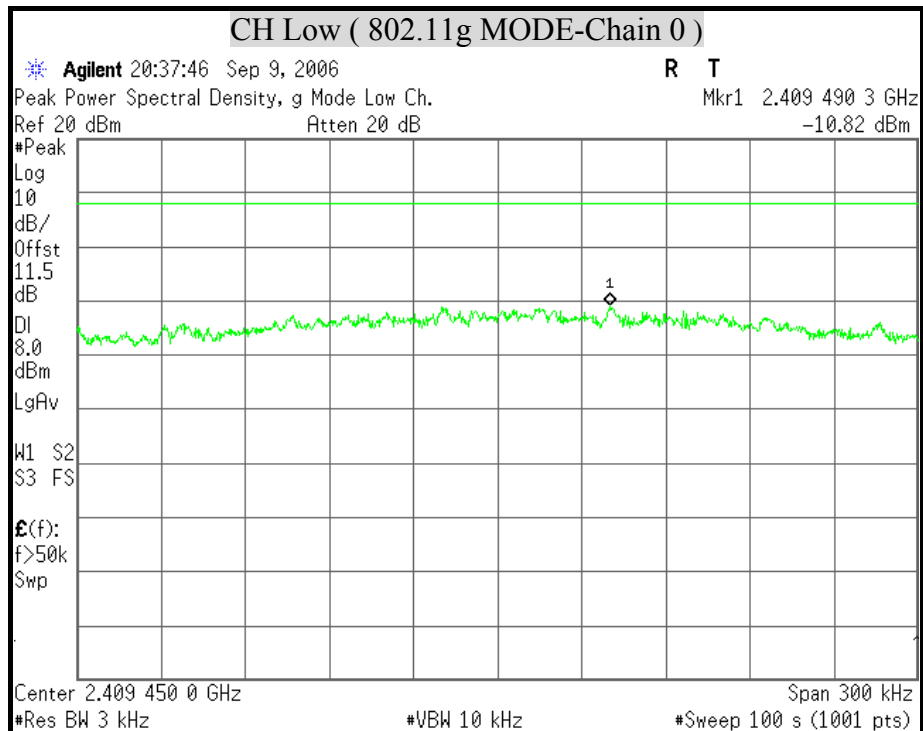
## 3dBi Antenna

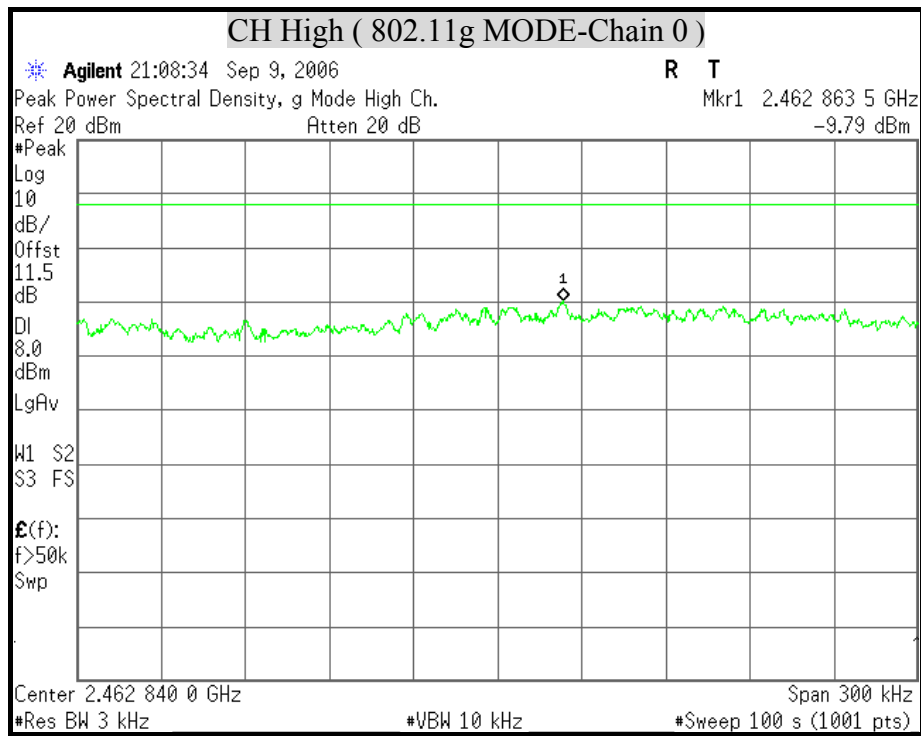




**POWER SPECTRAL DENSITY ( IEEE 802.11g MODE )**

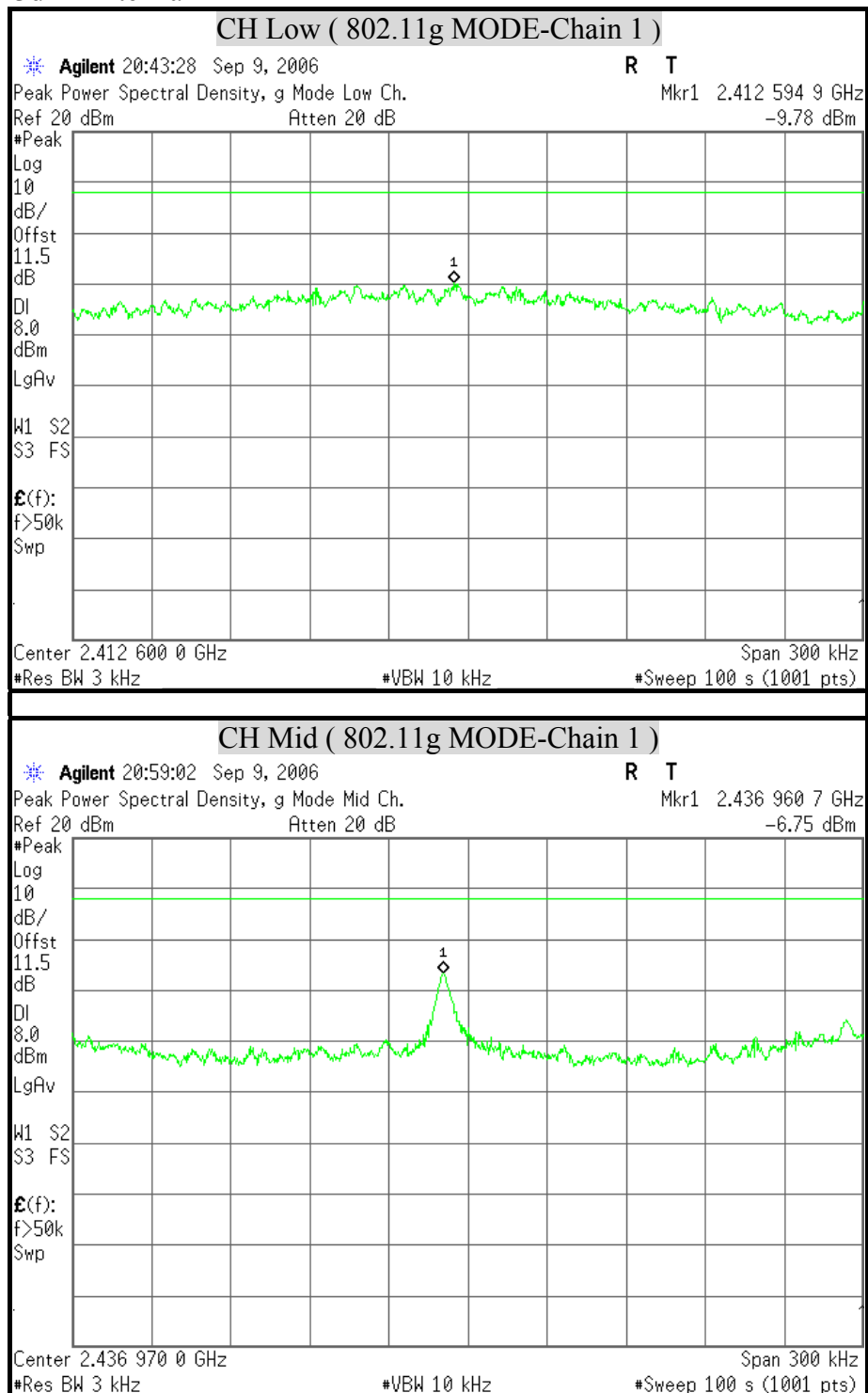
3dBi Antenna

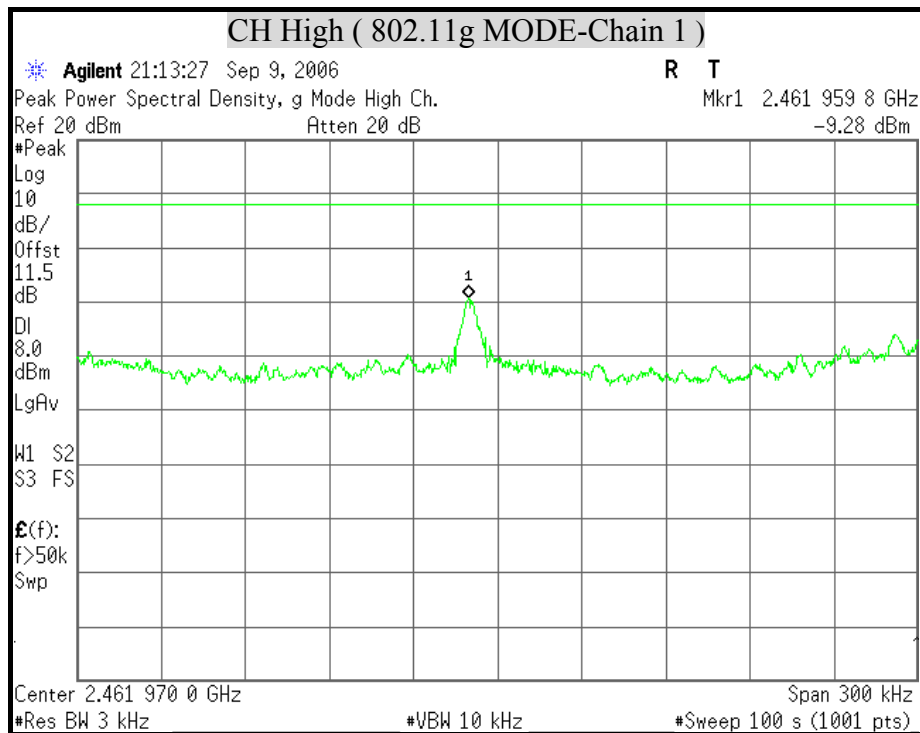






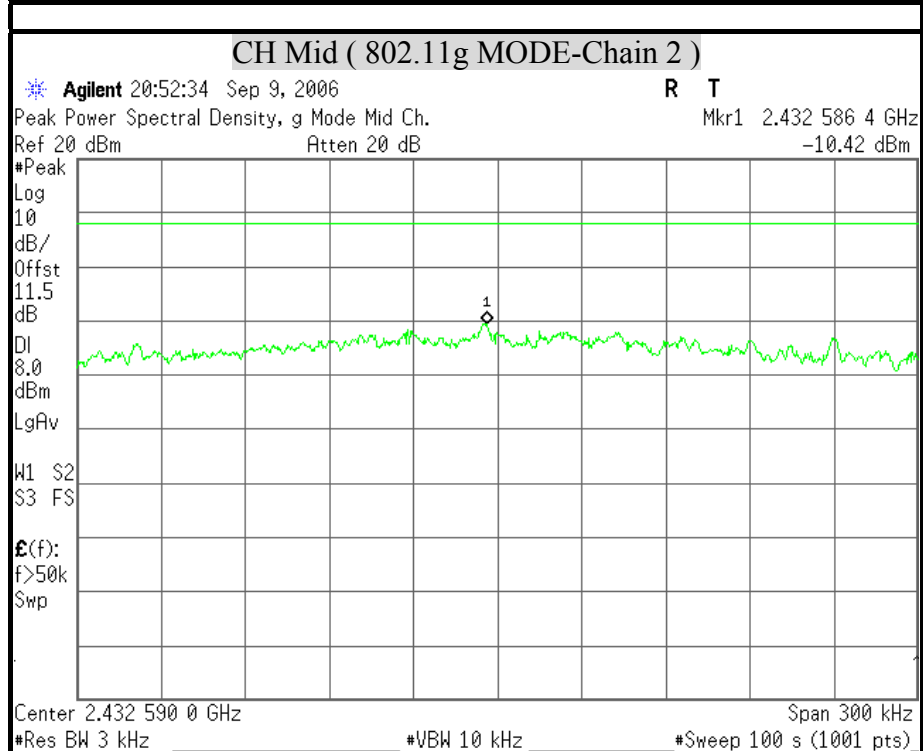
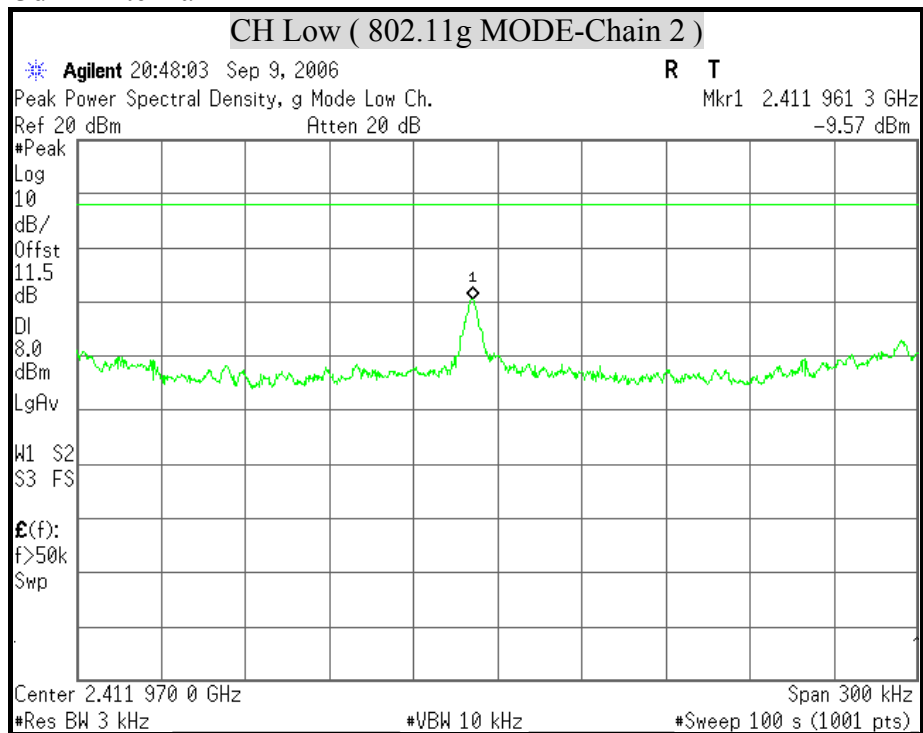
## 3dBi Antenna

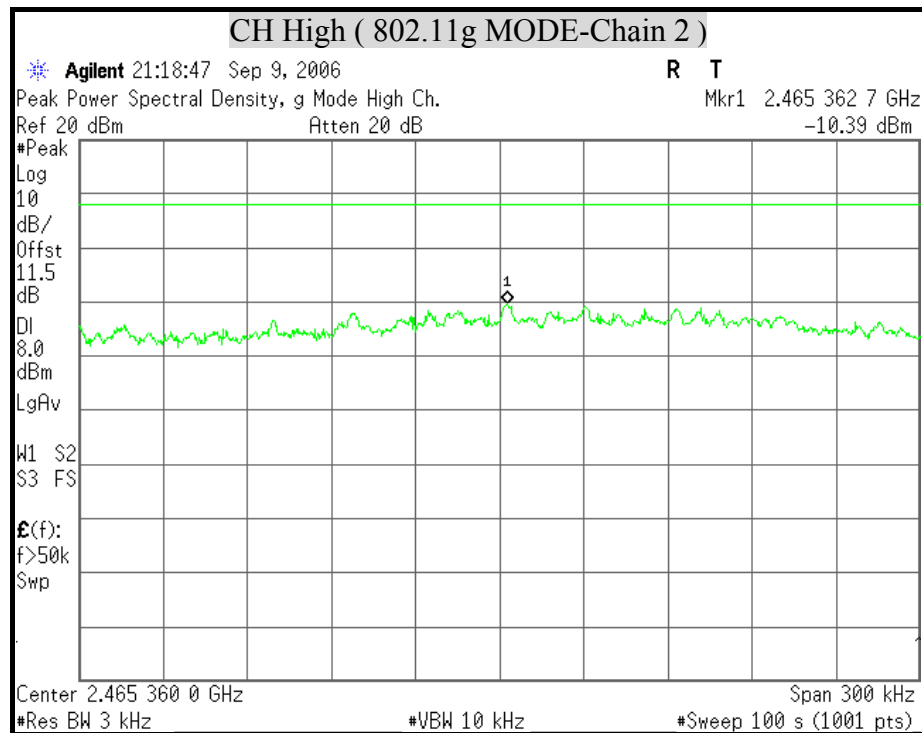






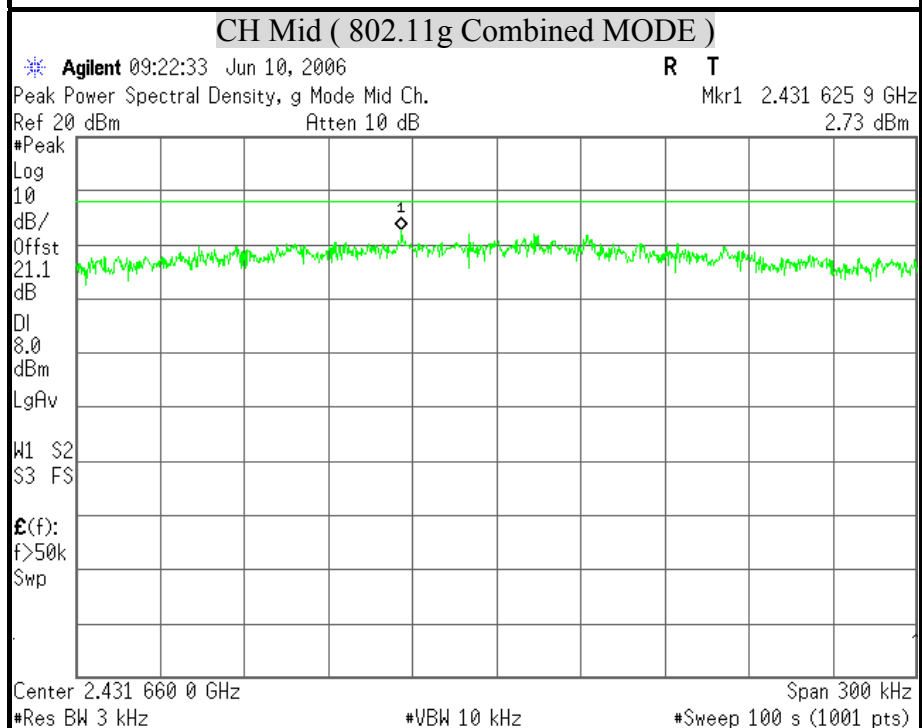
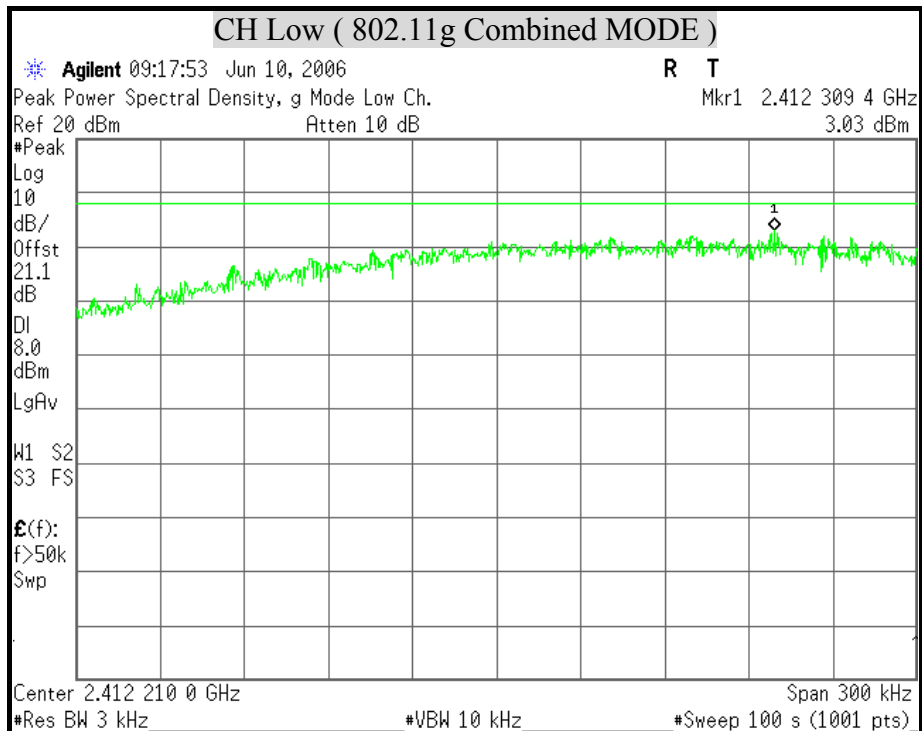
## 3dBi Antenna

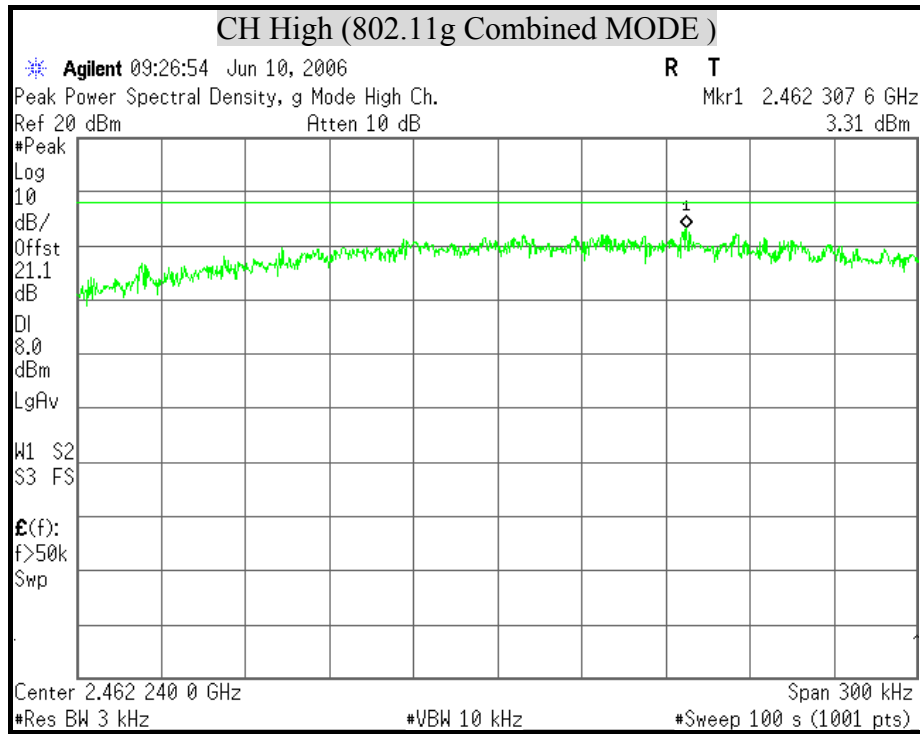






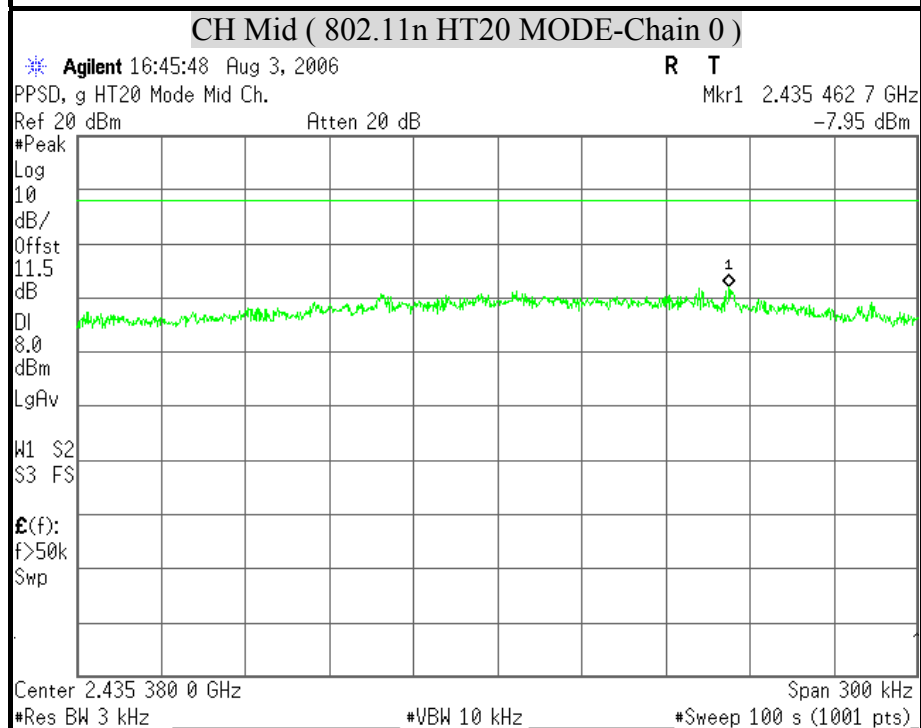
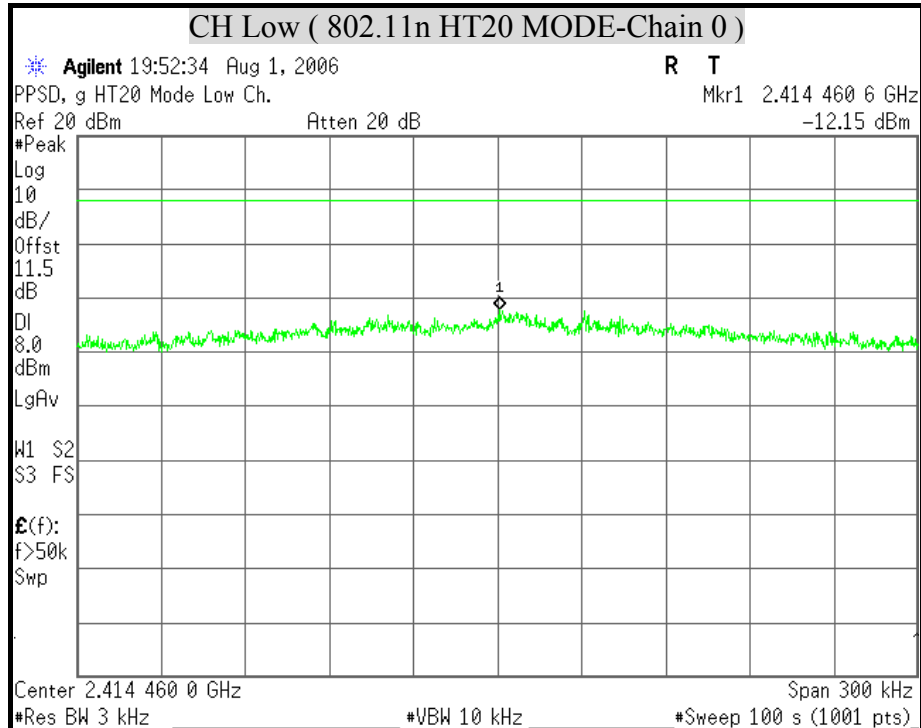
## 3dBi Antenna

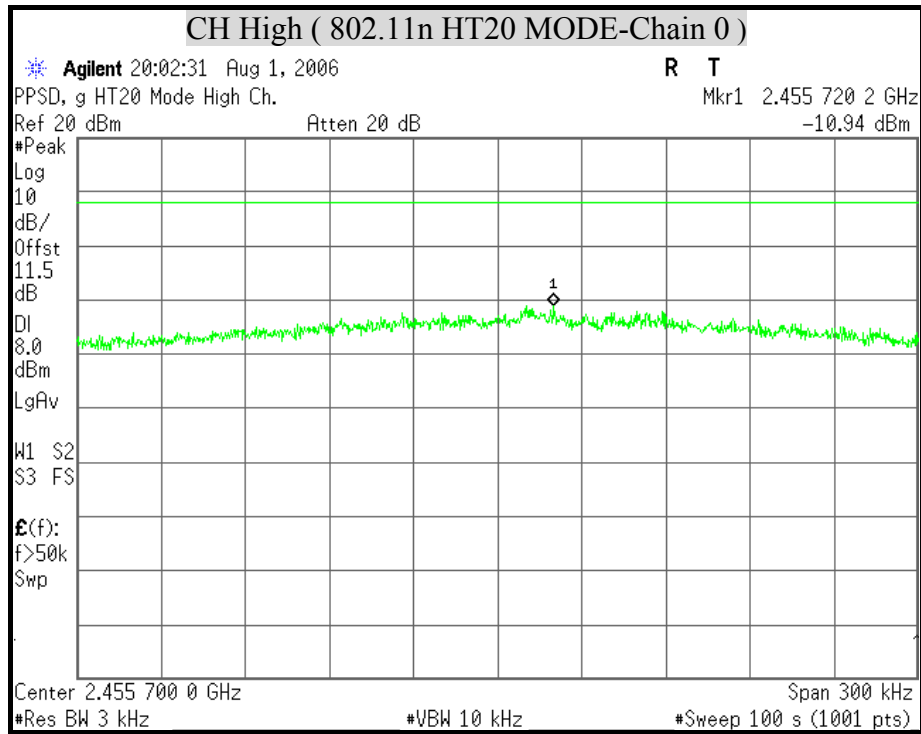




**POWER SPECTRAL DENSITY ( 802.11n HT20 MODE )**

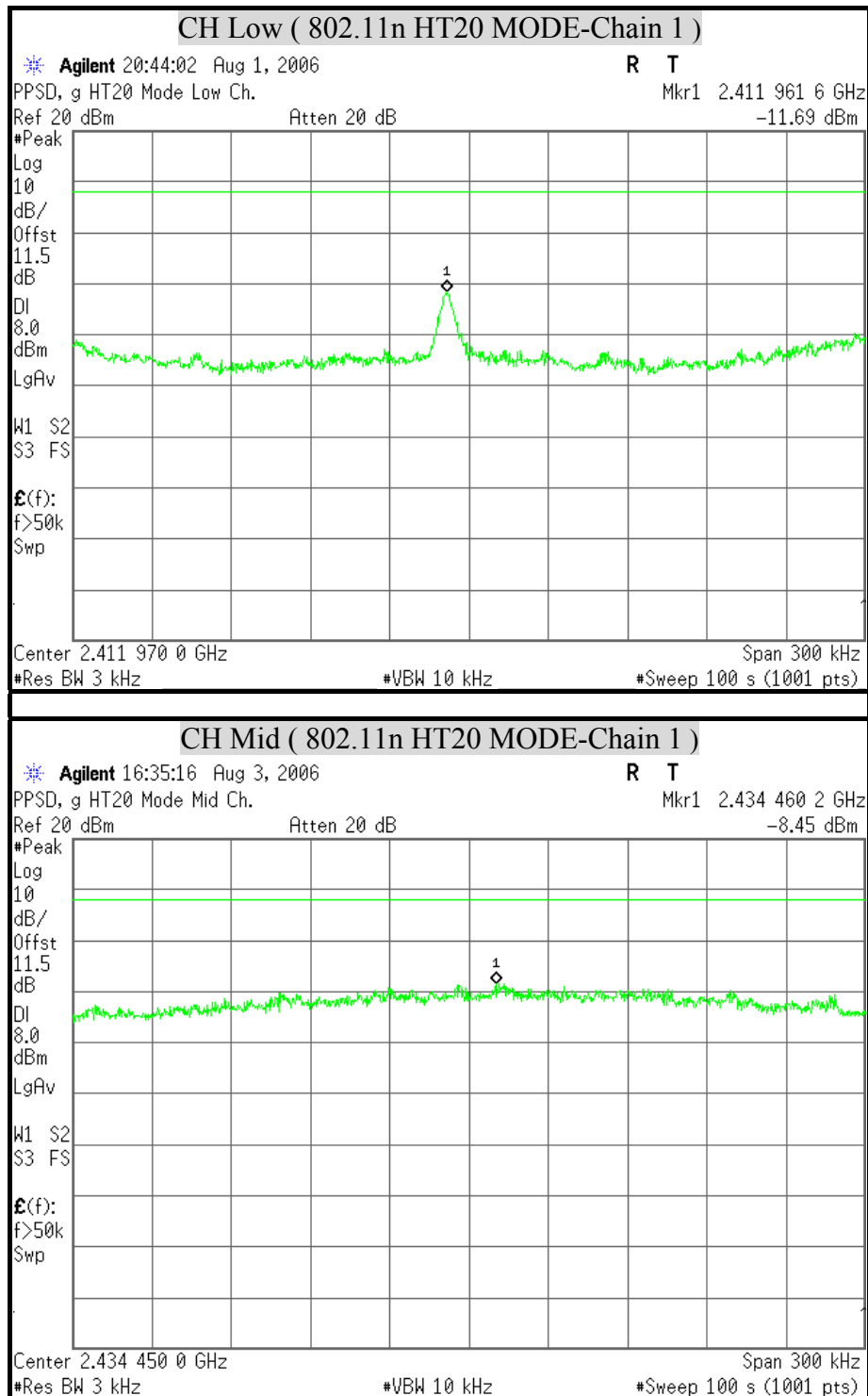
3dBi Antenna

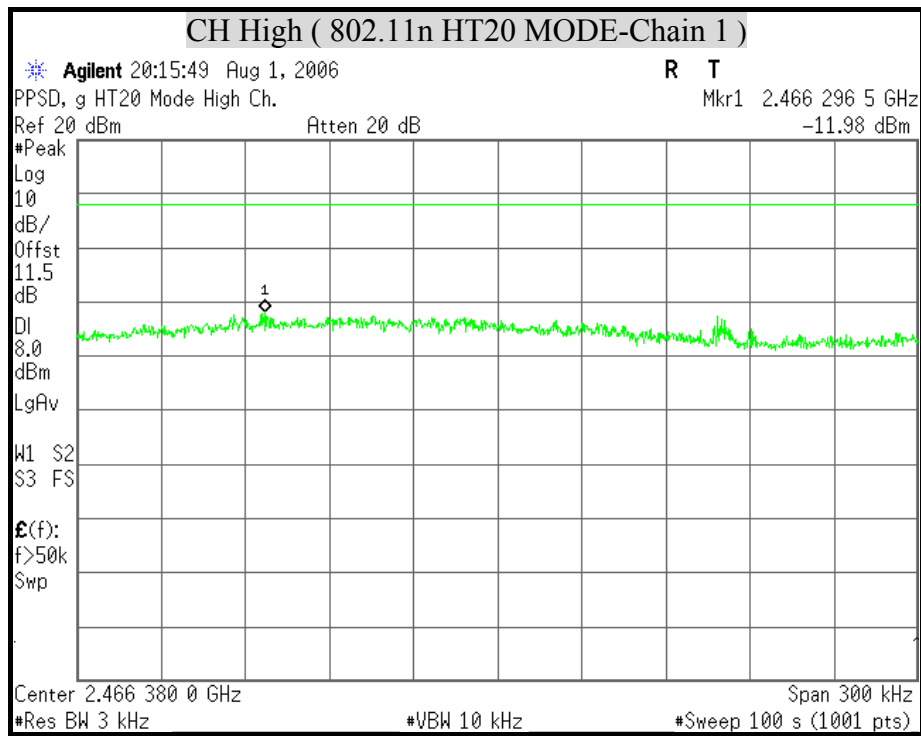






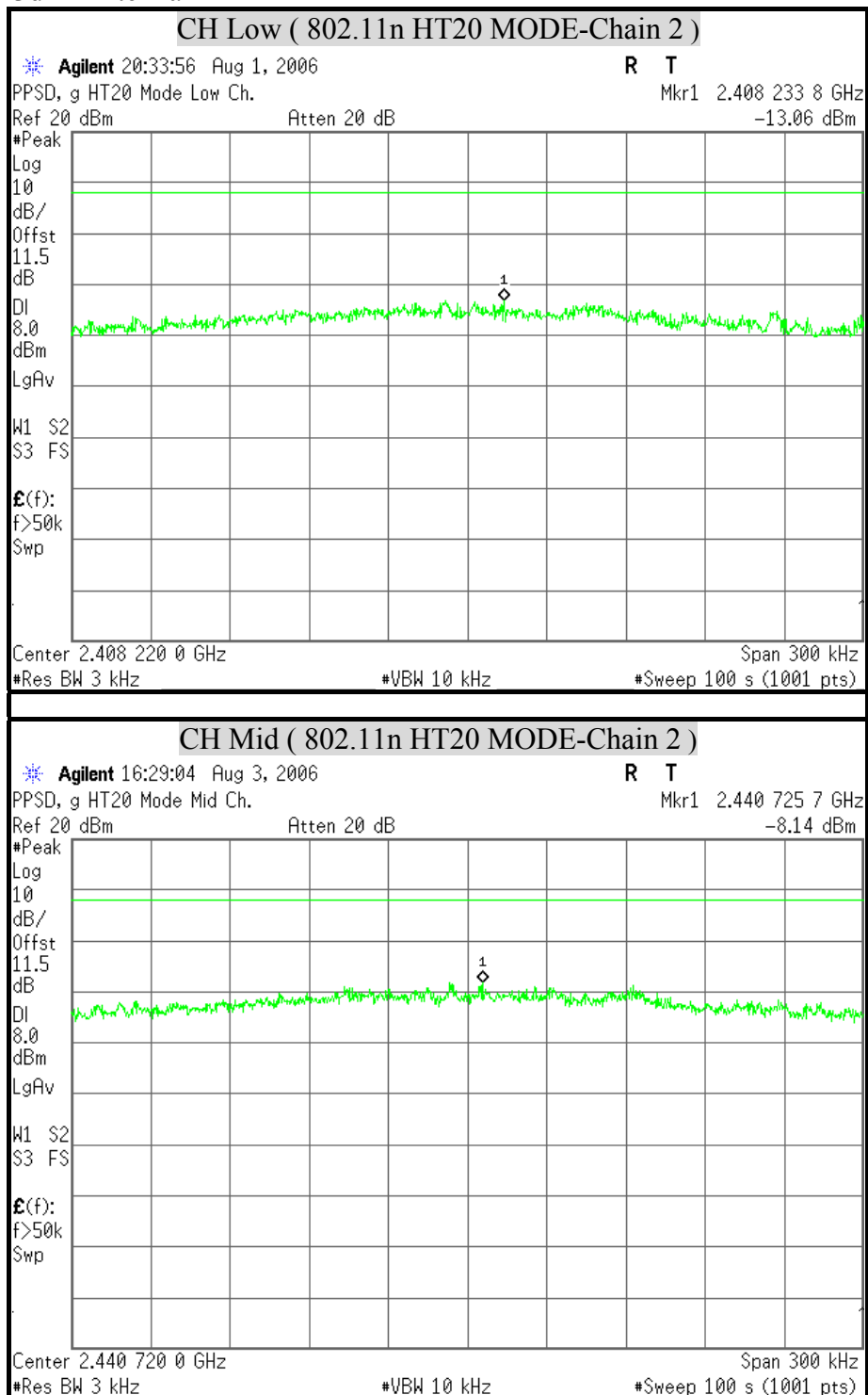
## 3dBi Antenna

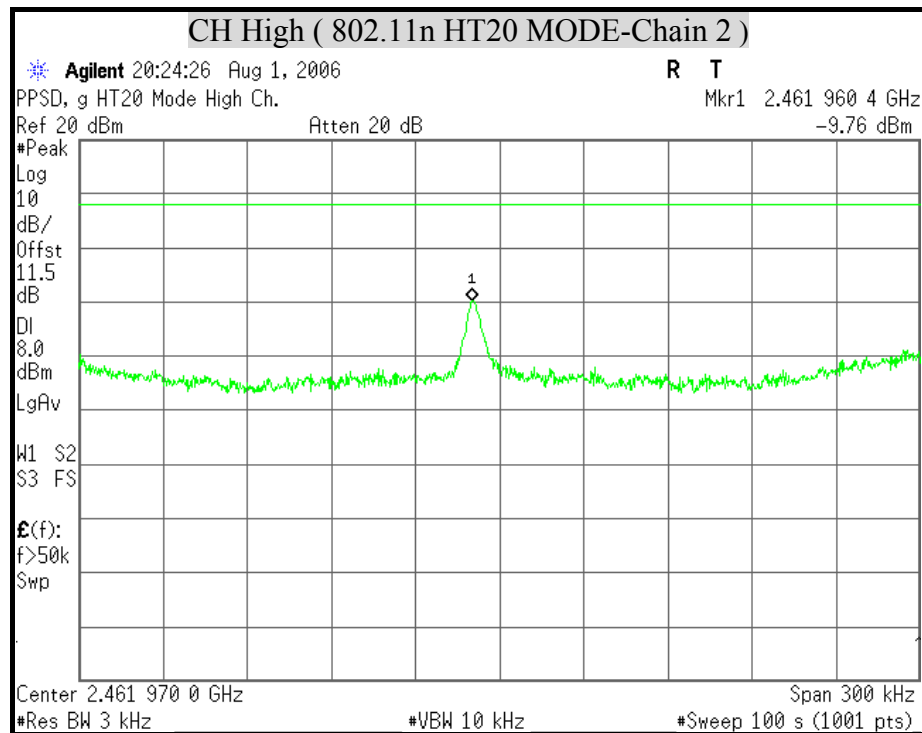






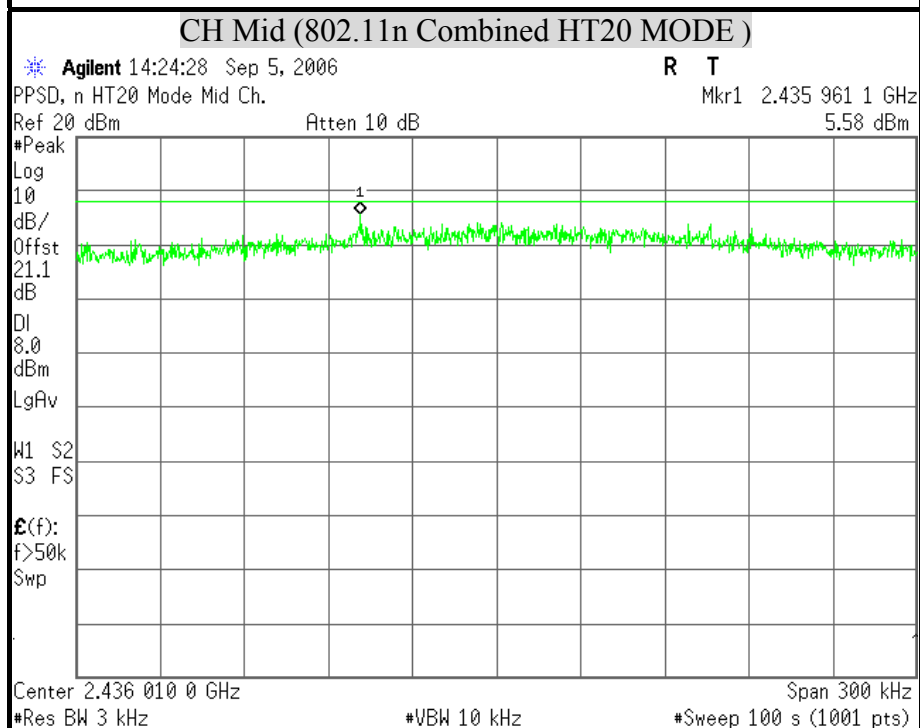
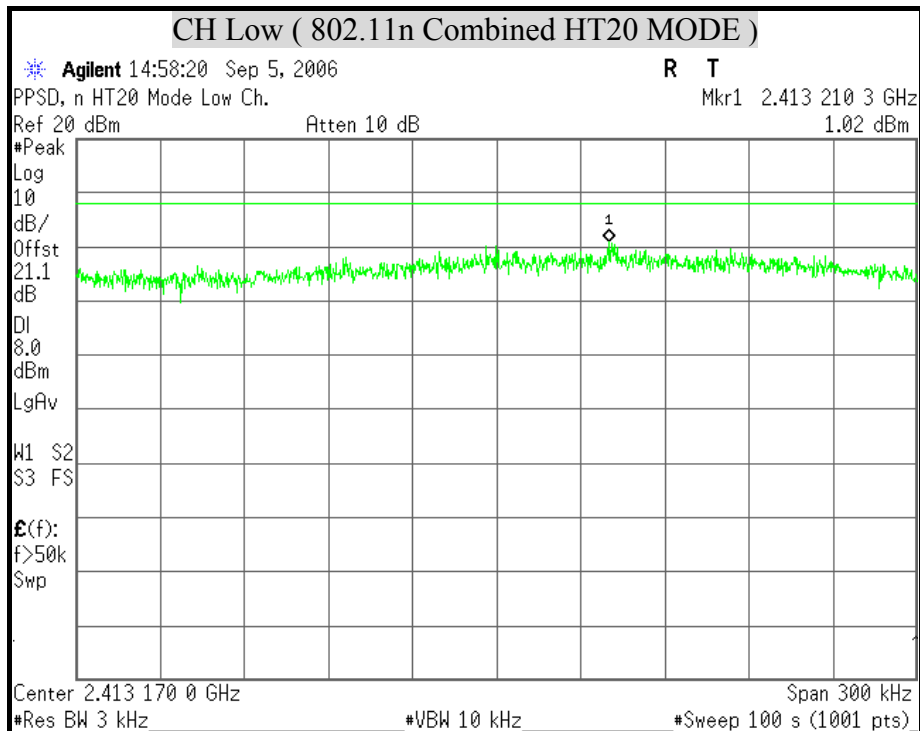
## 3dBi Antenna

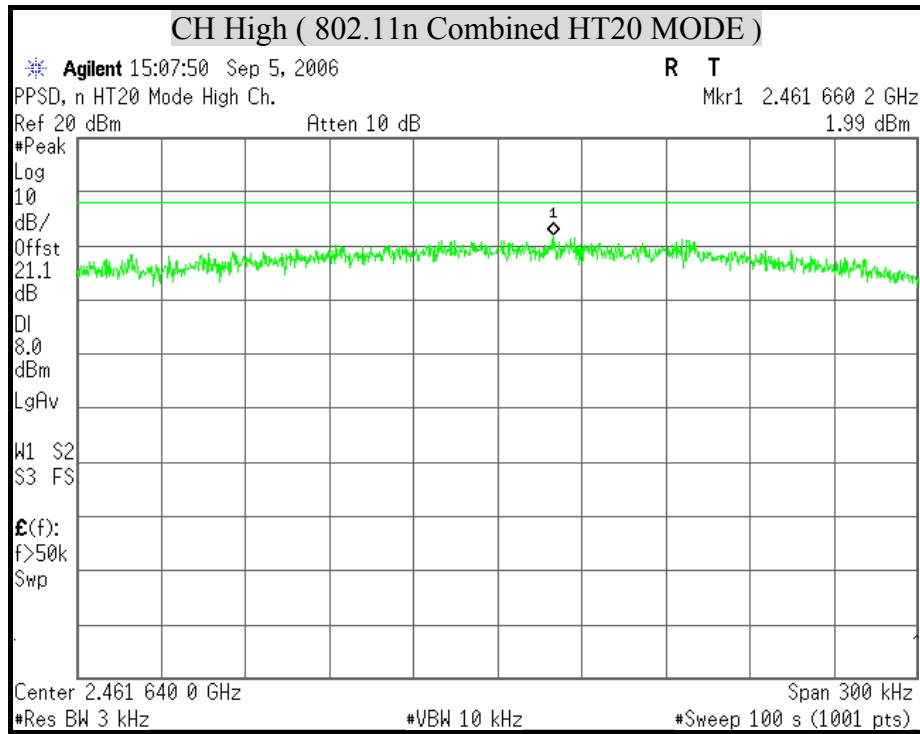






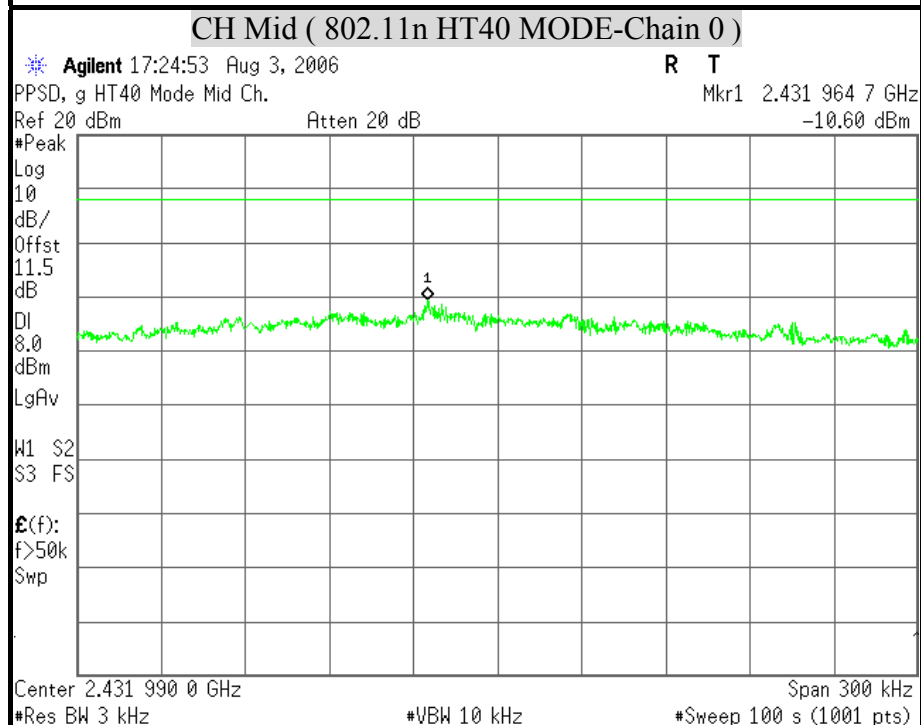
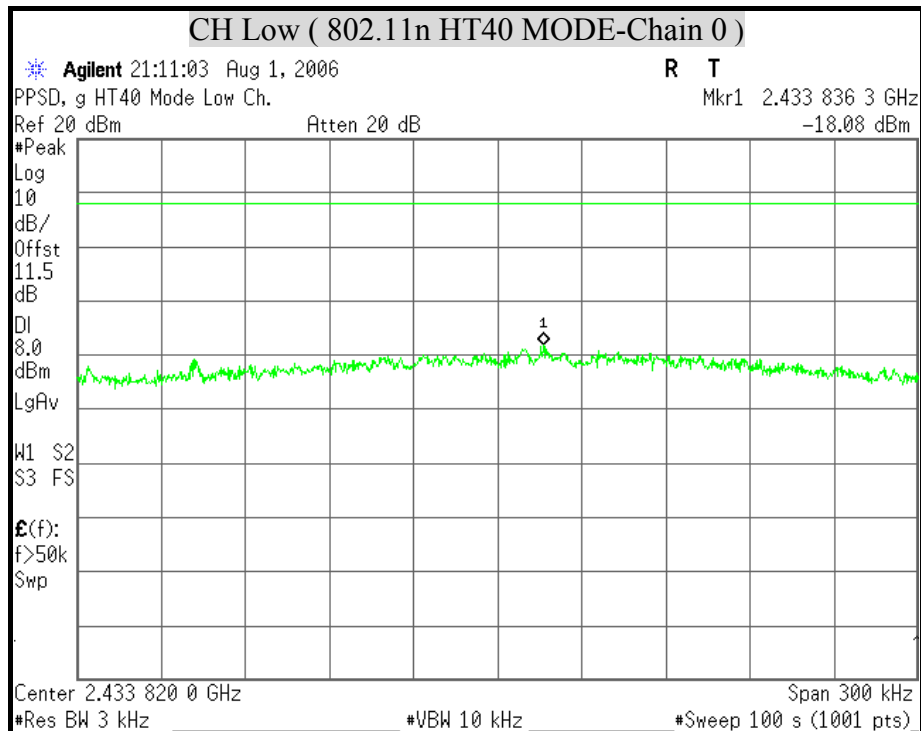
## 3dBi Antenna

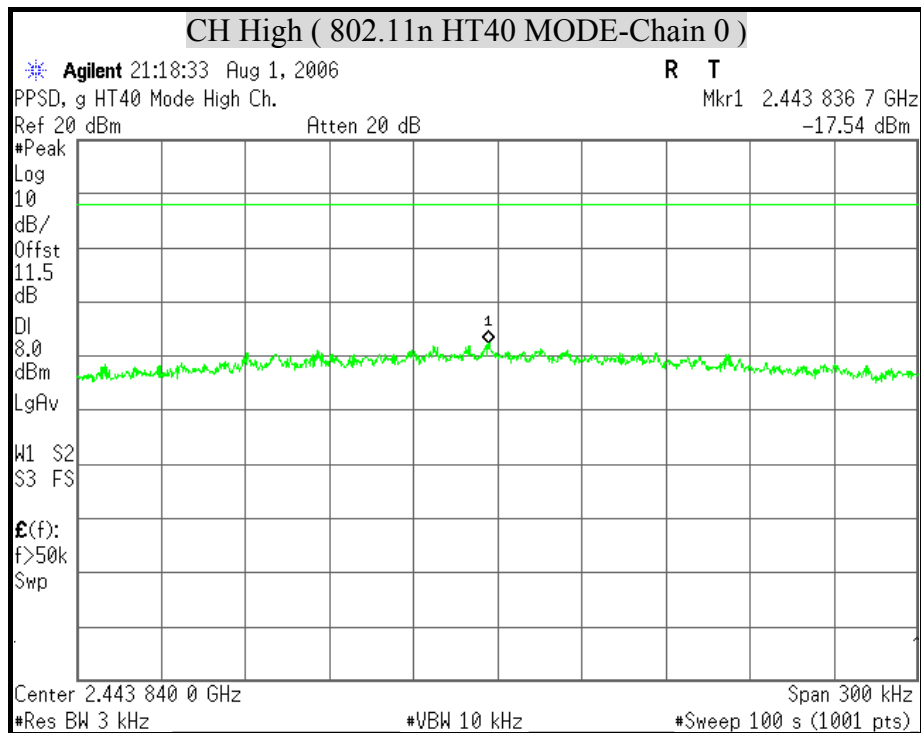




**POWER SPECTRAL DENSITY ( 802.11n HT40 MODE )**

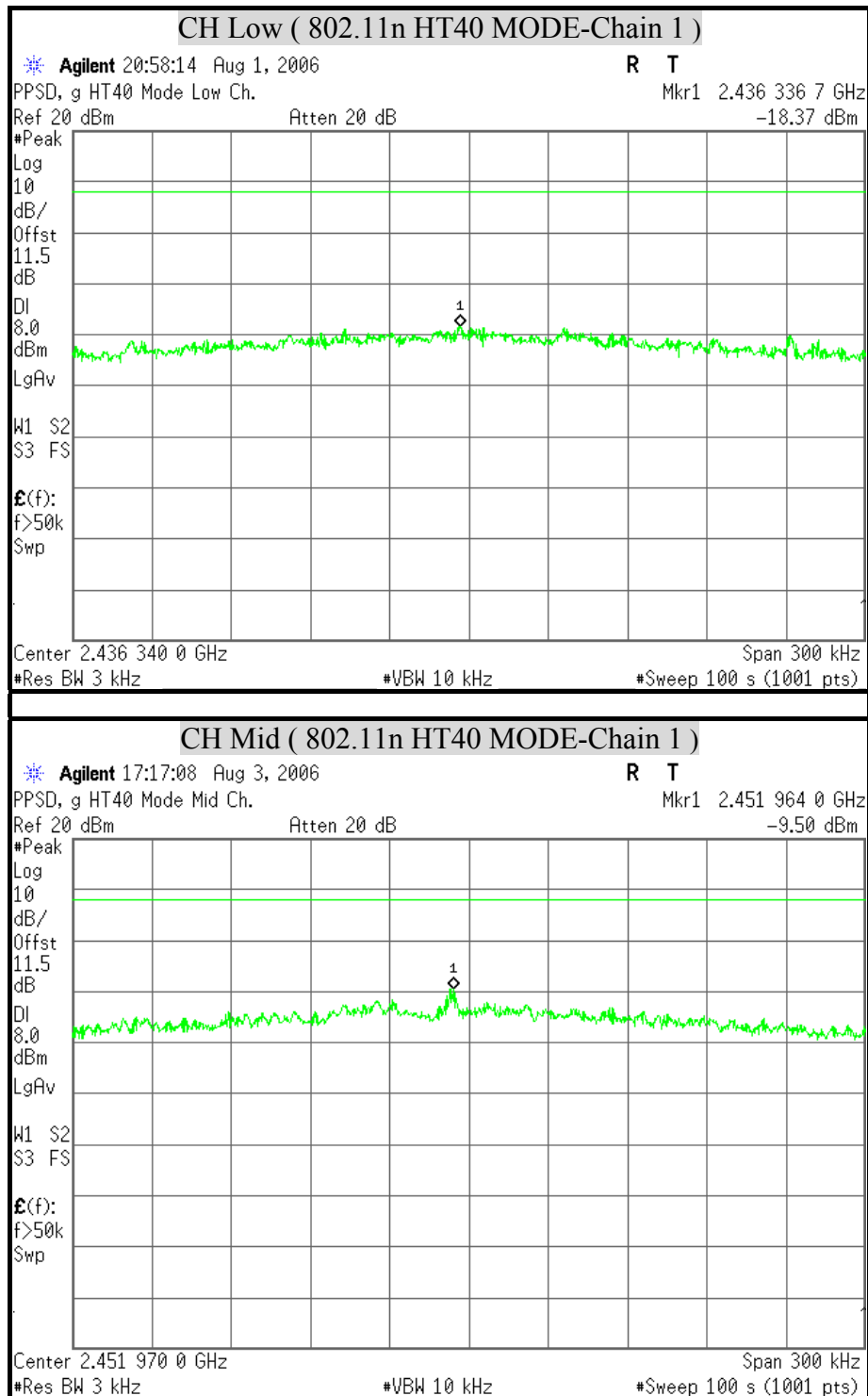
3dBi Antenna

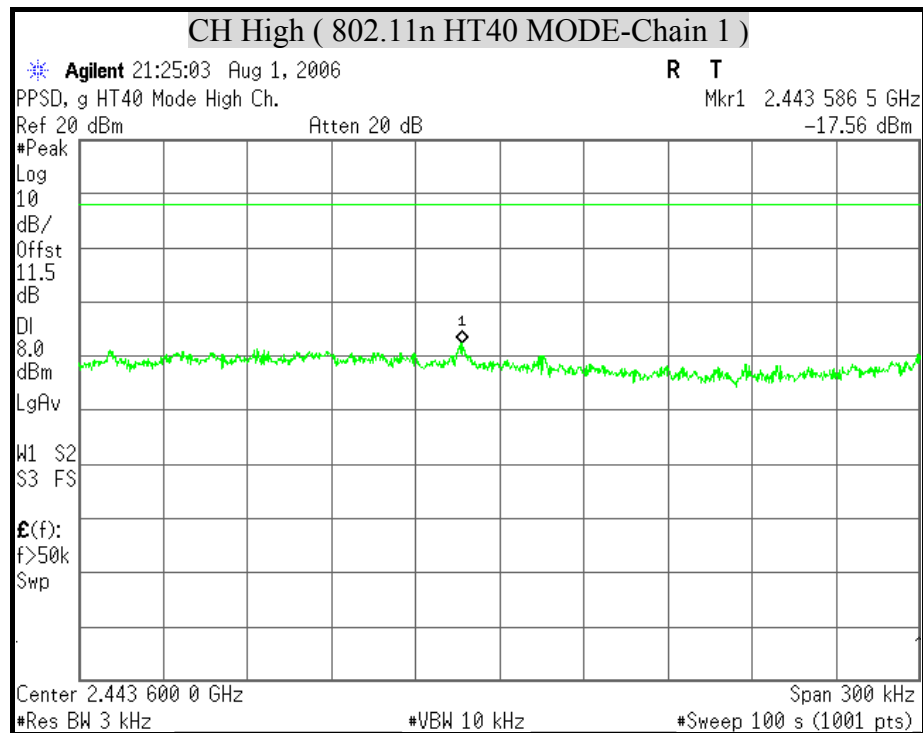






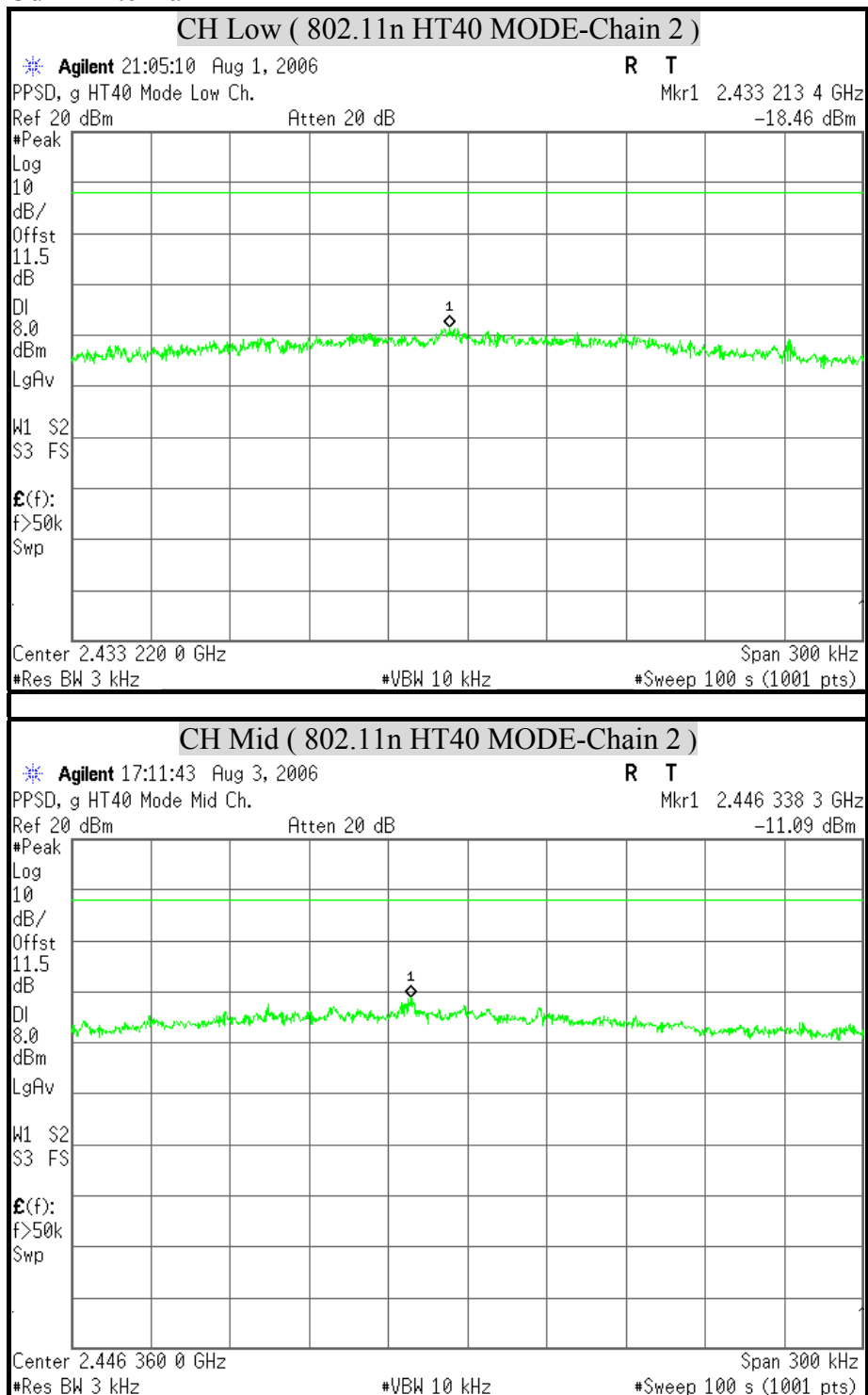
## 3dBi Antenna

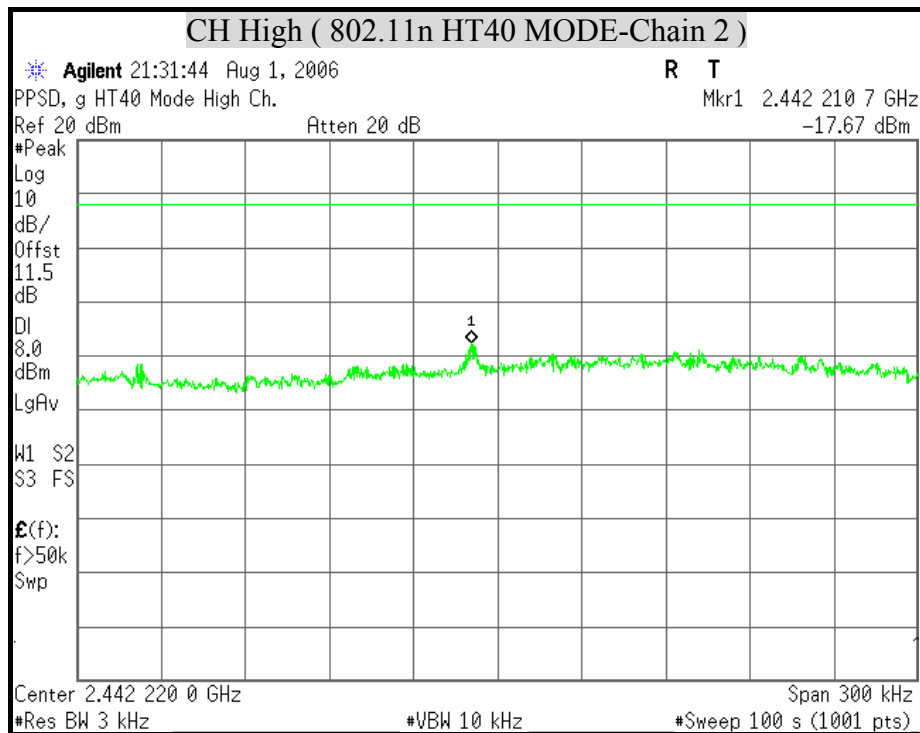






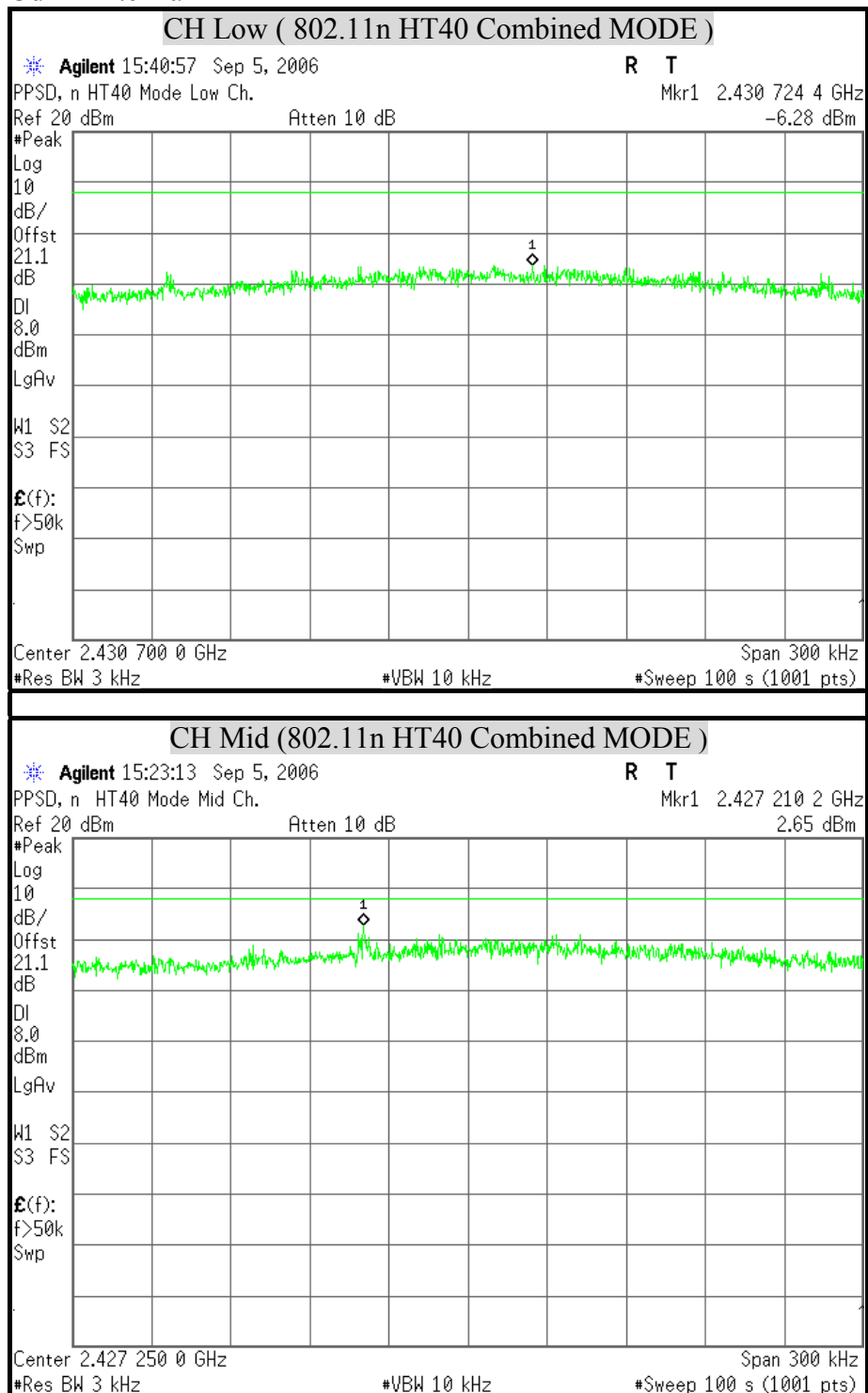
## 3dBi Antenna

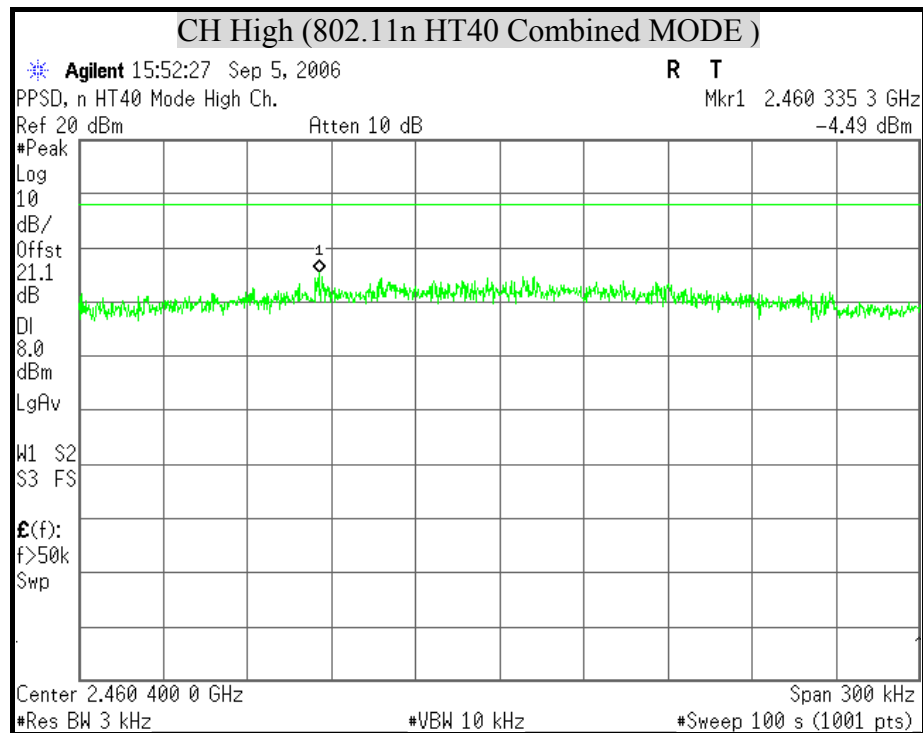






## 3dBi Antenna







## 8.7 CONDUCTED SPURIOUS EMISSION

### LIMITS

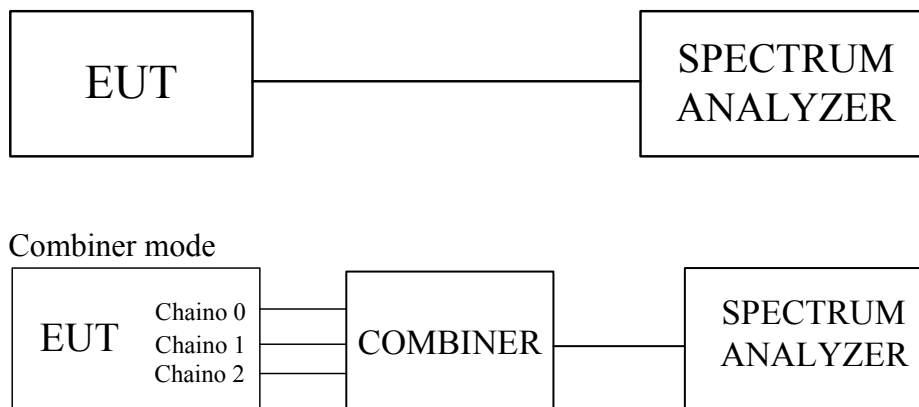
§ 15.247(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

### TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

### TEST SETUP



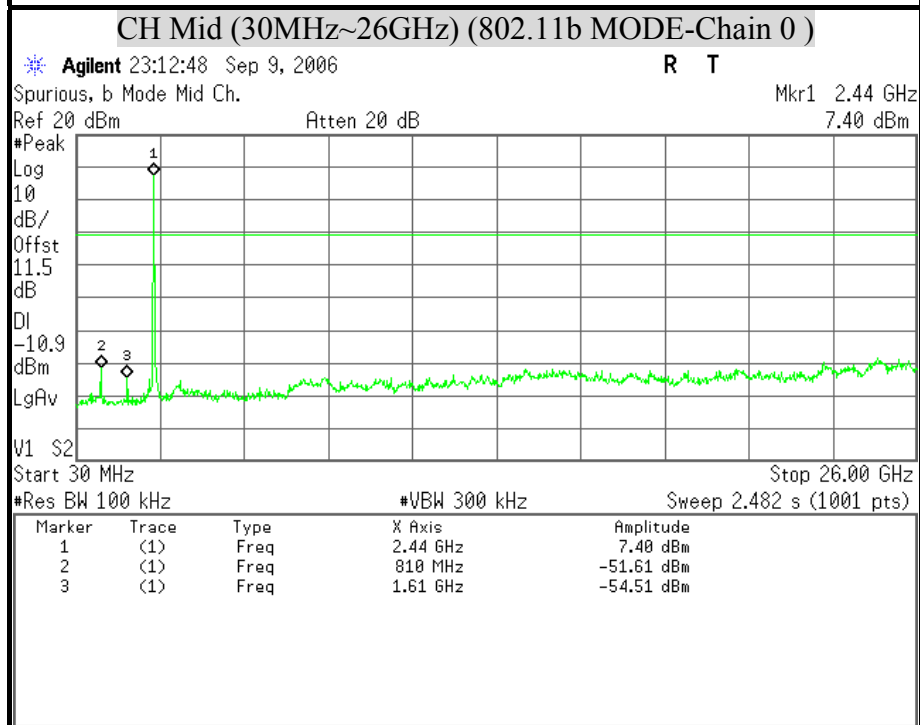
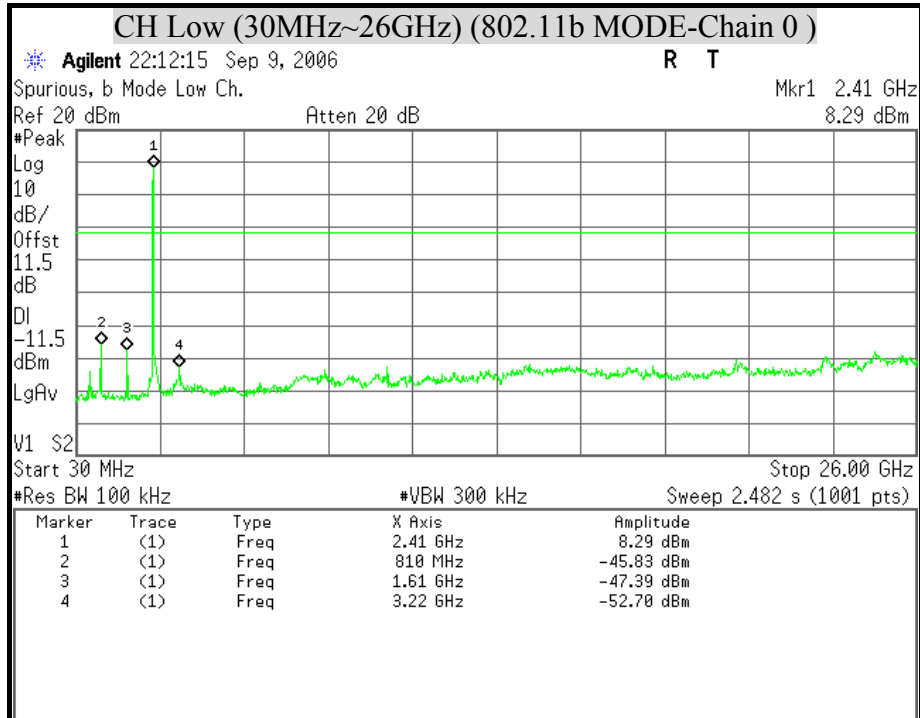
### TEST RESULTS

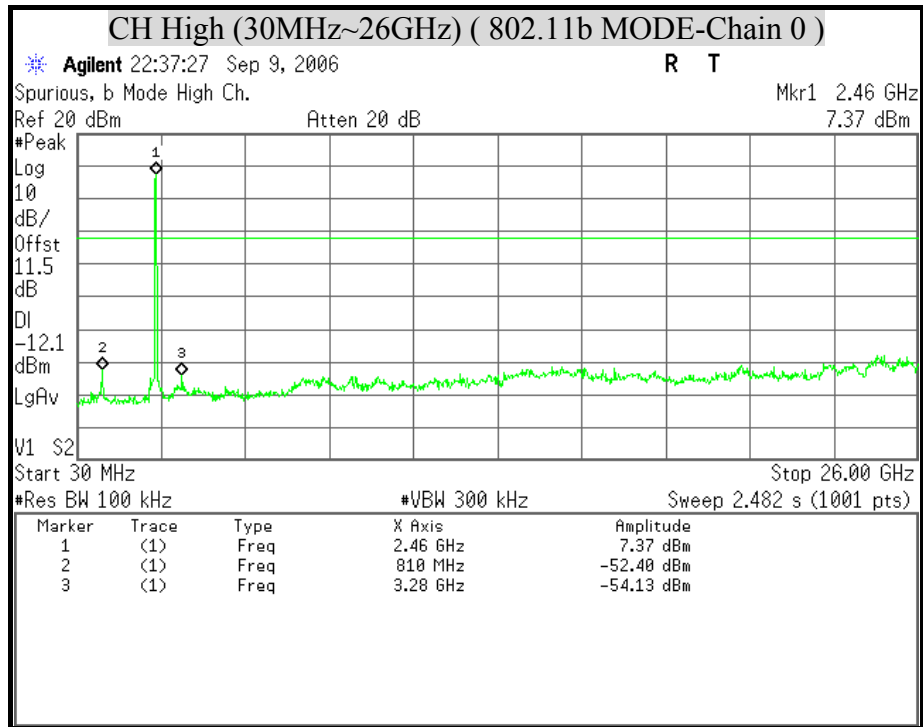
No non-compliance noted



## OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( IEEE 802.11b MODE)

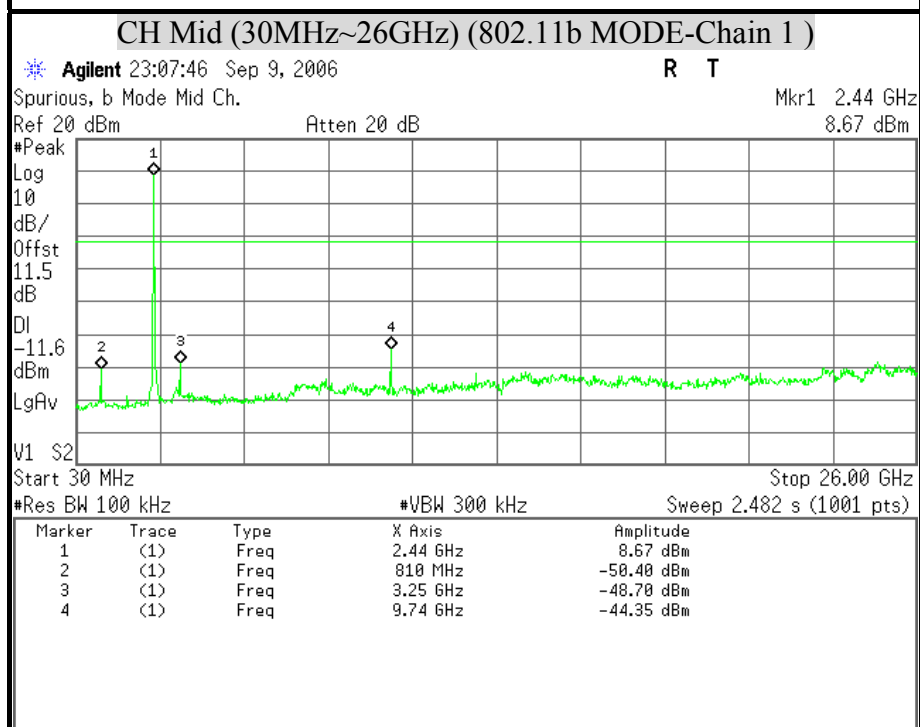
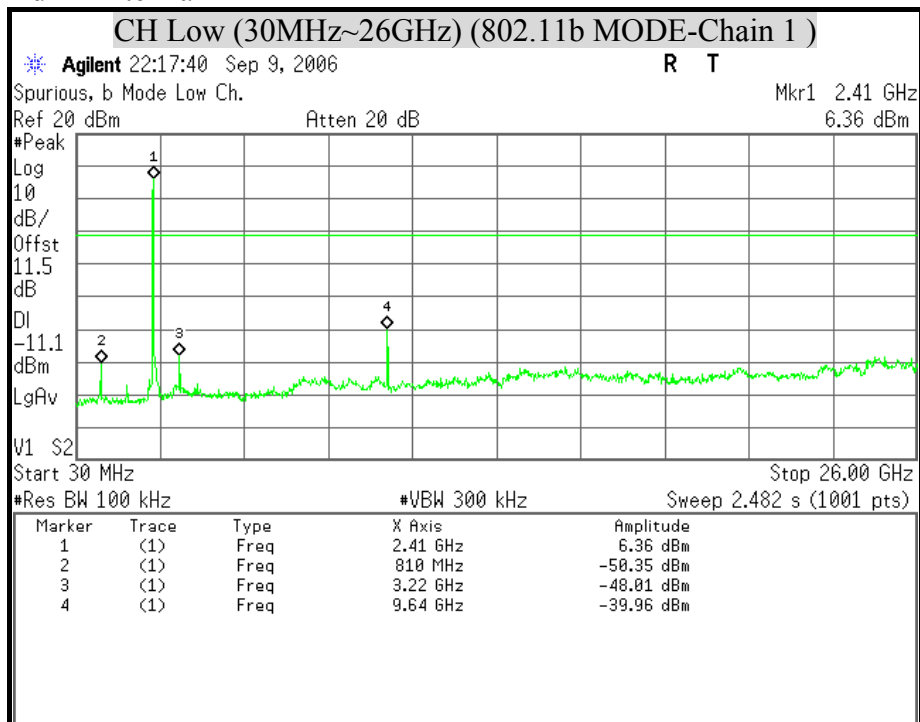
2dBi Antenna

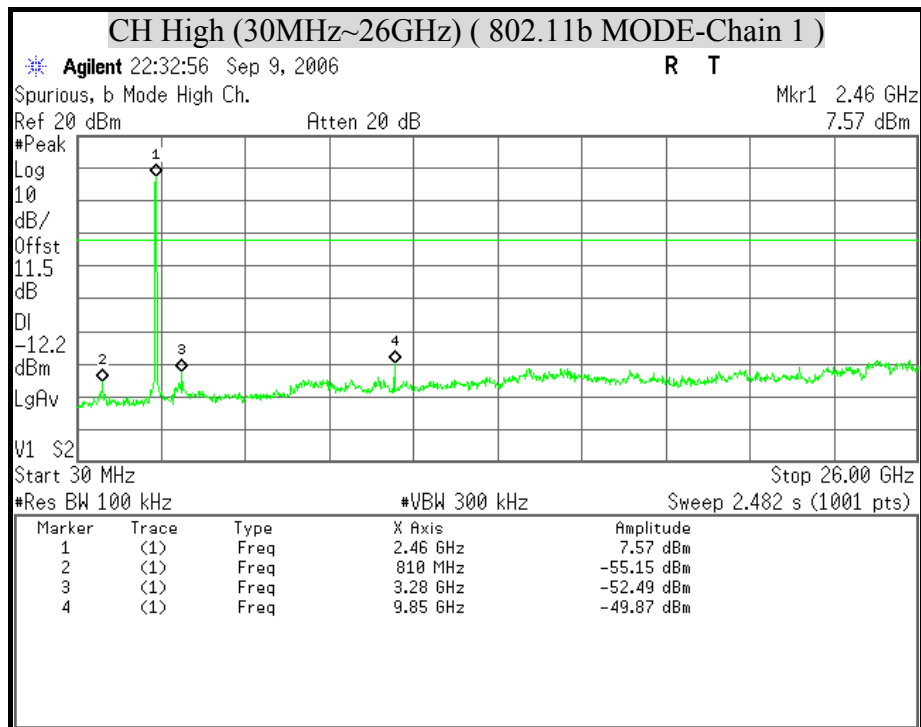






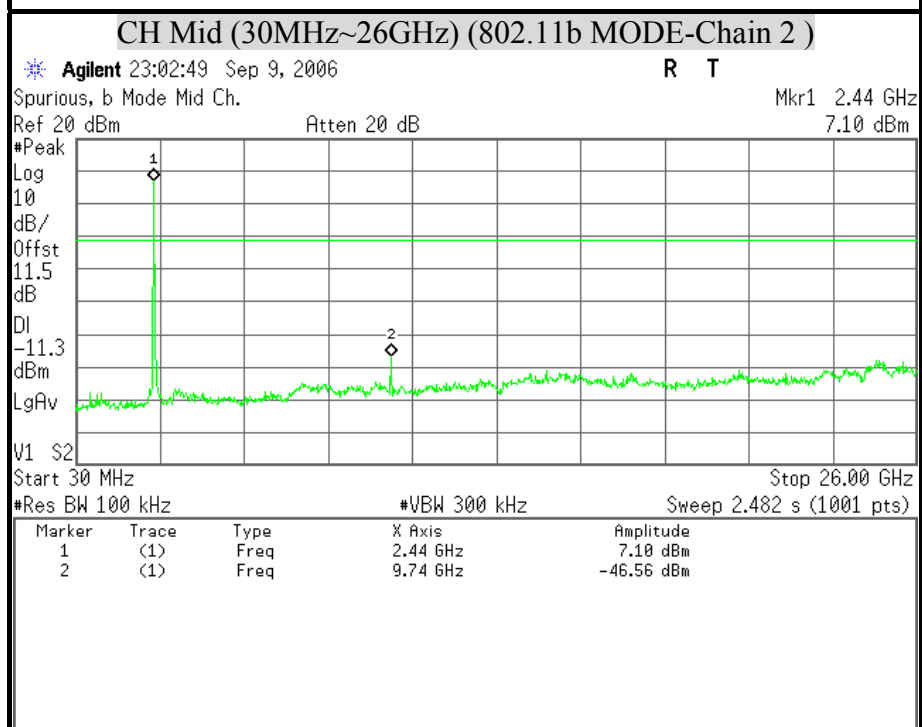
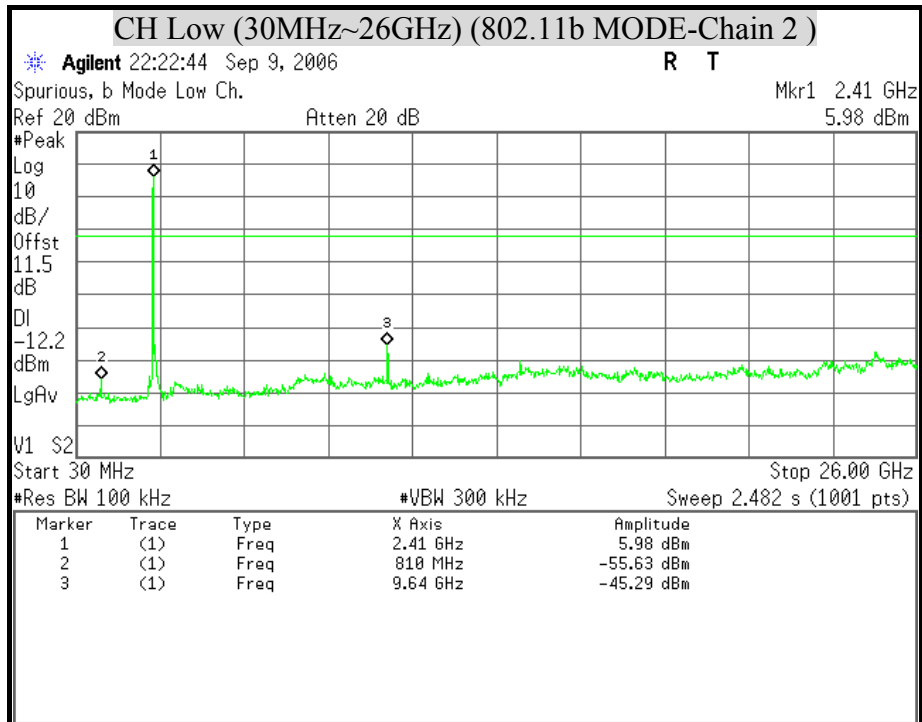
## 2dBi Antenna

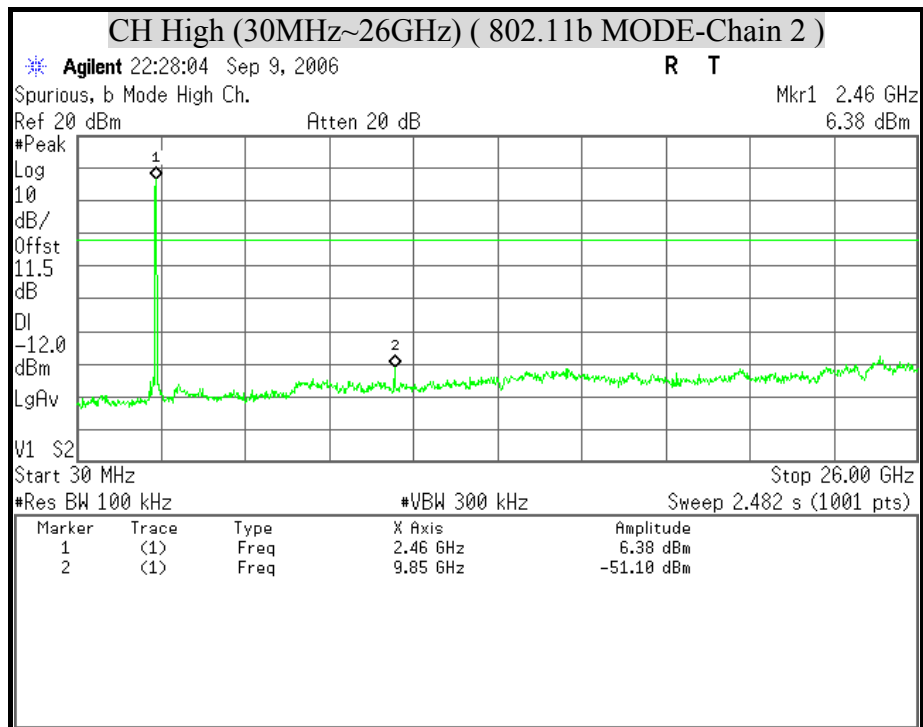






## 2dBi Antenna

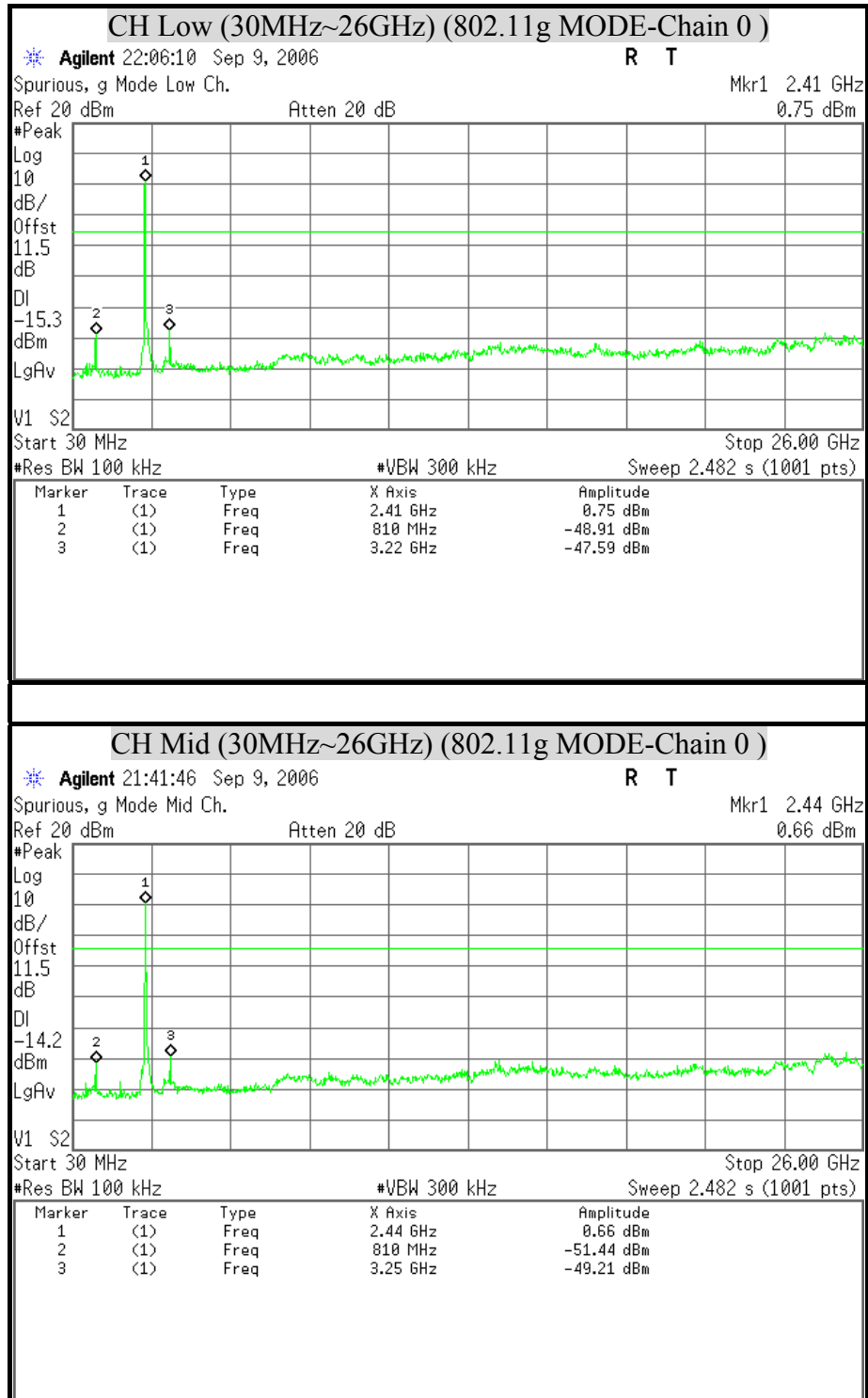


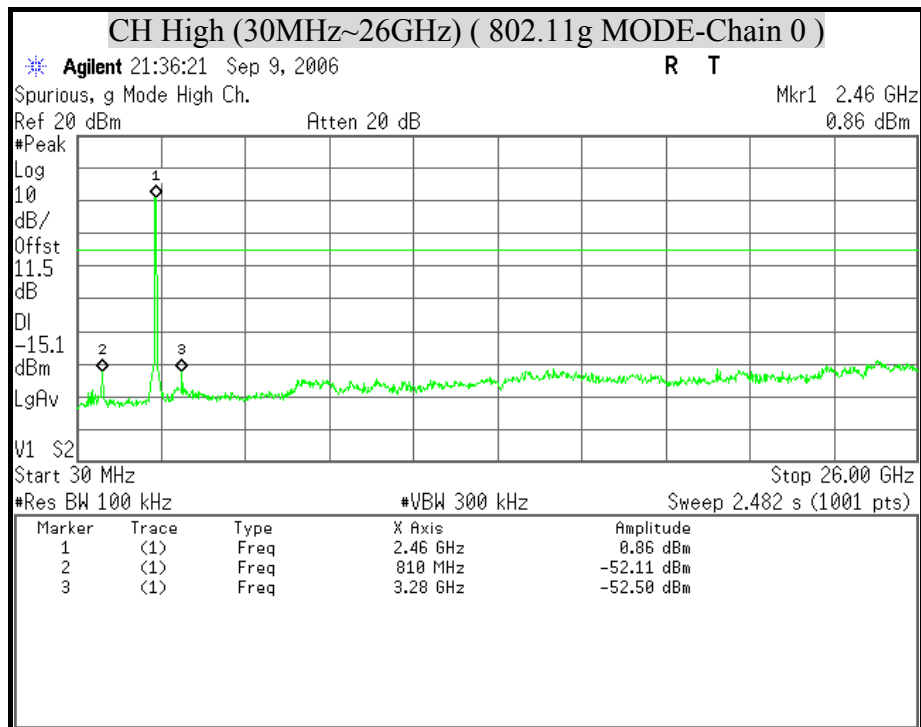




## OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( IEEE 802.11g MODE)

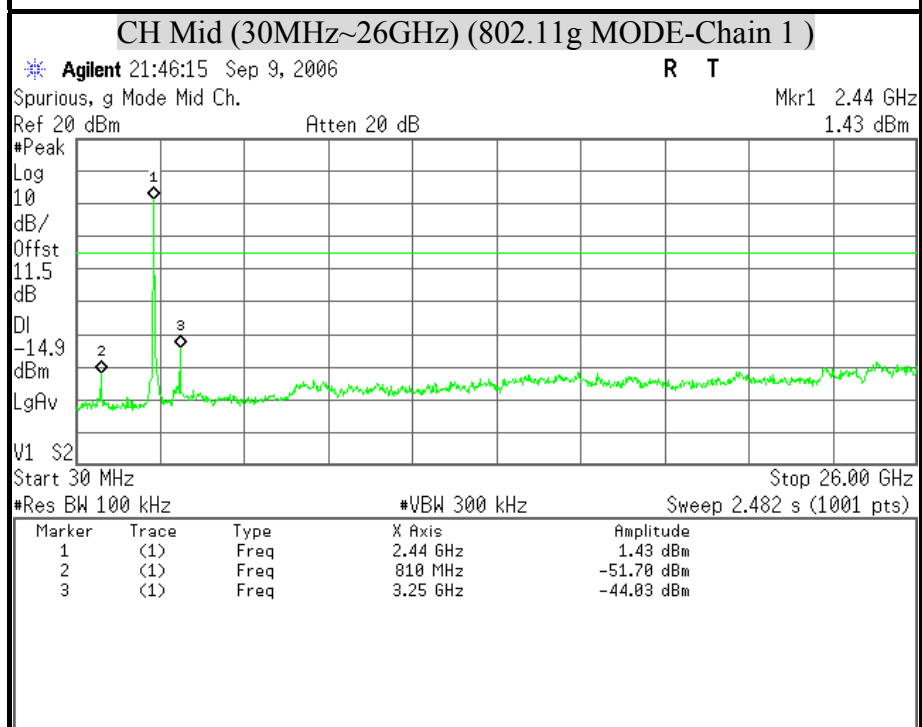
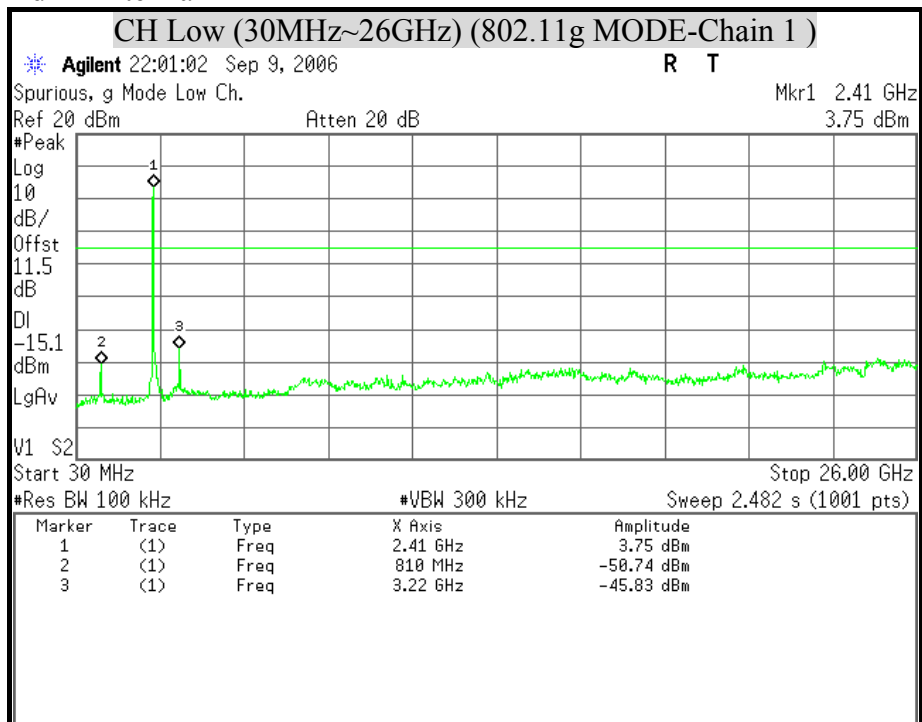
2dBi Antenna

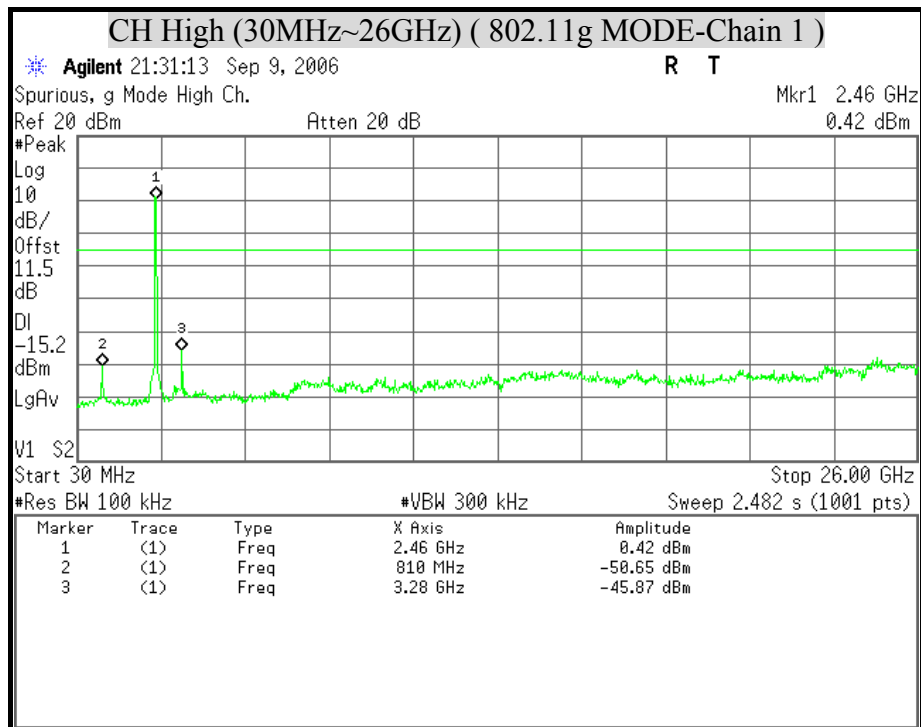






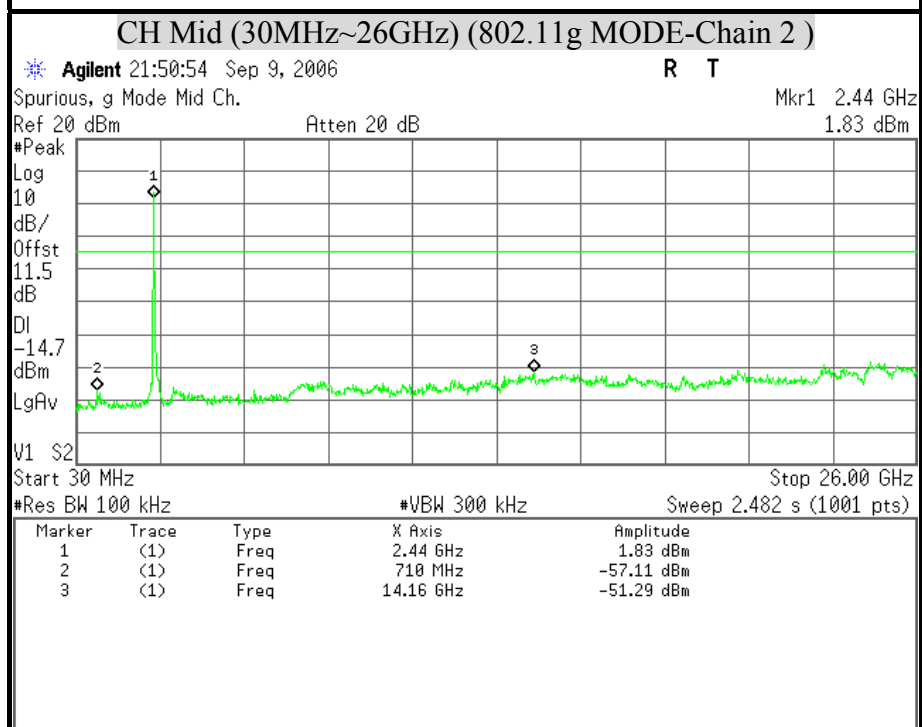
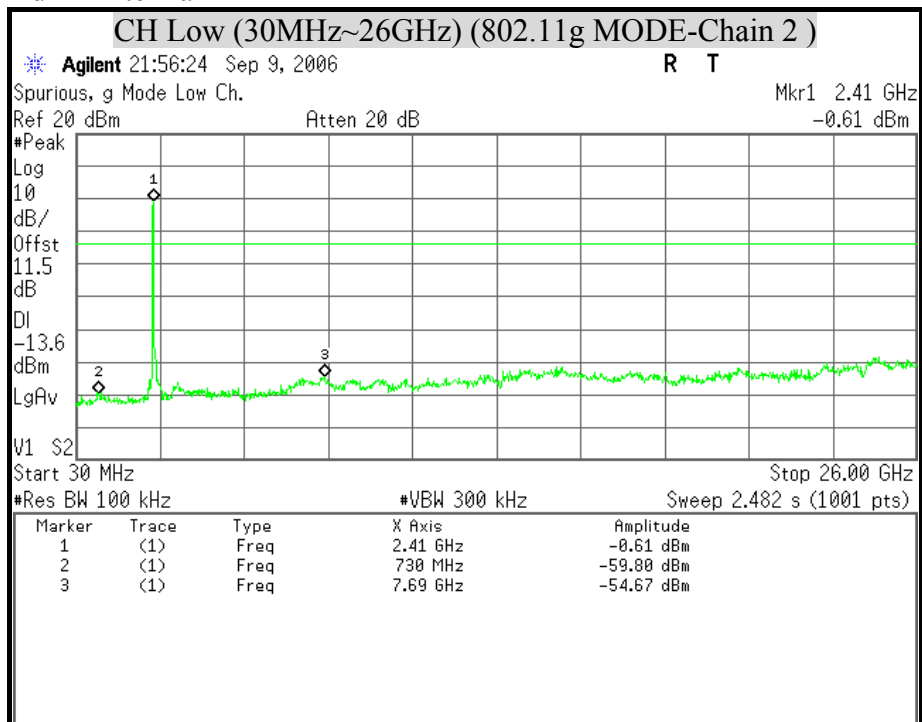
## 2dBi Antenna

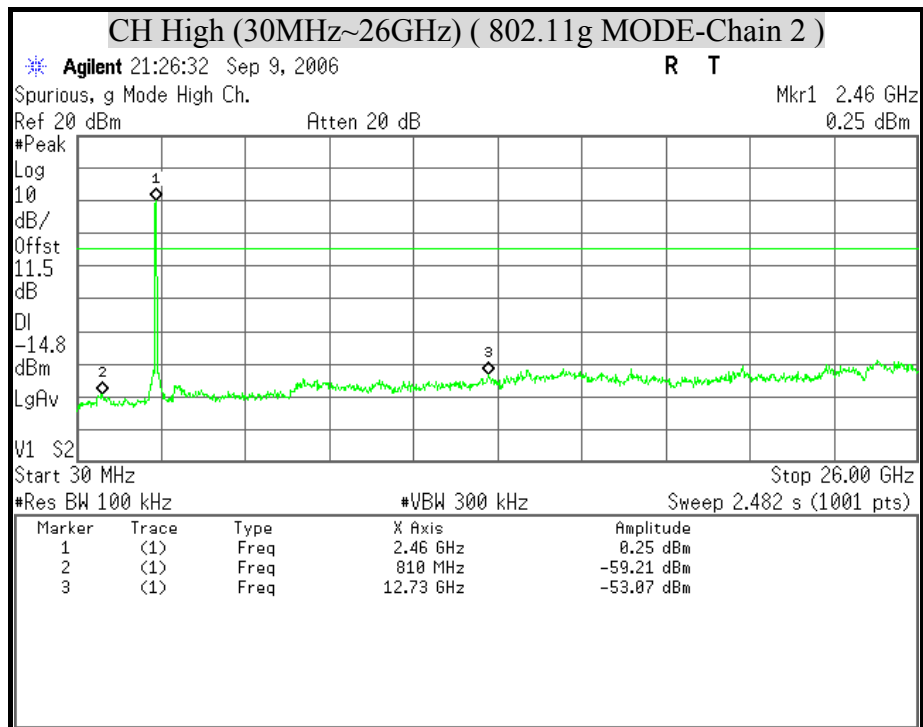






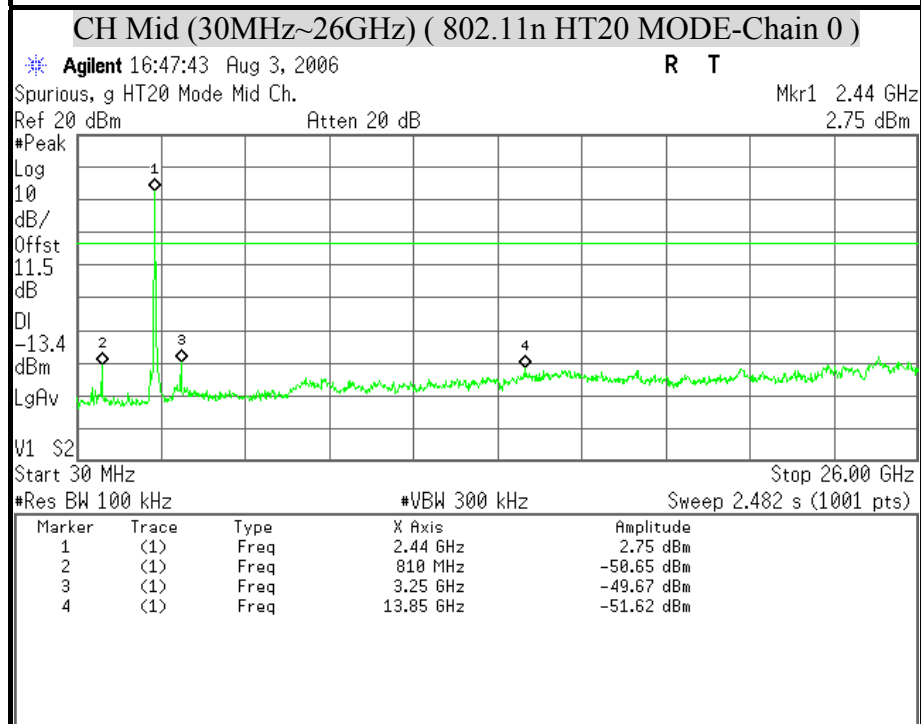
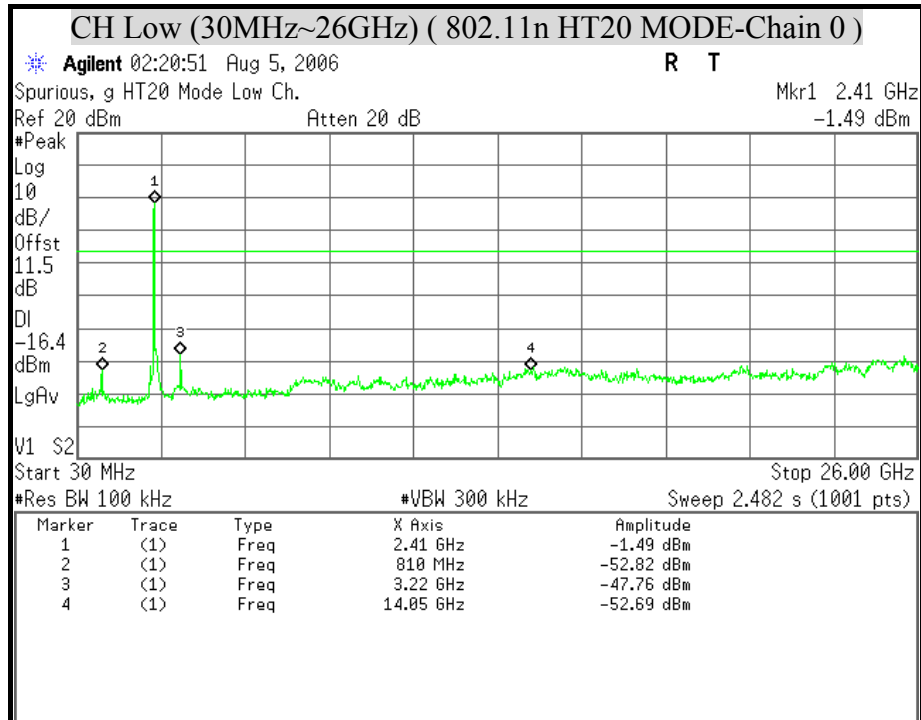
## 2dBi Antenna

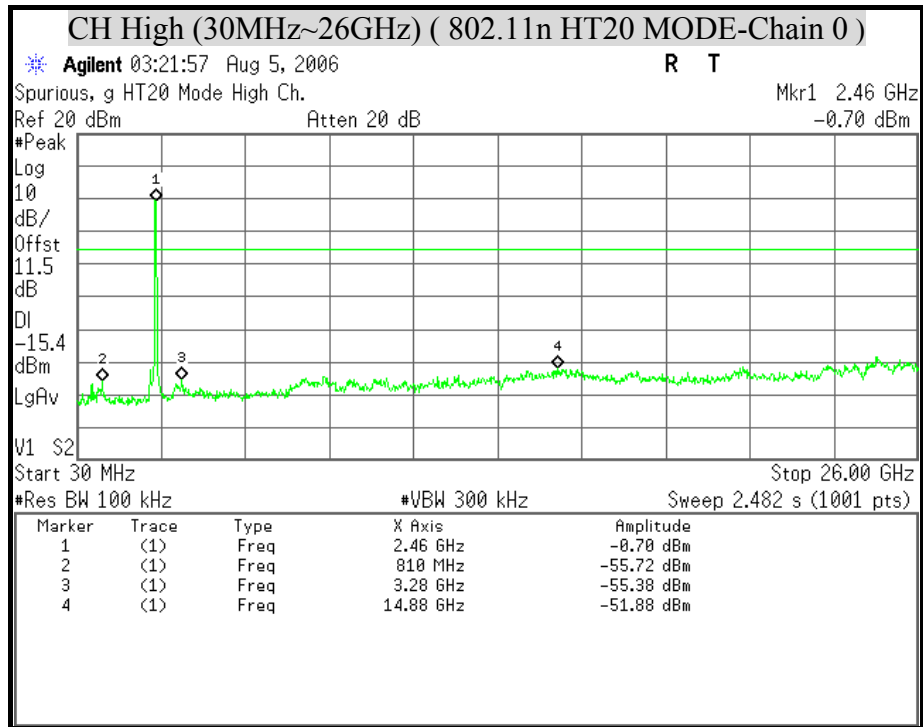




**OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT****( 802.11n HT20 MODE )**

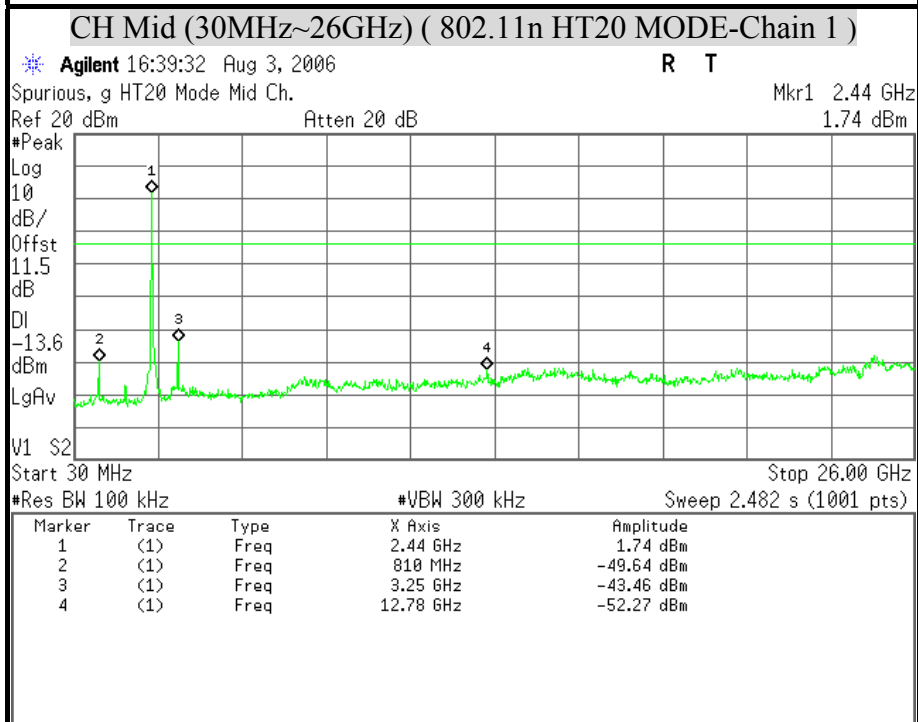
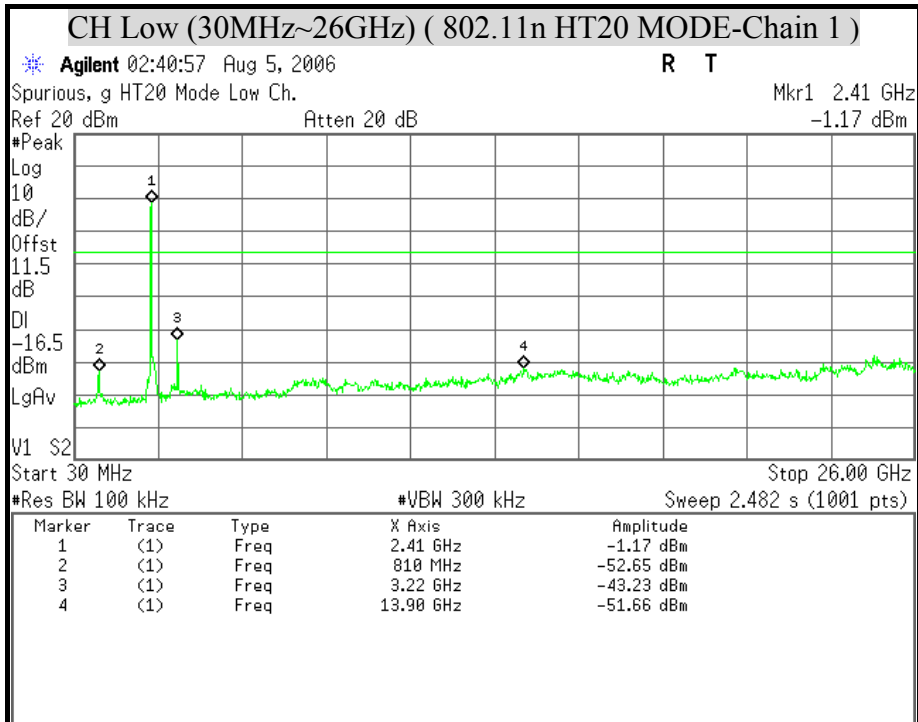
2dBi Antenna

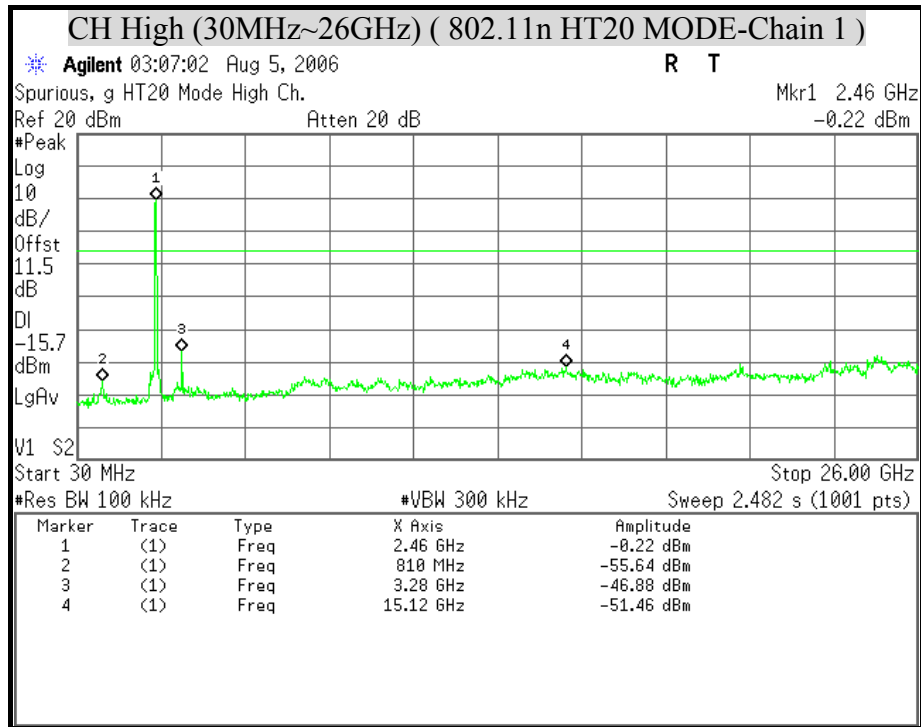






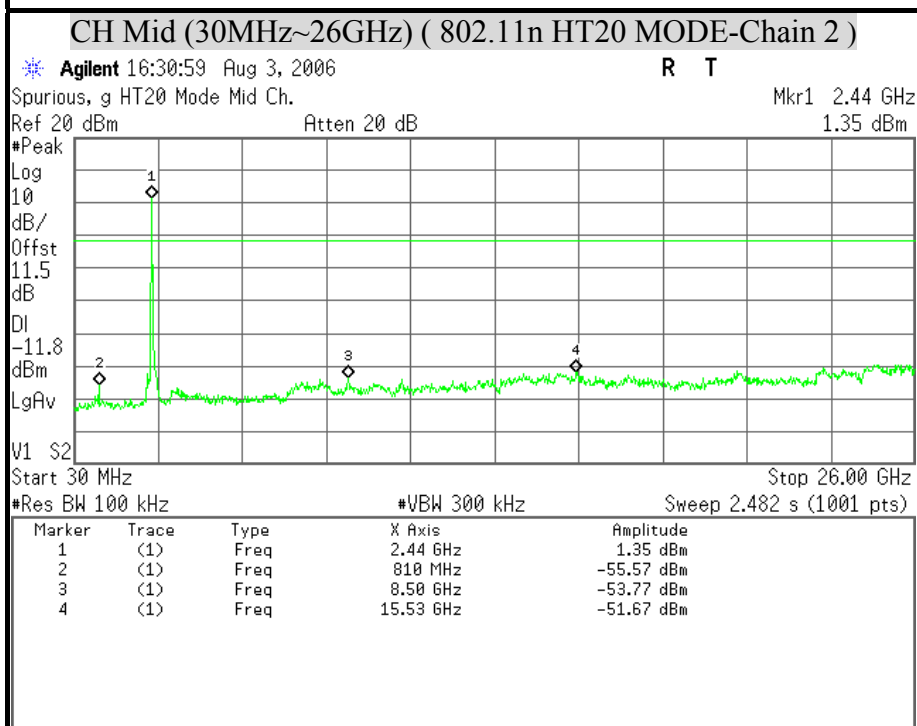
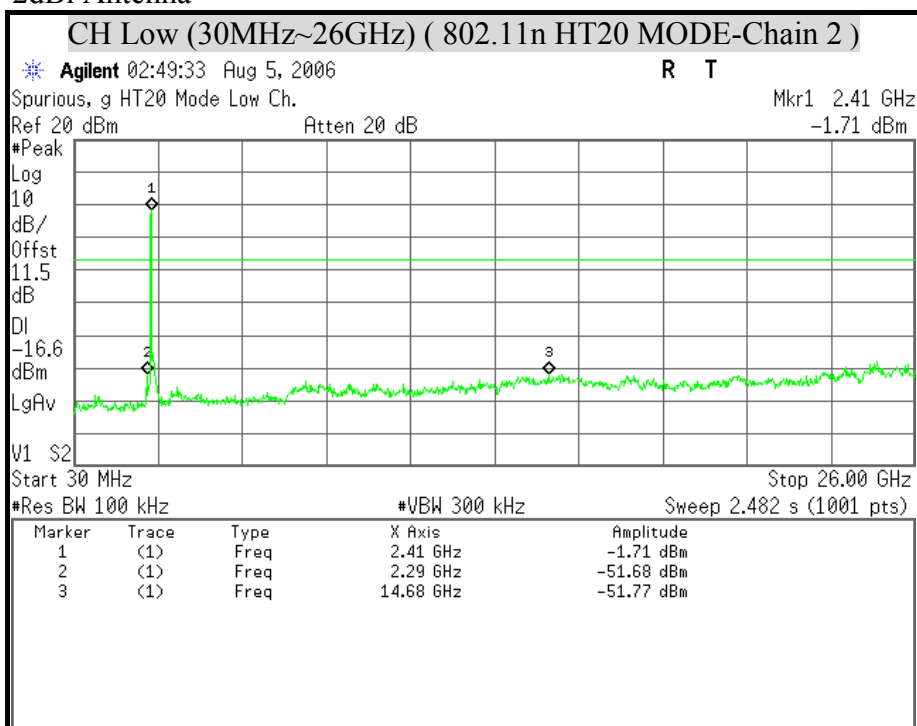
## 2dBi Antenna

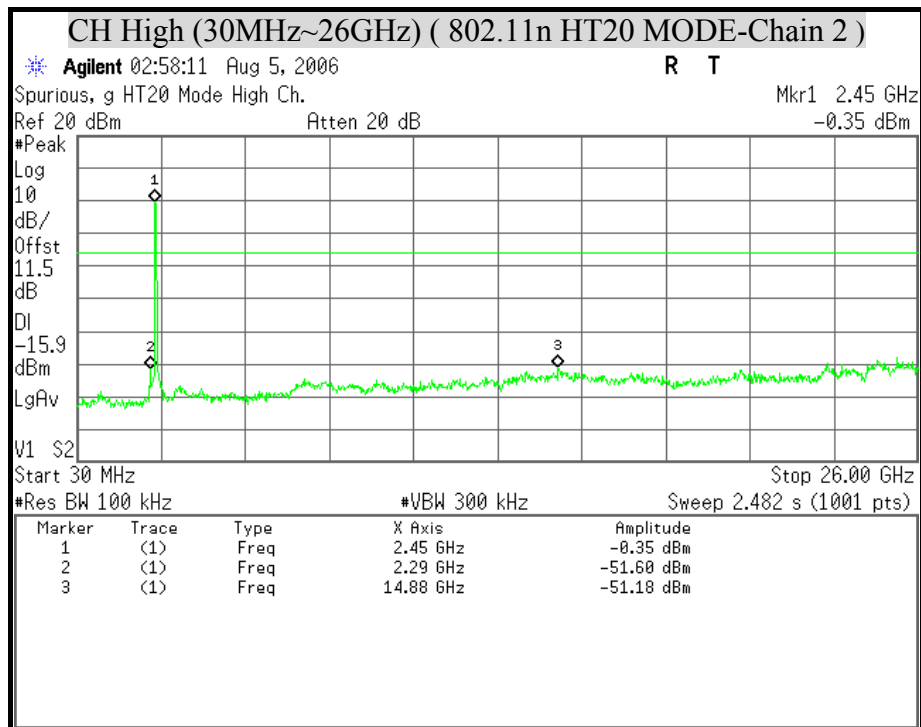






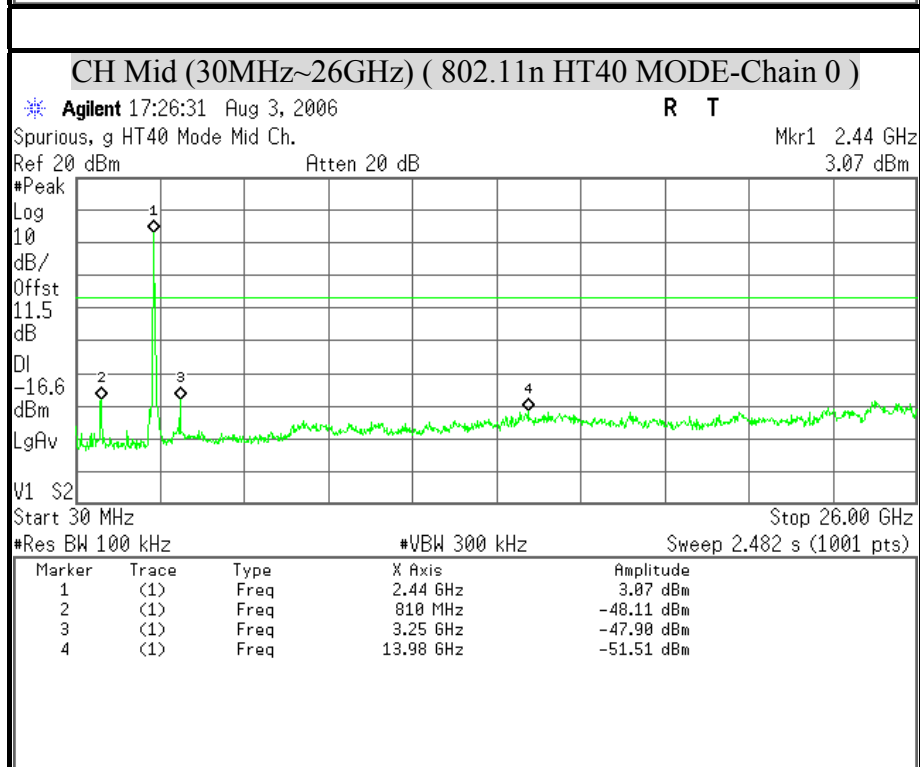
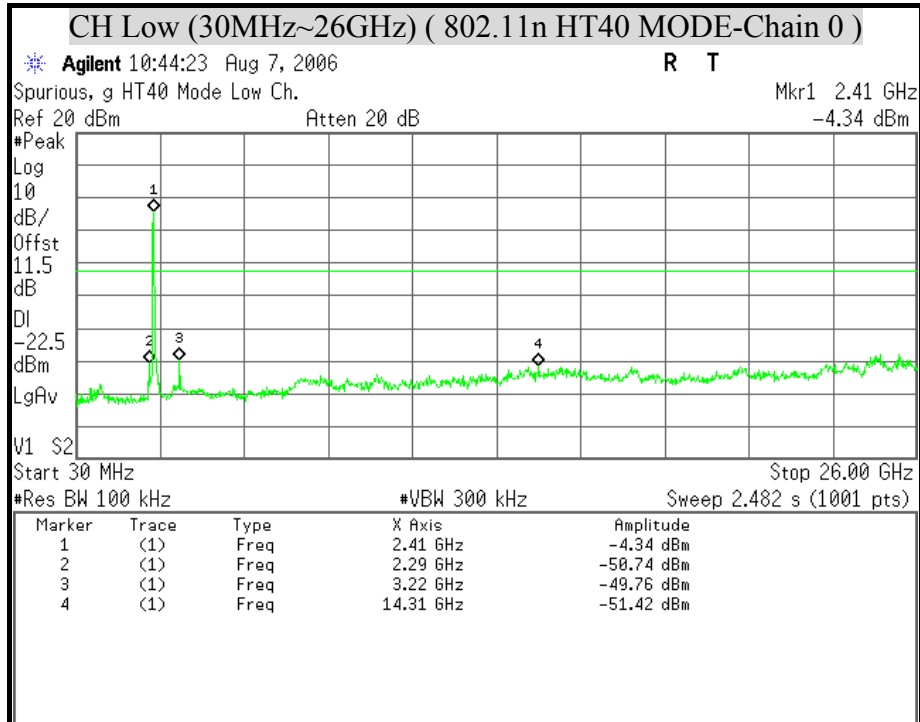
## 2dBi Antenna

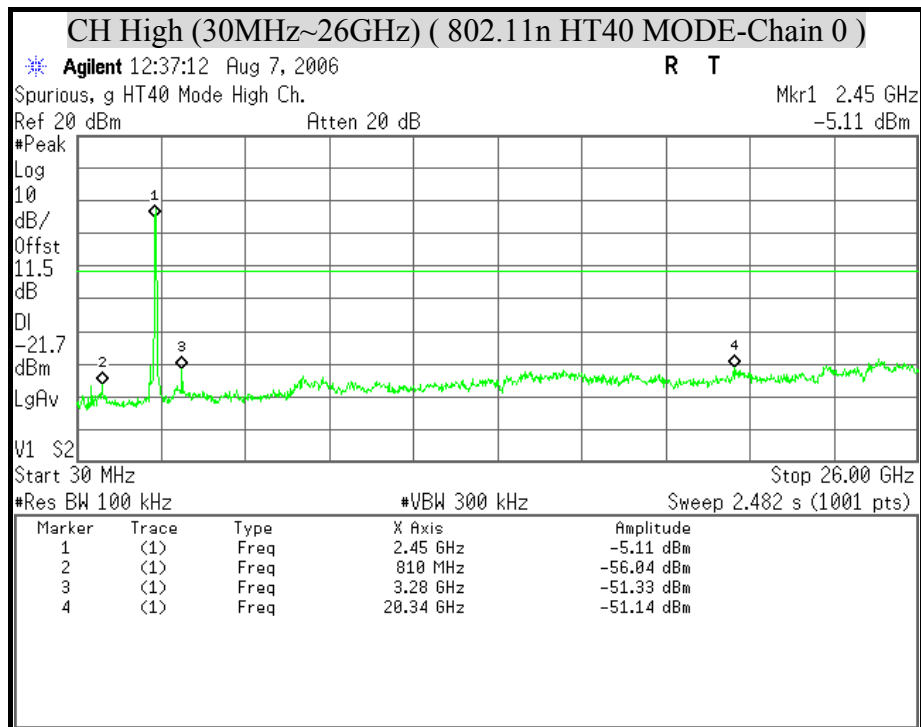




**OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT****( IEEE 802.11n HT40 MODE)**

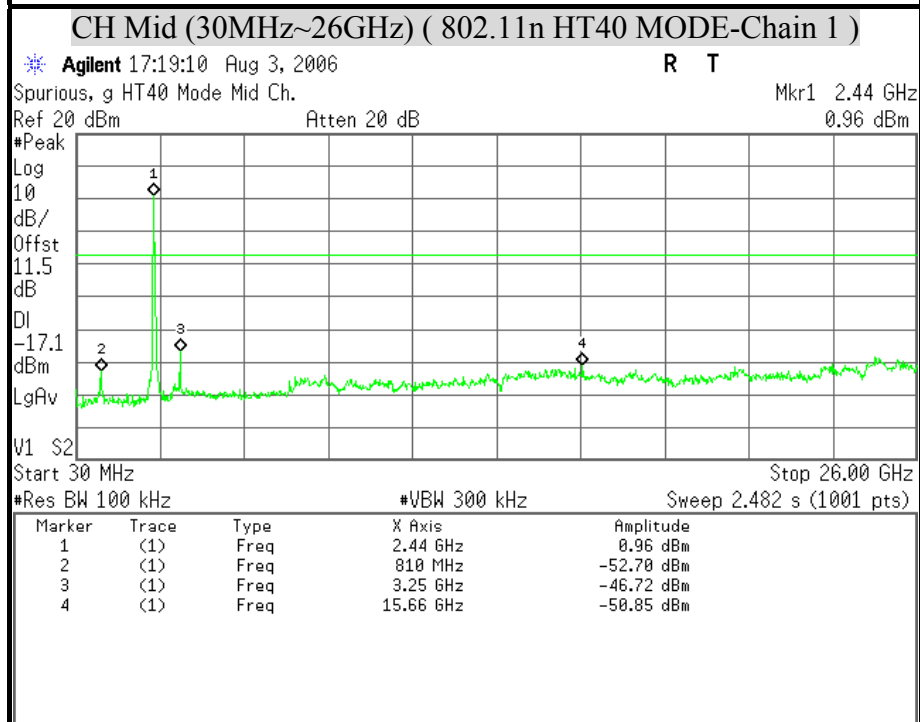
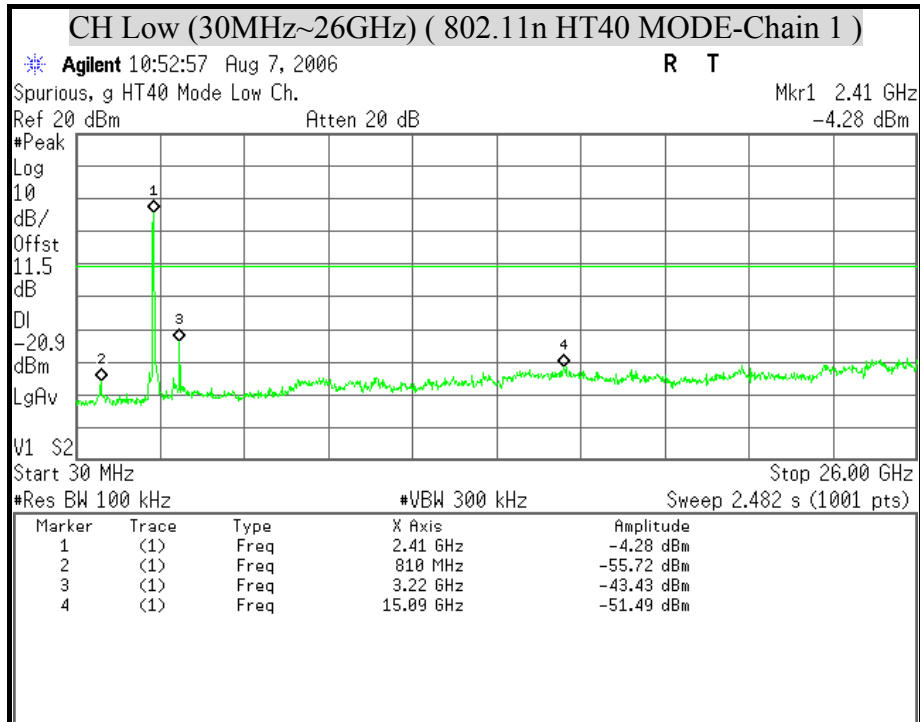
2dBi Antenna

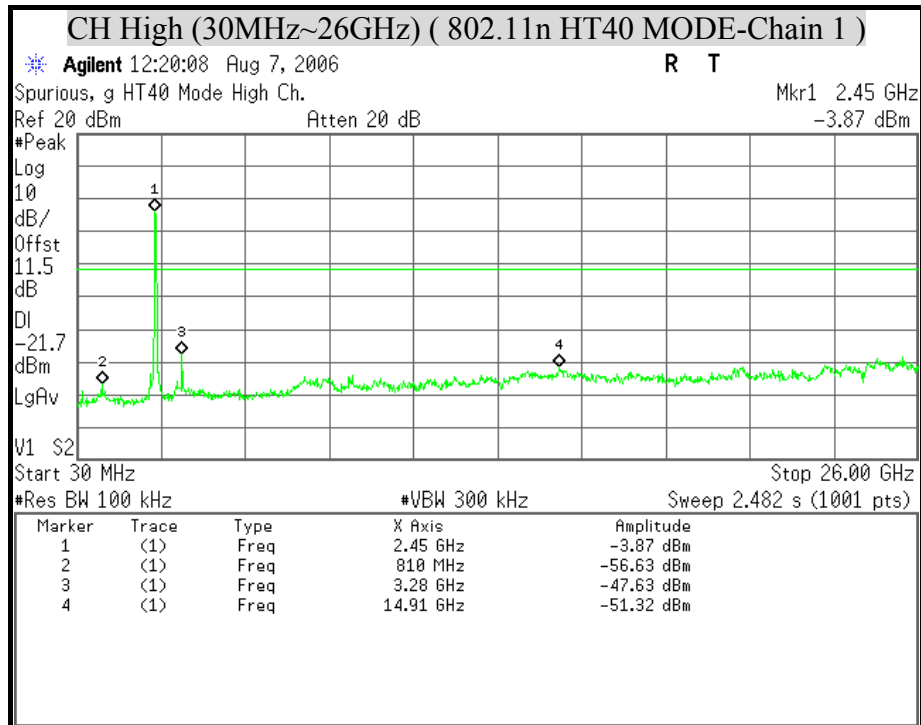






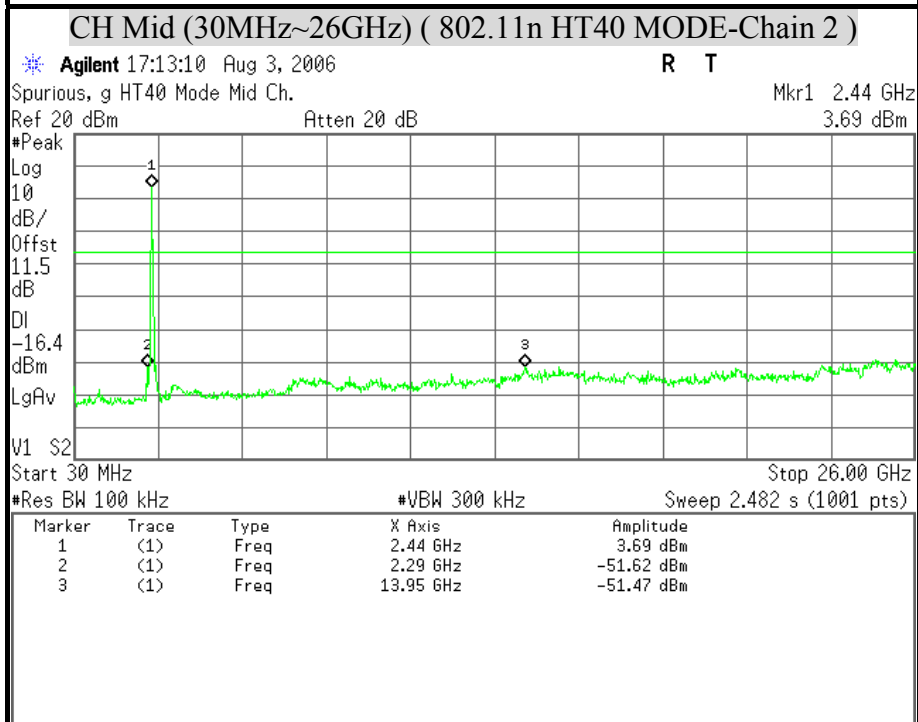
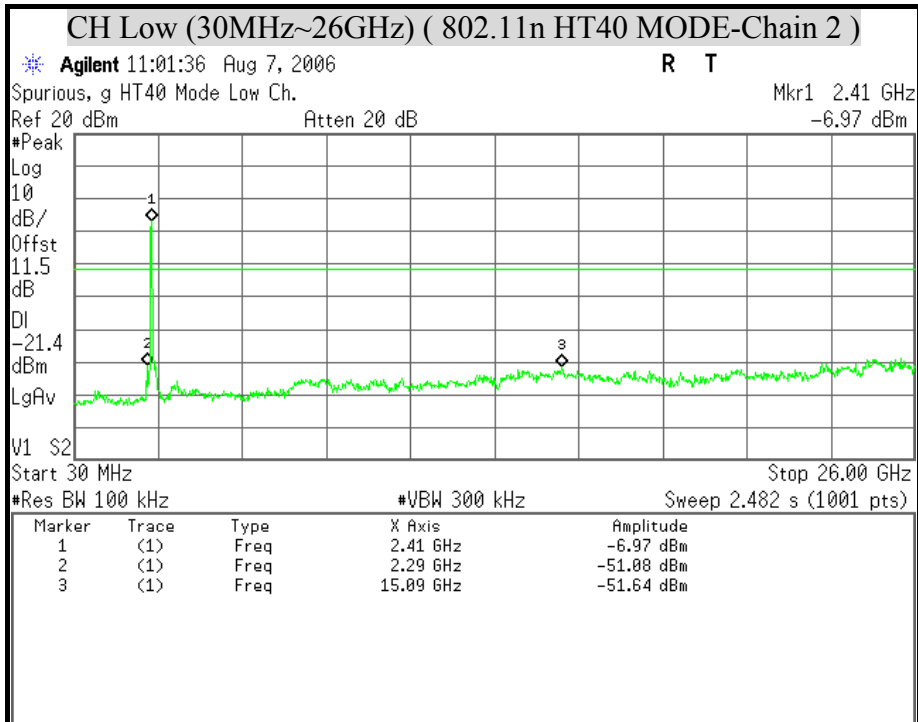
## 2dBi Antenna

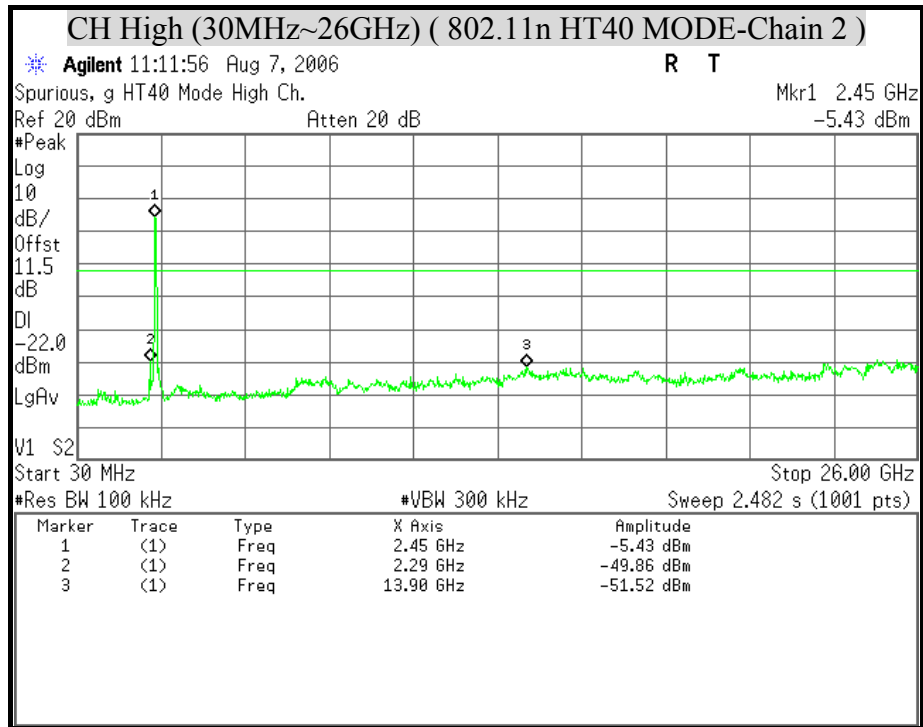






## 2dBi Antenna

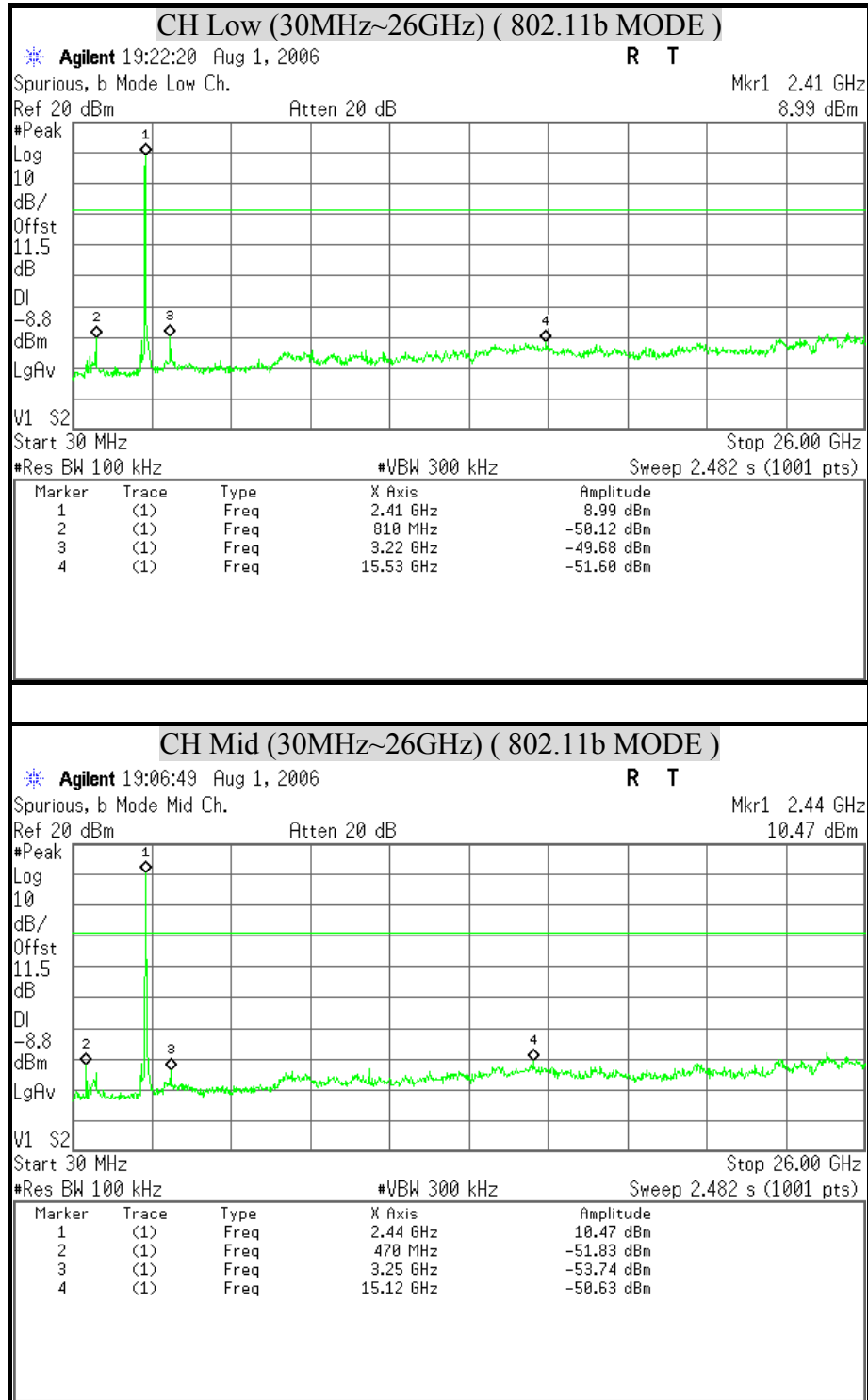


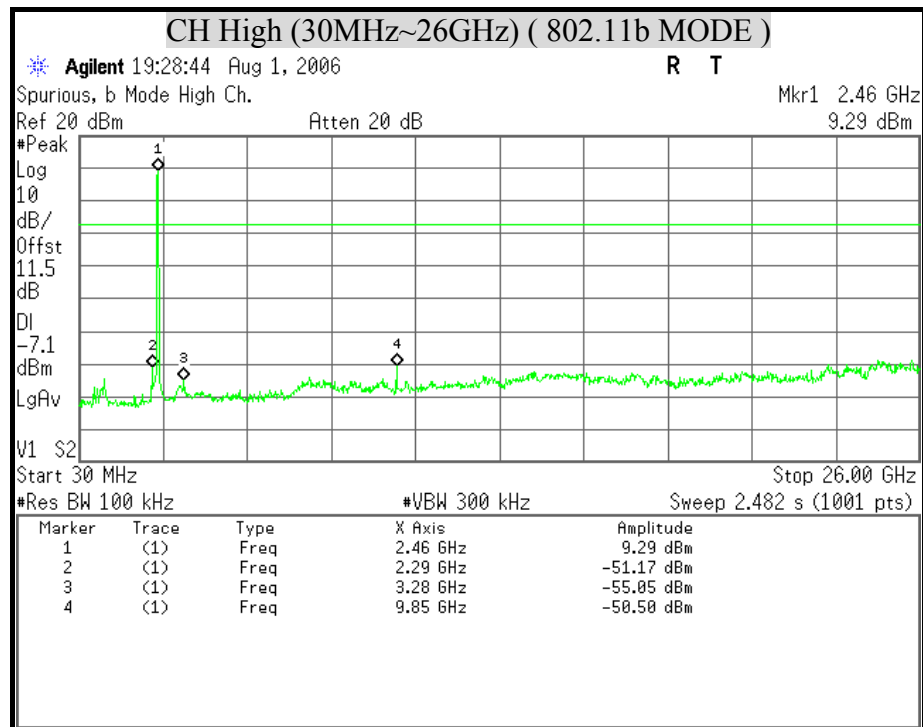




## OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( IEEE 802.11b MODE)

3dBi Antenna

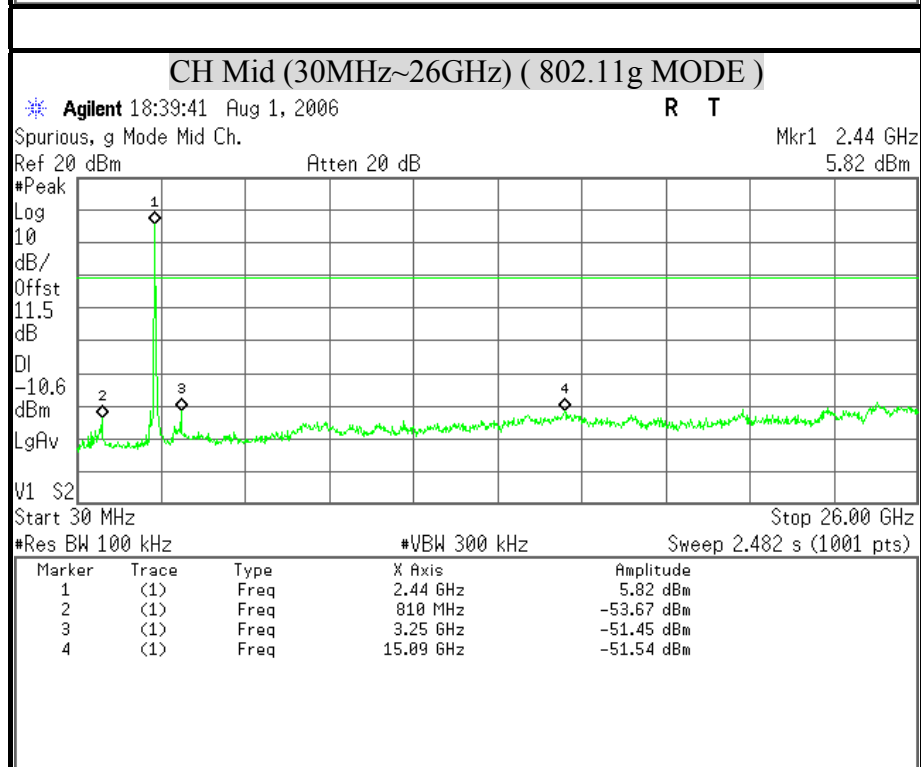
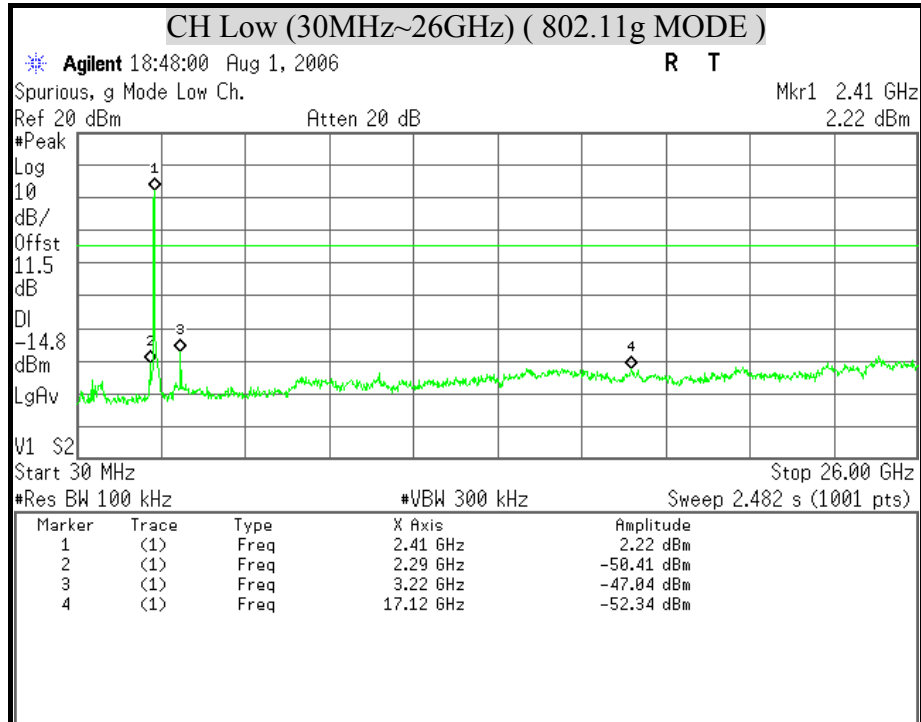


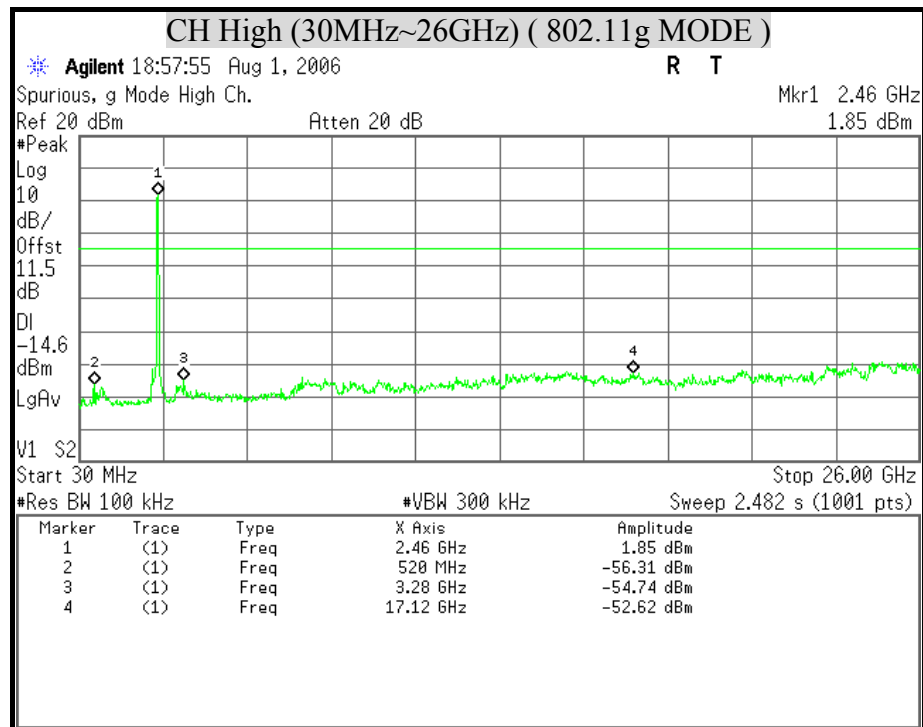




## OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( IEEE 802.11g MODE)

3dBi Antenna

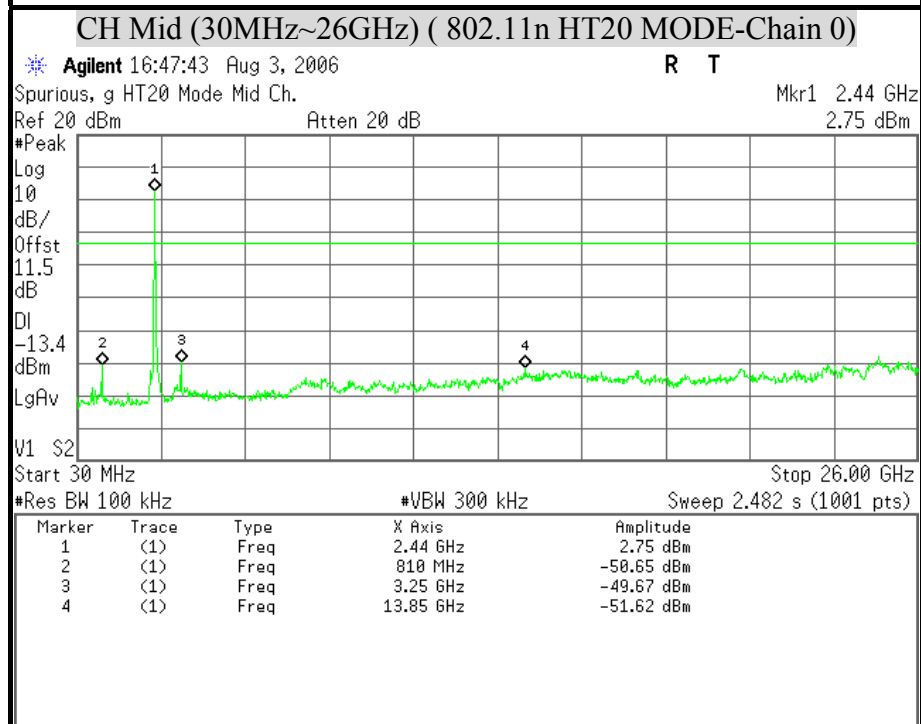
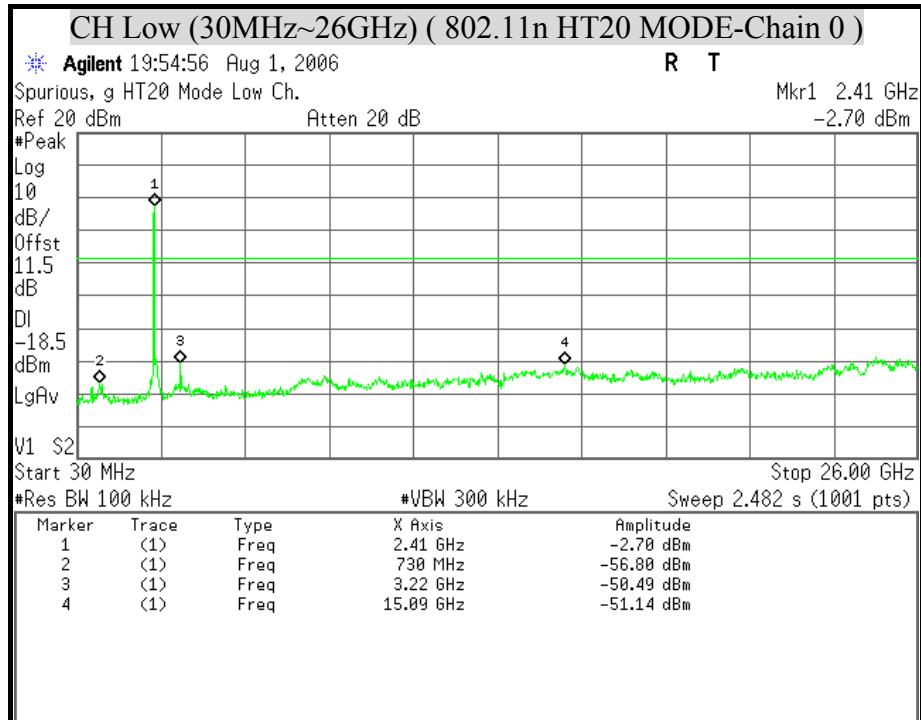


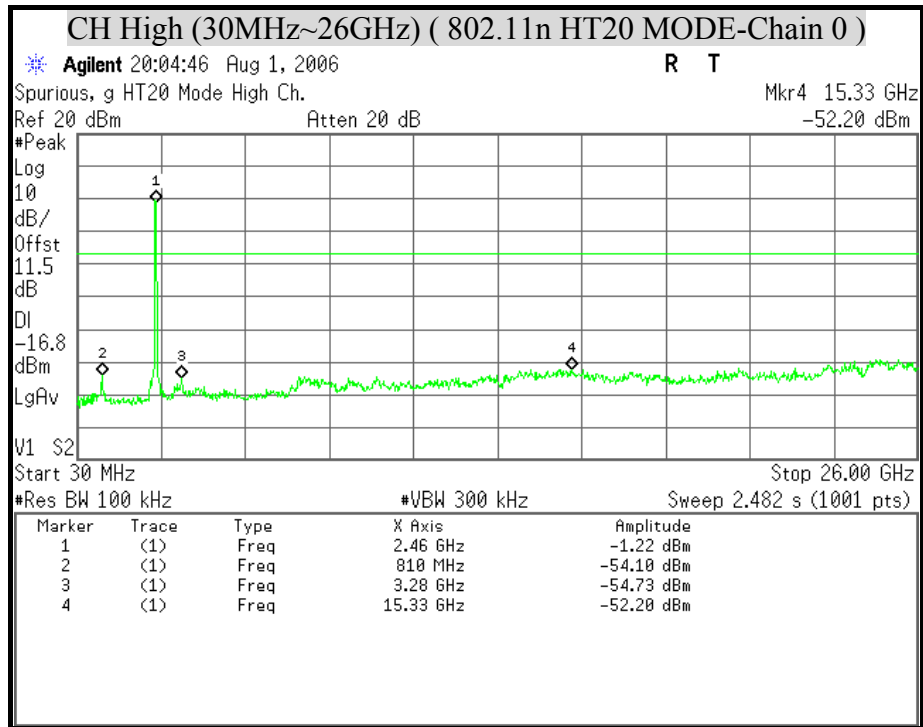




## OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( 802.11n HT20 MODE )

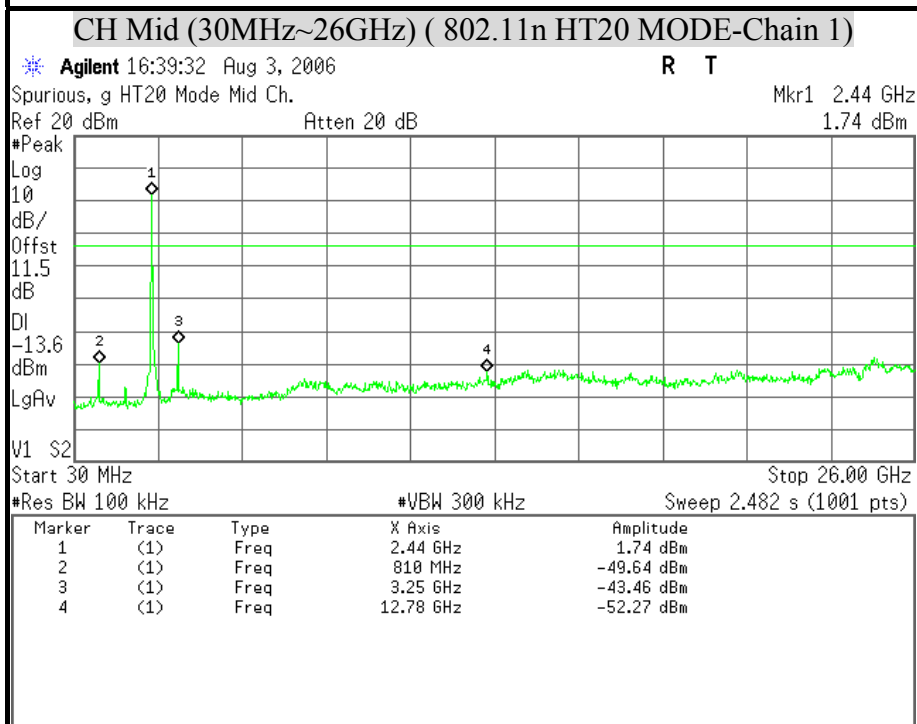
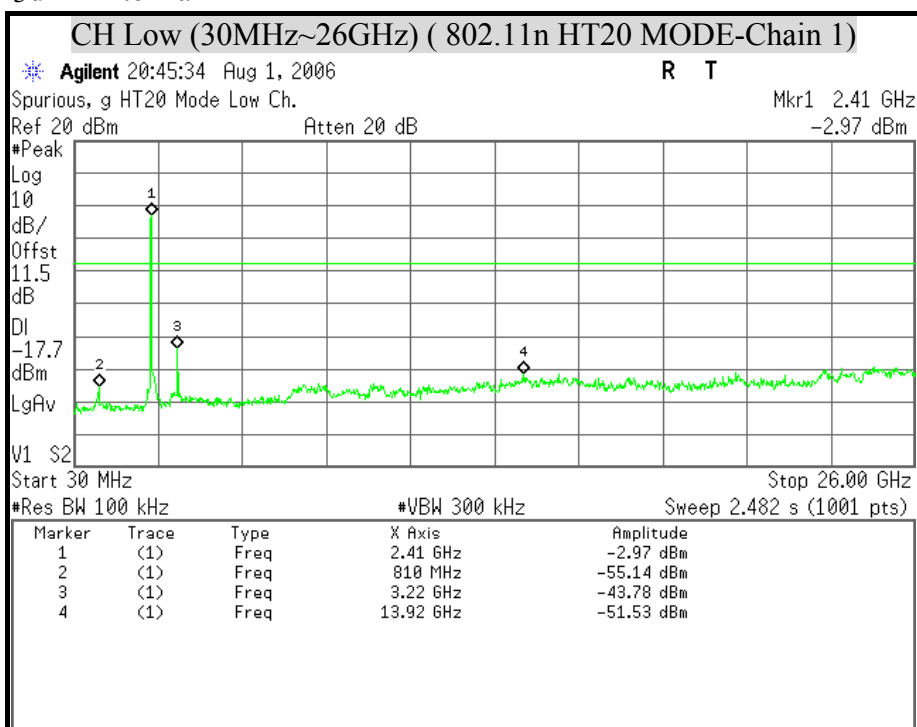
3dBi Antenna

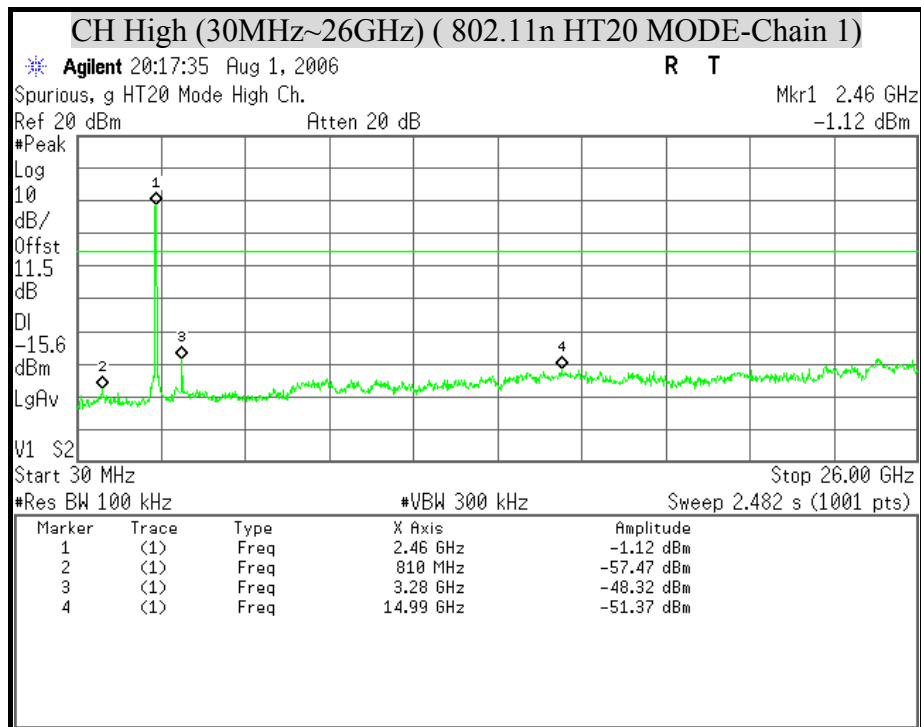






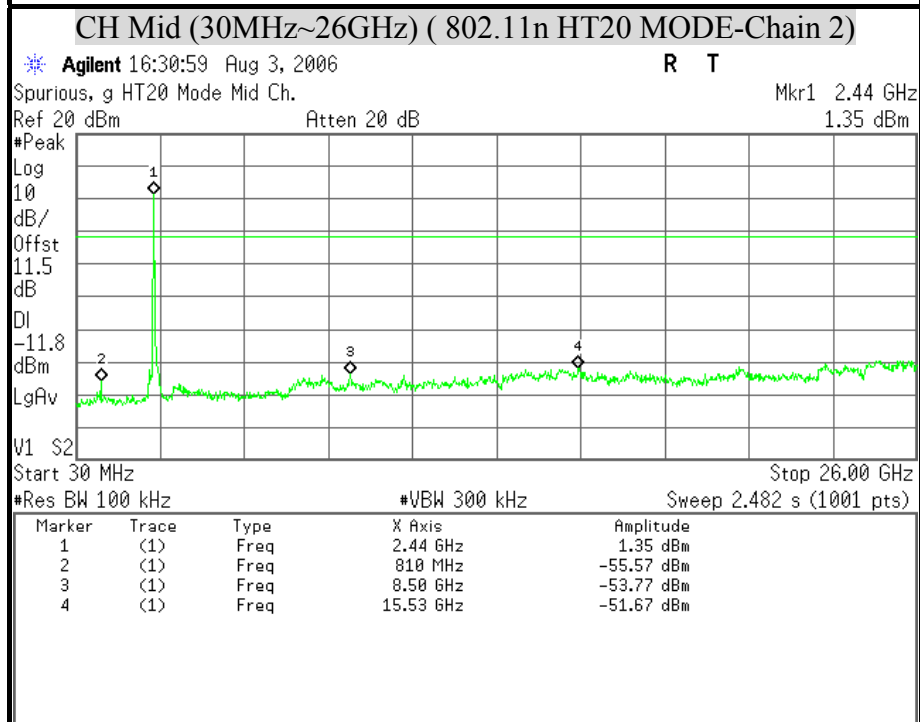
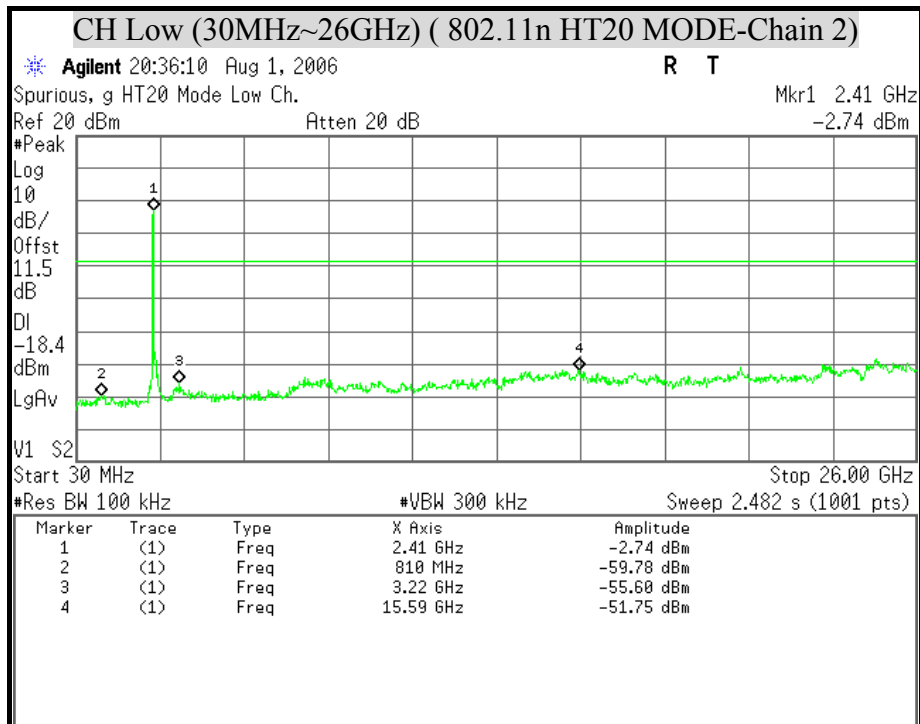
## 3dBi Antenna

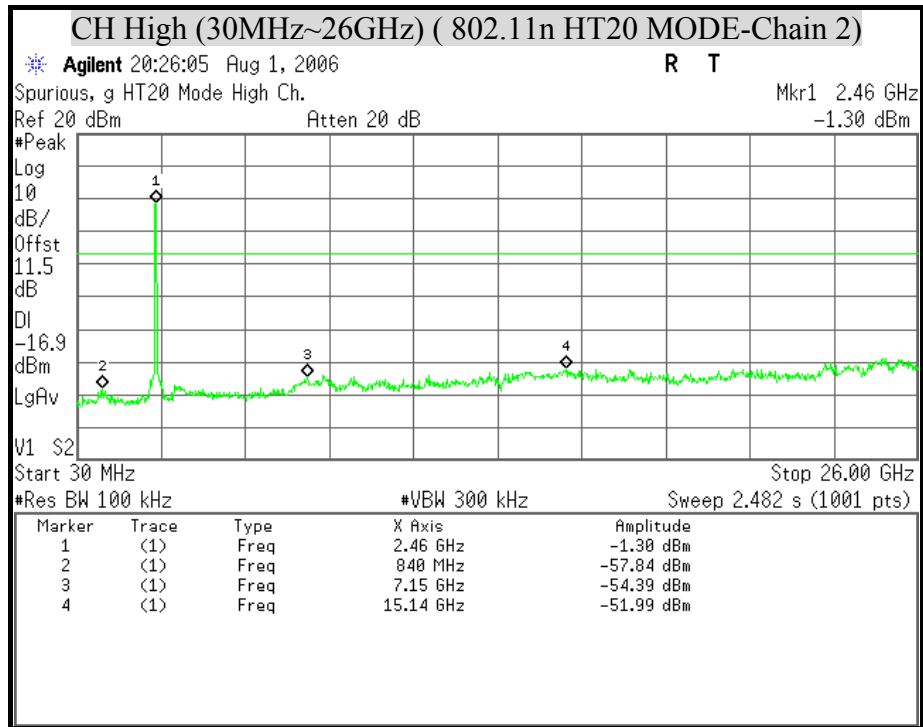






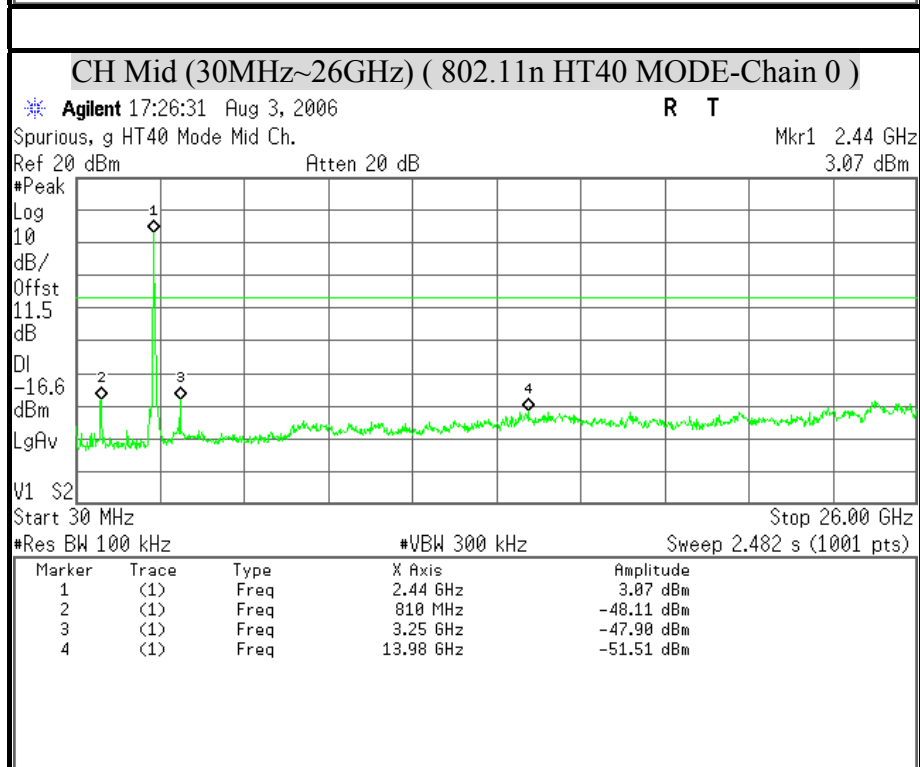
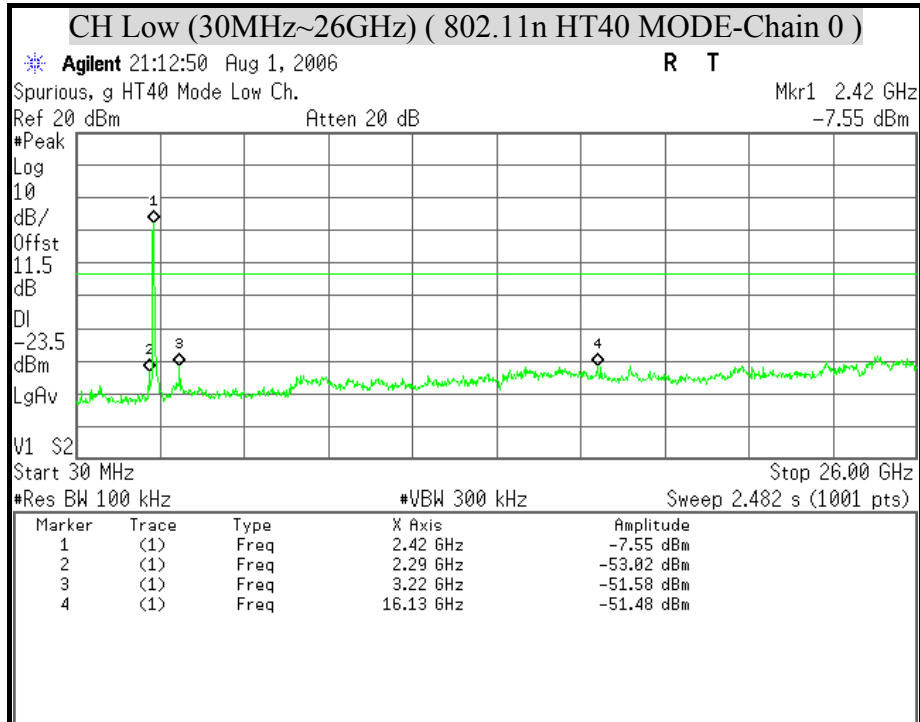
## 3dBi Antenna

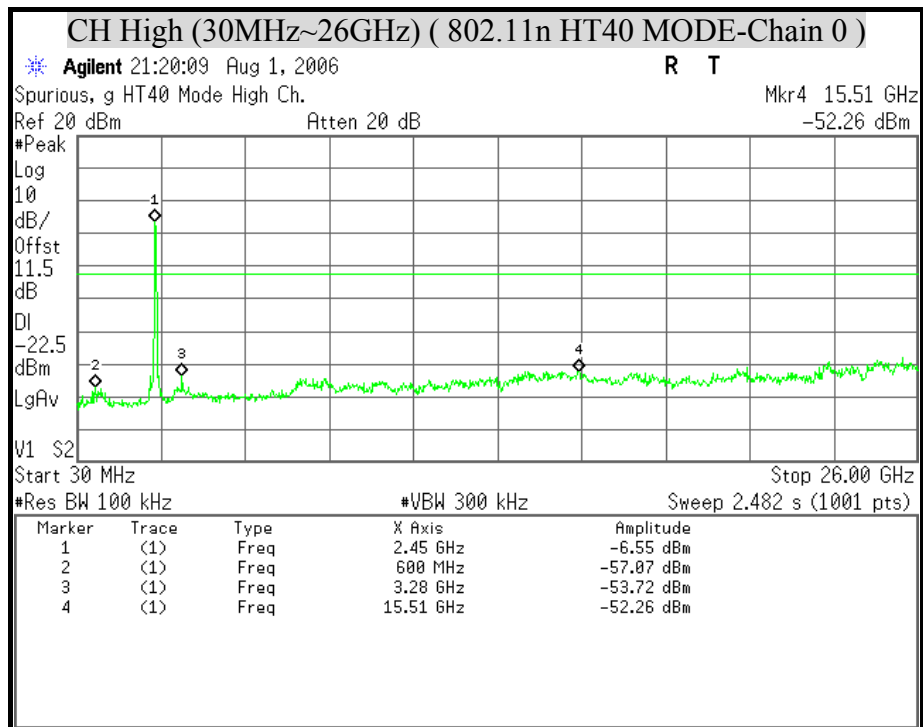




**OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT****( 802.11n HT40 MODE )**

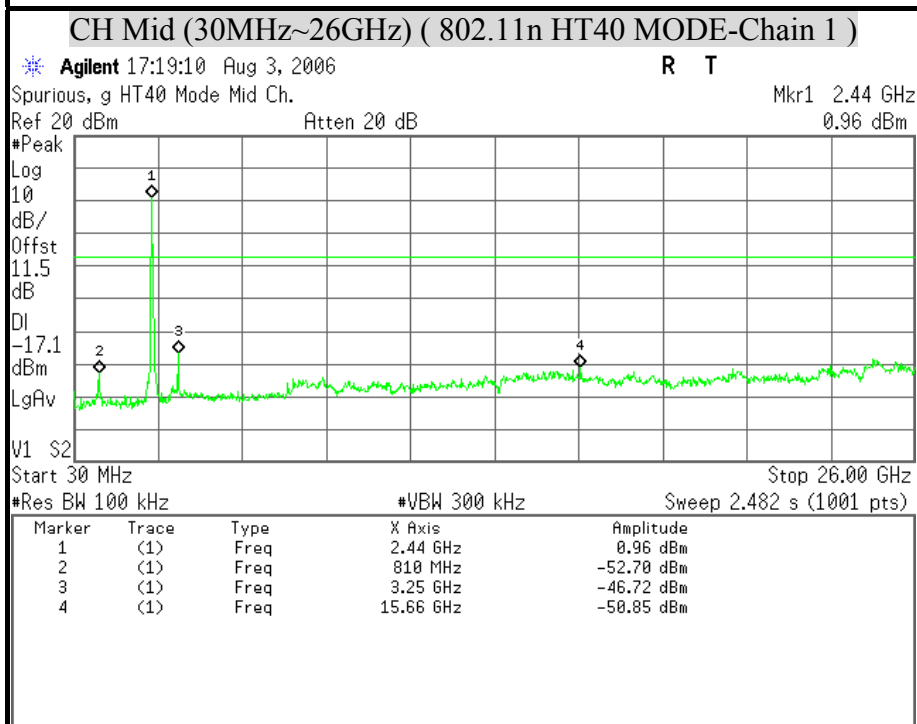
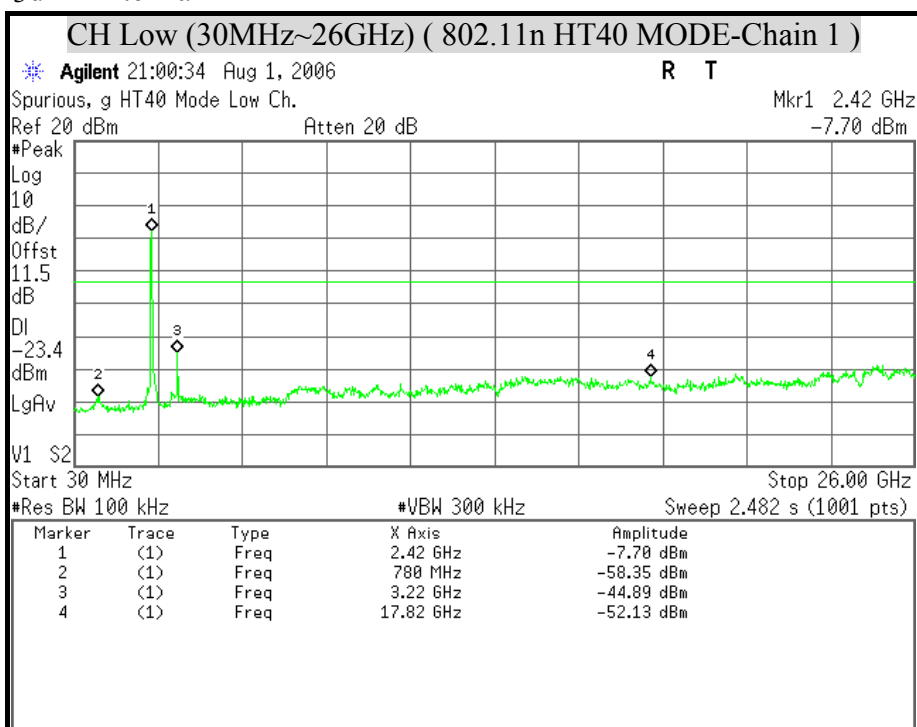
3dBi Antenna

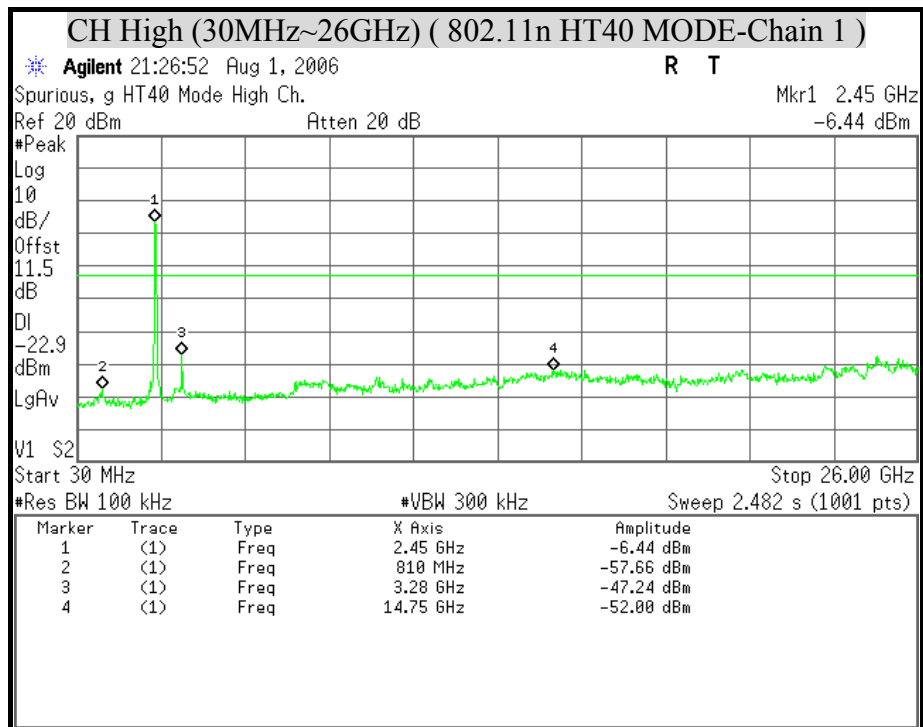






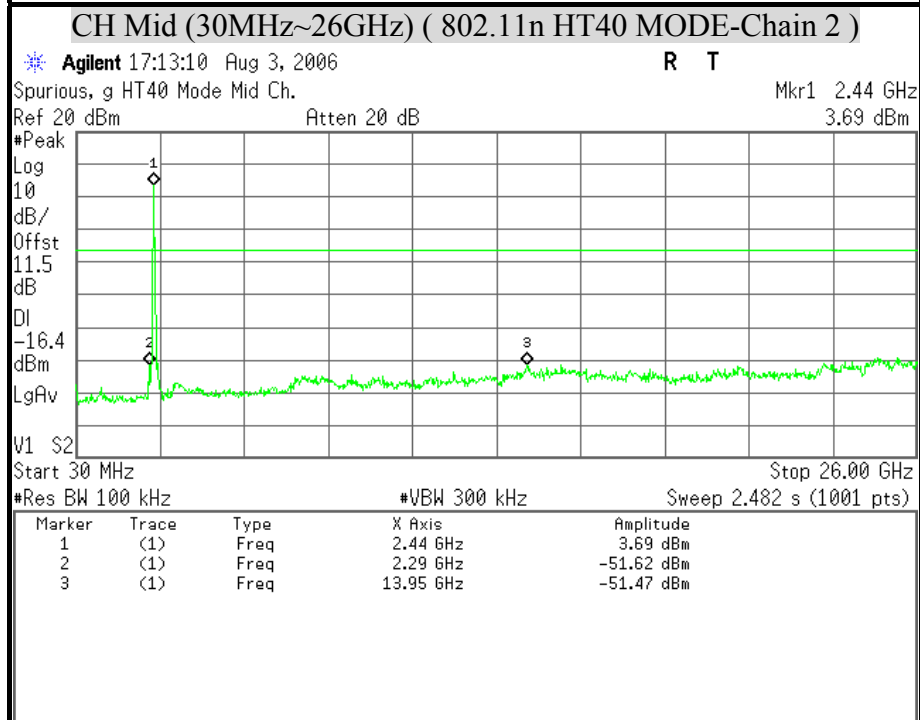
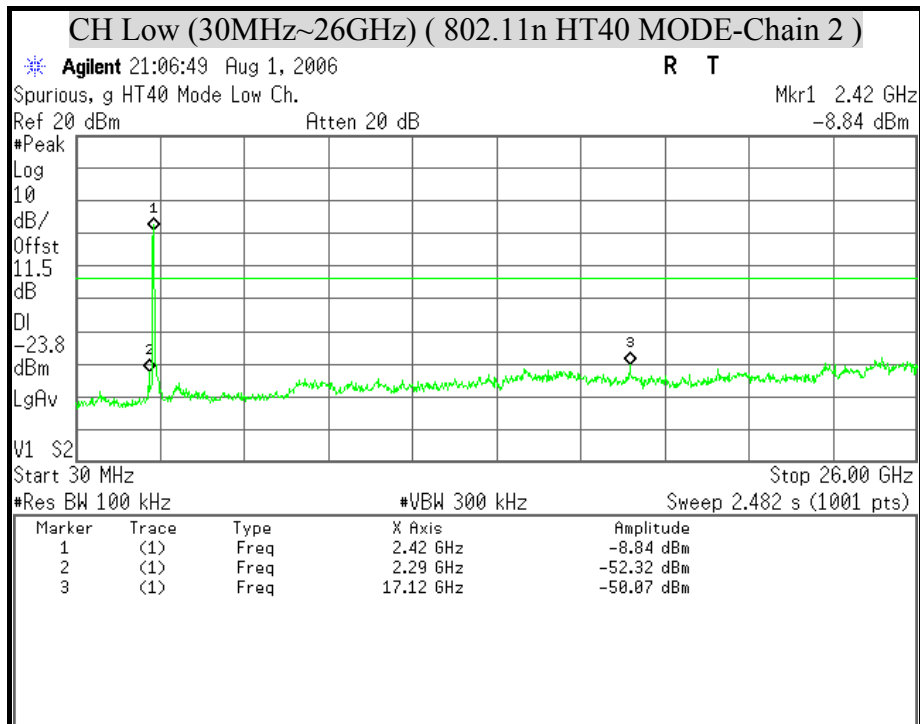
## 3dBi Antenna

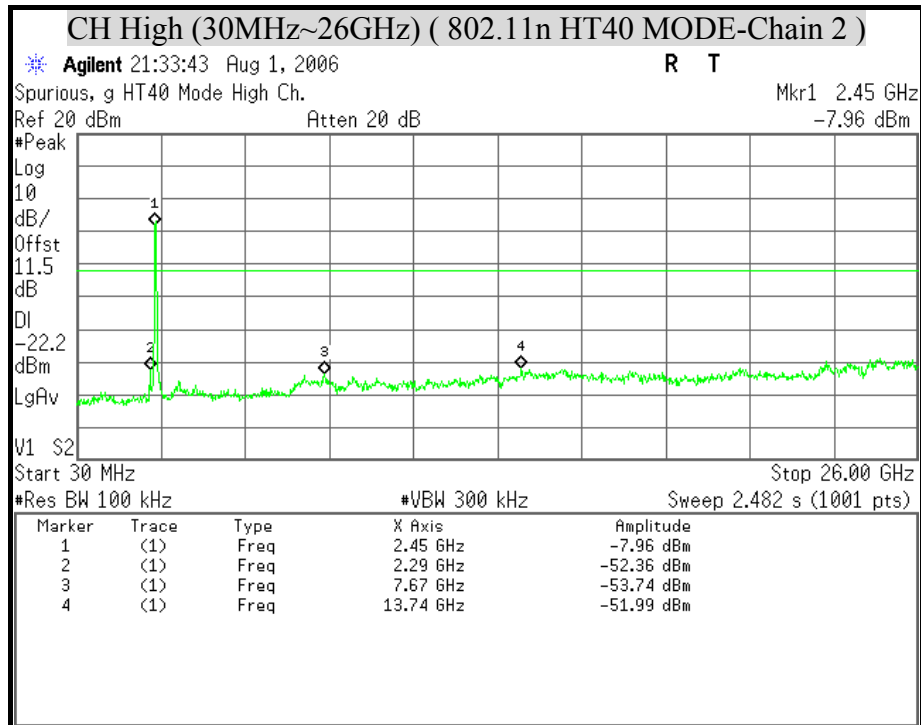






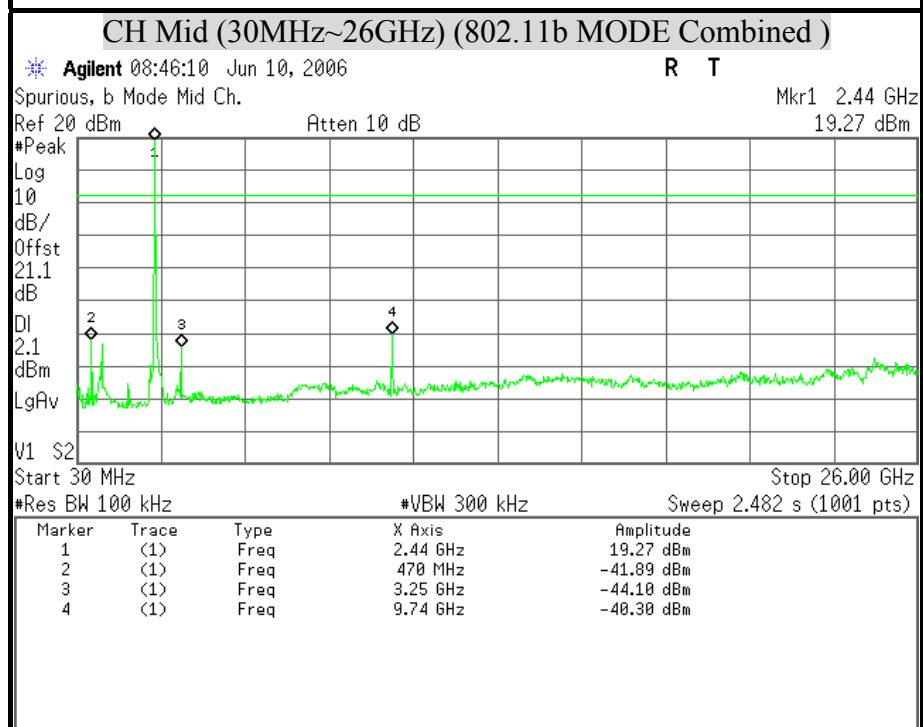
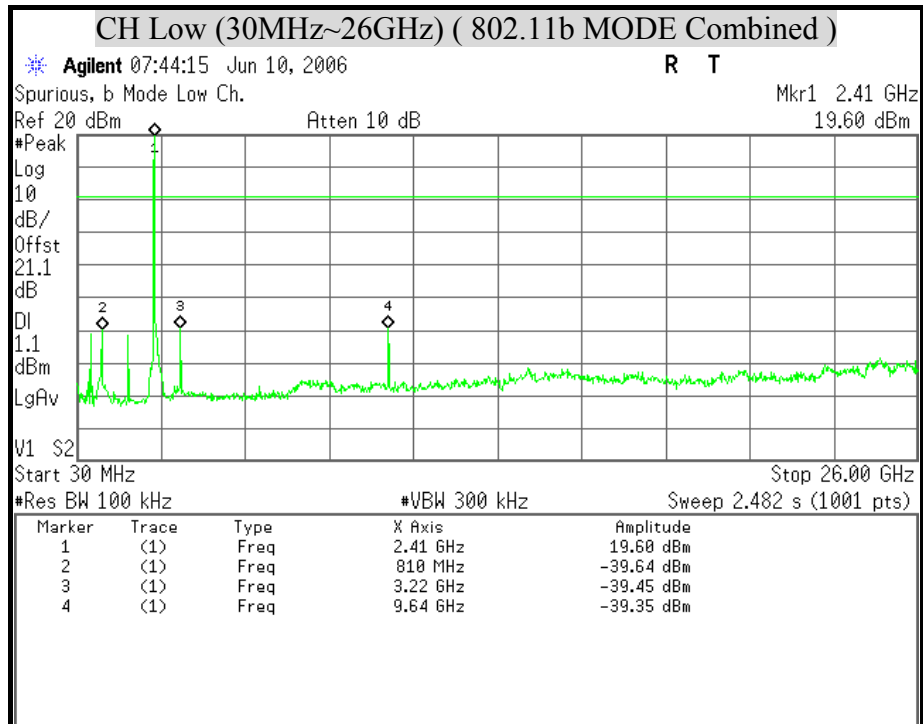
## 3dBi Antenna

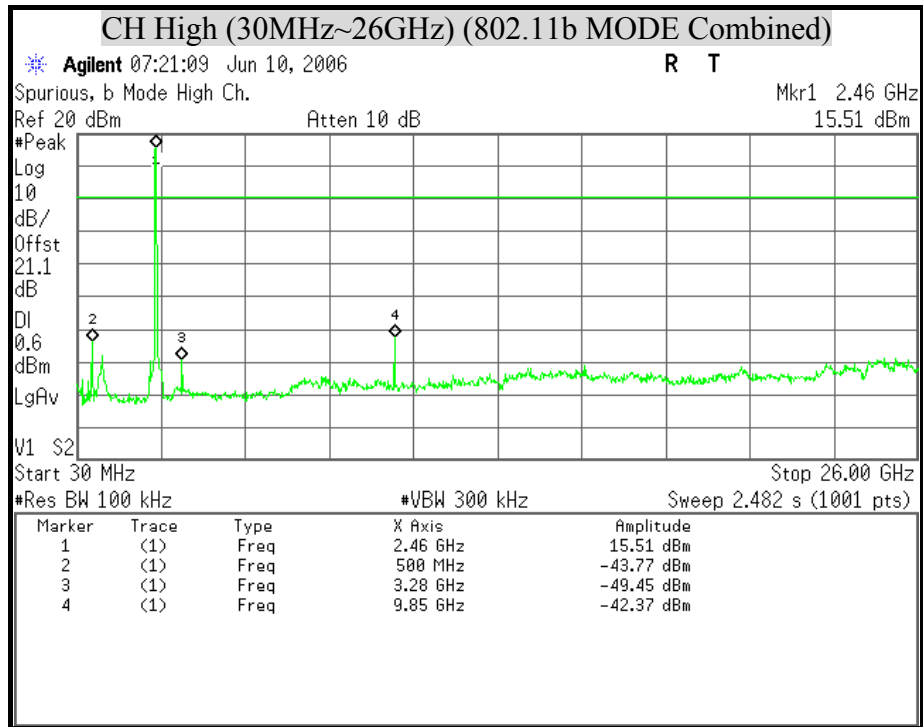




**OUT-OF-BAND COMBINED SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT****( 802.11b MODE Combined)**

2dBi Antenna

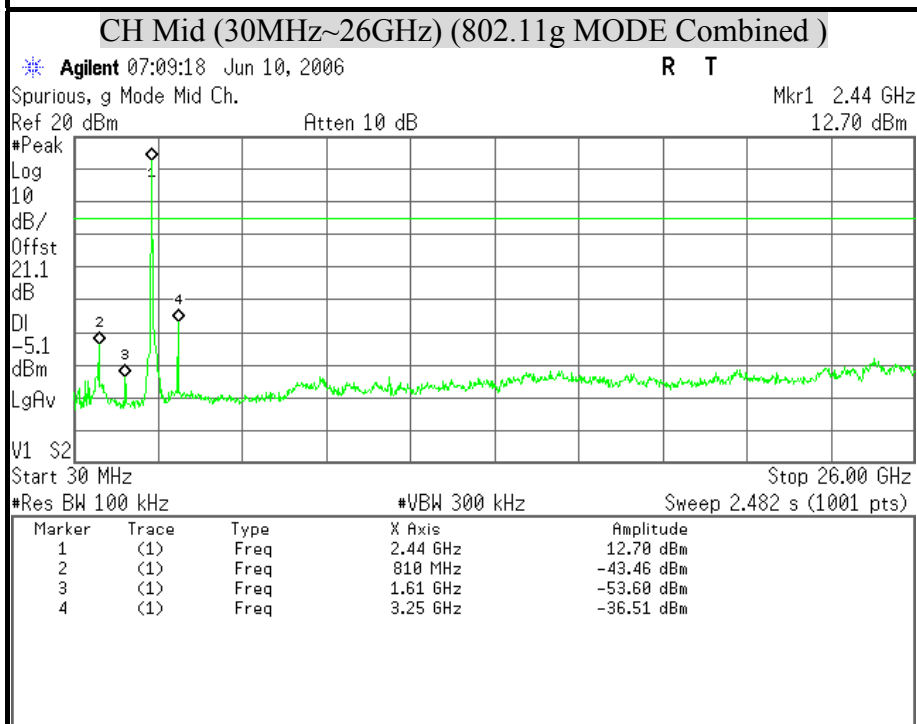
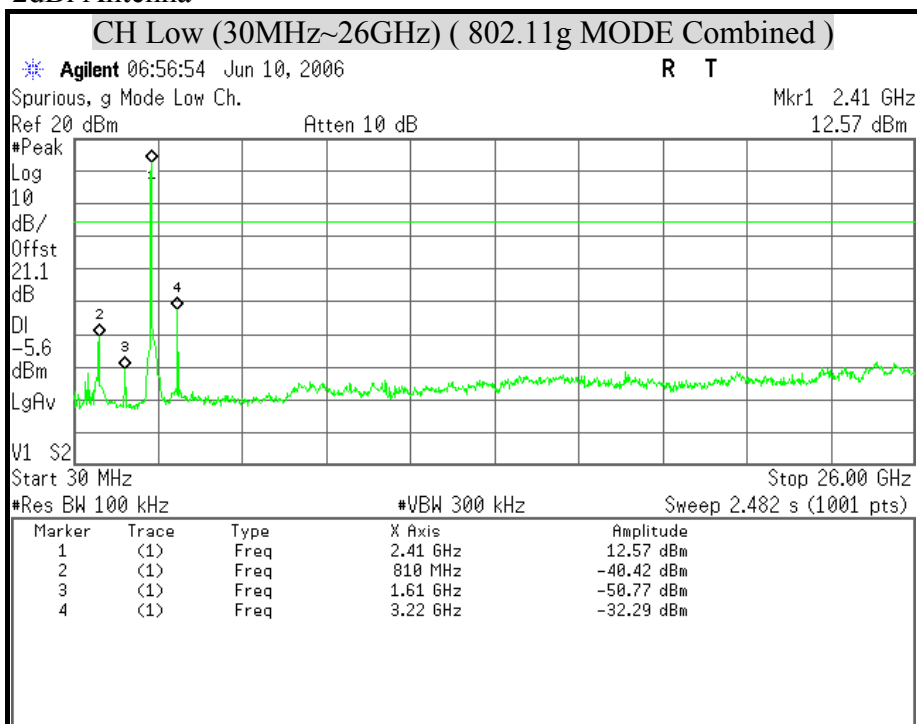


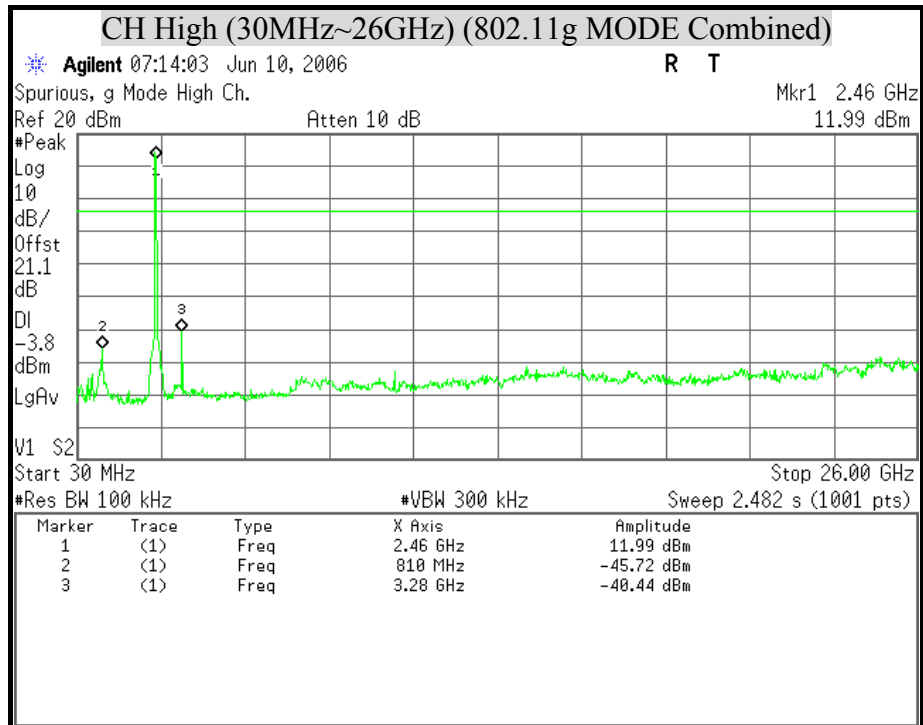




## OUT-OF-BAND COMBINED SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( 802.11g MODE Combined)

2dBi Antenna

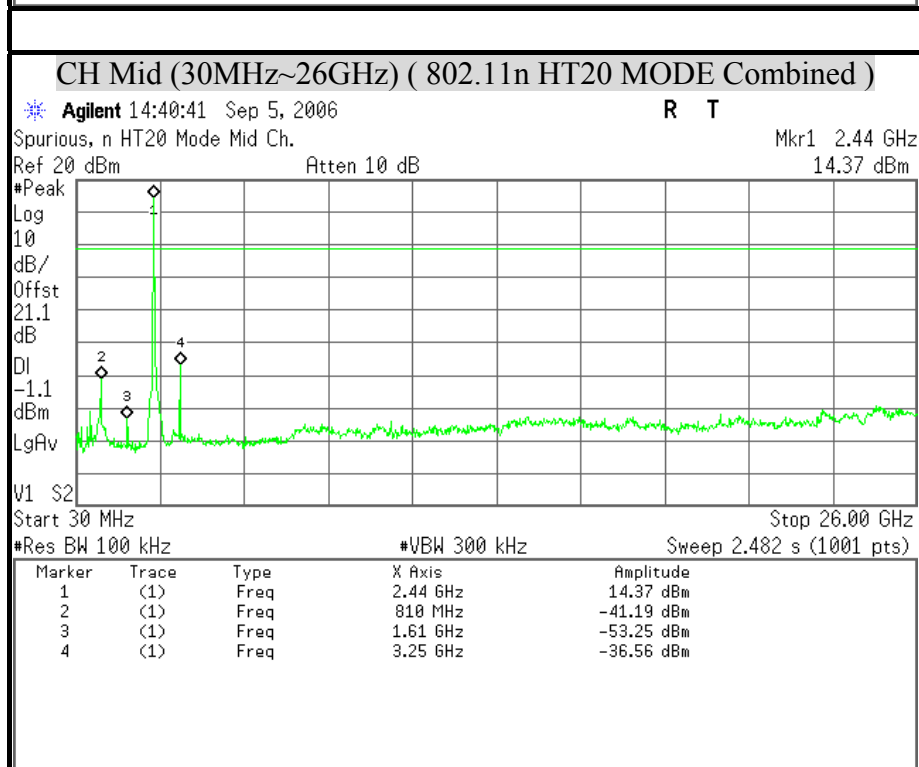
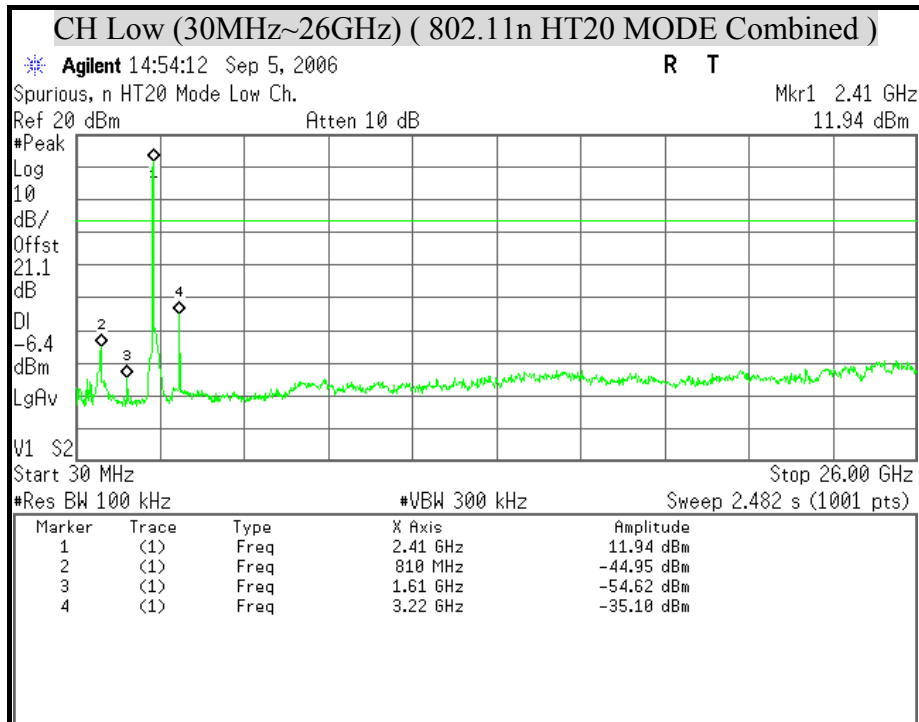


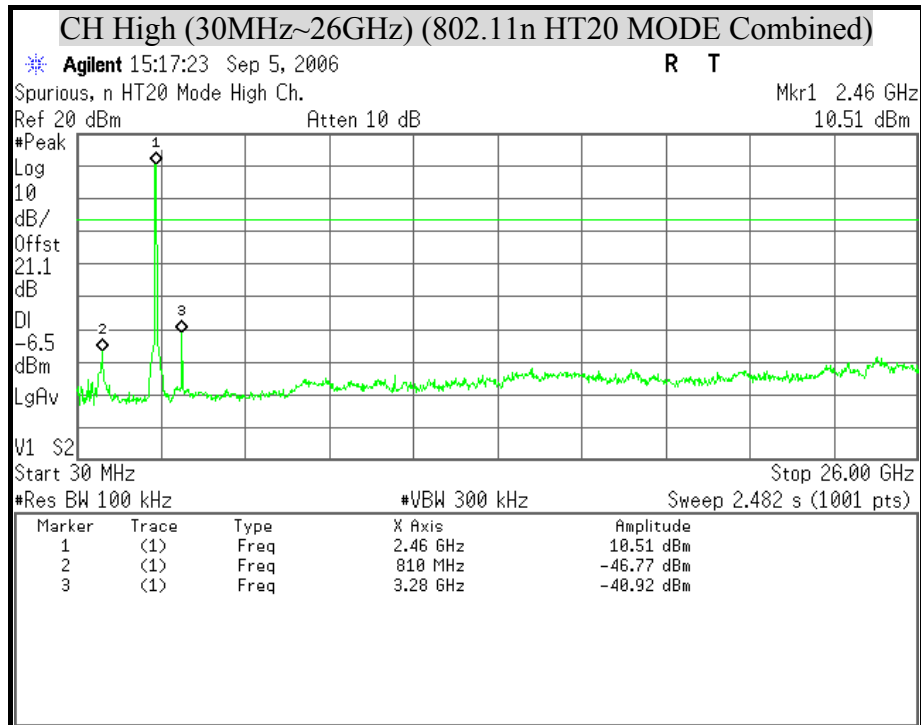




## OUT-OF-BAND COMBINED SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( 802.11n HT20 MODE Combined)

2dBi Antenna

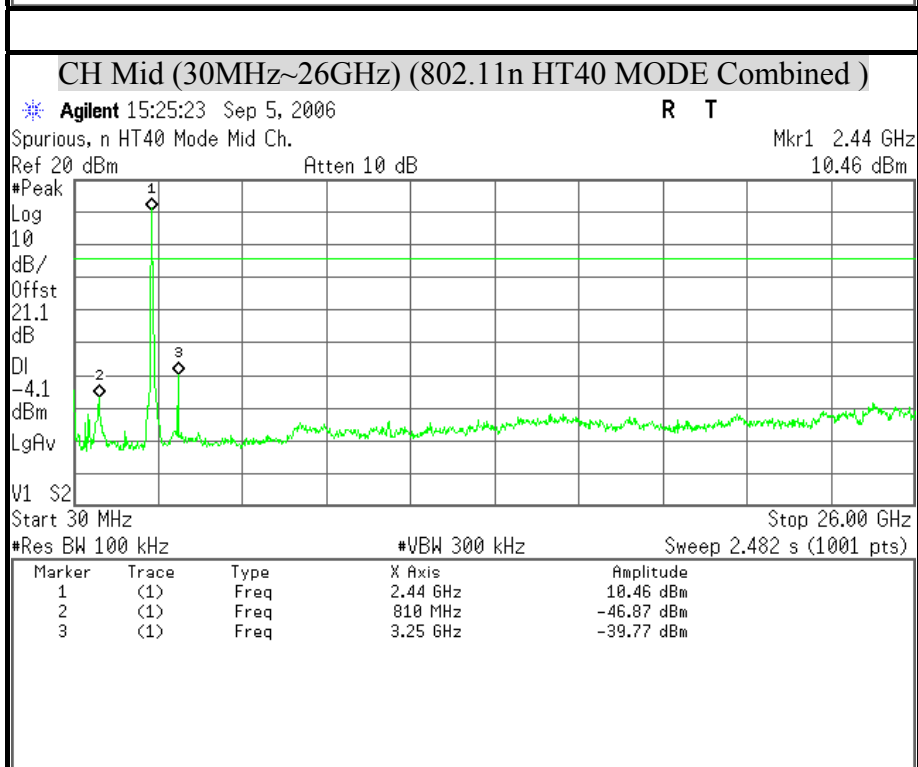
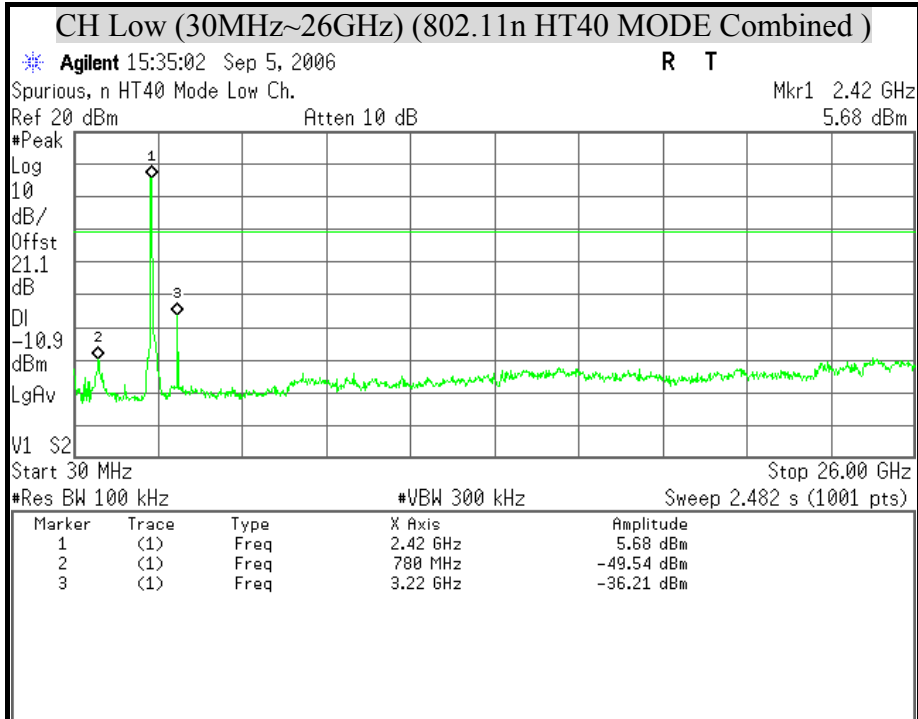


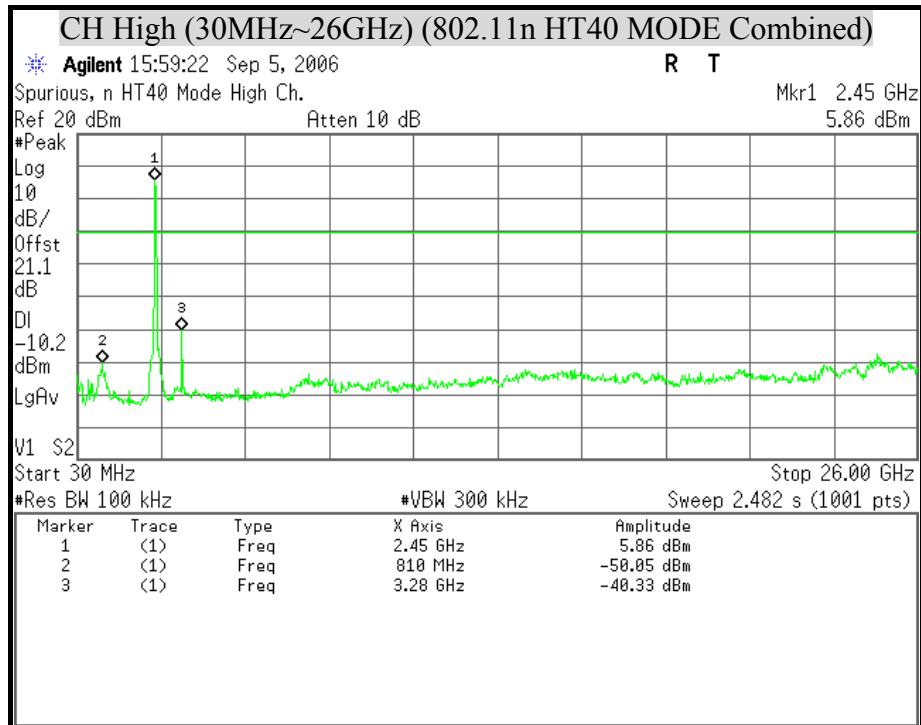




## OUT-OF-BAND COMBINED SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( 802.11n HT40 MODE Combined)

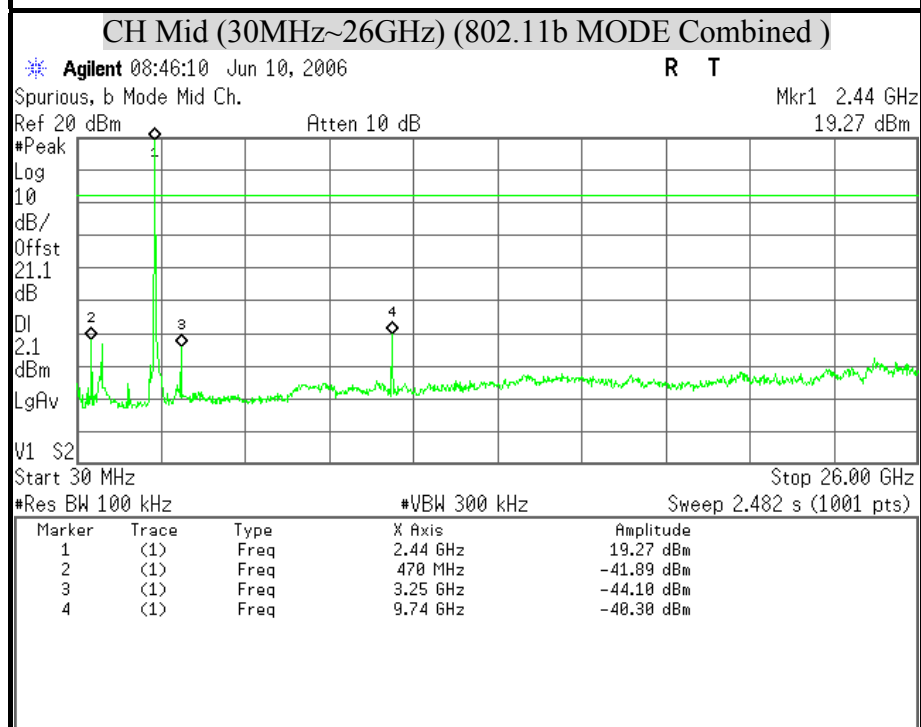
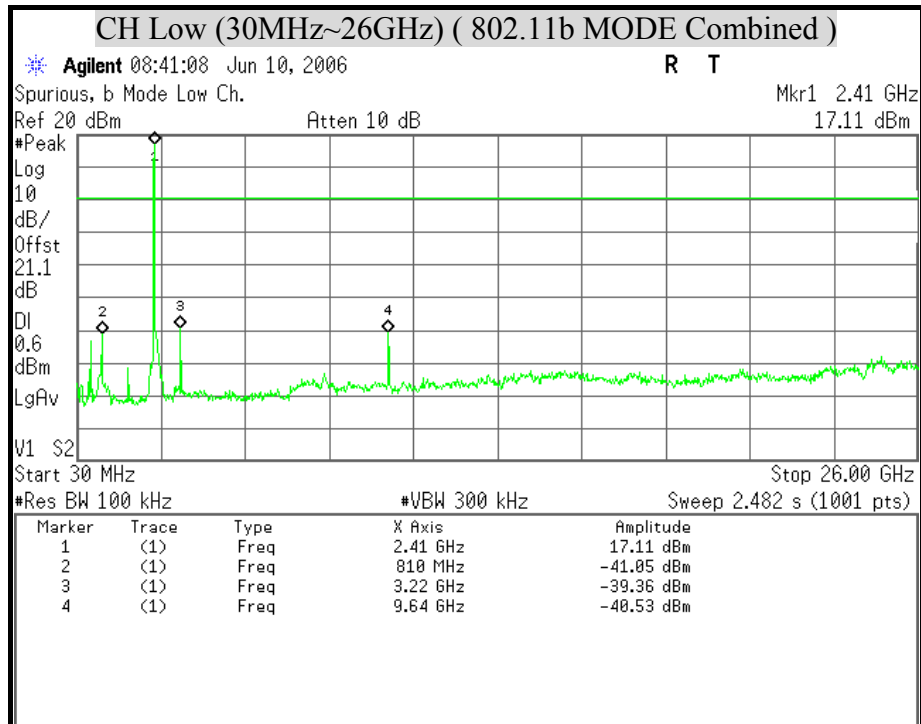
2dBi Antenna

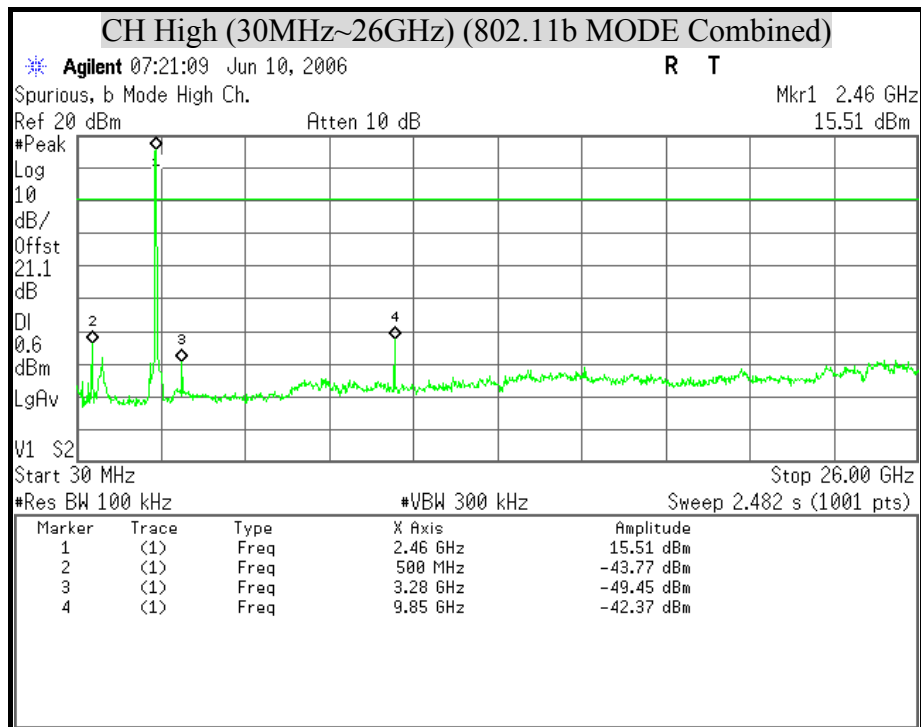




**OUT-OF-BAND COMBINED SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT****( 802.11b MODE Combined)**

3dBi Antenna

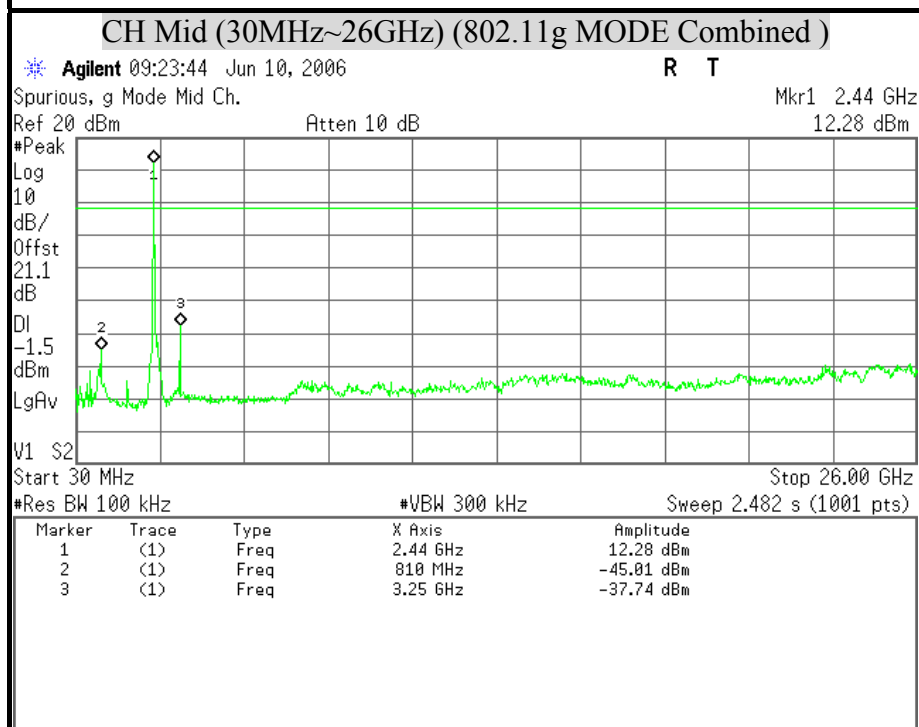
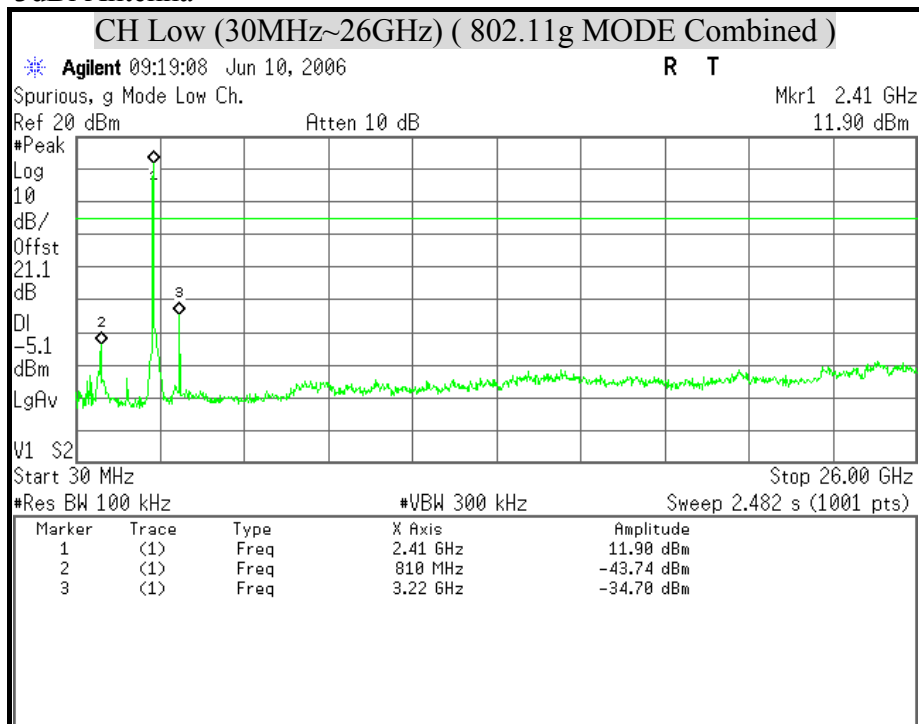


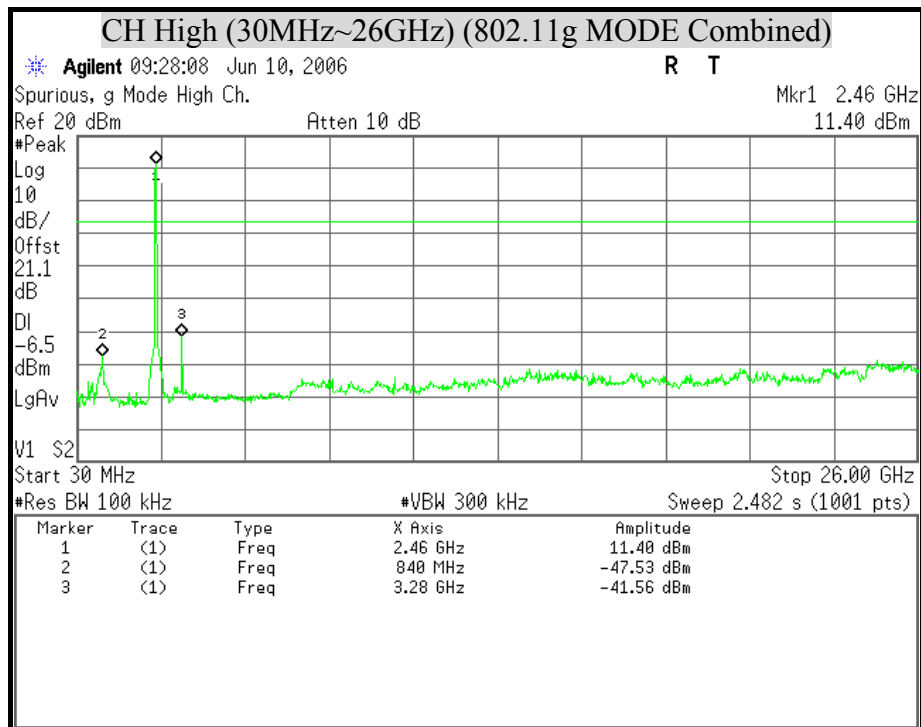




## OUT-OF-BAND COMBINED SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( 802.11g MODE Combined)

3dBi Antenna

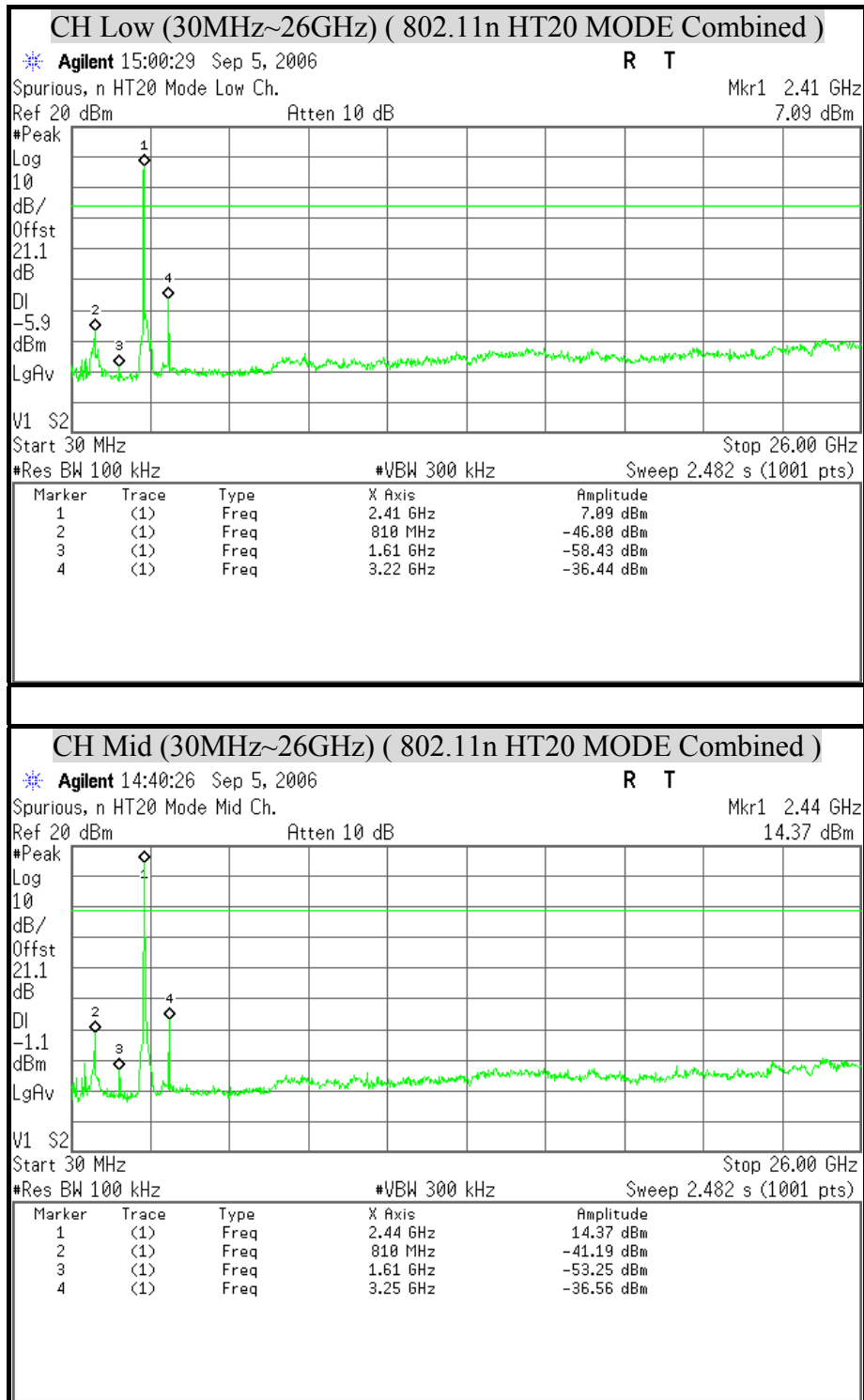


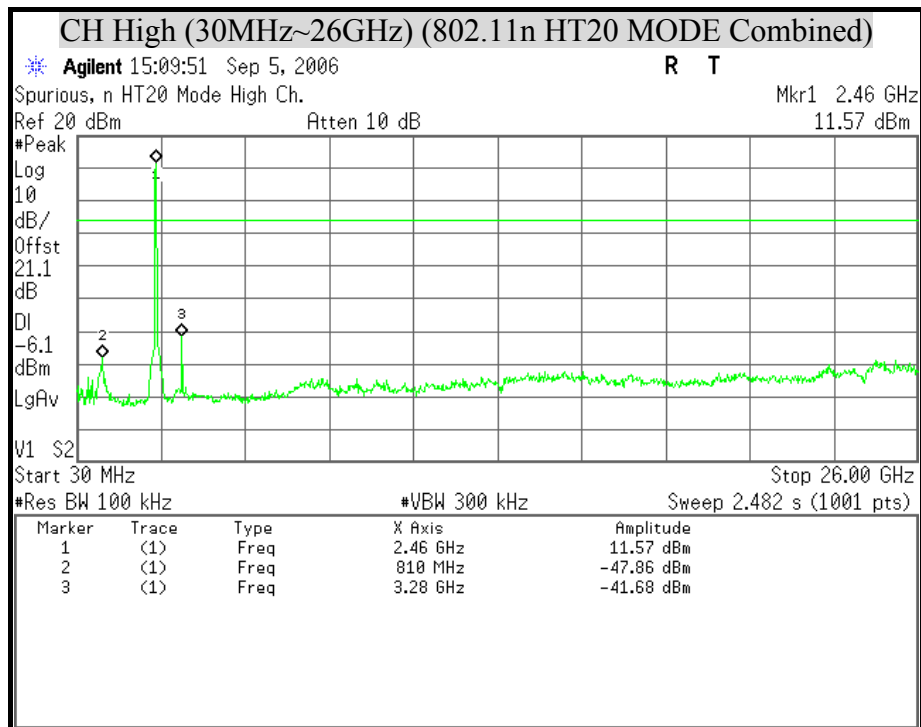




## OUT-OF-BAND COMBINED SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( 802.11n HT20 MODE Combined)

3dBi Antenna

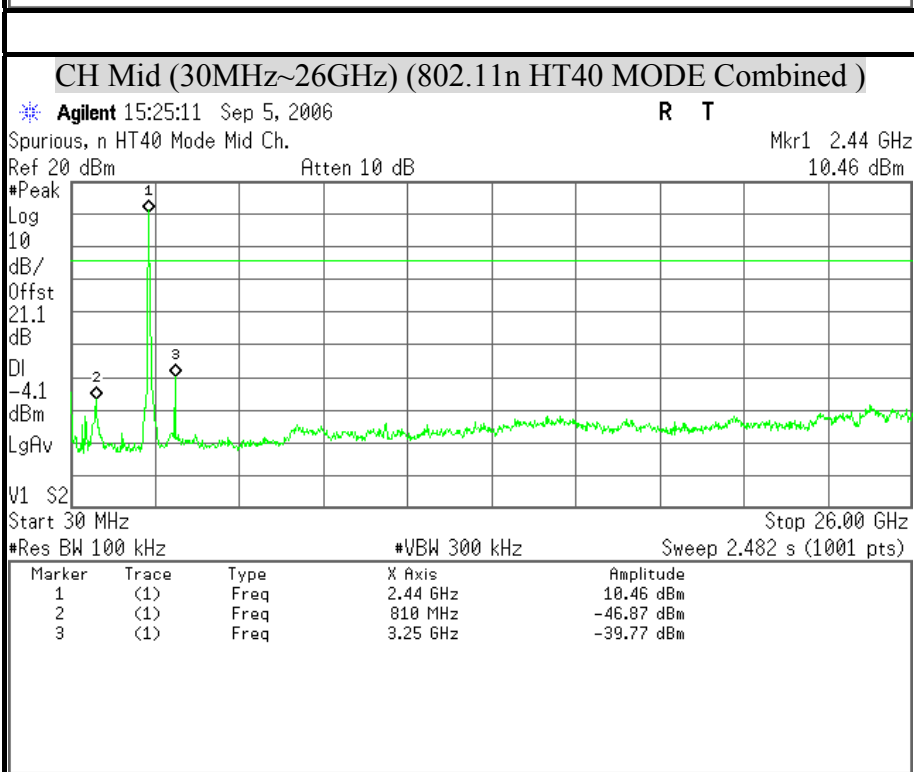
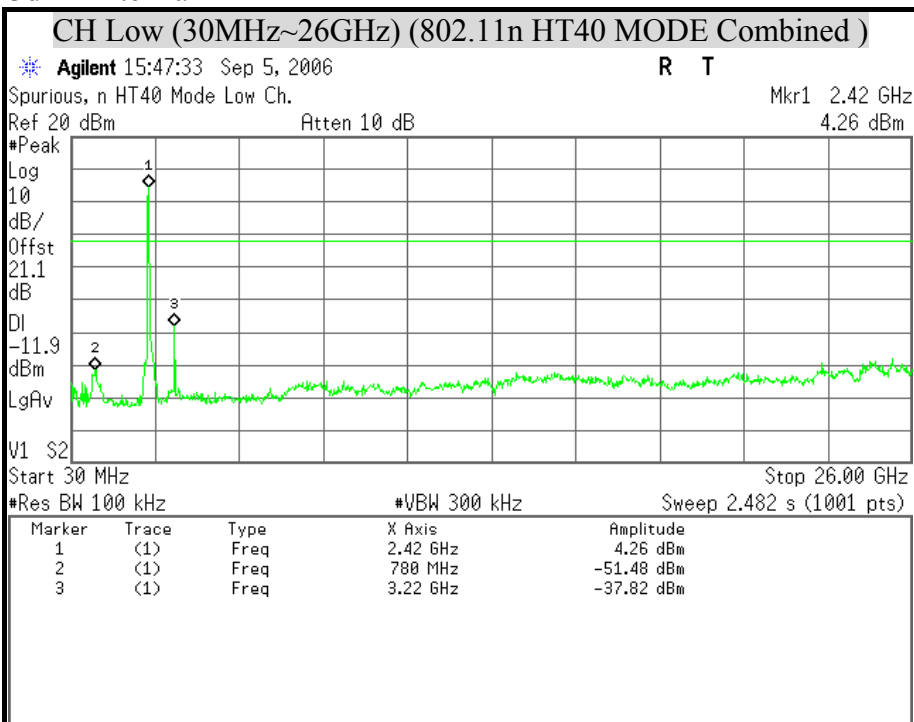


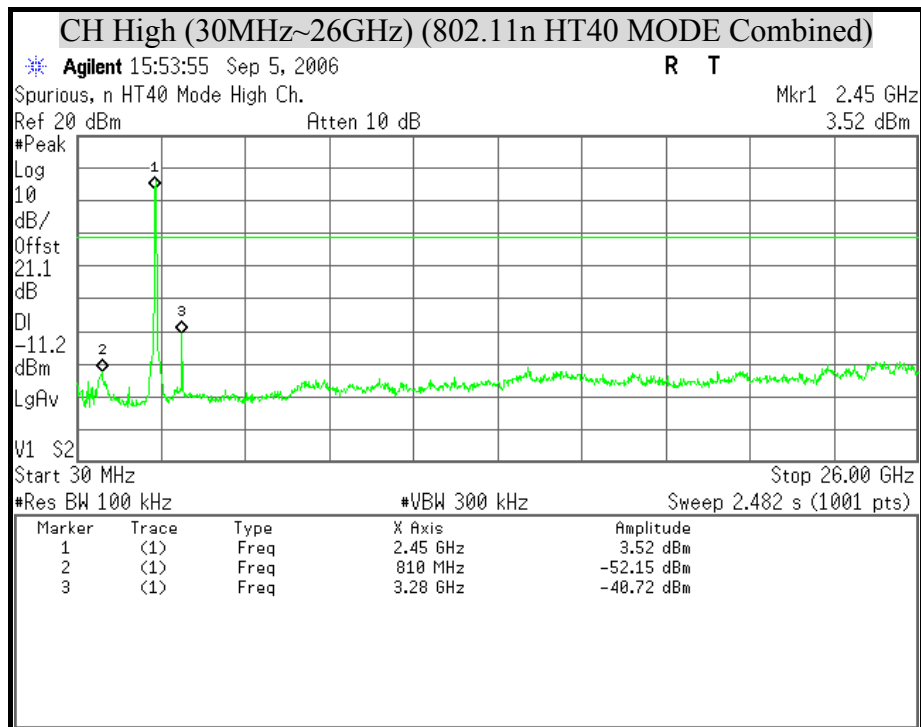




## OUT-OF-BAND COMBINED SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT ( 802.11n HT40 MODE Combined)

3dBi Antenna







## 8.8 RADIATED EMISSIONS

### 8.8.1 TRANSMITTER RADIATED SUPURIOUS EMISSIONS

#### LIMITS

§ 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz                        | MHz                   | MHz             | GHz              |
|----------------------------|-----------------------|-----------------|------------------|
| 0.090 - 0.110              | 16.42 - 16.423        | 399.9 - 410     | 4.5 - 5.15       |
| <sup>1</sup> 0.495 - 0.505 | 16.69475 - 16.69525   | 608 - 614       | 5.35 - 5.46      |
| 2.1735 - 2.1905            | 16.80425 - 16.80475   | 960 - 1240      | 7.25 - 7.75      |
| 4.125 - 4.128              | 25.5 - 25.67          | 1300 - 1427     | 8.025 - 8.5      |
| 4.17725 - 4.17775          | 37.5 - 38.25          | 1435 - 1626.5   | 9.0 - 9.2        |
| 4.20725 - 4.20775          | 73 - 74.6             | 1645.5 - 1646.5 | 9.3 - 9.5        |
| 6.215 - 6.218              | 74.8 - 75.2           | 1660 - 1710     | 10.6 - 12.7      |
| 6.26775 - 6.26825          | 108 - 121.94          | 1718.8 - 1722.2 | 13.25 - 13.4     |
| 6.31175 - 6.31225          | 123 - 138             | 2200 - 2300     | 14.47 - 14.5     |
| 8.291 - 8.294              | 149.9 - 150.05        | 2310 - 2390     | 15.35 - 16.2     |
| 8.362 - 8.366              | 156.52475 - 156.52525 | 2483.5 - 2500   | 17.7 - 21.4      |
| 8.37625 - 8.38675          | 156.7 - 156.9         | 2655 - 2900     | 22.01 - 23.12    |
| 8.41425 - 8.41475          | 162.0125 - 167.17     | 3260 - 3267     | 23.6 - 24.0      |
| 12.29 - 12.293             | 167.72 - 173.2        | 3332 - 3339     | 31.2 - 31.8      |
| 12.51975 - 12.52025        | 240 - 285             | 3345.8 - 3338   | 36.43 - 36.5     |
| 12.57675 - 12.57725        | 322 - 335.4           | 3600 - 4400     | ( <sup>2</sup> ) |
| 13.36 - 13.41              |                       |                 |                  |

<sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup> Above 38.6

§ 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.



§ 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

| Frequency<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|--------------------|--------------------------------------|----------------------------------|
| 30 - 88            | 100 **                               | 3                                |
| 88 - 216           | 150 **                               | 3                                |
| 216 - 960          | 200 **                               | 3                                |
| Above 960          | 500                                  | 3                                |

\*\* Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz, However, operation within these frequency bands is permitted under other sections of this Part, e-g, Sections 15.231 and 15.241.

§ 15.209 (b) In the emission table above, the tighter limit applies at the band edges.

### **TEST EQUIPMENTS**

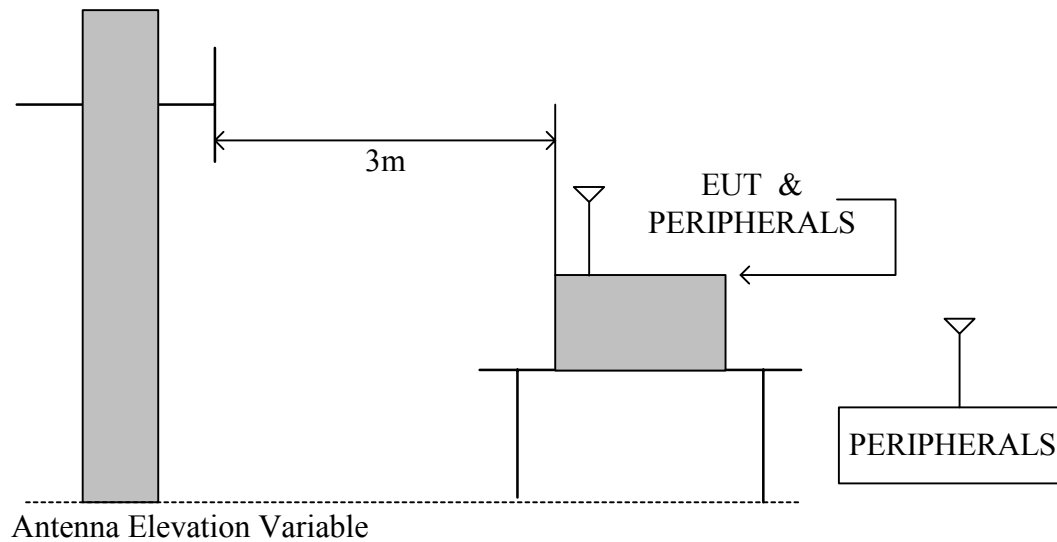
The following test equipments are utilized in making the measurements contained in this report.

| Manufacturer or Type      | Model No.   | Serial No.  | Date of Calibration | Calibration Period | Remark |
|---------------------------|-------------|-------------|---------------------|--------------------|--------|
| CHASE BI-LOG ANTENNA      | CBL6112B    | 2817        | March 22, 2006      | 1 Year             | FINAL  |
| R/S SPECTRUM ANALYZER     | FSEK30      | 835253/002  | September 24, 2005  | 1 Year             | FINAL  |
| AGILENT SPECTRUM ANALYZER | E4446A      | MY433601.32 | March 22 , 2006     | 1 Year             | FINAL  |
| R/S EMI TEST RECEIVER     | ESCS30      | 835418/008  | August 24, 2006     | 1 Year             | FINAL  |
| OPEN SITE                 | -----       | No.2        | May 07, 2006        | 1 Year             | FINAL  |
| N TYPE COAXIAL CABLE      | 9913-30M    | -----       | July 28, 2006       | 1 Year             | FINAL  |
| Horn Antenna              | AH-118      | 10089       | August 10, 2006     | 1 Year             | FINAL  |
| Horn Antenna              | AH-840      | 03077       | February 25, 2006   | 1 Year             | FINAL  |
| Agilent Pre-amplifier     | 8449B       | 3008A01471  | December 07, 2005   | 1 Year             | FINAL  |
| HP Amplifier              | 8447D       | 1937A02748  | December 07, 2005   | 1 Year             | FINAL  |
| HP High pass filter       | 84300/80038 | 002         | CAL. ON USE         | 1 Year             | FINAL  |
| HP High pass filter       | 84300/80039 | 003         | CAL. ON USE         | 1 Year             | FINAL  |

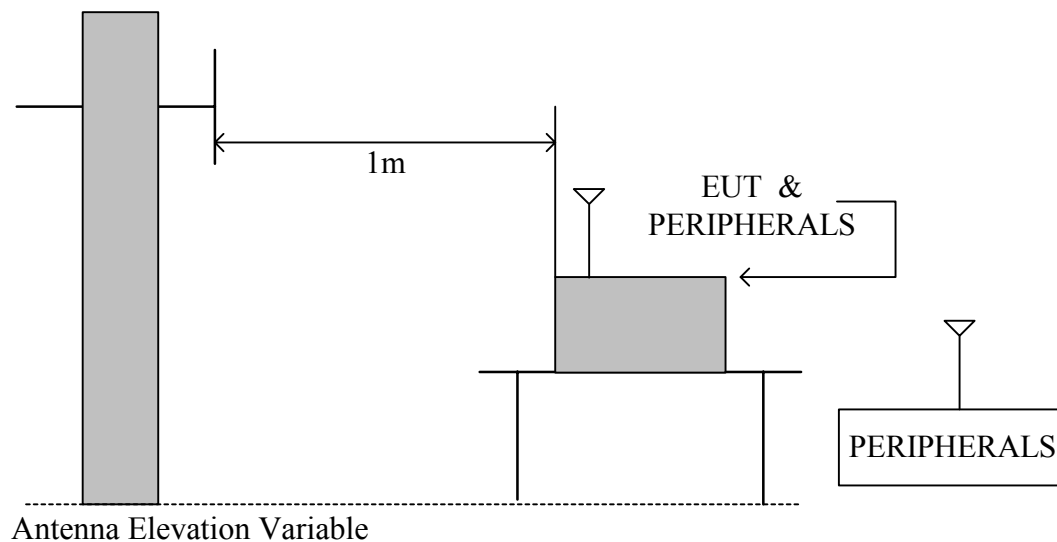


### **TEST SETUP**

The diagram below shows the test setup that is utilized to make the measurements for emission from 30 to 1GHz.



The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.





## **TEST PROCEDURE**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. While measuring the radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. While measuring the radiated emission above 1GHz, the EUT was set 1 meter away from the interference-receiving antenna
- c. The antenna is a broadband antenna, and its 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 polarization of the antenna are set to make the measurement.
- d. 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 table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB 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 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

### **Note:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

## **TEST RESULTS**

No non-compliance noted

**8.8.2 WORST-CASE RADIATED EMISSION BELOW 1 GHz**

|                     |                                               |                          |            |
|---------------------|-----------------------------------------------|--------------------------|------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                  | <b>Test Date</b>         | 2006/08/05 |
| <b>Model</b>        | WMP-N06                                       | <b>Test By</b>           | Alan Fan   |
| <b>Test Mode</b>    | 2dBi Antenna<br>Normal operating (worst case) | <b>TEMP&amp;Humidity</b> | 26.0℃, 66% |

| Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter Reading<br>at 3m(dBμV) |          | Limits<br>(dBμV/m) | Emission Level<br>at 3m(dBμV/m) |          |
|--------------------|-----------------------------|-----------------------|------------------------------|----------|--------------------|---------------------------------|----------|
|                    |                             |                       | Horizontal                   | Vertical |                    | Horizontal                      | Vertical |
| 155.13             | 11.59                       | 1.65                  | 18.20                        | 7.50     | 43.50              | 31.45                           | 20.75    |
| 265.44             | 13.44                       | 2.07                  | 25.70                        | 13.50    | 46.00              | 41.21                           | 29.01    |
| 299.99             | 14.20                       | 2.19                  | 22.60                        | 16.20    | 46.00              | 38.99                           | 32.59    |
| 319.99             | 14.76                       | 2.27                  | 10.20                        | 8.50     | 46.00              | 27.23                           | 25.53    |
| 399.98             | 17.00                       | 2.57                  | 15.30                        | 10.10    | 46.00              | 34.87                           | 29.67    |
| 439.98             | 17.72                       | 2.69                  | 11.50                        | 13.10    | 46.00              | 31.91                           | 33.51    |
| 479.98             | 18.44                       | 2.82                  | 8.80                         | 10.50    | 46.00              | 30.06                           | 31.76    |
| 520.00             | 18.94                       | 2.98                  | 6.10                         | 9.10     | 46.00              | 28.02                           | 31.02    |
| 599.98             | 19.50                       | 3.36                  | 10.20                        | 15.10    | 46.00              | 33.06                           | 37.96    |
| 638.19             | 19.96                       | 3.44                  | 9.30                         | 7.20     | 46.00              | 32.69                           | 30.59    |
| 679.98             | 20.46                       | 3.52                  | 5.10                         | 6.00     | 46.00              | 29.08                           | 29.98    |
| 799.98             | 21.60                       | 3.89                  | 6.50                         | 10.60    | 46.00              | 31.99                           | 36.09    |

**Remark:** Emission level (dBμV/m) =Antenna Factor (dB/m) + Cable loss (dB) + Meter Reading (dBμV).



|                     |                                               |                          |            |
|---------------------|-----------------------------------------------|--------------------------|------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                  | <b>Test Date</b>         | 2006/07/30 |
| <b>Model</b>        | WMP-N06                                       | <b>Test By</b>           | Alan Fan   |
| <b>Test Mode</b>    | 3dBi Antenna<br>Normal operating (worst case) | <b>TEMP&amp;Humidity</b> | 33.0℃, 60% |

| Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter Reading<br>at 3m(dBμV) |          | Limits<br>(dBμV/m) | Emission Level<br>at 3m(dBμV/m) |          |
|--------------------|-----------------------------|-----------------------|------------------------------|----------|--------------------|---------------------------------|----------|
|                    |                             |                       | Horizontal                   | Vertical |                    | Horizontal                      | Vertical |
| 155.13             | 11.59                       | 1.65                  | 18.00                        | 7.30     | 43.50              | 31.25                           | 20.55    |
| 265.44             | 13.44                       | 2.07                  | 25.60                        | 13.60    | 46.00              | 41.11                           | 29.11    |
| 299.99             | 14.20                       | 2.19                  | 22.50                        | 16.00    | 46.00              | 38.89                           | 32.39    |
| 319.99             | 14.76                       | 2.27                  | 10.00                        | 8.60     | 46.00              | 27.03                           | 25.63    |
| 399.98             | 17.00                       | 2.57                  | 15.00                        | 10.00    | 46.00              | 34.57                           | 29.57    |
| 439.98             | 17.72                       | 2.69                  | 11.00                        | 13.00    | 46.00              | 31.41                           | 33.41    |
| 479.98             | 18.44                       | 2.82                  | 8.50                         | 10.70    | 46.00              | 29.76                           | 31.96    |
| 520.00             | 18.94                       | 2.98                  | 6.00                         | 9.30     | 46.00              | 27.92                           | 31.22    |
| 599.98             | 19.50                       | 3.36                  | 10.10                        | 15.00    | 46.00              | 32.96                           | 37.86    |
| 638.19             | 19.96                       | 3.44                  | 9.00                         | 7.30     | 46.00              | 32.39                           | 30.69    |
| 679.98             | 20.46                       | 3.52                  | 5.00                         | 6.10     | 46.00              | 28.98                           | 30.08    |
| 799.98             | 21.60                       | 3.89                  | 6.30                         | 10.50    | 46.00              | 31.79                           | 35.99    |

**Remark:** Emission level (dBμV/m) = Antenna Factor (dB/m) + Cable loss (dB) + Meter Reading (dBμV).



### 8.8.3 TRANSMITTER RADIATED EMISSION ABOVE 1 GHz

|                     |                                          |                          |              |
|---------------------|------------------------------------------|--------------------------|--------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card             | <b>Test Date</b>         | 2006/09/08   |
| <b>Model</b>        | WMP-N06                                  | <b>Test By</b>           | Alan Fan     |
| <b>Test Mode</b>    | 2dBi Antenna<br>IEEE 802.11b TX (CH Low) | <b>TEMP&amp;Humidity</b> | 33.0°C , 60% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                        |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m)      | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4829.16                                        | 50.75             | 34.42        | 6.32          | 35.30           | 9.50         | 0.34           | 47.03                  | 74.00             | -26.97         | P               | 1.08              |
| 4829.16                                        | 36.60             | 34.42        | 6.32          | 35.30           | 9.50         | 0.34           | 32.88                  | 54.00             | -21.12         | A               | 1.08              |
| 12060.43                                       | 48.88             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 56.87                  | 74.00             | -17.13         | P               | 1.04              |
| 12060.43                                       | 34.64             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 42.63                  | 54.00             | -11.37         | A               | 1.04              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                        |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4823.85                                        | 55.52             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 51.79                  | 74.00             | -22.21         | P               | 1.00              |
| 4823.85                                        | 38.58             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 34.85                  | 54.00             | -19.15         | A               | 1.00              |
| 12060.00                                       | 48.71             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 56.70                  | 74.00             | -17.30         | P               | 1.00              |
| 12060.00                                       | 34.85             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 42.84                  | 54.00             | -11.16         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                             |                          |             |
|---------------------|---------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                | <b>Test Date</b>         | 2006/09/08  |
| <b>Model</b>        | WMP-N06                                     | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>IEEE 802.11b TX (CH Middle) | <b>TEMP&amp;Humidity</b> | 33.0°C, 60% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4879.51                                        | 51.31             | 34.59        | 6.32          | 35.30           | 9.50         | 0.29           | 47.71             | 74.00             | -26.29         | P               | 1.00              |
| 4879.51                                        | 36.00             | 34.59        | 6.32          | 35.30           | 9.50         | 0.29           | 32.40             | 54.00             | -21.60         | A               | 1.00              |
| 7309.40                                        | 62.61             | 39.58        | 8.30          | 35.56           | 9.50         | 0.84           | 66.26             | 74.00             | -7.74          | P               | 1.00              |
| 7309.40                                        | 49.26             | 39.58        | 8.30          | 35.56           | 9.50         | 0.84           | 52.91             | 54.00             | -1.09          | A               | 1.00              |
| 12185.00                                       | 48.28             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 56.39             | 74.00             | -17.61         | P               | 1.00              |
| 12185.00                                       | 34.65             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 42.76             | 54.00             | -11.24         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4879.58                                        | 55.66             | 34.59        | 6.32          | 35.30           | 9.50         | 0.29           | 52.06             | 74.00             | -21.94         | P               | 1.22              |
| 4879.58                                        | 41.27             | 34.59        | 6.32          | 35.30           | 9.50         | 0.29           | 37.67             | 54.00             | -16.33         | A               | 1.22              |
| 7309.27                                        | 60.83             | 39.58        | 8.30          | 35.56           | 9.50         | 0.84           | 64.48             | 74.00             | -9.52          | P               | 1.00              |
| 7309.27                                        | 47.61             | 39.58        | 8.30          | 35.56           | 9.50         | 0.84           | 51.26             | 54.00             | -2.74          | A               | 1.00              |
| 12185.79                                       | 48.12             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 56.23             | 74.00             | -17.77         | P               | 1.00              |
| 12185.79                                       | 34.93             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 43.04             | 54.00             | -10.96         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                           |                          |             |
|---------------------|-------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card              | <b>Test Date</b>         | 2006/09/08  |
| <b>Model</b>        | WMP-N06                                   | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>IEEE 802.11b TX (CH High) | <b>TEMP&amp;Humidity</b> | 33.0°C, 60% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4824.03                                        | 52.66             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 48.93             | 74.00             | -25.07         | P               | 1.12              |
| 4824.03                                        | 36.81             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 33.08             | 54.00             | -20.92         | A               | 1.12              |
| 7384.12                                        | 61.06             | 39.75        | 8.33          | 35.58           | 9.50         | 0.77           | 64.82             | 74.00             | -9.18          | P               | 1.10              |
| 7384.12                                        | 46.87             | 39.75        | 8.33          | 35.58           | 9.50         | 0.77           | 50.63             | 54.00             | -3.37          | A               | 1.10              |
| 12311.02                                       | 46.89             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 55.12             | 74.00             | -18.88         | P               | 1.00              |
| 12311.02                                       | 34.74             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 42.97             | 54.00             | -11.03         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4929.58                                        | 58.55             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 55.07             | 74.00             | -18.93         | P               | 1.13              |
| 4929.58                                        | 41.84             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 38.36             | 54.00             | -15.64         | A               | 1.13              |
| 7382.22                                        | 60.31             | 39.74        | 8.33          | 35.58           | 9.50         | 0.77           | 64.07             | 74.00             | -9.93          | P               | 1.10              |
| 7382.22                                        | 47.12             | 39.74        | 8.33          | 35.58           | 9.50         | 0.77           | 50.88             | 54.00             | -3.12          | A               | 1.10              |
| 12311.62                                       | 47.25             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 55.49             | 74.00             | -18.51         | P               | 1.00              |
| 12311.62                                       | 34.52             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 42.76             | 54.00             | -11.24         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                          |                          |             |
|---------------------|------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card             | <b>Test Date</b>         | 2006/09/08  |
| <b>Model</b>        | WMP-N06                                  | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>IEEE 802.11g TX (CH Low) | <b>TEMP&amp;Humidity</b> | 33.0°C, 60% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4824.73                                        | 49.89             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 46.16             | 74.00             | -27.84         | P               | 1.08              |
| 4824.73                                        | 35.12             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 31.39             | 54.00             | -22.61         | A               | 1.08              |
| 12060.00                                       | 46.12             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 54.11             | 74.00             | -19.89         | P               | 1.00              |
| 12060.00                                       | 33.25             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 41.24             | 54.00             | -12.76         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4830.22                                        | 53.91             | 34.42        | 6.32          | 35.30           | 9.50         | 0.34           | 50.19             | 74.00             | -23.81         | P               | 1.14              |
| 4830.22                                        | 39.38             | 34.42        | 6.32          | 35.30           | 9.50         | 0.34           | 35.66             | 54.00             | -18.34         | A               | 1.14              |
| 12060.00                                       | 47.00             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 54.99             | 74.00             | -19.01         | P               | 1.00              |
| 12060.00                                       | 34.50             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 42.49             | 54.00             | -11.51         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level-Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                             |                          |             |
|---------------------|---------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                | <b>Test Date</b>         | 2006/09/08  |
| <b>Model</b>        | WMP-N06                                     | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>IEEE 802.11g TX (CH Middle) | <b>TEMP&amp;Humidity</b> | 33.0°C, 60% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4880.05                                        | 50.00             | 34.59        | 6.32          | 35.30           | 9.50         | 0.29           | 46.40                   | 74.00             | -27.60         | P               | 1.18              |
| 4880.05                                        | 35.95             | 34.59        | 6.32          | 35.30           | 9.50         | 0.29           | 32.35                   | 54.00             | -21.65         | A               | 1.18              |
| 7305.15                                        | 62.44             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 66.09                   | 74.00             | -7.91          | P               | 1.09              |
| 7305.15                                        | 47.45             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 51.10                   | 54.00             | -2.90          | A               | 1.09              |
| 12185.00                                       | 45.41             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 53.52                   | 74.00             | -20.48         | P               | 1.00              |
| 12185.00                                       | 33.05             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 41.16                   | 54.00             | -12.84         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4874.76                                        | 53.18             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 49.57                   | 74.00             | -24.43         | P               | 1.00              |
| 4874.76                                        | 39.13             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 35.52                   | 54.00             | -18.48         | A               | 1.00              |
| 7311.35                                        | 62.07             | 39.58        | 8.30          | 35.56           | 9.50         | 0.83           | 65.72                   | 74.00             | -8.28          | P               | 1.00              |
| 7311.35                                        | 45.98             | 39.58        | 8.30          | 35.56           | 9.50         | 0.83           | 49.63                   | 54.00             | -4.37          | A               | 1.00              |
| 12185.00                                       | 46.02             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.13                   | 74.00             | -19.87         | P               | 1.00              |
| 12185.00                                       | 34.10             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 42.21                   | 54.00             | -11.79         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                           |                          |             |
|---------------------|-------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card              | <b>Test Date</b>         | 2006/09/08  |
| <b>Model</b>        | WMP-N06                                   | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>IEEE 802.11g TX (CH High) | <b>TEMP&amp;Humidity</b> | 33.0°C, 60% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4924.53                                        | 50.59             | 34.74        | 6.32          | 35.30           | 9.50         | 0.25           | 47.10             | 74.00             | -26.90         | P               | 1.11              |
| 4924.53                                        | 35.37             | 34.74        | 6.32          | 35.30           | 9.50         | 0.25           | 31.88             | 54.00             | -22.12         | A               | 1.11              |
| 7385.90                                        | 62.41             | 39.75        | 8.33          | 35.58           | 9.50         | 0.76           | 66.17             | 74.00             | -7.83          | P               | 1.08              |
| 7385.90                                        | 44.48             | 39.75        | 8.33          | 35.58           | 9.50         | 0.76           | 48.24             | 54.00             | -5.76          | A               | 1.08              |
| 12310.00                                       | 47.20             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 55.43             | 74.00             | -18.57         | P               | 1.00              |
| 12310.00                                       | 34.30             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 42.53             | 54.00             | -11.47         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4919.03                                        | 56.73             | 34.72        | 6.32          | 35.30           | 9.50         | 0.25           | 53.23             | 74.00             | -20.77         | P               | 1.10              |
| 4919.03                                        | 41.04             | 34.72        | 6.32          | 35.30           | 9.50         | 0.25           | 37.54             | 54.00             | -16.46         | A               | 1.10              |
| 7385.47                                        | 60.91             | 39.75        | 8.33          | 35.58           | 9.50         | 0.77           | 64.67             | 74.00             | -9.33          | P               | 1.07              |
| 7385.47                                        | 44.96             | 39.75        | 8.33          | 35.58           | 9.50         | 0.77           | 48.72             | 54.00             | -5.28          | A               | 1.07              |
| 12310.00                                       | 47.60             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 55.83             | 74.00             | -18.17         | P               | 1.00              |
| 12310.00                                       | 34.20             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 42.43             | 54.00             | -11.57         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                          |                          |             |
|---------------------|------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card             | <b>Test Date</b>         | 2006/07/18  |
| <b>Model</b>        | WMP-N06                                  | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>802.11n HT20 TX (CH Low) | <b>TEMP&amp;Humidity</b> | 28.0°C, 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2769.01                                        | 53.05             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 44.21             | 74.00             | -29.79         | P               | 1.12              |
| 2769.01                                        | 41.06             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 32.22             | 54.00             | -21.78         | A               | 1.12              |
| 4824.46                                        | 48.41             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 44.68             | 74.00             | -29.32         | P               | 1.12              |
| 4824.46                                        | 35.62             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 31.89             | 54.00             | -22.11         | A               | 1.12              |
| 12063.25                                       | 46.25             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 54.24             | 74.00             | -19.76         | P               | 1.01              |
| 12063.25                                       | 32.87             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 40.86             | 54.00             | -13.14         | A               | 1.01              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2765.13                                        | 62.43             | 30.41        | 5.25          | 35.01           | 9.50         | 0.00           | 53.59             | 74.00             | -20.41         | P               | 1.01              |
| 2765.13                                        | 50.02             | 30.41        | 5.25          | 35.01           | 9.50         | 0.00           | 41.18             | 54.00             | -12.82         | A               | 1.01              |
| 4826.99                                        | 53.67             | 34.41        | 6.32          | 35.30           | 9.50         | 0.34           | 49.94             | 74.00             | -24.06         | P               | 1.07              |
| 4826.99                                        | 40.44             | 34.41        | 6.32          | 35.30           | 9.50         | 0.34           | 36.71             | 54.00             | -17.29         | A               | 1.07              |
| 12060.00                                       | 45.28             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 53.27             | 74.00             | -20.73         | P               | 1.00              |
| 12060.00                                       | 32.46             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 40.45             | 54.00             | -13.55         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                             |                          |             |
|---------------------|---------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                | <b>Test Date</b>         | 2006/07/20  |
| <b>Model</b>        | WMP-N06                                     | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>802.11n HT20 TX (CH Middle) | <b>TEMP&amp;Humidity</b> | 33.0°C, 48% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2755.32                                        | 50.11             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 41.25                   | 74.00             | -32.75         | P               | 1.18              |
| 2755.32                                        | 34.61             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 25.75                   | 54.00             | -28.25         | A               | 1.18              |
| 4866.88                                        | 48.11             | 34.55        | 6.32          | 35.30           | 9.50         | 0.30           | 44.48                   | 74.00             | -29.52         | P               | 1.18              |
| 4866.88                                        | 34.13             | 34.55        | 6.32          | 35.30           | 9.50         | 0.30           | 30.50                   | 54.00             | -23.50         | A               | 1.18              |
| 7304.60                                        | 55.23             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 58.87                   | 74.00             | -15.13         | P               | 1.09              |
| 7304.60                                        | 41.75             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 45.39                   | 54.00             | -8.61          | A               | 1.09              |
| 12185.00                                       | 45.67             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 53.78                   | 74.00             | -20.22         | P               | 1.00              |
| 12185.00                                       | 32.47             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 40.58                   | 54.00             | -13.42         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2755.45                                        | 60.93             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 52.07                   | 74.00             | -21.93         | P               | 1.00              |
| 2755.45                                        | 47.09             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 38.23                   | 54.00             | -15.77         | A               | 1.00              |
| 4874.76                                        | 55.63             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 52.02                   | 74.00             | -21.98         | P               | 1.00              |
| 4874.76                                        | 40.17             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 36.56                   | 54.00             | -17.44         | A               | 1.00              |
| 7301.77                                        | 59.70             | 39.56        | 8.29          | 35.56           | 9.50         | 0.84           | 63.34                   | 74.00             | -10.66         | P               | 1.00              |
| 7301.77                                        | 40.98             | 39.56        | 8.29          | 35.56           | 9.50         | 0.84           | 44.62                   | 54.00             | -9.38          | A               | 1.00              |
| 12185.00                                       | 46.10             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.21                   | 74.00             | -19.79         | P               | 1.00              |
| 12185.00                                       | 32.58             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 40.69                   | 54.00             | -13.31         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                           |                          |             |
|---------------------|-------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card              | <b>Test Date</b>         | 2006/07/18  |
| <b>Model</b>        | WMP-N06                                   | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>802.11n HT20 TX (CH High) | <b>TEMP&amp;Humidity</b> | 28.0°C, 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2776.90                                        | 52.89             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 44.07             | 74.00             | -29.93         | P               | 1.00              |
| 2776.90                                        | 41.06             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 32.24             | 54.00             | -21.76         | A               | 1.00              |
| 4927.72                                        | 46.81             | 34.75        | 6.32          | 35.30           | 9.50         | 0.24           | 43.33             | 74.00             | -30.67         | P               | 1.00              |
| 4927.72                                        | 35.69             | 34.75        | 6.32          | 35.30           | 9.50         | 0.24           | 32.21             | 54.00             | -21.79         | A               | 1.00              |
| 7400.86                                        | 53.50             | 39.78        | 8.33          | 35.58           | 9.50         | 0.75           | 57.29             | 74.00             | -16.71         | P               | 1.08              |
| 7400.86                                        | 40.79             | 39.78        | 8.33          | 35.58           | 9.50         | 0.75           | 44.58             | 54.00             | -9.42          | A               | 1.08              |
| 12310.25                                       | 44.58             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 52.81             | 74.00             | -21.19         | P               | 1.04              |
| 12310.25                                       | 32.96             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 41.19             | 54.00             | -12.81         | A               | 1.04              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2776.90                                        | 62.15             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 53.33             | 74.00             | -20.67         | P               | 1.26              |
| 2776.90                                        | 49.74             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 40.92             | 54.00             | -13.08         | A               | 1.26              |
| 4923.57                                        | 57.00             | 34.74        | 6.32          | 35.30           | 9.50         | 0.25           | 53.51             | 74.00             | -20.49         | P               | 1.26              |
| 4923.57                                        | 42.36             | 34.74        | 6.32          | 35.30           | 9.50         | 0.25           | 38.87             | 54.00             | -15.13         | A               | 1.26              |
| 7390.37                                        | 58.88             | 39.76        | 8.33          | 35.58           | 9.50         | 0.76           | 62.65             | 74.00             | -11.35         | P               | 1.11              |
| 7390.37                                        | 40.05             | 39.76        | 8.33          | 35.58           | 9.50         | 0.76           | 43.82             | 54.00             | -10.18         | A               | 1.11              |
| 12310.02                                       | 46.89             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 55.12             | 74.00             | -18.88         | P               | 1.00              |
| 12310.02                                       | 33.47             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 41.70             | 54.00             | -12.30         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                          |                          |             |
|---------------------|------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card             | <b>Test Date</b>         | 2006/07/18  |
| <b>Model</b>        | WMP-N06                                  | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>802.11n HT40 TX (CH Low) | <b>TEMP&amp;Humidity</b> | 28.0°C, 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2755.18                                        | 51.22             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 42.36             | 74.00             | -31.64         | P               | 1.07              |
| 2755.18                                        | 40.25             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 31.39             | 54.00             | -22.61         | A               | 1.07              |
| 4844.00                                        | 47.68             | 34.47        | 6.32          | 35.30           | 9.50         | 0.33           | 44.00             | 74.00             | -30.00         | P               | 1.07              |
| 4844.00                                        | 35.19             | 34.47        | 6.32          | 35.30           | 9.50         | 0.33           | 31.51             | 54.00             | -22.49         | A               | 1.07              |
| 7256.50                                        | 57.00             | 39.46        | 8.28          | 35.55           | 9.50         | 0.88           | 60.57             | 74.00             | -13.43         | P               | 1.07              |
| 7256.50                                        | 41.87             | 39.46        | 8.28          | 35.55           | 9.50         | 0.88           | 45.44             | 54.00             | -8.56          | A               | 1.07              |
| 12110.00                                       | 45.39             | 41.81        | 10.55         | 35.23           | 9.50         | 0.41           | 53.43             | 74.00             | -20.57         | P               | 1.01              |
| 12110.00                                       | 32.40             | 41.81        | 10.55         | 35.23           | 9.50         | 0.41           | 40.44             | 54.00             | -13.56         | A               | 1.01              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2755.18                                        | 61.85             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 52.99             | 74.00             | -21.01         | P               | 1.16              |
| 2755.18                                        | 49.50             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 40.64             | 54.00             | -13.36         | A               | 1.16              |
| 4836.95                                        | 54.25             | 34.45        | 6.32          | 35.30           | 9.50         | 0.33           | 50.55             | 74.00             | -23.45         | P               | 1.16              |
| 4836.95                                        | 39.00             | 34.45        | 6.32          | 35.30           | 9.50         | 0.33           | 35.30             | 54.00             | -18.70         | A               | 1.16              |
| 7268.72                                        | 58.04             | 39.49        | 8.28          | 35.55           | 9.50         | 0.87           | 61.63             | 74.00             | -12.37         | P               | 1.14              |
| 7268.72                                        | 42.79             | 39.49        | 8.28          | 35.55           | 9.50         | 0.87           | 46.38             | 54.00             | -7.62          | A               | 1.14              |
| 12110.00                                       | 45.69             | 41.81        | 10.55         | 35.23           | 9.50         | 0.41           | 53.73             | 74.00             | -20.27         | P               | 1.00              |
| 12110.00                                       | 32.47             | 41.81        | 10.55         | 35.23           | 9.50         | 0.41           | 40.51             | 54.00             | -13.49         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                             |                          |             |
|---------------------|---------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                | <b>Test Date</b>         | 2006/07/20  |
| <b>Model</b>        | WMP-N06                                     | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>802.11n HT40 TX (CH Middle) | <b>TEMP&amp;Humidity</b> | 33.0°C, 48% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2753.69                                        | 47.52             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 38.66                   | 74.00             | -35.34         | P               | 1.18              |
| 2753.69                                        | 35.92             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 27.06                   | 54.00             | -26.94         | A               | 1.18              |
| 4887.54                                        | 49.12             | 34.62        | 6.32          | 35.30           | 9.50         | 0.28           | 45.54                   | 74.00             | -28.46         | P               | 1.18              |
| 4887.54                                        | 34.85             | 34.62        | 6.32          | 35.30           | 9.50         | 0.28           | 31.27                   | 54.00             | -22.73         | A               | 1.18              |
| 7301.19                                        | 59.07             | 39.56        | 8.29          | 35.56           | 9.50         | 0.84           | 62.71                   | 74.00             | -11.29         | P               | 1.09              |
| 7301.19                                        | 43.15             | 39.56        | 8.29          | 35.56           | 9.50         | 0.84           | 46.79                   | 54.00             | -7.21          | A               | 1.09              |
| 12185.00                                       | 46.41             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.52                   | 74.00             | -19.48         | P               | 1.00              |
| 12185.00                                       | 32.20             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 40.31                   | 54.00             | -13.69         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2774.83                                        | 62.52             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 53.69                   | 74.00             | -20.31         | P               | 1.00              |
| 2774.83                                        | 47.95             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 39.12                   | 54.00             | -14.88         | A               | 1.00              |
| 4865.78                                        | 54.26             | 34.54        | 6.32          | 35.30           | 9.50         | 0.30           | 50.63                   | 74.00             | -23.37         | P               | 1.00              |
| 4865.78                                        | 40.72             | 34.54        | 6.32          | 35.30           | 9.50         | 0.30           | 37.09                   | 54.00             | -16.91         | A               | 1.00              |
| 7323.81                                        | 58.78             | 39.61        | 8.30          | 35.56           | 9.50         | 0.82           | 62.45                   | 74.00             | -11.55         | P               | 1.00              |
| 7323.81                                        | 44.34             | 39.61        | 8.30          | 35.56           | 9.50         | 0.82           | 48.01                   | 54.00             | -5.99          | A               | 1.00              |
| 12185.00                                       | 46.12             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.23                   | 74.00             | -19.77         | P               | 1.00              |
| 12185.00                                       | 32.88             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 40.99                   | 54.00             | -13.01         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                           |                          |             |
|---------------------|-------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card              | <b>Test Date</b>         | 2006/07/17  |
| <b>Model</b>        | WMP-N06                                   | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 2dBi Antenna<br>802.11n HT40 TX (CH High) | <b>TEMP&amp;Humidity</b> | 28.0°C, 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2789.48                                        | 50.12             | 30.43        | 5.28          | 35.02           | 9.50         | 0.00           | 41.31             | 74.00             | -32.69         | P               | 1.06              |
| 2789.48                                        | 39.89             | 30.43        | 5.28          | 35.02           | 9.50         | 0.00           | 31.08             | 54.00             | -22.92         | A               | 1.06              |
| 4899.24                                        | 50.68             | 34.66        | 6.32          | 35.30           | 9.50         | 0.27           | 47.13             | 74.00             | -26.87         | P               | 1.06              |
| 4899.24                                        | 38.09             | 34.66        | 6.32          | 35.30           | 9.50         | 0.27           | 34.54             | 54.00             | -19.46         | A               | 1.06              |
| 7360.62                                        | 57.29             | 39.69        | 8.32          | 35.57           | 9.50         | 0.79           | 61.02             | 74.00             | -12.98         | P               | 1.07              |
| 7360.62                                        | 42.41             | 39.69        | 8.32          | 35.57           | 9.50         | 0.79           | 46.14             | 54.00             | -7.86          | A               | 1.07              |
| 12260.15                                       | 46.38             | 41.96        | 10.50         | 35.14           | 9.50         | 0.37           | 54.56             | 74.00             | -19.44         | P               | 1.04              |
| 12260.15                                       | 32.67             | 41.96        | 10.50         | 35.14           | 9.50         | 0.37           | 40.85             | 54.00             | -13.15         | A               | 1.04              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2789.48                                        | 62.59             | 30.43        | 5.28          | 35.02           | 9.50         | 0.00           | 53.78             | 74.00             | -20.22         | P               | 1.04              |
| 2789.48                                        | 48.61             | 30.43        | 5.28          | 35.02           | 9.50         | 0.00           | 39.80             | 54.00             | -14.20         | A               | 1.04              |
| 4901.39                                        | 56.93             | 34.66        | 6.32          | 35.30           | 9.50         | 0.27           | 53.38             | 74.00             | -20.62         | P               | 1.04              |
| 4901.39                                        | 42.75             | 34.66        | 6.32          | 35.30           | 9.50         | 0.27           | 39.20             | 54.00             | -14.80         | A               | 1.04              |
| 7353.08                                        | 58.78             | 39.68        | 8.31          | 35.57           | 9.50         | 0.80           | 62.50             | 74.00             | -11.50         | P               | 1.29              |
| 7353.08                                        | 42.30             | 39.68        | 8.31          | 35.57           | 9.50         | 0.80           | 46.02             | 54.00             | -7.98          | A               | 1.29              |
| 12260.00                                       | 45.85             | 41.96        | 10.50         | 35.14           | 9.50         | 0.37           | 54.03             | 74.00             | -19.97         | P               | 1.07              |
| 12260.00                                       | 33.47             | 41.96        | 10.50         | 35.14           | 9.50         | 0.37           | 41.65             | 54.00             | -12.35         | A               | 1.07              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                          |                          |             |
|---------------------|------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card             | <b>Test Date</b>         | 2006/09/07  |
| <b>Model</b>        | WMP-N06                                  | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>IEEE 802.11b TX (CH Low) | <b>TEMP&amp;Humidity</b> | 27.0°C, 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                        |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m)      | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4823.99                                        | 57.13             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 53.40                  | 74.00             | -20.60         | P               | 1.08              |
| 4823.99                                        | 38.68             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 34.95                  | 54.00             | -19.05         | A               | 1.08              |
| 12060.43                                       | 49.49             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 57.48                  | 74.00             | -16.52         | P               | 1.04              |
| 12060.43                                       | 35.67             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 43.66                  | 54.00             | -10.34         | A               | 1.04              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                        |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4823.96                                        | 59.57             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 55.84                  | 74.00             | -18.16         | P               | 1.00              |
| 4823.96                                        | 43.20             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 39.47                  | 54.00             | -14.53         | A               | 1.00              |
| 12060.00                                       | 49.84             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 57.83                  | 74.00             | -16.17         | P               | 1.00              |
| 12060.00                                       | 37.95             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 45.94                  | 54.00             | -8.06          | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                             |                          |             |
|---------------------|---------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                | <b>Test Date</b>         | 2006/09/07  |
| <b>Model</b>        | WMP-N06                                     | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>IEEE 802.11b TX (CH Middle) | <b>TEMP&amp;Humidity</b> | 27.0°C, 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4873.77                                        | 51.89             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 48.28             | 74.00             | -25.72         | P               | 1.00              |
| 4873.77                                        | 35.60             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 31.99             | 54.00             | -22.01         | A               | 1.00              |
| 7307.41                                        | 60.86             | 39.58        | 8.30          | 35.56           | 9.50         | 0.84           | 64.51             | 74.00             | -9.49          | P               | 1.00              |
| 7307.41                                        | 46.78             | 39.58        | 8.30          | 35.56           | 9.50         | 0.84           | 50.43             | 54.00             | -3.57          | A               | 1.00              |
| 12185.00                                       | 49.05             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 57.16             | 74.00             | -16.84         | P               | 1.00              |
| 12185.00                                       | 36.49             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 44.60             | 54.00             | -9.40          | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4874.00                                        | 57.09             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 53.48             | 74.00             | -20.52         | P               | 1.22              |
| 4874.00                                        | 40.96             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 37.35             | 54.00             | -16.65         | A               | 1.22              |
| 7303.08                                        | 60.70             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 64.34             | 74.00             | -9.66          | P               | 1.00              |
| 7303.08                                        | 46.37             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 50.01             | 54.00             | -3.99          | A               | 1.00              |
| 12185.00                                       | 50.17             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 58.28             | 74.00             | -15.72         | P               | 1.00              |
| 12185.00                                       | 37.44             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 45.55             | 54.00             | -8.45          | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                           |                          |             |
|---------------------|-------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card              | <b>Test Date</b>         | 2006/09/07  |
| <b>Model</b>        | WMP-N06                                   | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>IEEE 802.11b TX (CH High) | <b>TEMP&amp;Humidity</b> | 27.0°C, 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4929.58                                        | 55.35             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 51.87             | 74.00             | -22.13         | P               | 1.12              |
| 4929.58                                        | 38.86             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 35.38             | 54.00             | -18.62         | A               | 1.12              |
| 7394.06                                        | 60.93             | 39.77        | 8.33          | 35.58           | 9.50         | 0.76           | 64.71             | 74.00             | -9.29          | P               | 1.10              |
| 7394.06                                        | 47.69             | 39.77        | 8.33          | 35.58           | 9.50         | 0.76           | 51.47             | 54.00             | -2.53          | A               | 1.10              |
| 12311.02                                       | 49.38             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 57.61             | 74.00             | -16.39         | P               | 1.00              |
| 12311.02                                       | 36.70             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 44.93             | 54.00             | -9.07          | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4929.53                                        | 60.33             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 56.85             | 74.00             | -17.15         | P               | 1.13              |
| 4929.53                                        | 44.15             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 40.67             | 54.00             | -13.33         | A               | 1.13              |
| 7377.51                                        | 58.20             | 39.73        | 8.32          | 35.58           | 9.50         | 0.77           | 61.95             | 74.00             | -12.05         | P               | 1.10              |
| 7377.51                                        | 45.25             | 39.73        | 8.32          | 35.58           | 9.50         | 0.77           | 49.00             | 54.00             | -5.00          | A               | 1.10              |
| 12311.62                                       | 50.23             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 58.47             | 74.00             | -15.53         | P               | 1.00              |
| 12311.62                                       | 37.89             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 46.13             | 54.00             | -7.87          | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                          |                          |              |
|---------------------|------------------------------------------|--------------------------|--------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card             | <b>Test Date</b>         | 2006/09/07   |
| <b>Model</b>        | WMP-N06                                  | <b>Test By</b>           | Alan Fan     |
| <b>Test Mode</b>    | 3dBi Antenna<br>IEEE 802.11g TX (CH Low) | <b>TEMP&amp;Humidity</b> | 27.0°C , 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4824.73                                        | 50.77             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 47.04             | 74.00             | -26.96         | P               | 1.08              |
| 4824.73                                        | 35.97             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 32.24             | 54.00             | -21.76         | A               | 1.08              |
| 12060.00                                       | 46.50             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 54.49             | 74.00             | -19.51         | P               | 1.00              |
| 12060.00                                       | 34.27             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 42.26             | 54.00             | -11.74         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4829.72                                        | 55.48             | 34.42        | 6.32          | 35.30           | 9.50         | 0.34           | 51.76             | 74.00             | -22.24         | P               | 1.14              |
| 4829.72                                        | 40.02             | 34.42        | 6.32          | 35.30           | 9.50         | 0.34           | 36.30             | 54.00             | -17.70         | A               | 1.14              |
| 12060.00                                       | 47.12             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 55.11             | 74.00             | -18.89         | P               | 1.00              |
| 12060.00                                       | 35.20             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 43.19             | 54.00             | -10.81         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level-Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                             |                          |              |
|---------------------|---------------------------------------------|--------------------------|--------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                | <b>Test Date</b>         | 2006/09/07   |
| <b>Model</b>        | WMP-N06                                     | <b>Test By</b>           | Alan Fan     |
| <b>Test Mode</b>    | 3dBi Antenna<br>IEEE 802.11g TX (CH Middle) | <b>TEMP&amp;Humidity</b> | 27.0°C , 69% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4875.97                                        | 50.41             | 34.58        | 6.32          | 35.30           | 9.50         | 0.29           | 46.80                   | 74.00             | -27.20         | P               | 1.18              |
| 4875.97                                        | 35.36             | 34.58        | 6.32          | 35.30           | 9.50         | 0.29           | 31.75                   | 54.00             | -22.25         | A               | 1.18              |
| 7304.25                                        | 61.10             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 64.74                   | 74.00             | -9.26          | P               | 1.09              |
| 7304.25                                        | 44.27             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 47.91                   | 54.00             | -6.09          | A               | 1.09              |
| 12185.00                                       | 46.55             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.66                   | 74.00             | -19.34         | P               | 1.00              |
| 12185.00                                       | 33.87             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 41.98                   | 54.00             | -12.02         | A               | 1.00              |

| Measurement Distance at 1m Vertical polarity |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
|----------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                               | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4875.92                                      | 53.51             | 34.58        | 6.32          | 35.30           | 9.50         | 0.29           | 49.90                   | 74.00             | -24.10         | P               | 1.00              |
| 4875.92                                      | 38.46             | 34.58        | 6.32          | 35.30           | 9.50         | 0.29           | 34.85                   | 54.00             | -19.15         | A               | 1.00              |
| 7315.50                                      | 56.78             | 39.59        | 8.30          | 35.56           | 9.50         | 0.83           | 60.44                   | 74.00             | -13.56         | P               | 1.00              |
| 7315.50                                      | 42.54             | 39.59        | 8.30          | 35.56           | 9.50         | 0.83           | 46.20                   | 54.00             | -7.80          | A               | 1.00              |
| 12185.00                                     | 47.02             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 55.13                   | 74.00             | -18.87         | P               | 1.00              |
| 12185.00                                     | 34.50             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 42.61                   | 54.00             | -11.39         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                           |                          |             |
|---------------------|-------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card              | <b>Test Date</b>         | 2006/07/23  |
| <b>Model</b>        | WMP-N06                                   | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>IEEE 802.11g TX (CH High) | <b>TEMP&amp;Humidity</b> | 38.0°C, 61% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4930.43                                        | 53.80             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 50.32             | 74.00             | -23.68         | P               | 1.11              |
| 4930.43                                        | 37.52             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 34.04             | 54.00             | -19.96         | A               | 1.11              |
| 7385.11                                        | 64.12             | 39.75        | 8.33          | 35.58           | 9.50         | 0.77           | 67.88             | 74.00             | -6.12          | P               | 1.08              |
| 7385.11                                        | 46.23             | 39.75        | 8.33          | 35.58           | 9.50         | 0.77           | 49.99             | 54.00             | -4.01          | A               | 1.08              |
| 12310.00                                       | 47.23             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 55.46             | 74.00             | -18.54         | P               | 1.00              |
| 12310.00                                       | 34.55             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 42.78             | 54.00             | -11.22         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 4929.46                                        | 58.53             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 55.05             | 74.00             | -18.95         | P               | 1.15              |
| 4929.46                                        | 42.38             | 34.76        | 6.32          | 35.30           | 9.50         | 0.24           | 38.90             | 54.00             | -15.10         | A               | 1.15              |
| 7394.95                                        | 60.14             | 39.77        | 8.33          | 35.58           | 9.50         | 0.76           | 63.92             | 74.00             | -10.08         | P               | 1.07              |
| 7394.95                                        | 42.78             | 39.77        | 8.33          | 35.58           | 9.50         | 0.76           | 46.56             | 54.00             | -7.44          | A               | 1.07              |
| 12310.00                                       | 47.02             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 55.25             | 74.00             | -18.75         | P               | 1.00              |
| 12310.00                                       | 33.80             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 42.03             | 54.00             | -11.97         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                          |                          |             |
|---------------------|------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card             | <b>Test Date</b>         | 2006/07/23  |
| <b>Model</b>        | WMP-N06                                  | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>802.11n HT20 TX (CH Low) | <b>TEMP&amp;Humidity</b> | 38.0°C, 61% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2769.01                                        | 53.47             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 44.63             | 74.00             | -29.37         | P               | 1.12              |
| 2769.01                                        | 41.69             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 32.85             | 54.00             | -21.15         | A               | 1.12              |
| 4824.46                                        | 50.25             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 46.52             | 74.00             | -27.48         | P               | 1.12              |
| 4824.46                                        | 34.80             | 34.40        | 6.32          | 35.30           | 9.50         | 0.35           | 31.07             | 54.00             | -22.93         | A               | 1.12              |
| 12063.25                                       | 46.25             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 54.24             | 74.00             | -19.76         | P               | 1.01              |
| 12063.25                                       | 32.87             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 40.86             | 54.00             | -13.14         | A               | 1.01              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2765.13                                        | 65.56             | 30.41        | 5.25          | 35.01           | 9.50         | 0.00           | 56.72             | 74.00             | -17.28         | P               | 1.01              |
| 2765.13                                        | 52.82             | 30.41        | 5.25          | 35.01           | 9.50         | 0.00           | 43.98             | 54.00             | -10.02         | A               | 1.01              |
| 4826.99                                        | 53.70             | 34.41        | 6.32          | 35.30           | 9.50         | 0.34           | 49.97             | 74.00             | -24.03         | P               | 1.07              |
| 4826.99                                        | 39.84             | 34.41        | 6.32          | 35.30           | 9.50         | 0.34           | 36.11             | 54.00             | -17.89         | A               | 1.07              |
| 12060.00                                       | 46.33             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 54.32             | 74.00             | -19.68         | P               | 1.00              |
| 12060.00                                       | 33.40             | 41.76        | 10.56         | 35.26           | 9.50         | 0.43           | 41.39             | 54.00             | -12.61         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                             |                          |             |
|---------------------|---------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                | <b>Test Date</b>         | 2006/07/23  |
| <b>Model</b>        | WMP-N06                                     | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>802.11n HT20 TX (CH Middle) | <b>TEMP&amp;Humidity</b> | 38.0°C, 61% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2755.32                                        | 52.25             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 43.39                   | 74.00             | -30.61         | P               | 1.18              |
| 2755.32                                        | 35.46             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 26.60                   | 54.00             | -27.40         | A               | 1.18              |
| 4866.88                                        | 50.20             | 34.55        | 6.32          | 35.30           | 9.50         | 0.30           | 46.57                   | 74.00             | -27.43         | P               | 1.18              |
| 4866.88                                        | 34.27             | 34.55        | 6.32          | 35.30           | 9.50         | 0.30           | 30.64                   | 54.00             | -23.36         | A               | 1.18              |
| 7304.60                                        | 60.00             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 63.64                   | 74.00             | -10.36         | P               | 1.09              |
| 7304.60                                        | 42.98             | 39.57        | 8.30          | 35.56           | 9.50         | 0.84           | 46.62                   | 54.00             | -7.38          | A               | 1.09              |
| 12185.00                                       | 45.89             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.00                   | 74.00             | -20.00         | P               | 1.00              |
| 12185.00                                       | 32.71             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 40.82                   | 54.00             | -13.18         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2786.56                                        | 66.35             | 30.43        | 5.28          | 35.01           | 9.50         | 0.00           | 57.54                   | 74.00             | -16.46         | P               | 1.00              |
| 2786.56                                        | 53.40             | 30.43        | 5.28          | 35.01           | 9.50         | 0.00           | 44.59                   | 54.00             | -9.41          | A               | 1.00              |
| 4874.76                                        | 56.12             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 52.51                   | 74.00             | -21.49         | P               | 1.00              |
| 4874.76                                        | 39.74             | 34.57        | 6.32          | 35.30           | 9.50         | 0.30           | 36.13                   | 54.00             | -17.87         | A               | 1.00              |
| 7301.77                                        | 62.05             | 39.56        | 8.29          | 35.56           | 9.50         | 0.84           | 65.69                   | 74.00             | -8.31          | P               | 1.00              |
| 7301.77                                        | 44.79             | 39.56        | 8.29          | 35.56           | 9.50         | 0.84           | 48.43                   | 54.00             | -5.57          | A               | 1.00              |
| 12185.00                                       | 46.78             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.89                   | 74.00             | -19.11         | P               | 1.00              |
| 12185.00                                       | 33.40             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 41.51                   | 54.00             | -12.49         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                           |                          |             |
|---------------------|-------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card              | <b>Test Date</b>         | 2006/07/23  |
| <b>Model</b>        | WMP-N06                                   | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>802.11n HT20 TX (CH High) | <b>TEMP&amp;Humidity</b> | 38.0°C, 61% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2776.90                                        | 52.89             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 44.07             | 74.00             | -29.93         | P               | 1.00              |
| 2776.90                                        | 41.06             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 32.24             | 54.00             | -21.76         | A               | 1.00              |
| 4922.35                                        | 52.35             | 34.74        | 6.32          | 35.30           | 9.50         | 0.25           | 48.85             | 74.00             | -25.15         | P               | 1.00              |
| 4922.35                                        | 35.79             | 34.74        | 6.32          | 35.30           | 9.50         | 0.25           | 32.29             | 54.00             | -21.71         | A               | 1.00              |
| 7400.86                                        | 59.74             | 39.78        | 8.33          | 35.58           | 9.50         | 0.75           | 63.53             | 74.00             | -10.47         | P               | 1.08              |
| 7400.86                                        | 43.17             | 39.78        | 8.33          | 35.58           | 9.50         | 0.75           | 46.96             | 54.00             | -7.04          | A               | 1.08              |
| 12310.25                                       | 44.58             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 52.81             | 74.00             | -21.19         | P               | 1.04              |
| 12310.25                                       | 32.96             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 41.19             | 54.00             | -12.81         | A               | 1.04              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2776.90                                        | 70.00             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 61.18             | 74.00             | -12.82         | P               | 1.26              |
| 2776.90                                        | 55.77             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 46.95             | 54.00             | -7.05          | A               | 1.26              |
| 4923.57                                        | 57.20             | 34.74        | 6.32          | 35.30           | 9.50         | 0.25           | 53.71             | 74.00             | -20.29         | P               | 1.26              |
| 4923.57                                        | 43.12             | 34.74        | 6.32          | 35.30           | 9.50         | 0.25           | 39.63             | 54.00             | -14.37         | A               | 1.26              |
| 7390.37                                        | 60.98             | 39.76        | 8.33          | 35.58           | 9.50         | 0.76           | 64.75             | 74.00             | -9.25          | P               | 1.11              |
| 7390.37                                        | 44.14             | 39.76        | 8.33          | 35.58           | 9.50         | 0.76           | 47.91             | 54.00             | -6.09          | A               | 1.11              |
| 12310.02                                       | 46.37             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 54.60             | 74.00             | -19.40         | P               | 1.00              |
| 12310.02                                       | 33.49             | 42.01        | 10.49         | 35.11           | 9.50         | 0.35           | 41.72             | 54.00             | -12.28         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                          |                          |             |
|---------------------|------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card             | <b>Test Date</b>         | 2006/07/23  |
| <b>Model</b>        | WMP-N06                                  | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>802.11n HT40 TX (CH Low) | <b>TEMP&amp;Humidity</b> | 38.0°C, 61% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2755.18                                        | 53.80             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 44.94             | 74.00             | -29.06         | P               | 1.07              |
| 2755.18                                        | 39.72             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 30.86             | 54.00             | -23.14         | A               | 1.07              |
| 4844.00                                        | 49.63             | 34.47        | 6.32          | 35.30           | 9.50         | 0.33           | 45.95             | 74.00             | -28.05         | P               | 1.07              |
| 4844.00                                        | 34.57             | 34.47        | 6.32          | 35.30           | 9.50         | 0.33           | 30.89             | 54.00             | -23.11         | A               | 1.07              |
| 7256.50                                        | 59.78             | 39.46        | 8.28          | 35.55           | 9.50         | 0.88           | 63.35             | 74.00             | -10.65         | P               | 1.07              |
| 7256.50                                        | 44.17             | 39.46        | 8.28          | 35.55           | 9.50         | 0.88           | 47.74             | 54.00             | -6.26          | A               | 1.07              |
| 12110.00                                       | 45.87             | 41.81        | 10.55         | 35.23           | 9.50         | 0.41           | 53.91             | 74.00             | -20.09         | P               | 1.01              |
| 12110.00                                       | 32.29             | 41.81        | 10.55         | 35.23           | 9.50         | 0.41           | 40.33             | 54.00             | -13.67         | A               | 1.01              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2755.18                                        | 66.95             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 58.09             | 74.00             | -15.91         | P               | 1.16              |
| 2755.18                                        | 53.55             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 44.69             | 54.00             | -9.31          | A               | 1.16              |
| 4836.95                                        | 56.90             | 34.45        | 6.32          | 35.30           | 9.50         | 0.33           | 53.20             | 74.00             | -20.80         | P               | 1.16              |
| 4836.95                                        | 43.66             | 34.45        | 6.32          | 35.30           | 9.50         | 0.33           | 39.96             | 54.00             | -14.04         | A               | 1.16              |
| 7268.72                                        | 60.50             | 39.49        | 8.28          | 35.55           | 9.50         | 0.87           | 64.09             | 74.00             | -9.91          | P               | 1.14              |
| 7268.72                                        | 46.39             | 39.49        | 8.28          | 35.55           | 9.50         | 0.87           | 49.98             | 54.00             | -4.02          | A               | 1.14              |
| 12110.00                                       | 46.55             | 41.81        | 10.55         | 35.23           | 9.50         | 0.41           | 54.59             | 74.00             | -19.41         | P               | 1.00              |
| 12110.00                                       | 33.37             | 41.81        | 10.55         | 35.23           | 9.50         | 0.41           | 41.41             | 54.00             | -12.59         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                             |                          |             |
|---------------------|---------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                | <b>Test Date</b>         | 2006/07/23  |
| <b>Model</b>        | WMP-N06                                     | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>802.11n HT40 TX (CH Middle) | <b>TEMP&amp;Humidity</b> | 38.0°C, 61% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2753.69                                        | 54.12             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 45.26                   | 74.00             | -28.74         | P               | 1.18              |
| 2753.69                                        | 39.88             | 30.40        | 5.24          | 35.00           | 9.50         | 0.00           | 31.02                   | 54.00             | -22.98         | A               | 1.18              |
| 4887.54                                        | 50.02             | 34.62        | 6.32          | 35.30           | 9.50         | 0.28           | 46.44                   | 74.00             | -27.56         | P               | 1.18              |
| 4887.54                                        | 34.90             | 34.62        | 6.32          | 35.30           | 9.50         | 0.28           | 31.32                   | 54.00             | -22.68         | A               | 1.18              |
| 7301.19                                        | 60.12             | 39.56        | 8.29          | 35.56           | 9.50         | 0.84           | 63.76                   | 74.00             | -10.24         | P               | 1.09              |
| 7301.19                                        | 44.52             | 39.56        | 8.29          | 35.56           | 9.50         | 0.84           | 48.16                   | 54.00             | -5.84          | A               | 1.09              |
| 12185.00                                       | 46.20             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.31                   | 74.00             | -19.69         | P               | 1.00              |
| 12185.00                                       | 32.71             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 40.82                   | 54.00             | -13.18         | A               | 1.00              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                         |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>1m<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2774.83                                        | 64.11             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 55.28                   | 74.00             | -18.72         | P               | 1.00              |
| 2774.83                                        | 51.24             | 30.42        | 5.26          | 35.01           | 9.50         | 0.00           | 42.41                   | 54.00             | -11.59         | A               | 1.00              |
| 4865.78                                        | 55.00             | 34.54        | 6.32          | 35.30           | 9.50         | 0.30           | 51.37                   | 74.00             | -22.63         | P               | 1.00              |
| 4865.78                                        | 40.80             | 34.54        | 6.32          | 35.30           | 9.50         | 0.30           | 37.17                   | 54.00             | -16.83         | A               | 1.00              |
| 7326.53                                        | 61.88             | 39.62        | 8.30          | 35.57           | 9.50         | 0.82           | 65.56                   | 74.00             | -8.44          | P               | 1.00              |
| 7326.53                                        | 46.76             | 39.62        | 8.30          | 35.57           | 9.50         | 0.82           | 50.44                   | 54.00             | -3.56          | A               | 1.00              |
| 12185.00                                       | 46.35             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 54.46                   | 74.00             | -19.54         | P               | 1.00              |
| 12185.00                                       | 33.17             | 41.89        | 10.52         | 35.19           | 9.50         | 0.39           | 41.28                   | 54.00             | -12.72         | A               | 1.00              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.



|                     |                                           |                          |             |
|---------------------|-------------------------------------------|--------------------------|-------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card              | <b>Test Date</b>         | 2006/07/23  |
| <b>Model</b>        | WMP-N06                                   | <b>Test By</b>           | Alan Fan    |
| <b>Test Mode</b>    | 3dBi Antenna<br>802.11n HT40 TX (CH High) | <b>TEMP&amp;Humidity</b> | 38.0°C, 61% |

| Measurement Distance at 1m Horizontal polarity |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
|------------------------------------------------|-------------------|--------------|---------------|-----------------|--------------|----------------|-------------------|-------------------|----------------|-----------------|-------------------|
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2789.48                                        | 53.38             | 30.43        | 5.28          | 35.02           | 9.50         | 0.00           | 44.57             | 74.00             | -29.43         | P               | 1.06              |
| 2789.48                                        | 39.89             | 30.43        | 5.28          | 35.02           | 9.50         | 0.00           | 31.08             | 54.00             | -22.92         | A               | 1.06              |
| 4899.24                                        | 51.22             | 34.66        | 6.32          | 35.30           | 9.50         | 0.27           | 47.67             | 74.00             | -26.33         | P               | 1.06              |
| 4899.24                                        | 38.40             | 34.66        | 6.32          | 35.30           | 9.50         | 0.27           | 34.85             | 54.00             | -19.15         | A               | 1.06              |
| 7360.62                                        | 60.20             | 39.69        | 8.32          | 35.57           | 9.50         | 0.79           | 63.93             | 74.00             | -10.07         | P               | 1.07              |
| 7360.62                                        | 45.00             | 39.69        | 8.32          | 35.57           | 9.50         | 0.79           | 48.73             | 54.00             | -5.27          | A               | 1.07              |
| 12260.15                                       | 45.60             | 41.96        | 10.50         | 35.14           | 9.50         | 0.37           | 53.78             | 74.00             | -20.22         | P               | 1.04              |
| 12260.15                                       | 33.41             | 41.96        | 10.50         | 35.14           | 9.50         | 0.37           | 41.59             | 54.00             | -12.41         | A               | 1.04              |
| Measurement Distance at 1m Vertical polarity   |                   |              |               |                 |              |                |                   |                   |                |                 |                   |
| Freq.<br>(MHz)                                 | Reading<br>(dBμV) | AF<br>(dBμV) | Cable<br>(dB) | Pre-amp<br>(dB) | Dist<br>(dB) | Filter<br>(dB) | Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Mark<br>(P/Q/A) | Height<br>(Meter) |
| 2810.34                                        | 67.88             | 30.45        | 5.30          | 35.02           | 9.50         | 0.00           | 59.11             | 74.00             | -14.89         | P               | 1.04              |
| 2810.34                                        | 53.74             | 30.45        | 5.30          | 35.02           | 9.50         | 0.00           | 44.97             | 54.00             | -9.03          | A               | 1.04              |
| 4901.39                                        | 56.71             | 34.66        | 6.32          | 35.30           | 9.50         | 0.27           | 53.16             | 74.00             | -20.84         | P               | 1.04              |
| 4901.39                                        | 43.20             | 34.66        | 6.32          | 35.30           | 9.50         | 0.27           | 39.65             | 54.00             | -14.35         | A               | 1.04              |
| 7353.08                                        | 60.12             | 39.68        | 8.31          | 35.57           | 9.50         | 0.80           | 63.84             | 74.00             | -10.16         | P               | 1.29              |
| 7353.08                                        | 46.46             | 39.68        | 8.31          | 35.57           | 9.50         | 0.80           | 50.18             | 54.00             | -3.82          | A               | 1.29              |
| 12260.00                                       | 46.70             | 41.96        | 10.50         | 35.14           | 9.50         | 0.37           | 54.88             | 74.00             | -19.12         | P               | 1.07              |
| 12260.00                                       | 33.54             | 41.96        | 10.50         | 35.14           | 9.50         | 0.37           | 41.72             | 54.00             | -12.28         | A               | 1.07              |

**Remark:**

1. AF: Antenna Factor, Cable: Cable Loss, Pre-Amp: Preamplifier gain, Filter: High Pass Filter Insertion Loss (3.5GHz)
2. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
3. Dist : correction to extra plate reading to 3m specification distance 1m measurement distance = -9.5dB
4. The result basic equation calculation is as follow:  
$$\text{Level} = \text{Reading} + \text{AF} + \text{Cable} - \text{Preamp} + \text{Filter} - \text{Dist}, \text{Margin} = \text{Level} - \text{Limit}$$
5. The other emission levels were 20dB below the limit
6. The test limit distance is 3M limit.

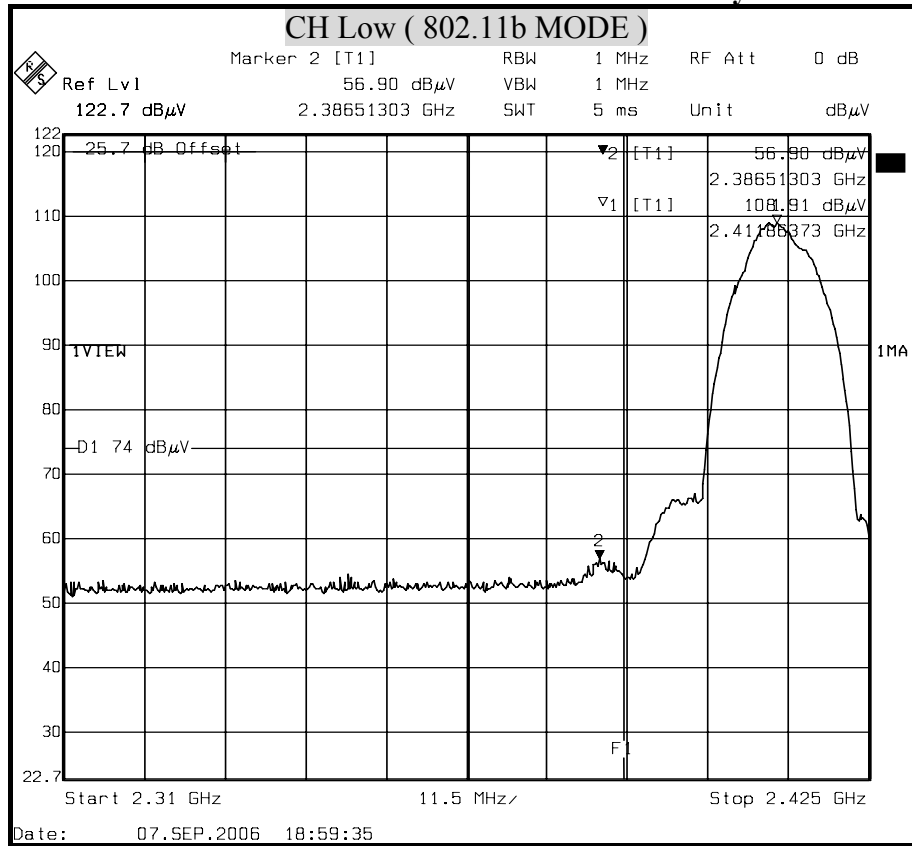


## 8.8.4 RESTRICTED BAND EDGES

2dBi Antenna

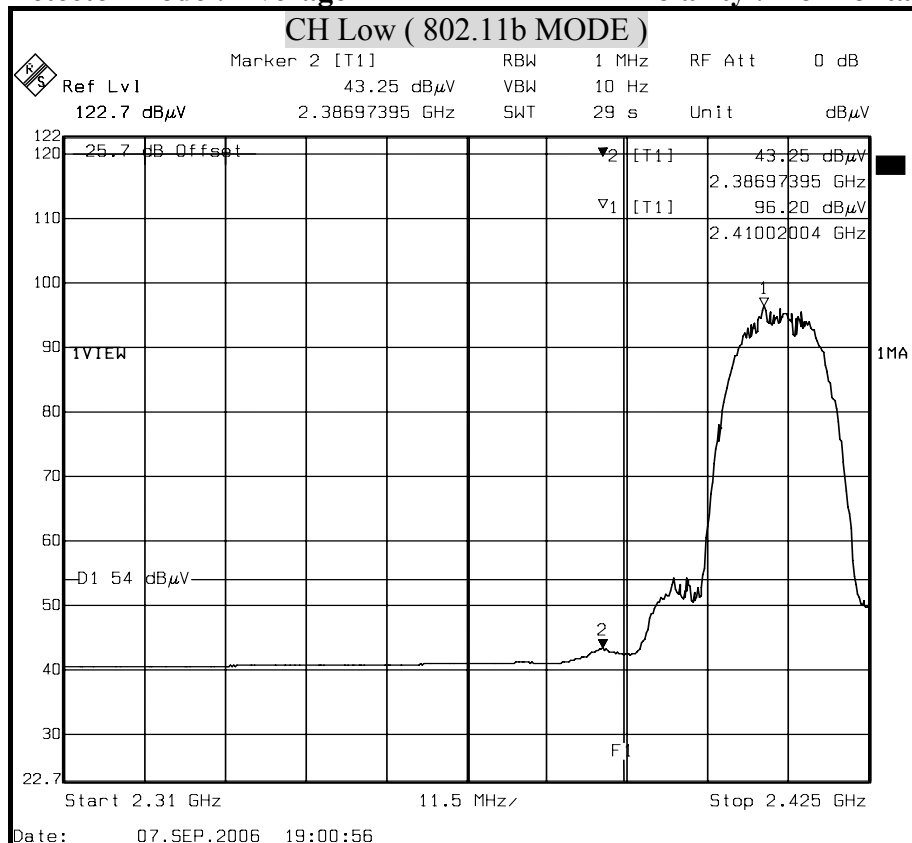
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

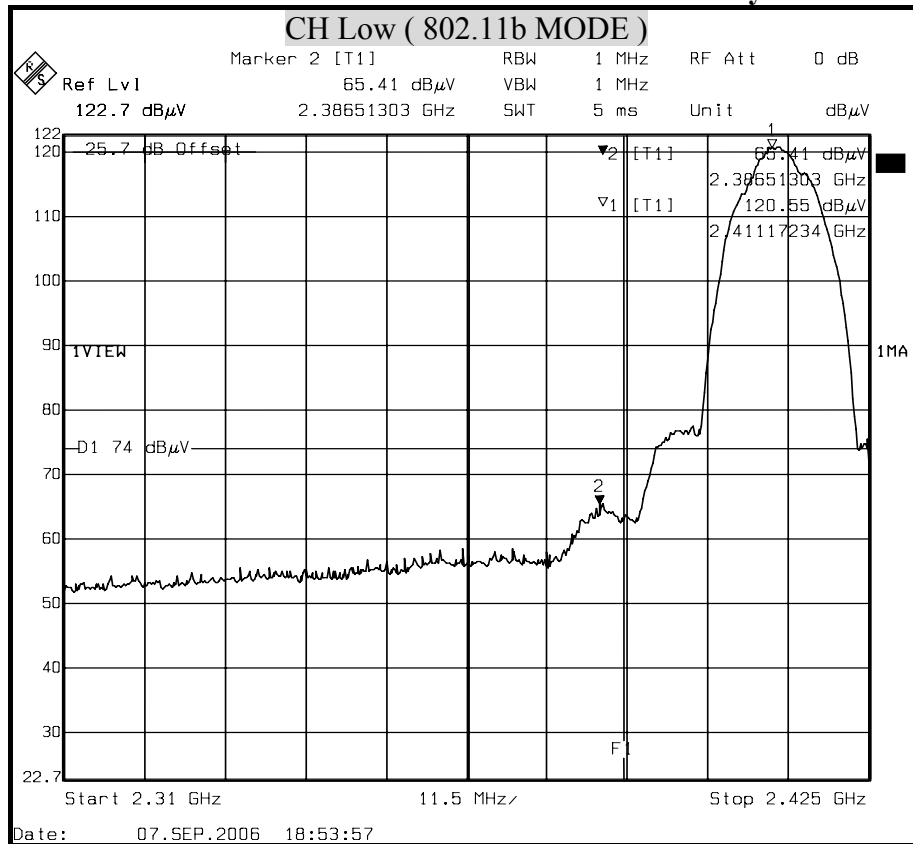
Polarity : Horizontal





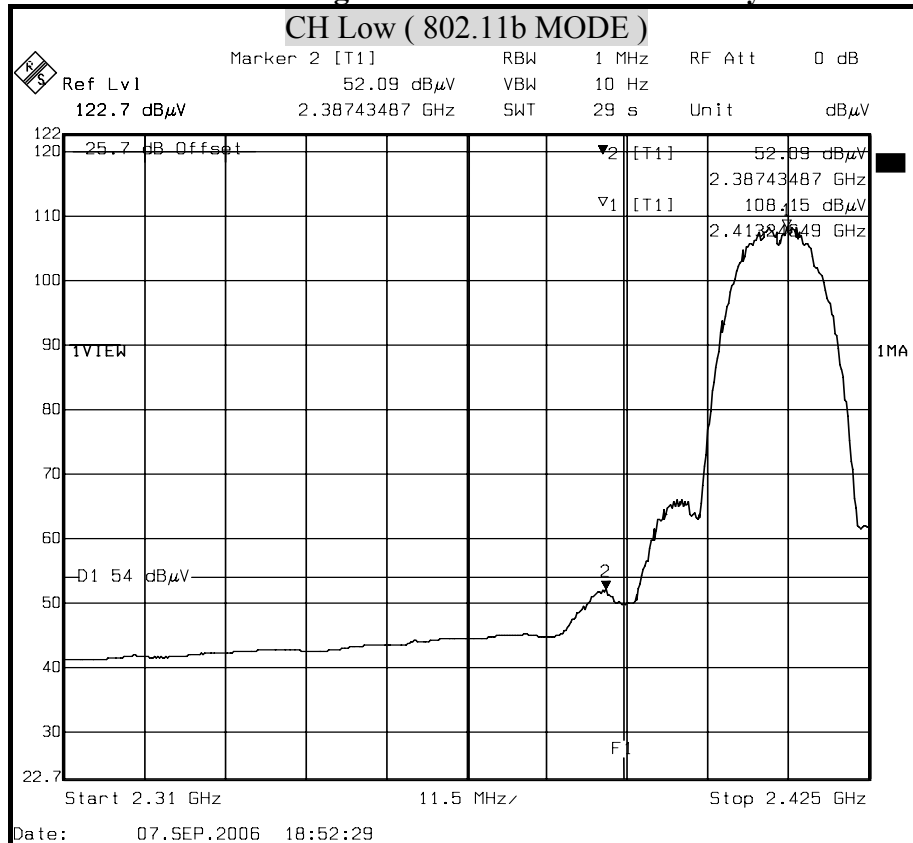
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

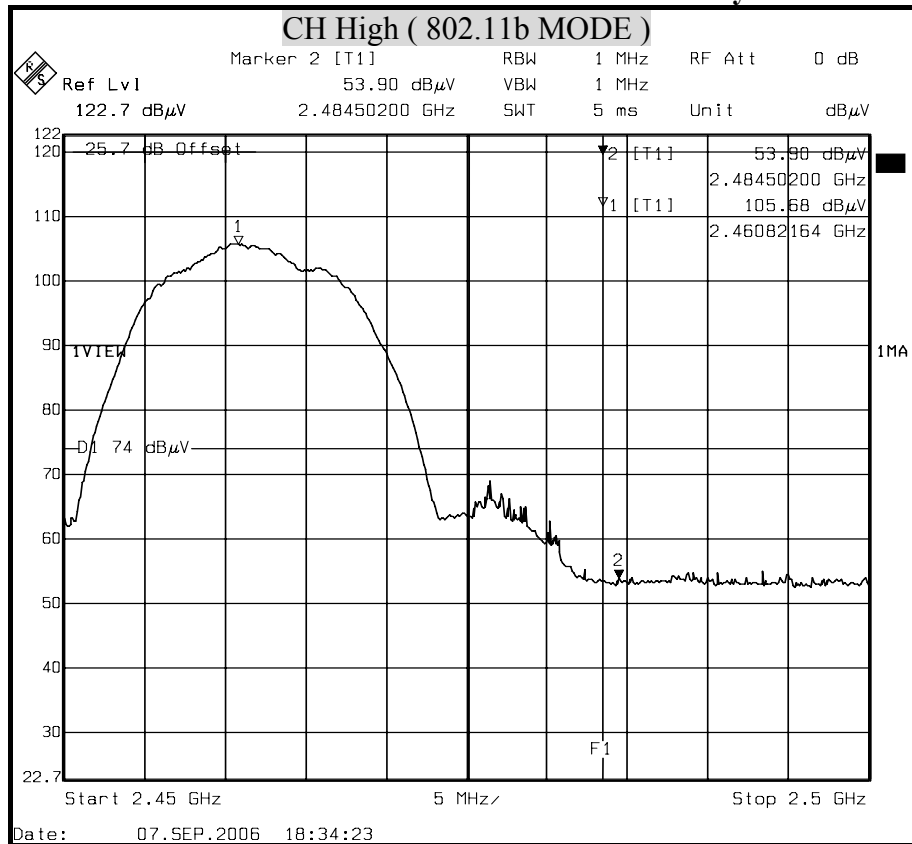
Polarity : Vertical





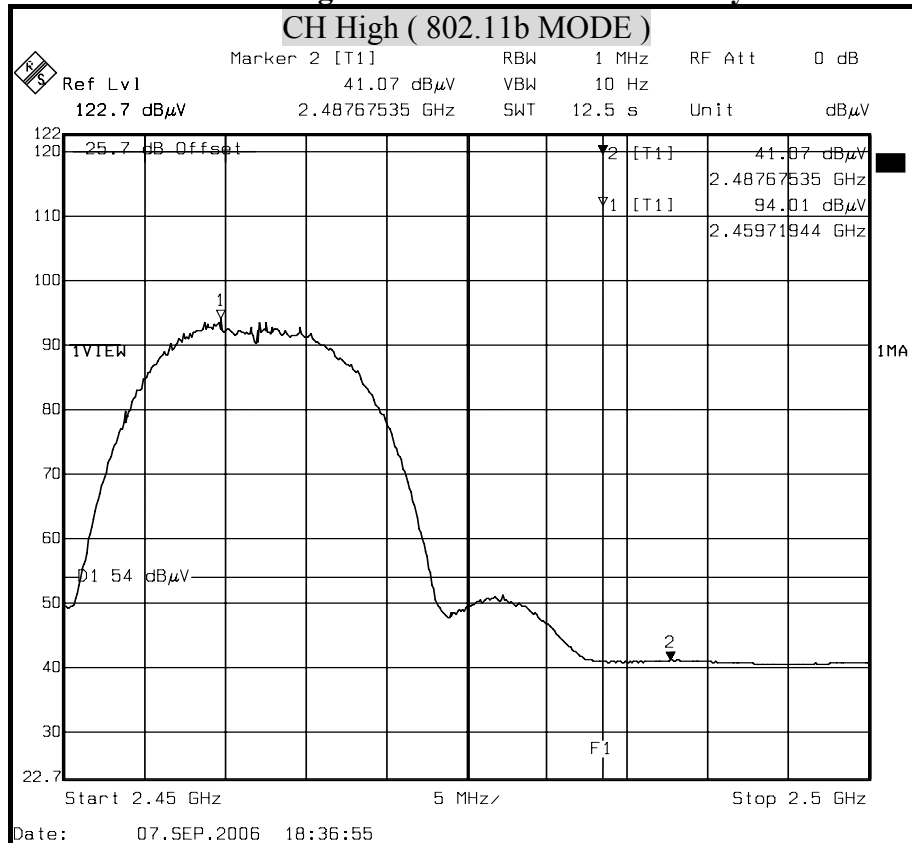
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

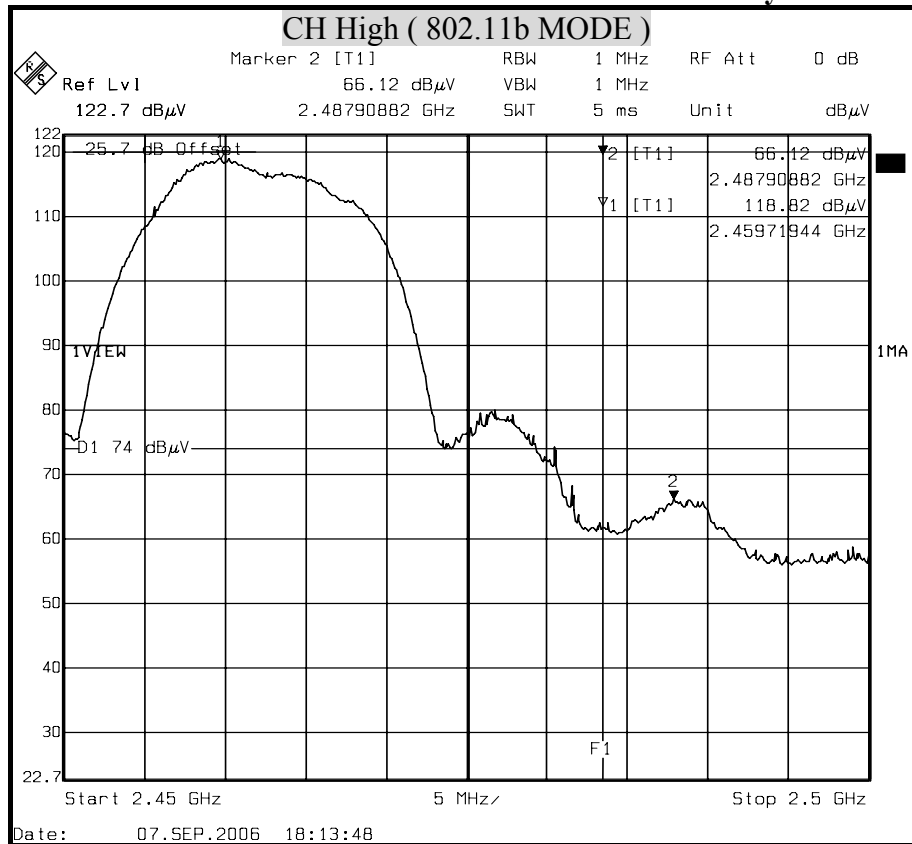
Polarity : Horizontal





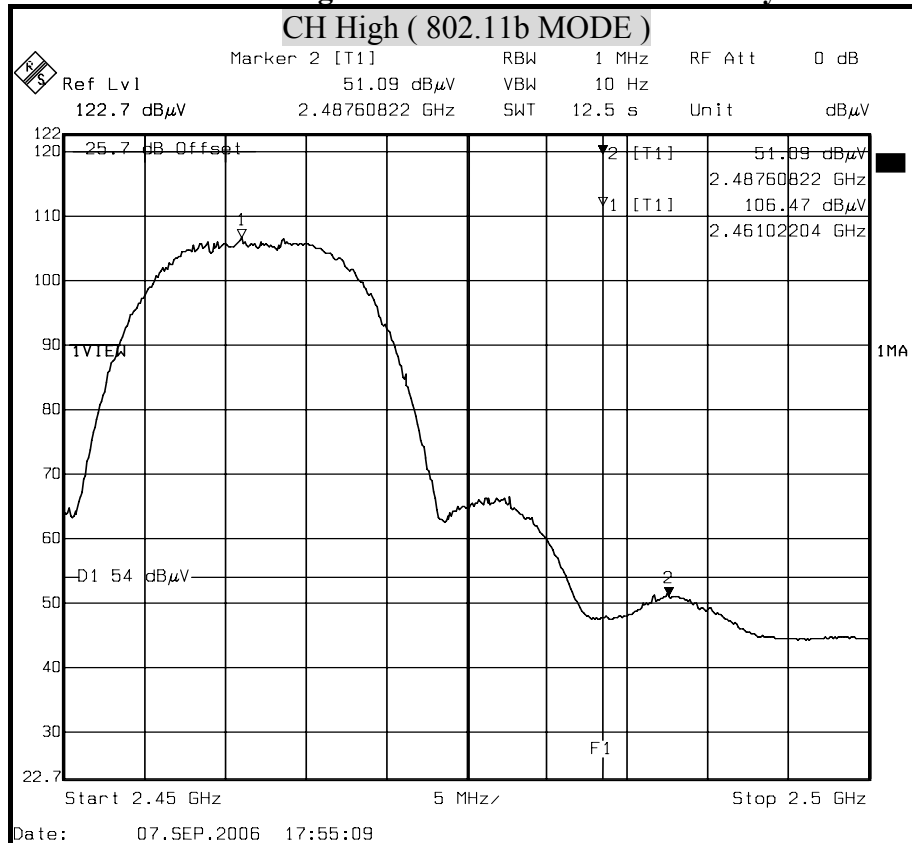
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

Polarity : Vertical

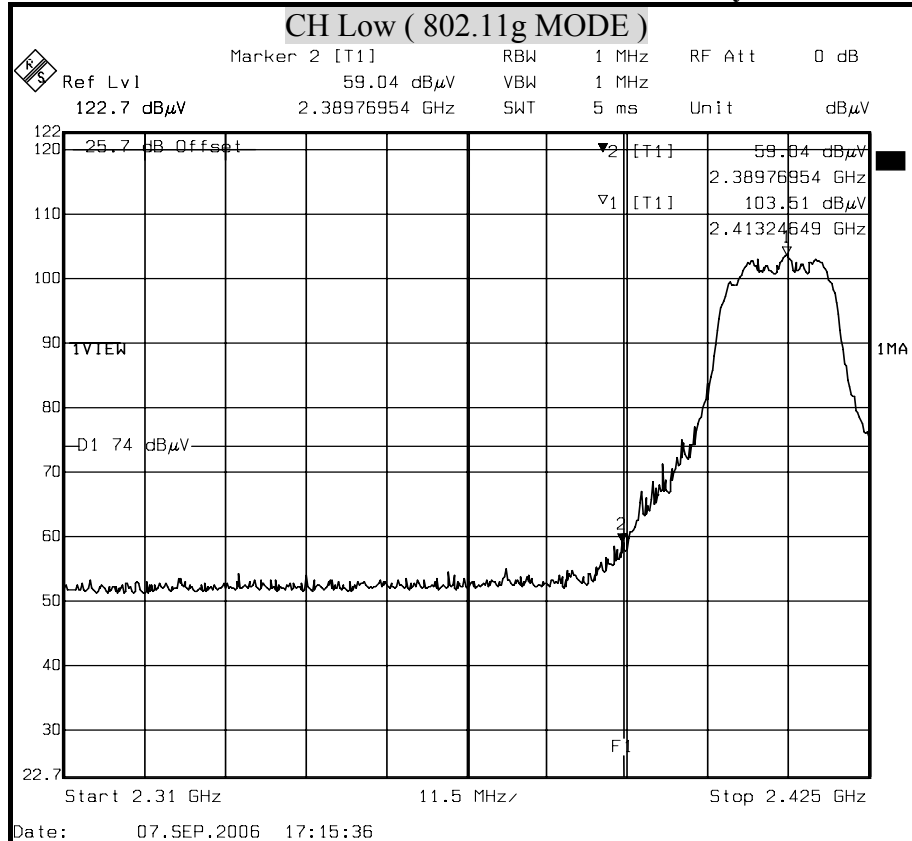




2dBi Antenna

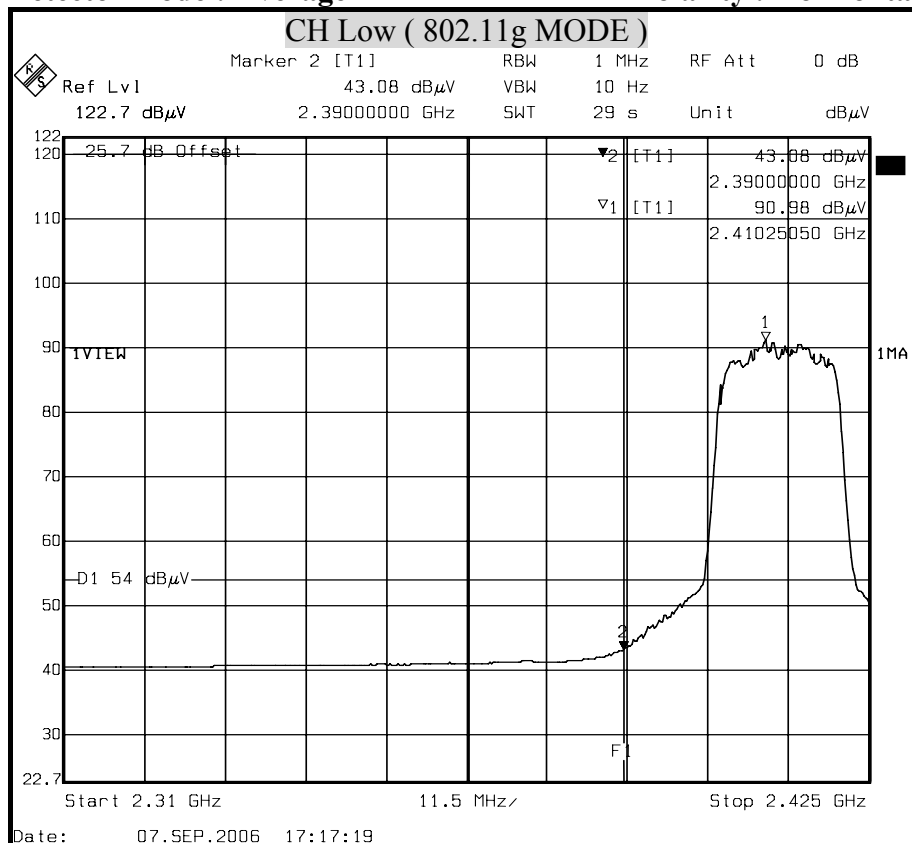
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

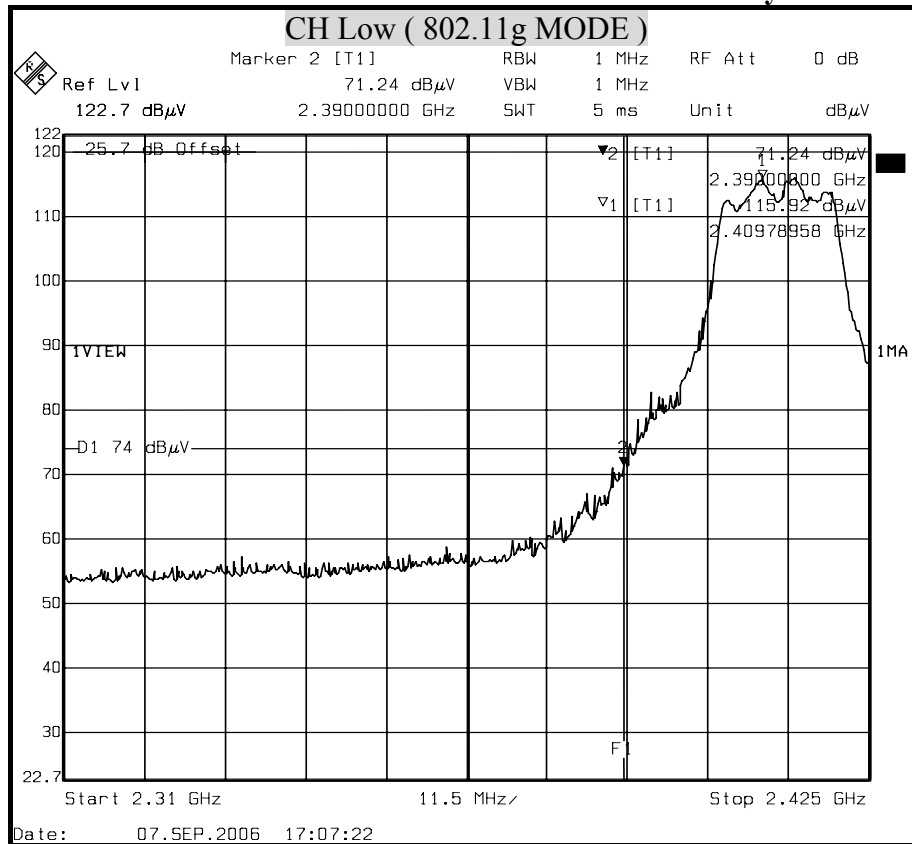
Polarity : Horizontal





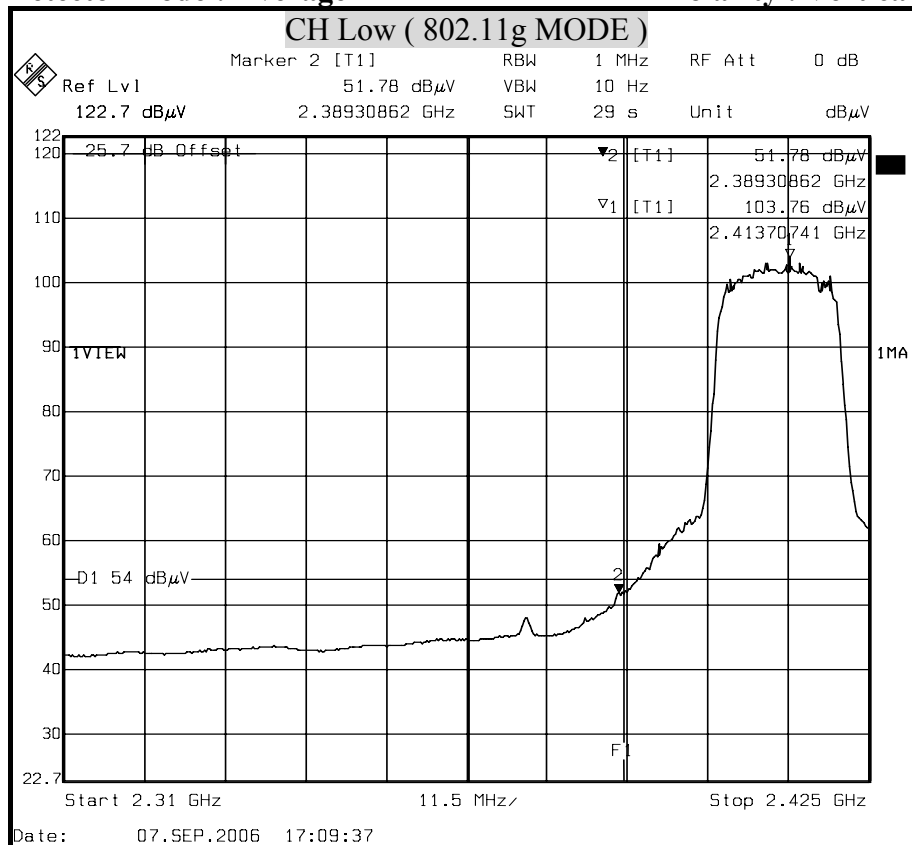
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

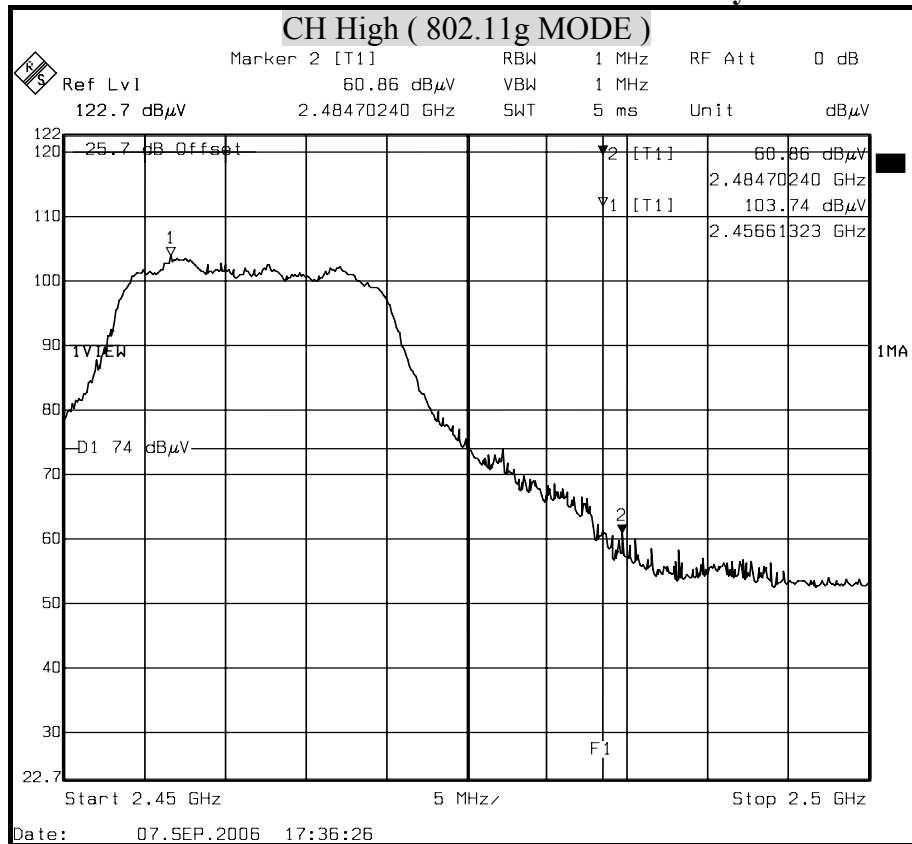
Polarity : Vertical





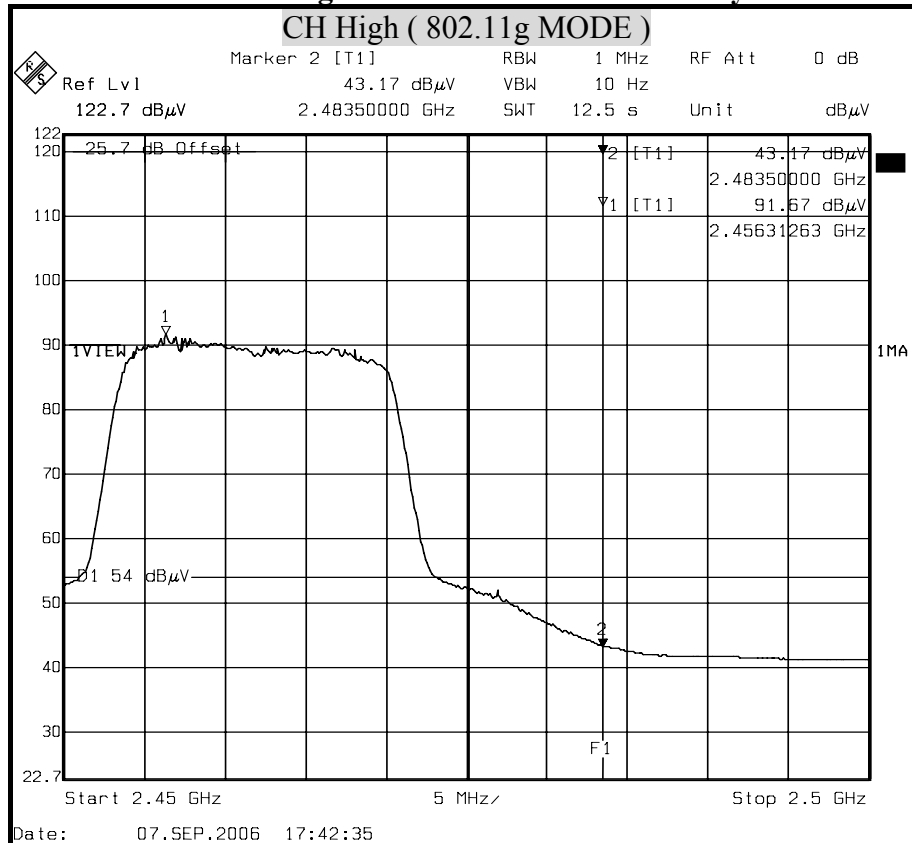
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

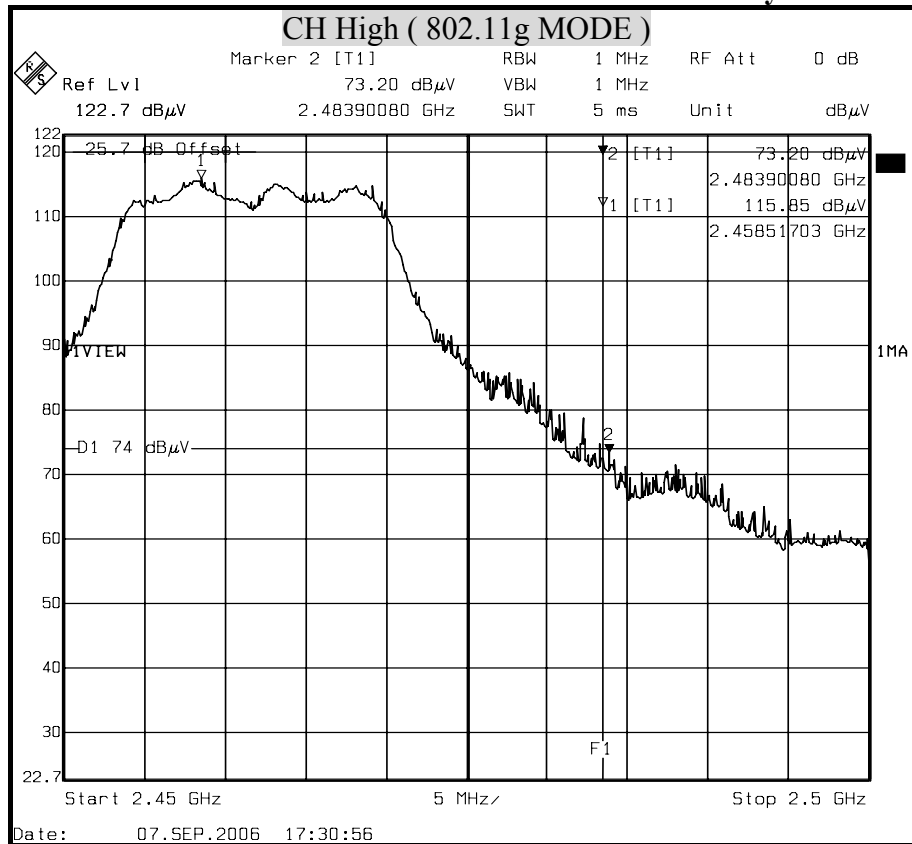
Polarity : Horizontal





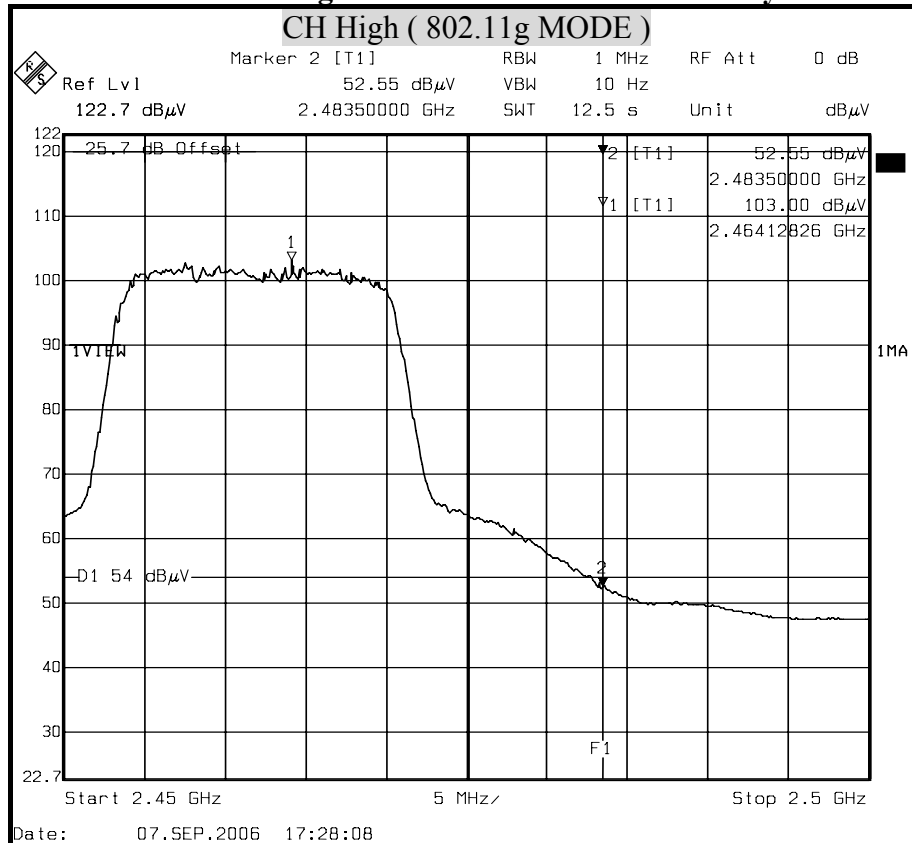
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

Polarity : Vertical

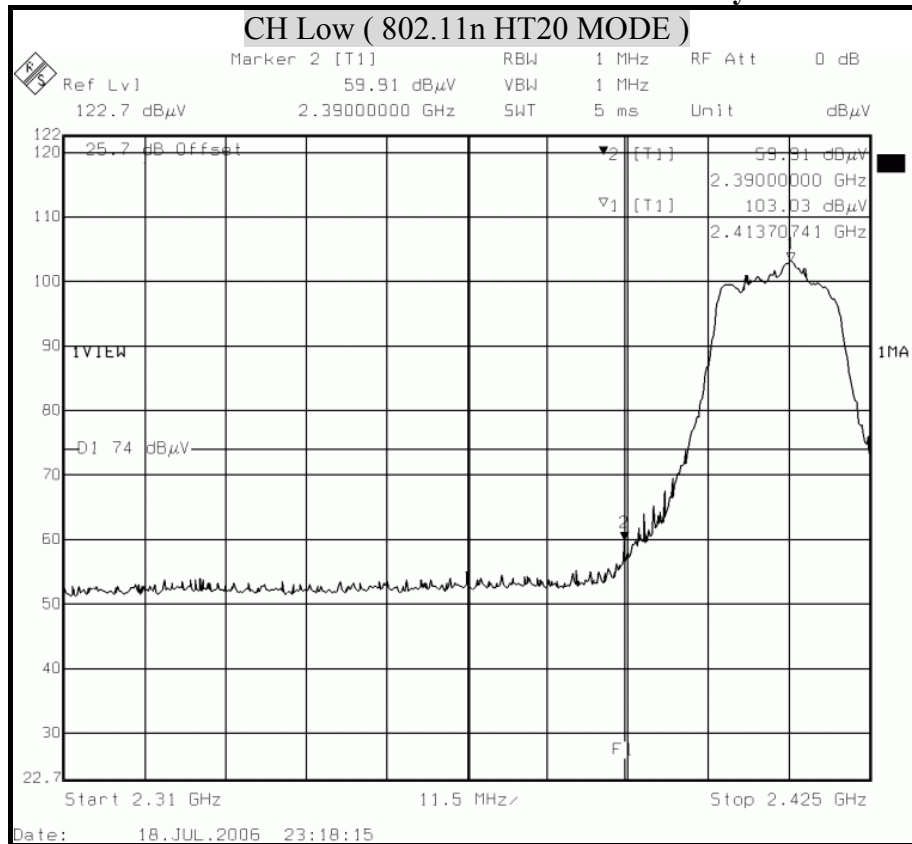




2dBi Antenna

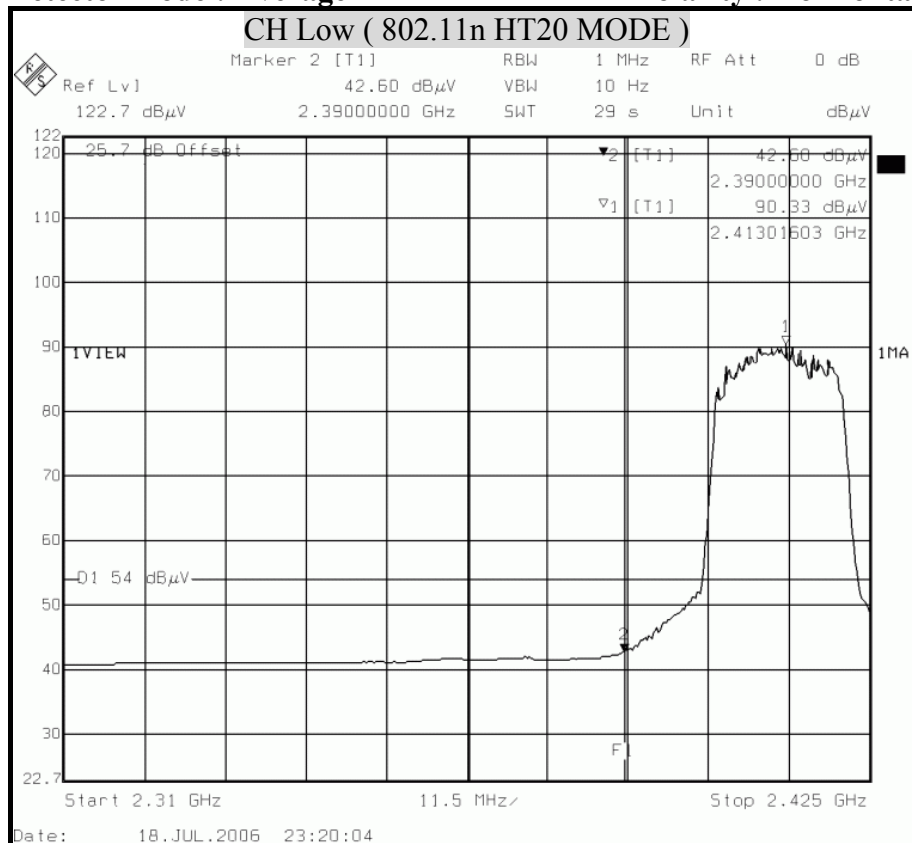
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

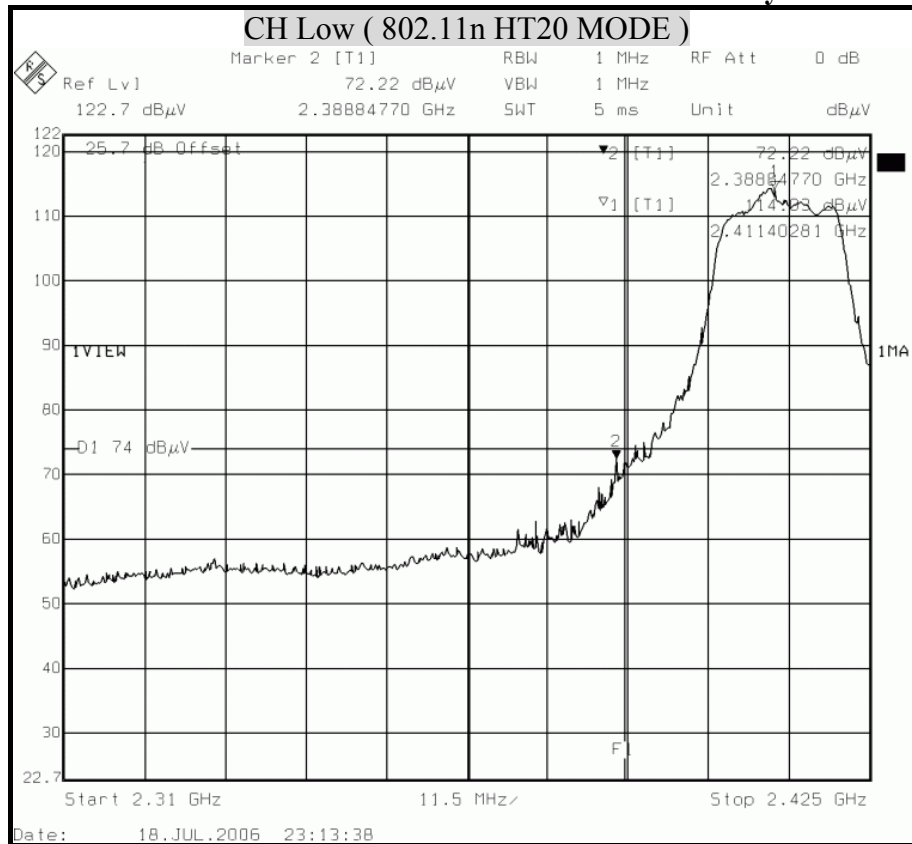
Polarity : Horizontal





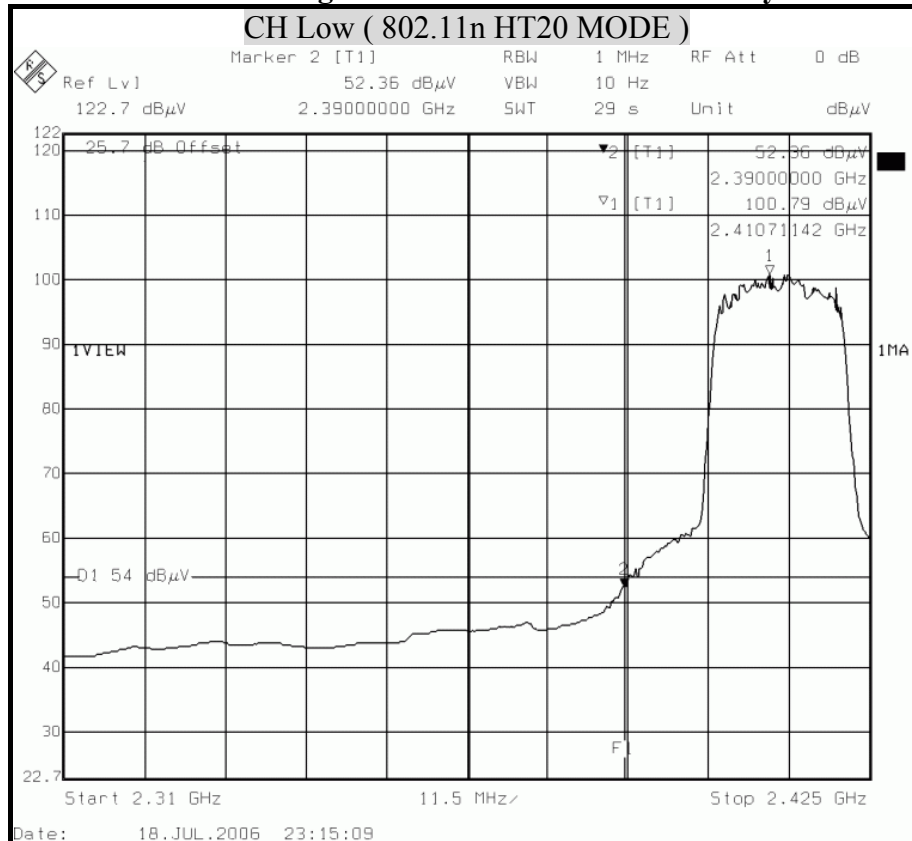
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

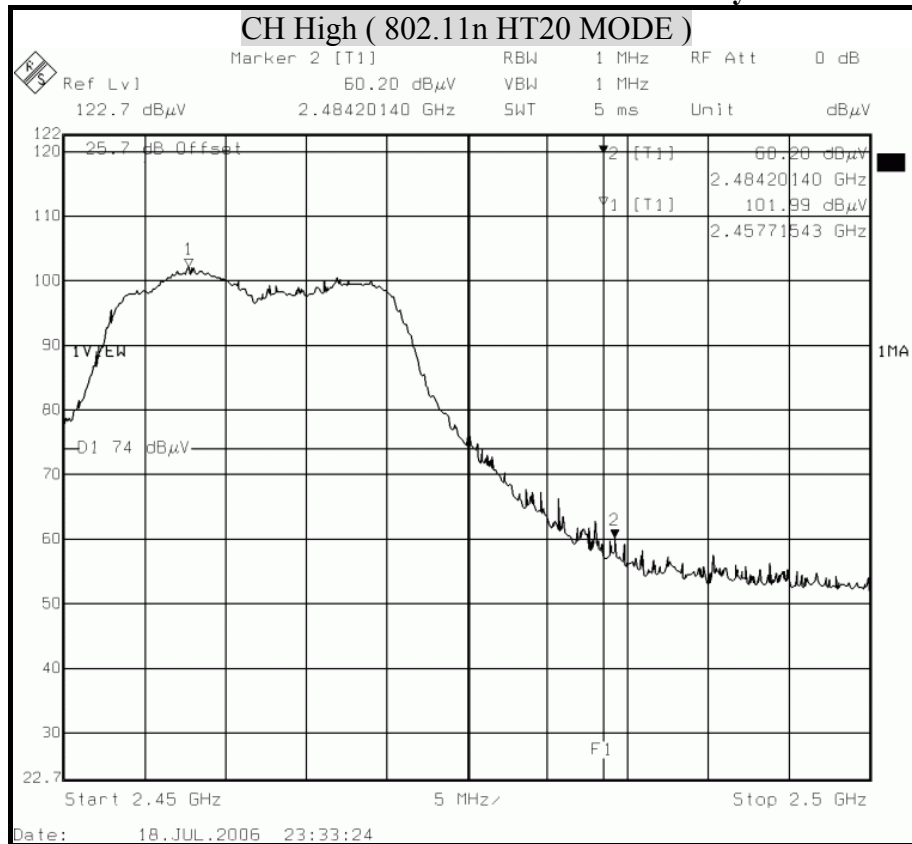
Polarity : Vertical





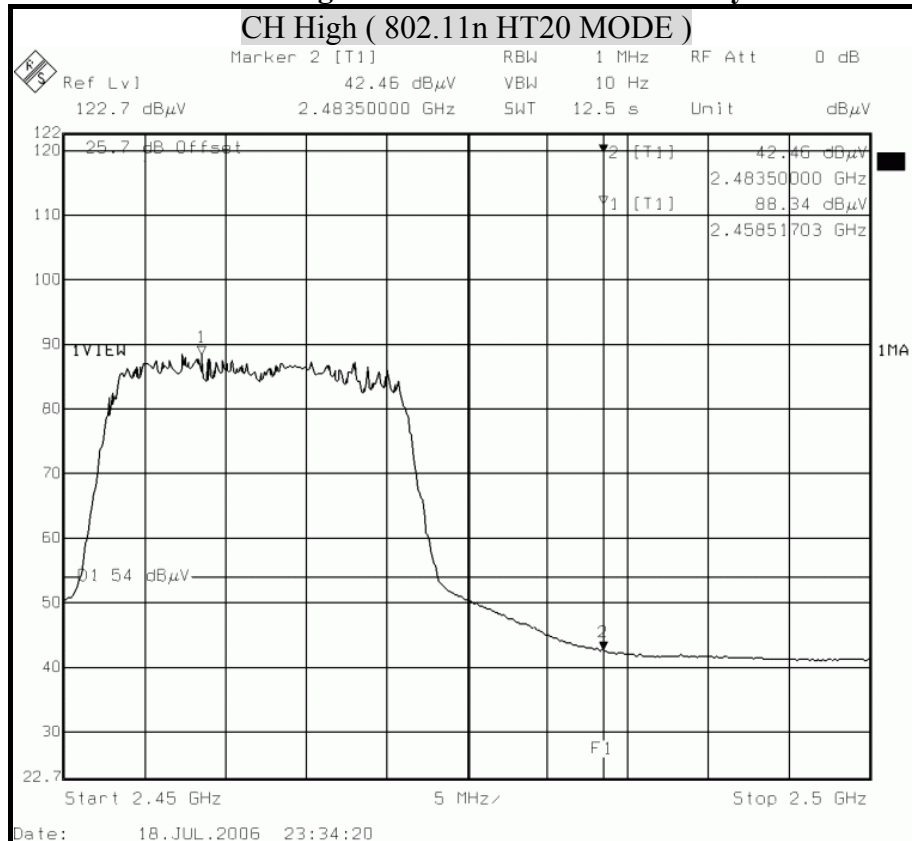
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

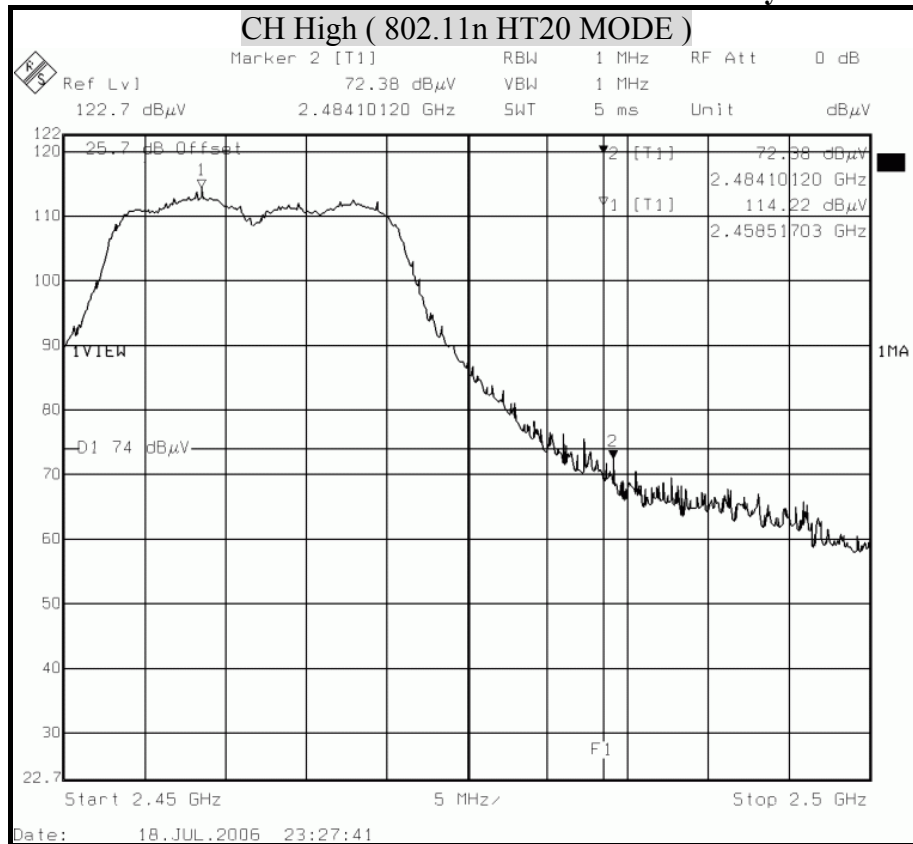
Polarity : Horizontal





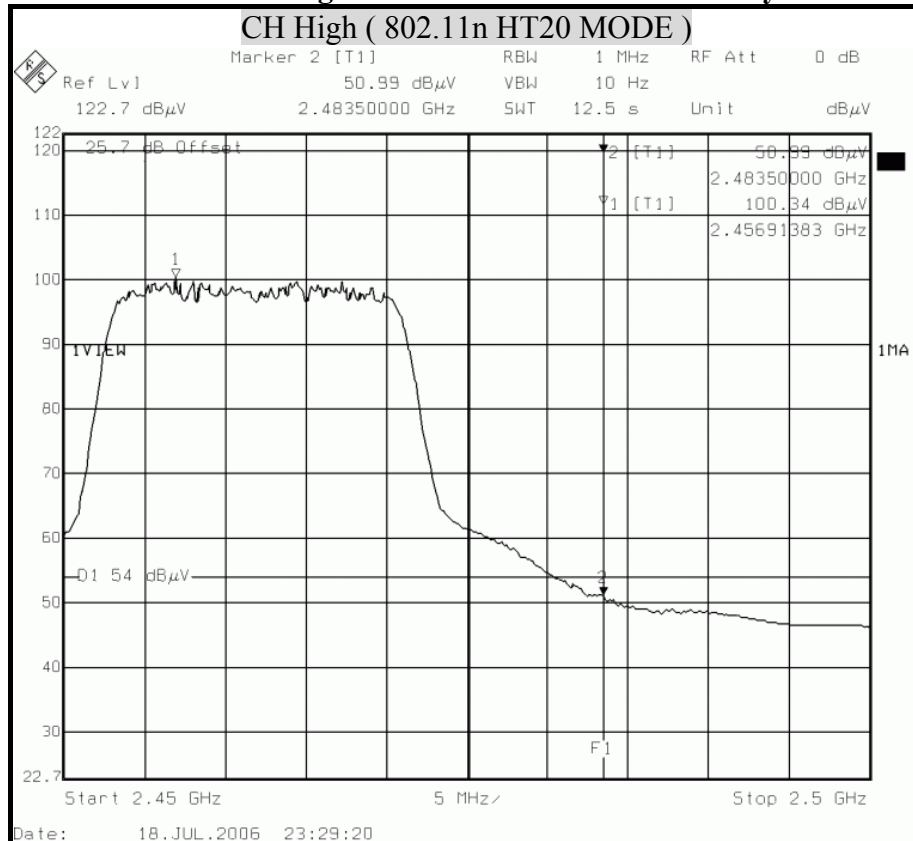
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

Polarity : Vertical

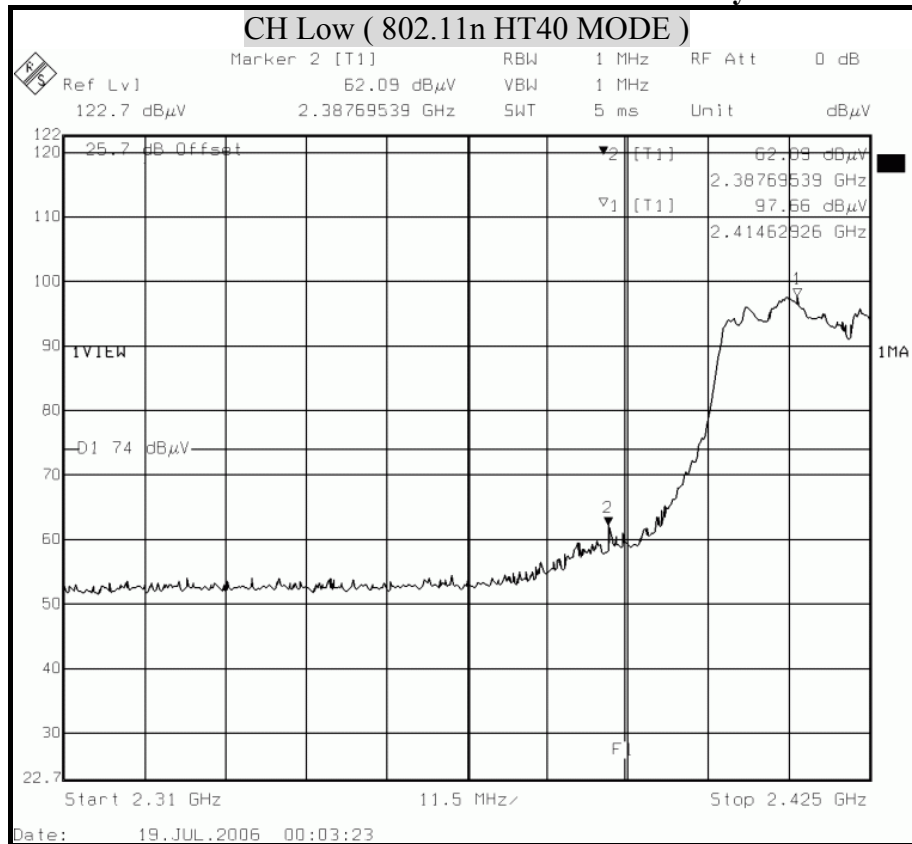




## 2dBi Antenna

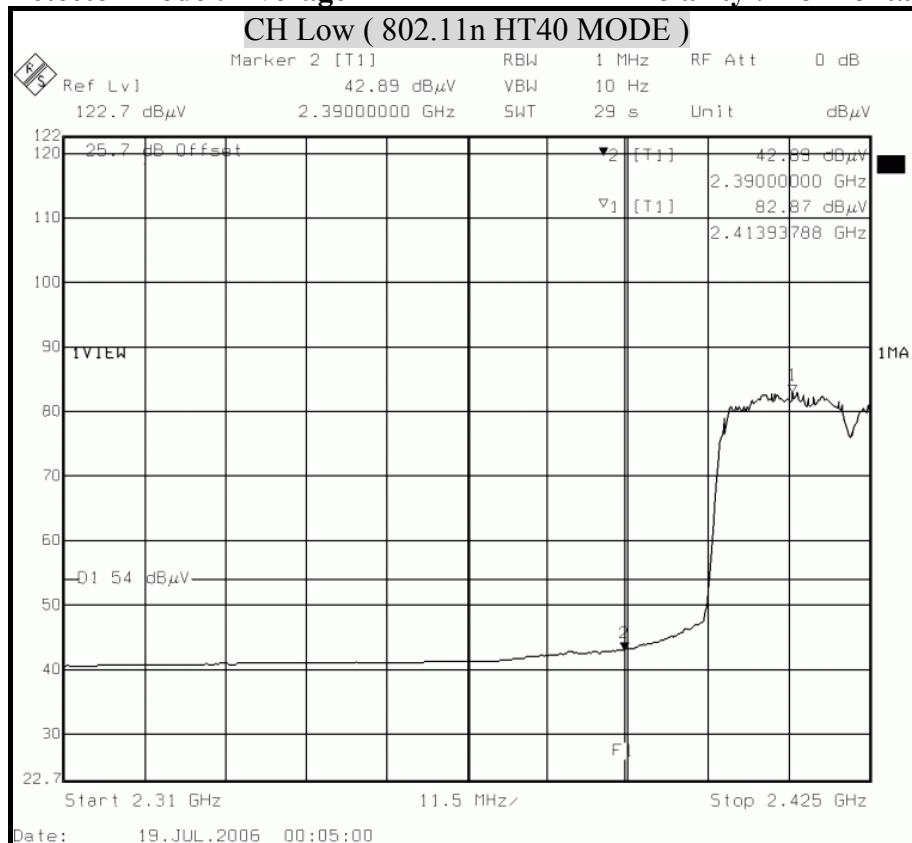
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

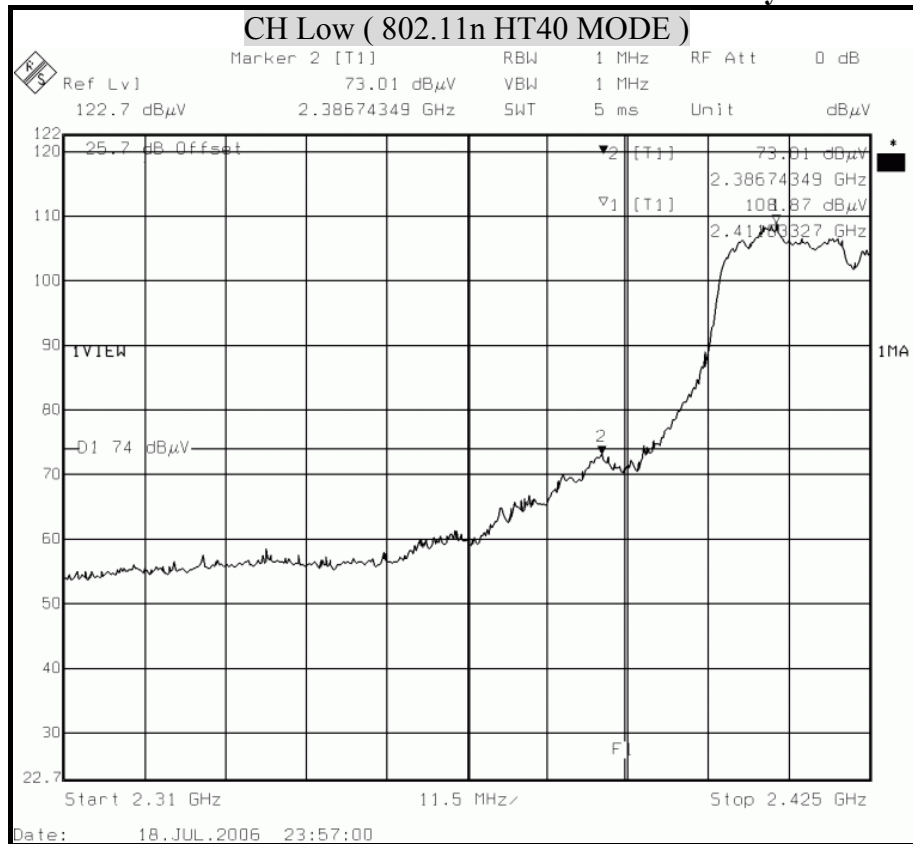
Polarity : Horizontal





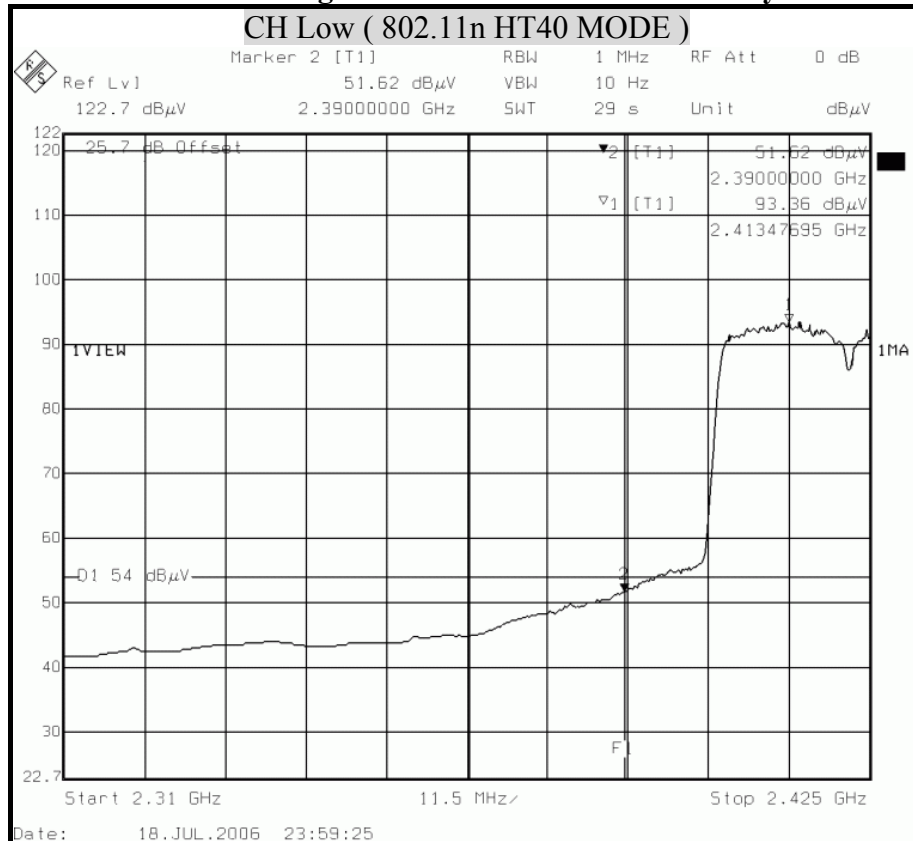
Detector mode : Peak

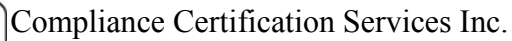
Polarity : Vertical



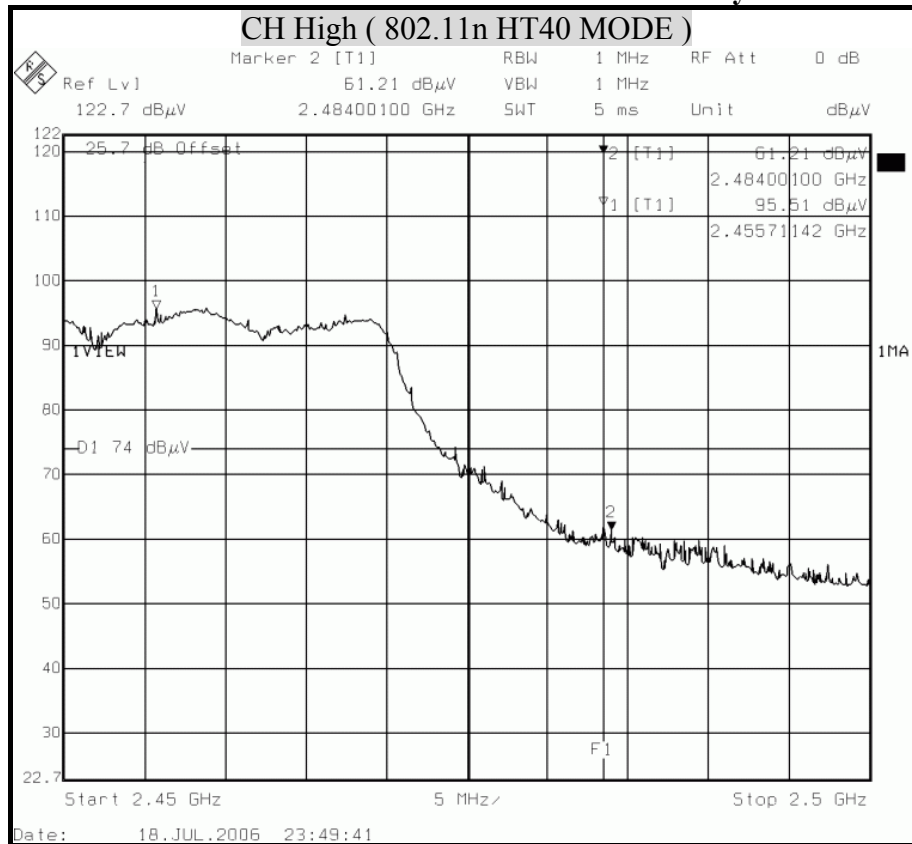
Detector mode : Average

Polarity : Vertical

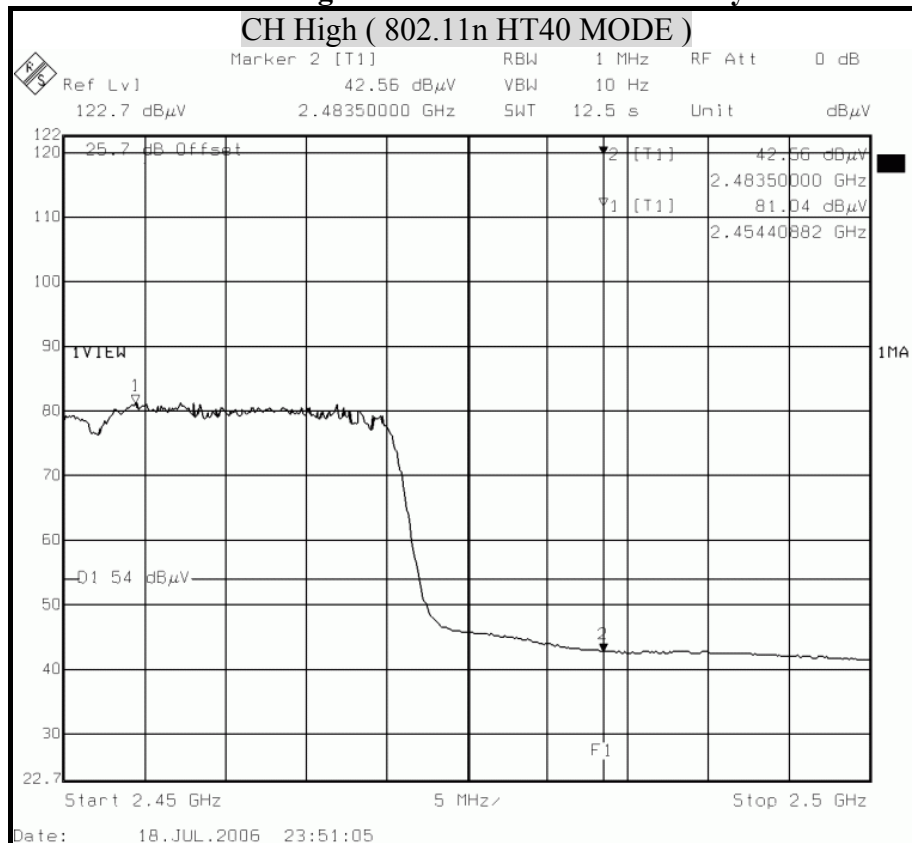




**Polarity : Horizontal**



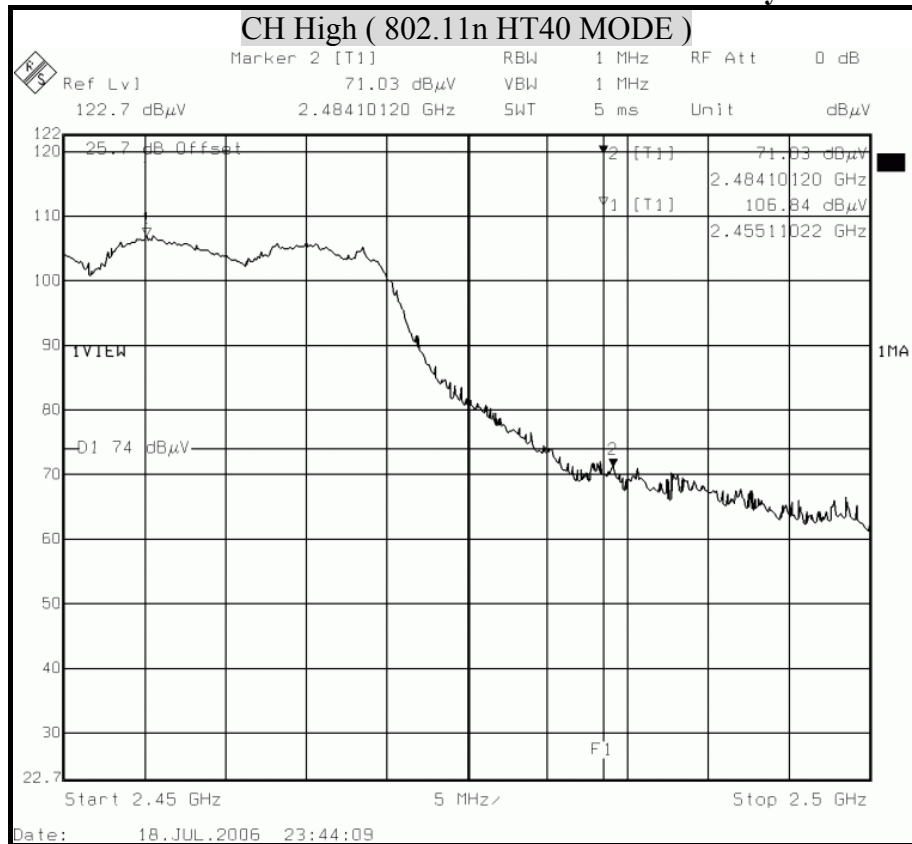
**Polarity : Horizontal**





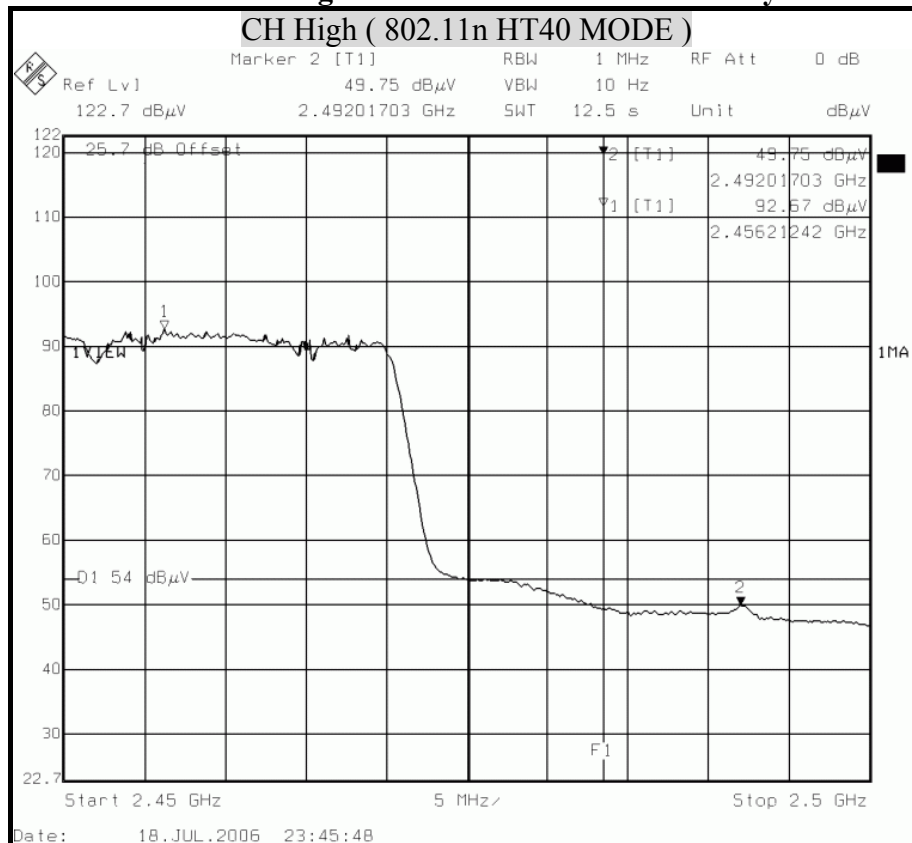
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

Polarity : Vertical

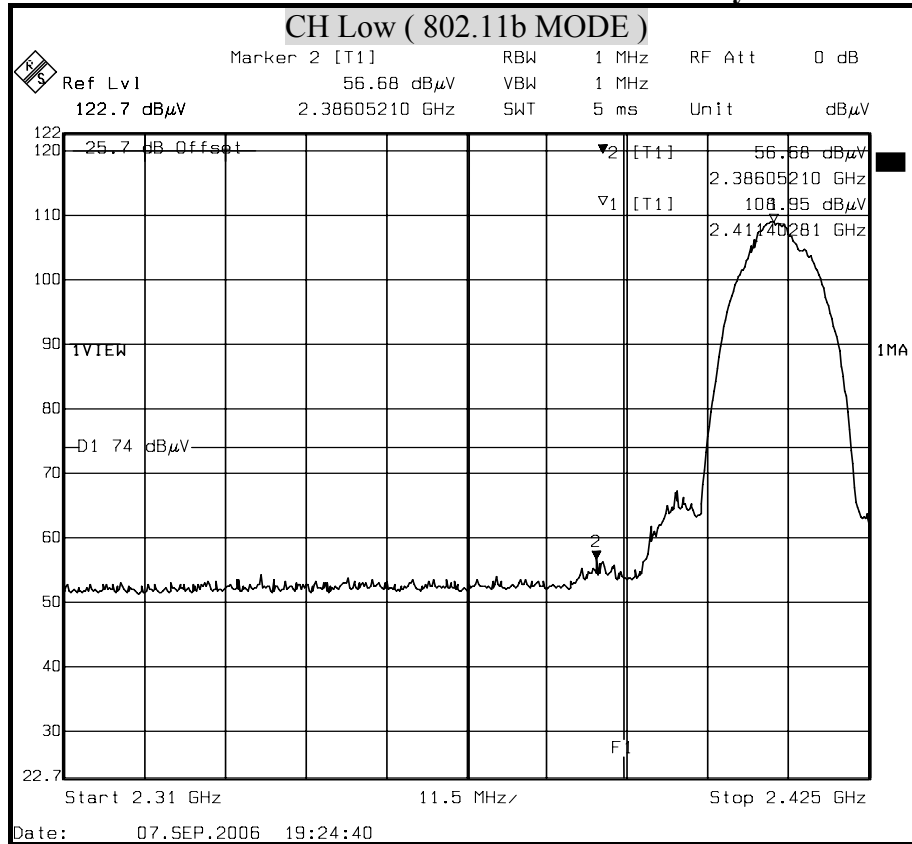




## 3dBi Antenna

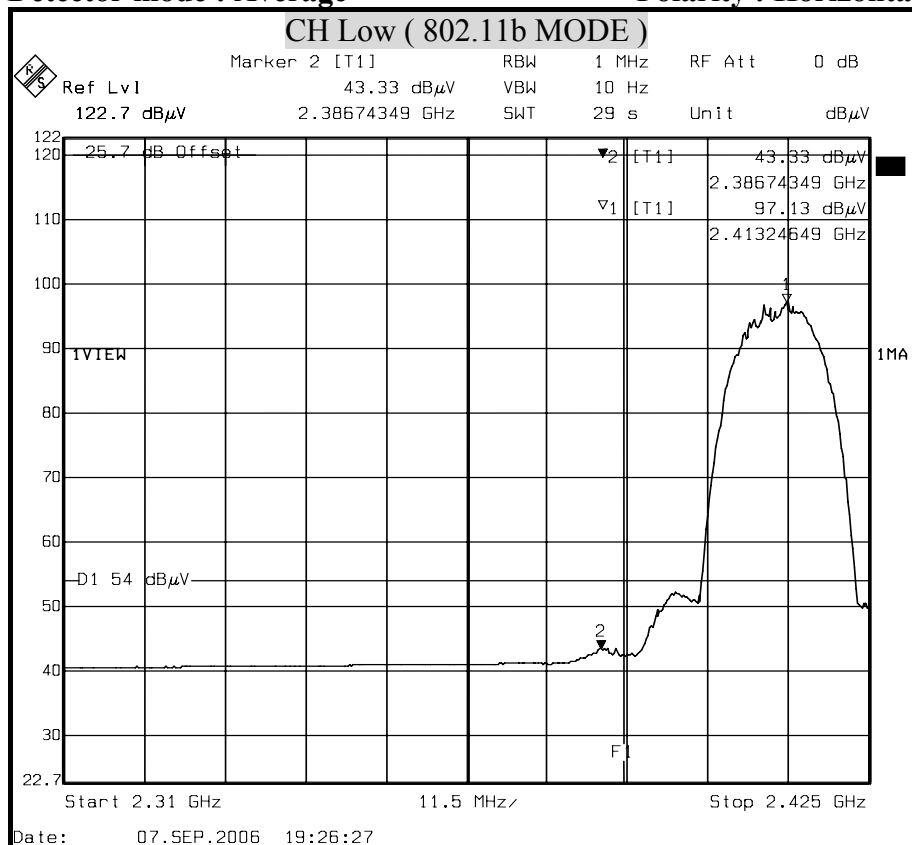
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

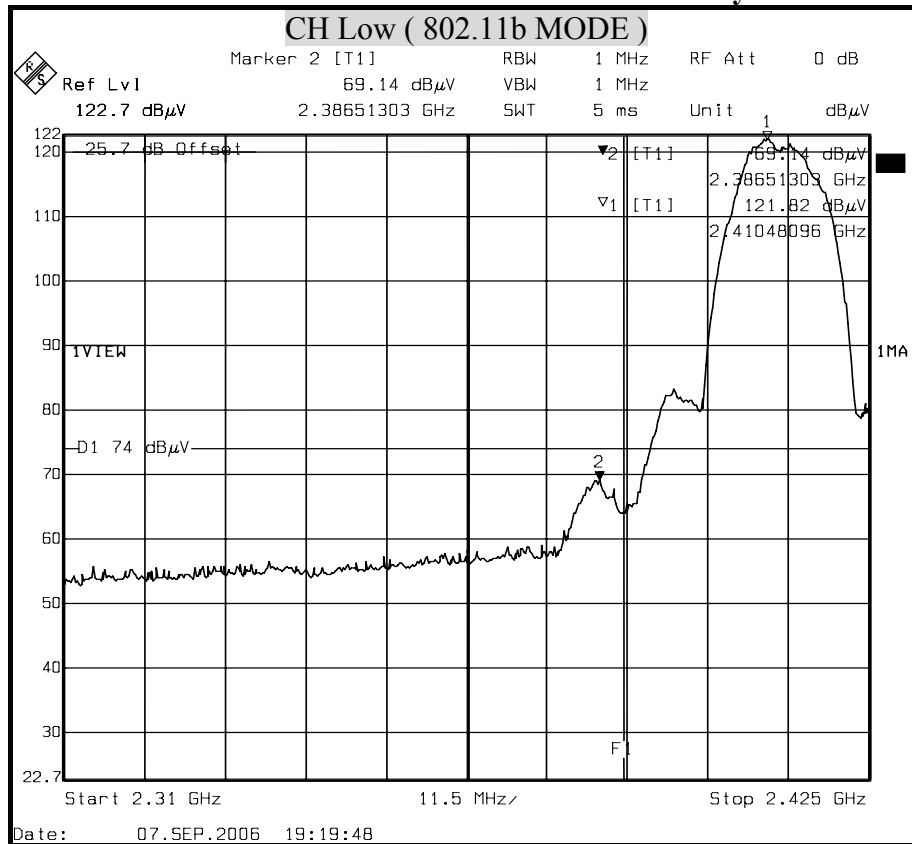
Polarity : Horizontal





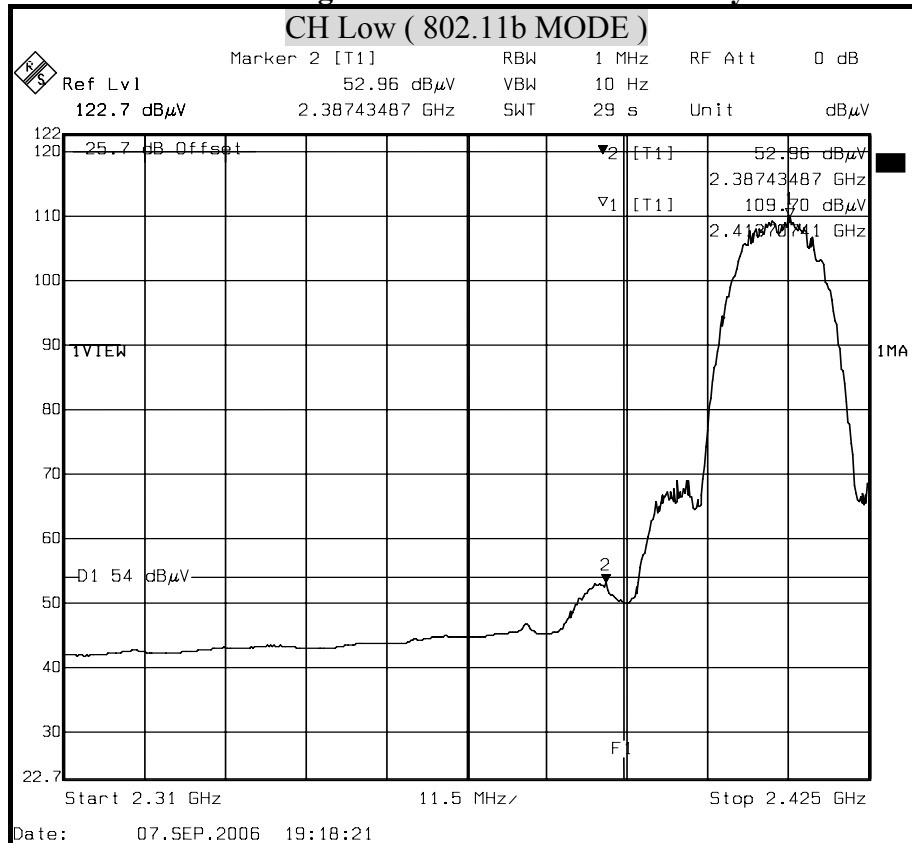
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

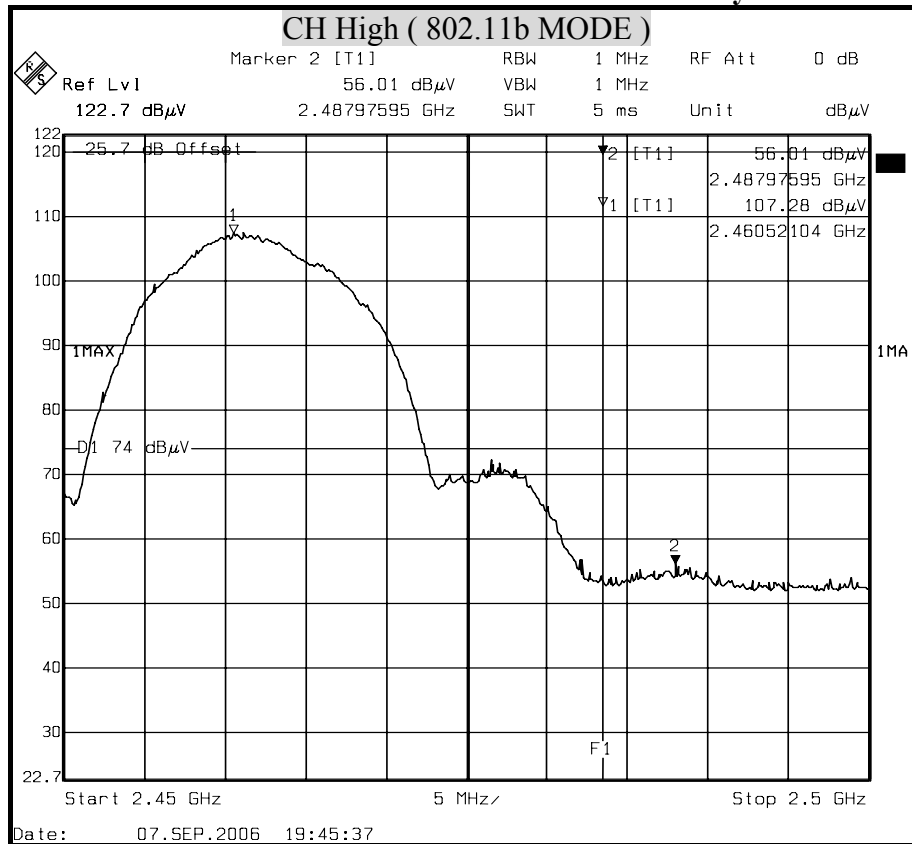
Polarity : Vertical





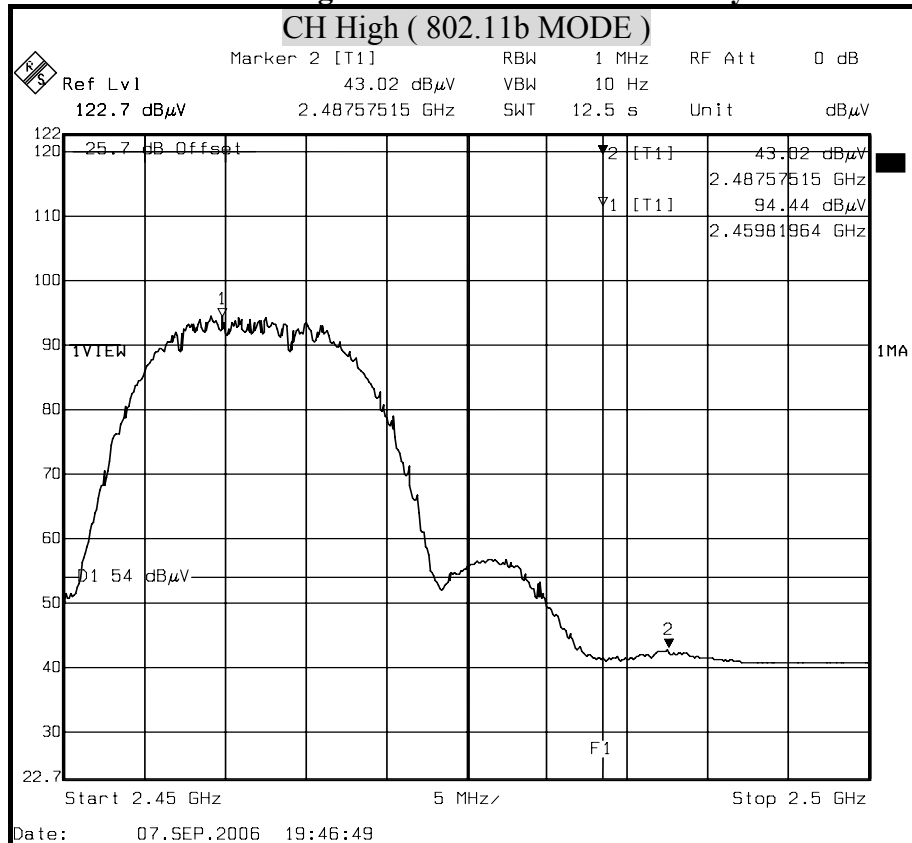
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

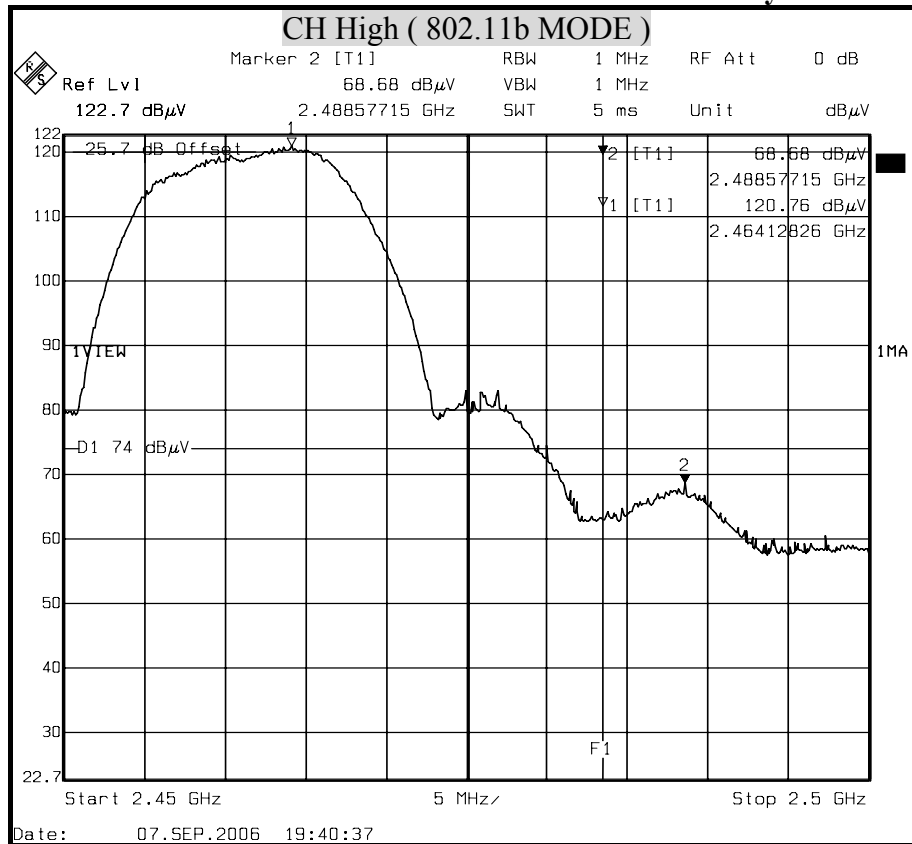
Polarity : Horizontal





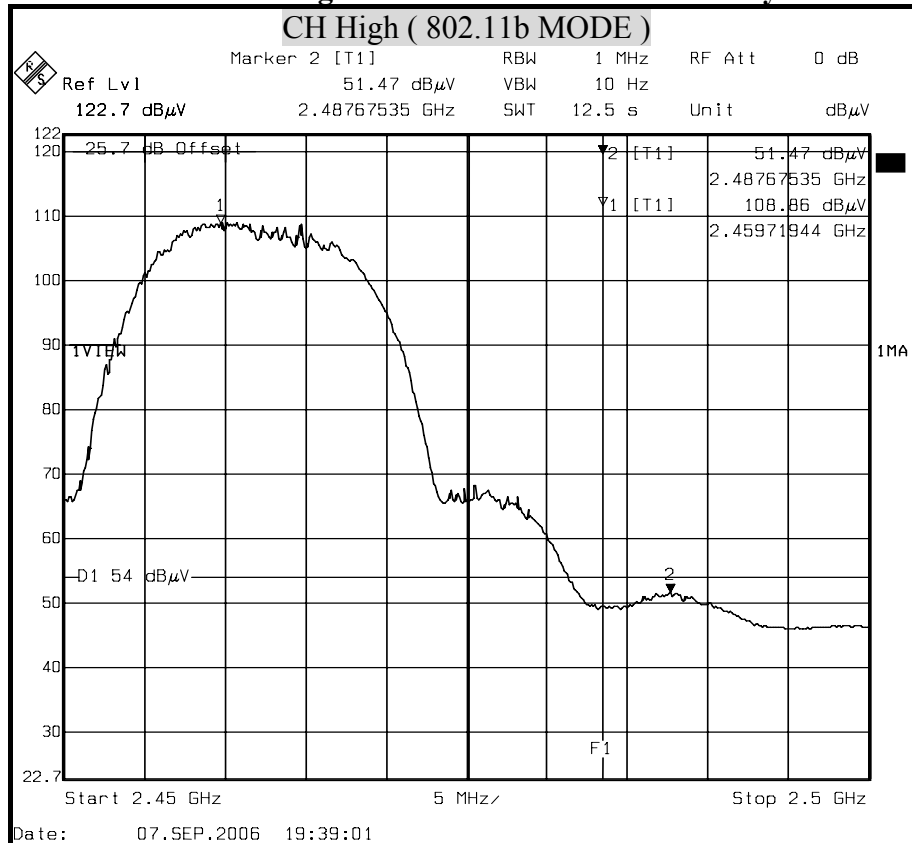
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

Polarity : Vertical

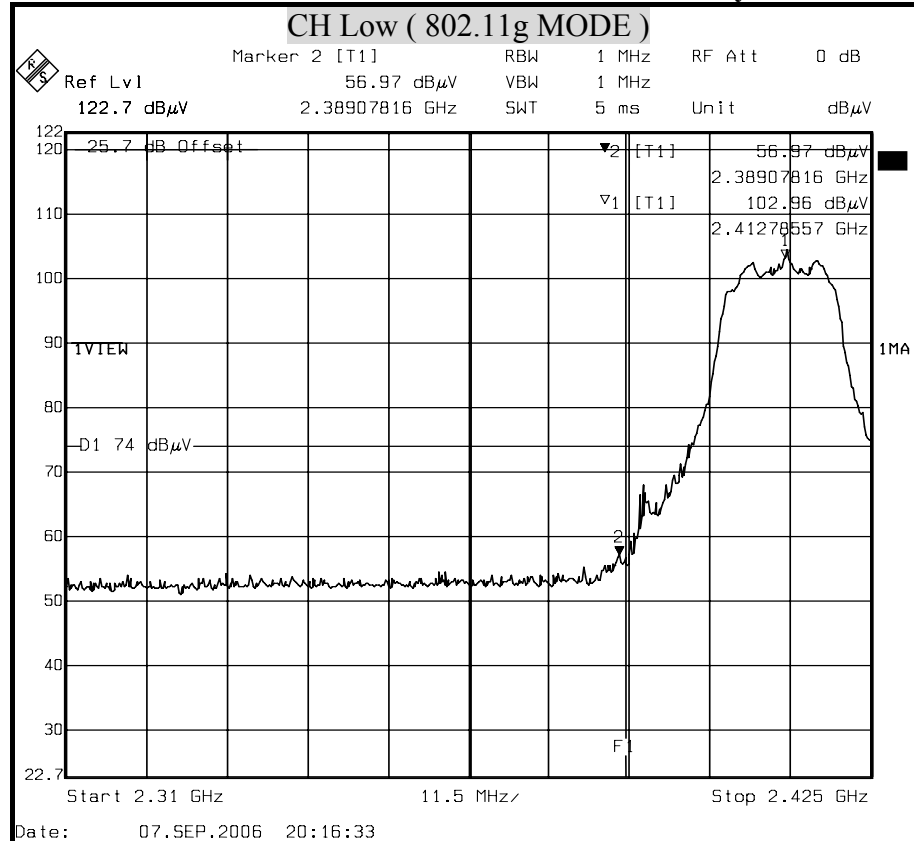




3dBi Antenna

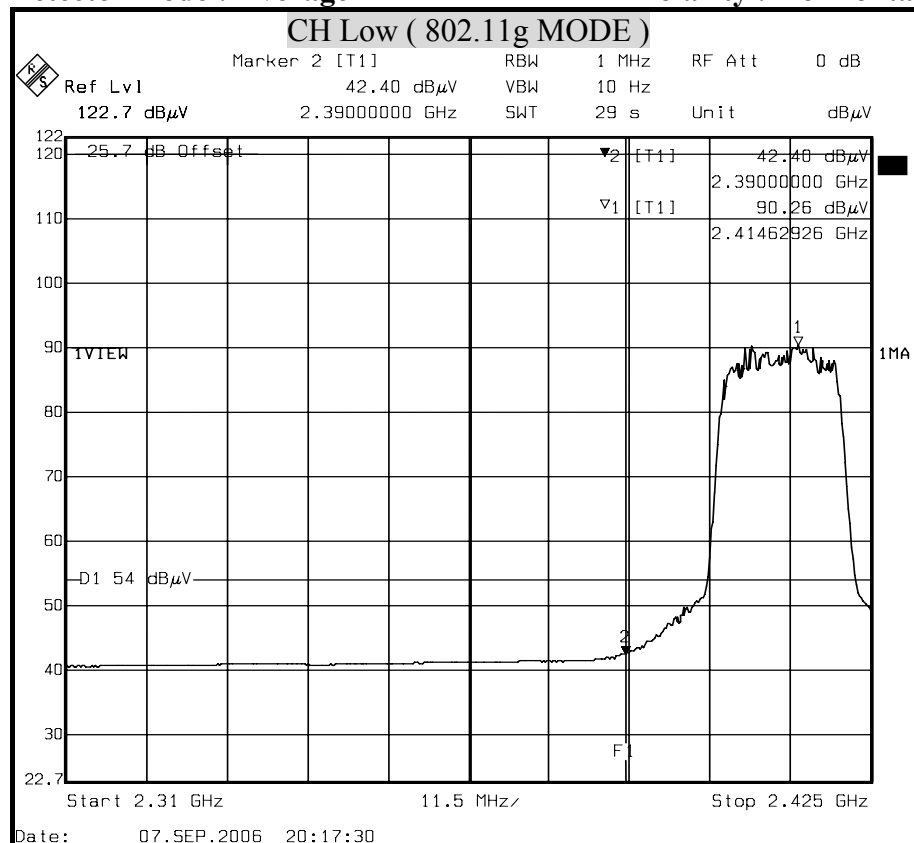
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

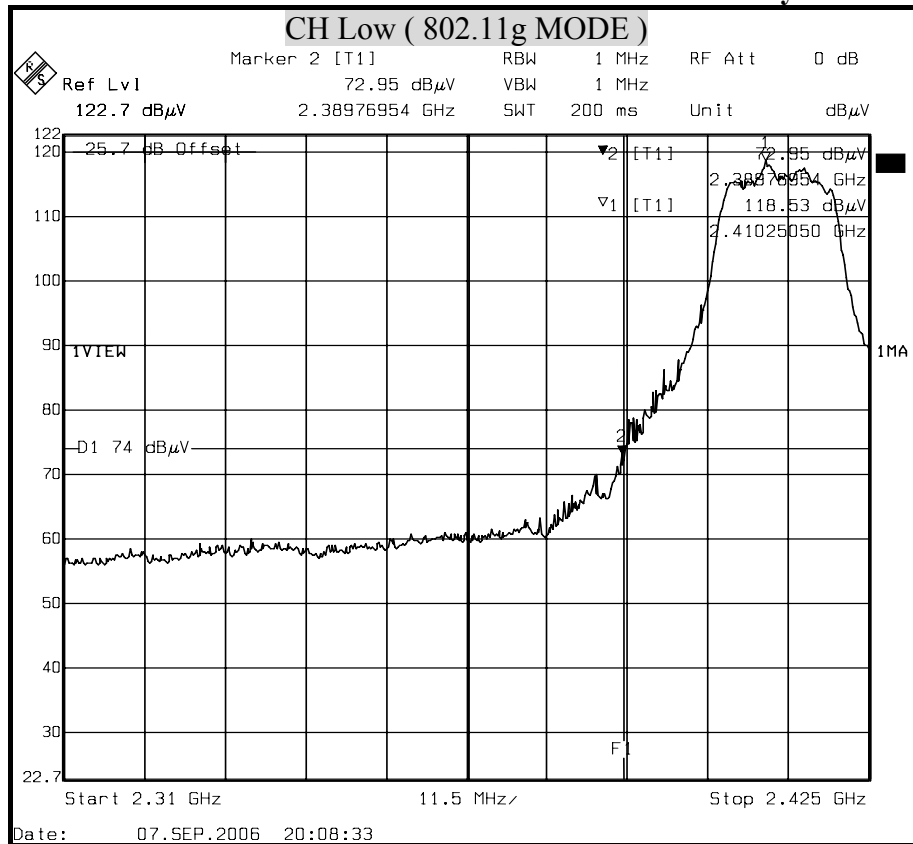
Polarity : Horizontal





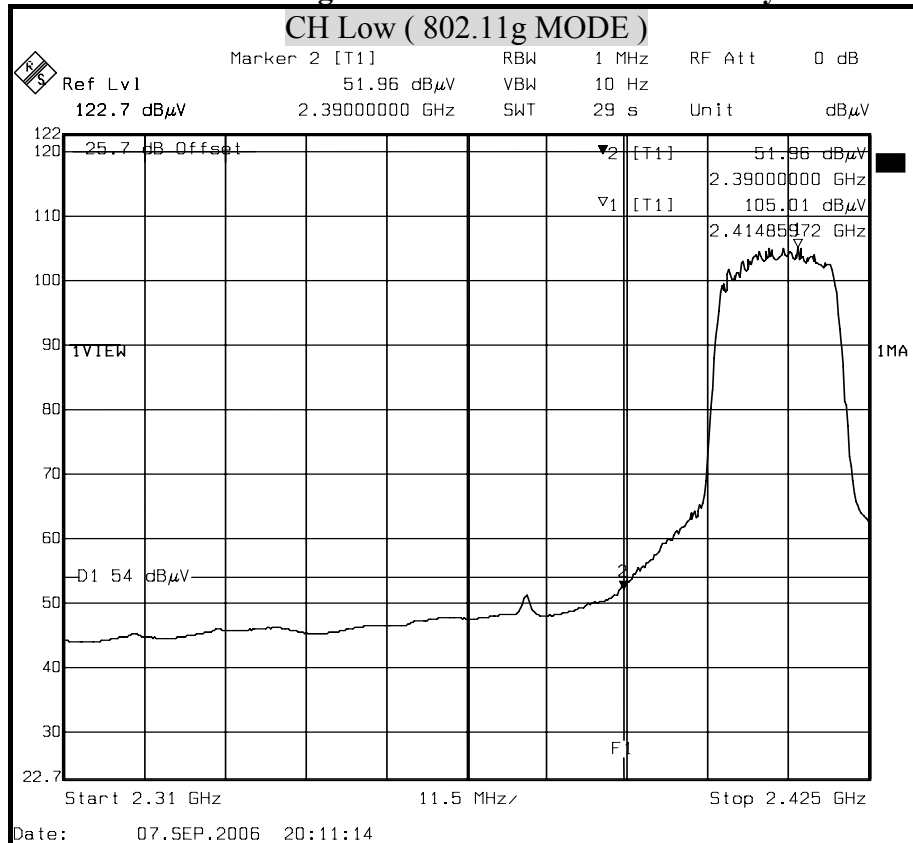
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

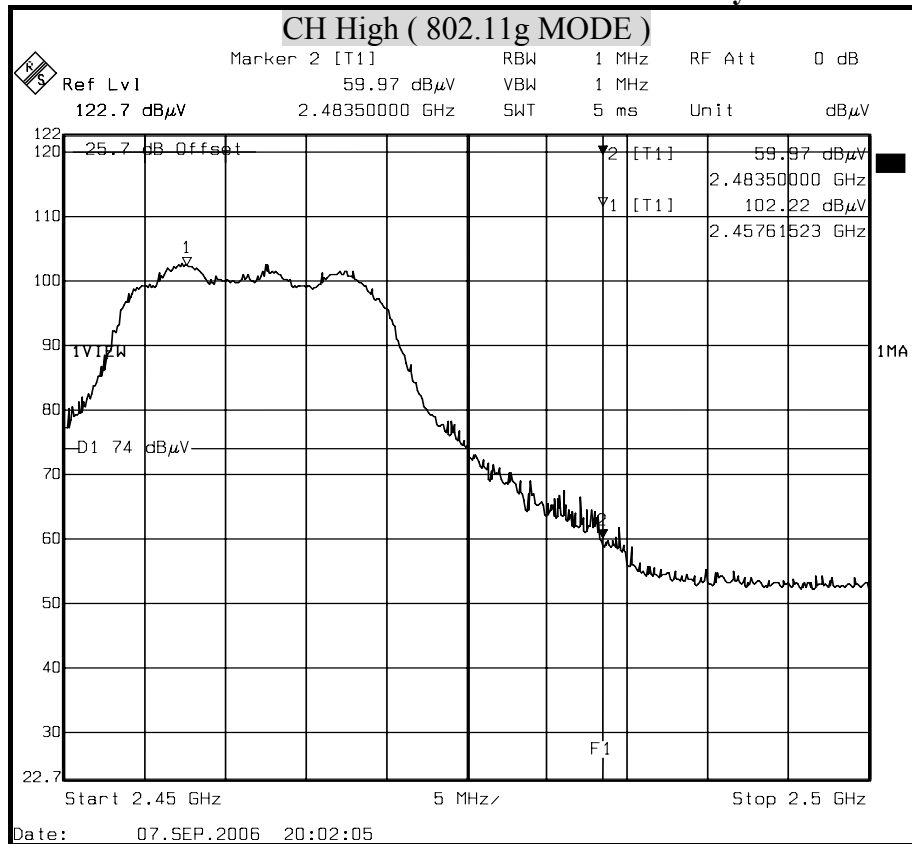
Polarity : Vertical





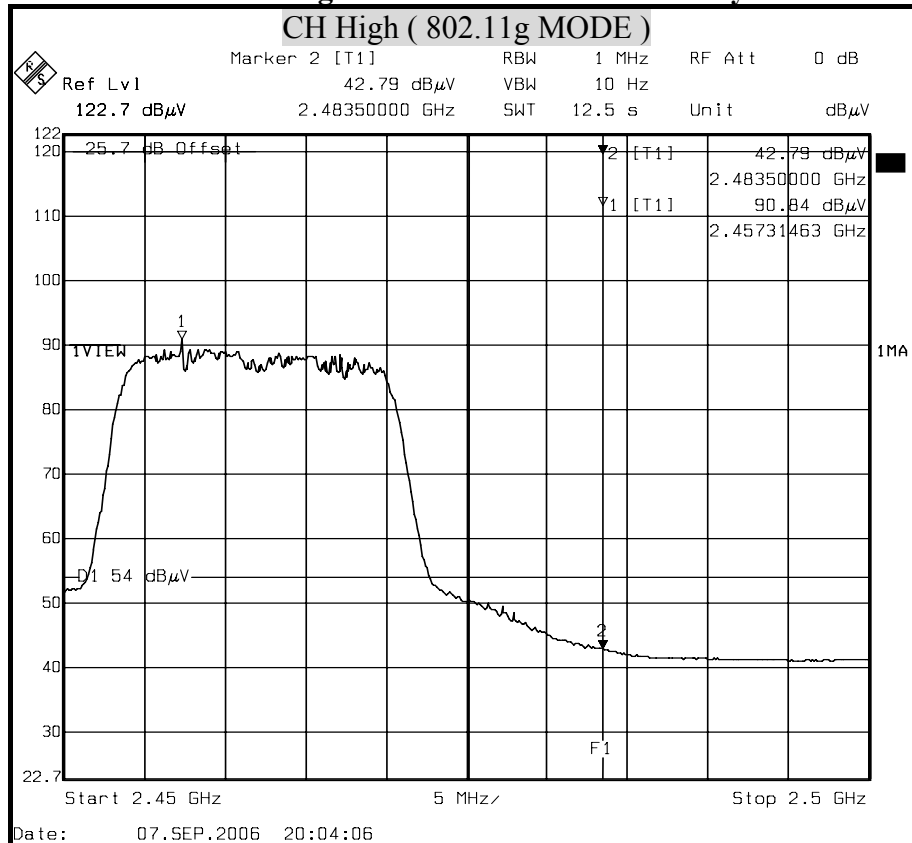
Detector mode : Peak

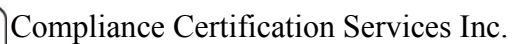
Polarity : Horizontal



Detector mode : Average

Polarity : Horizontal





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**Polarity : Vertical**



**Polarity : Vertical**

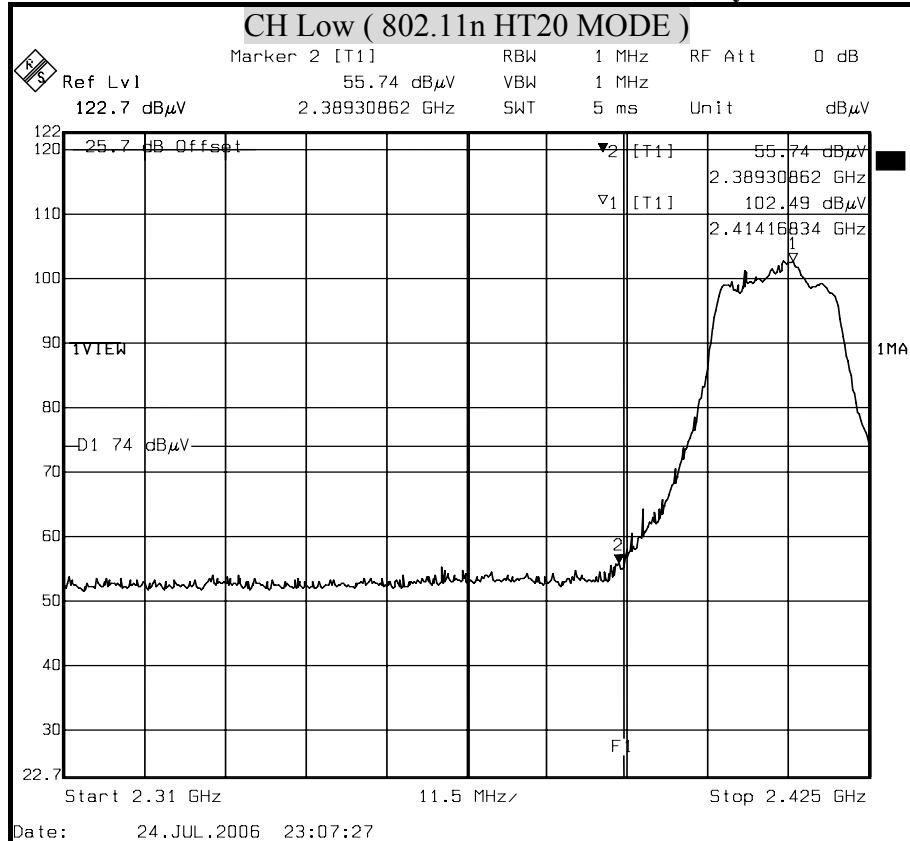




## 3dBi Antenna

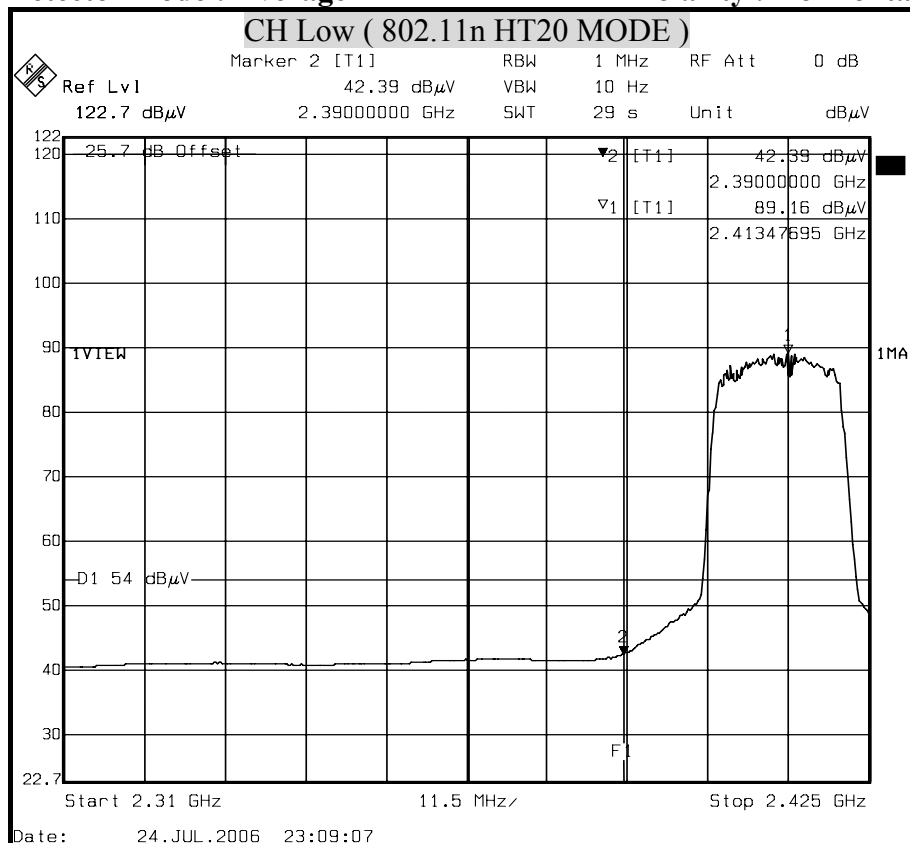
Detector mode : Peak

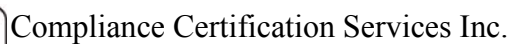
Polarity : Horizontal



Detector mode : Average

Polarity : Horizontal

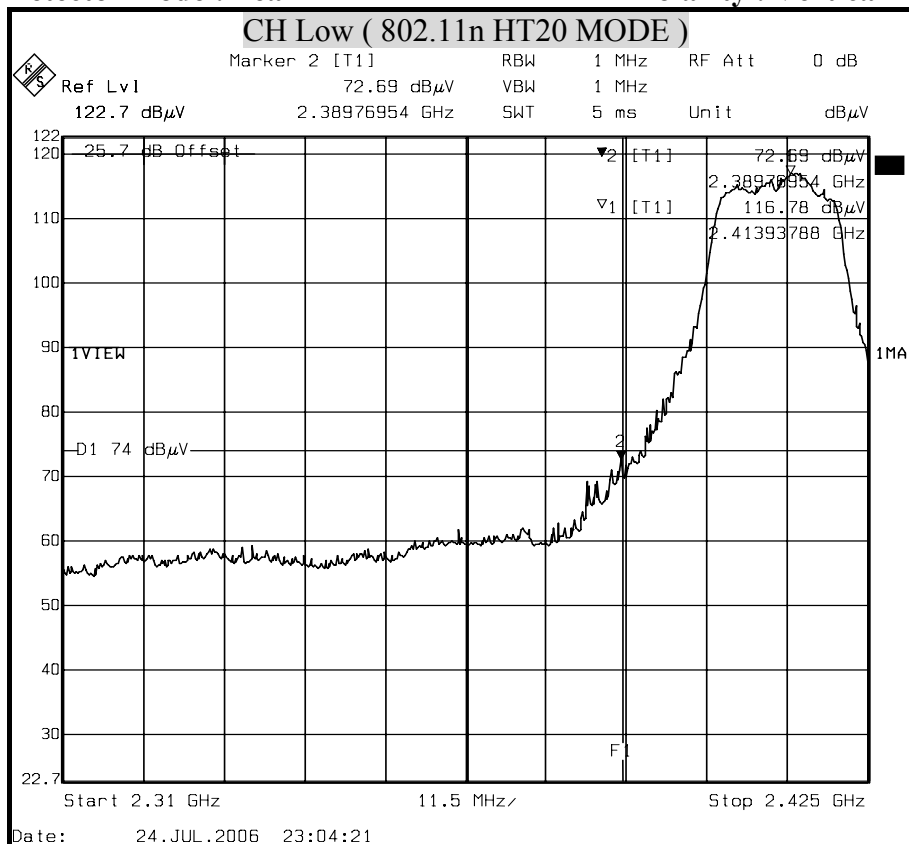




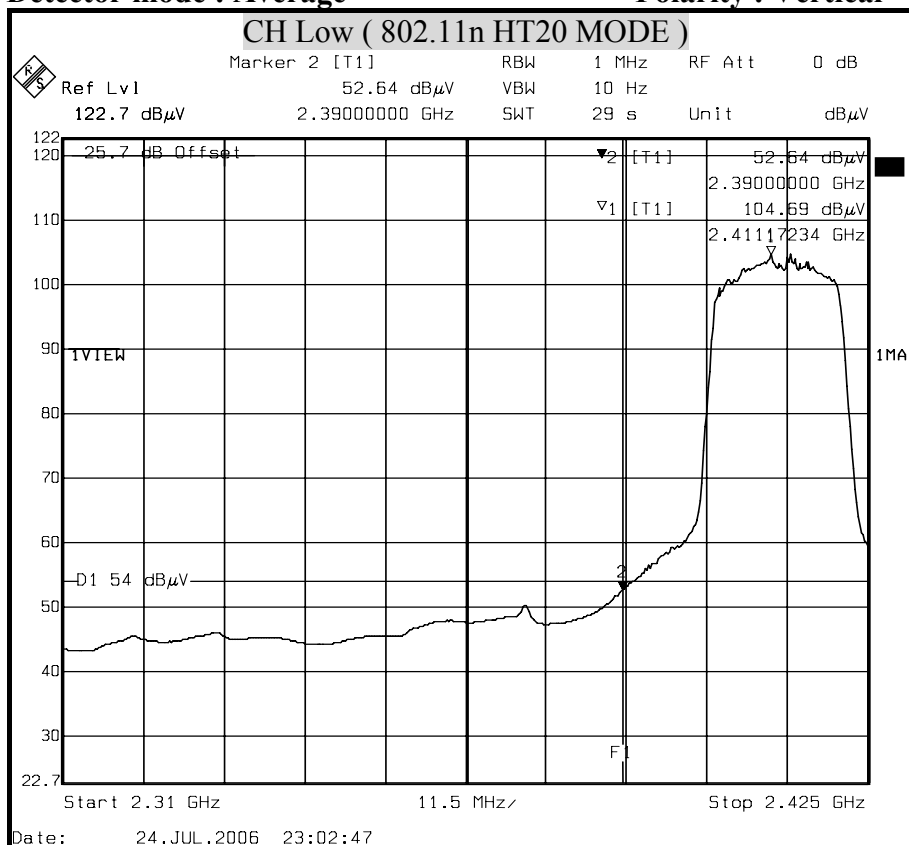
Report No.: 60803003-RP1

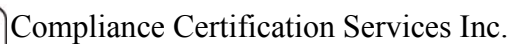
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**Polarity : Vertical**



**Polarity : Vertical**



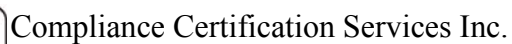


**Polarity : Horizontal**



**Polarity : Horizontal**





**Polarity : Vertical**



**Polarity : Vertical**

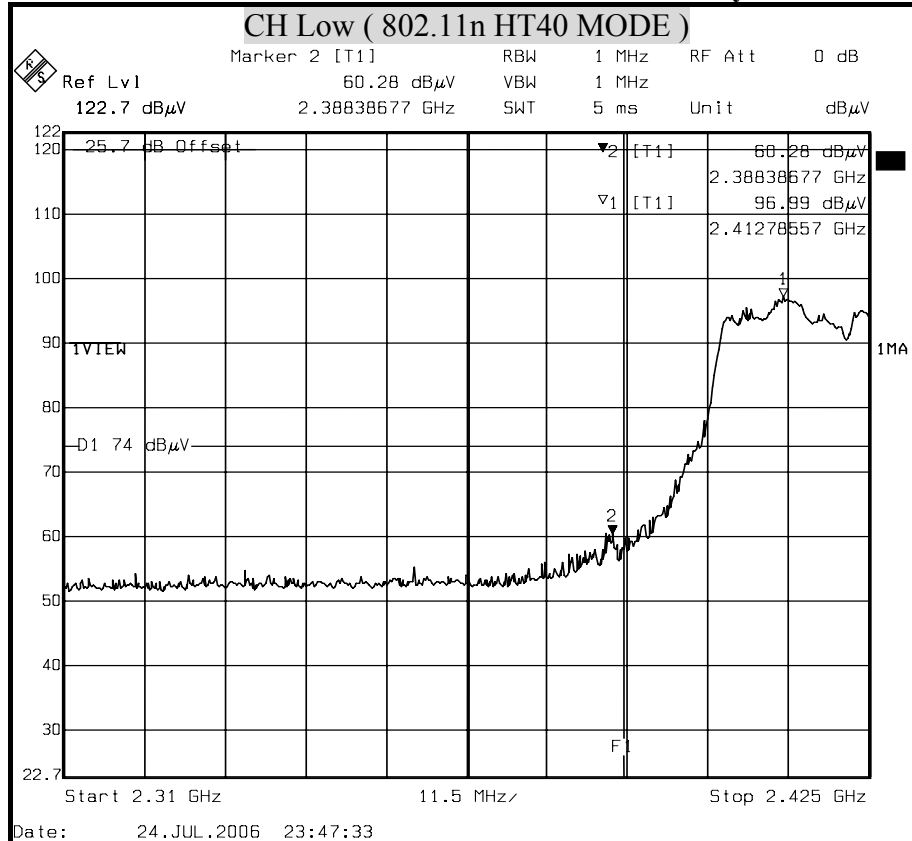




## 3dBi Antenna

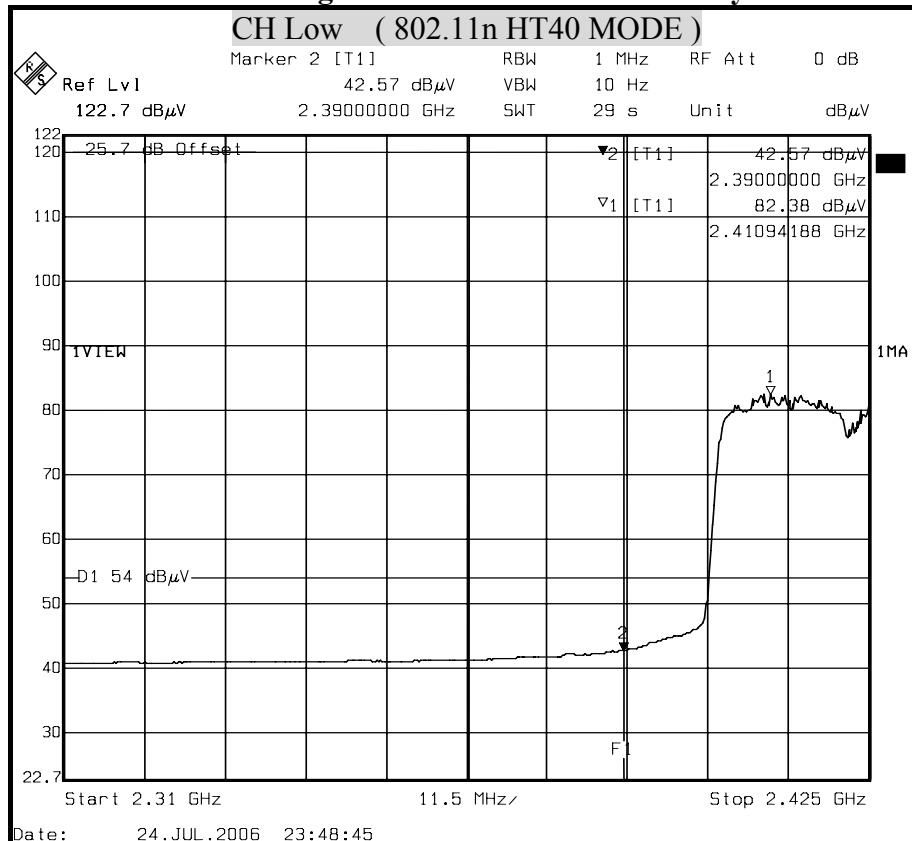
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

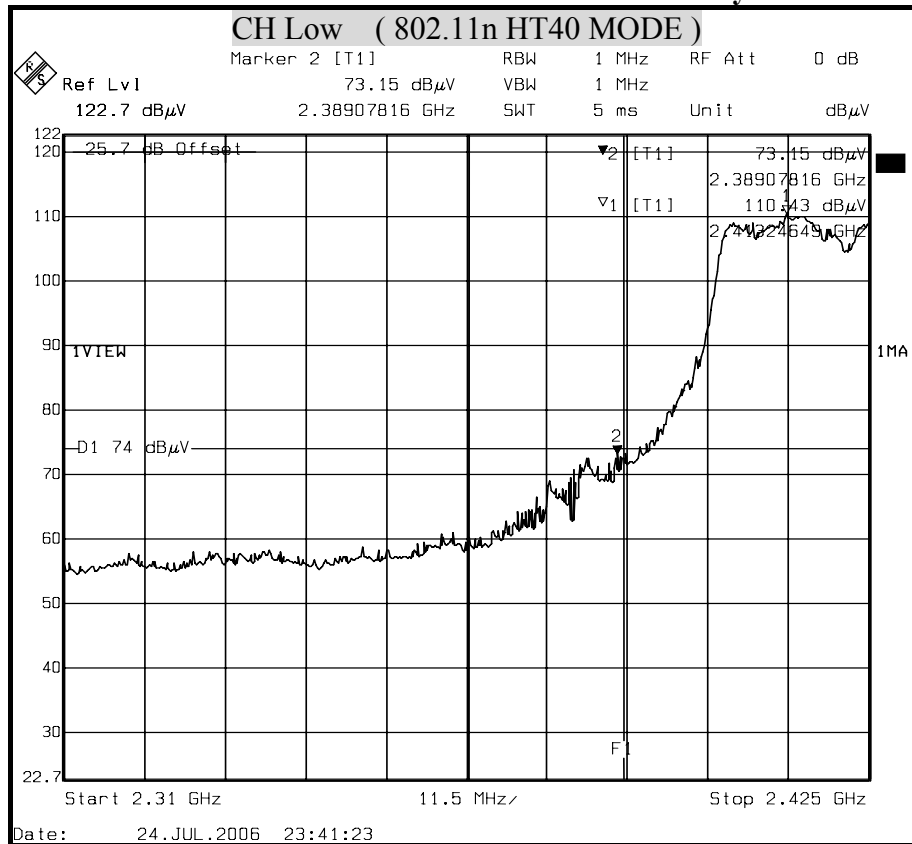
Polarity : Horizontal





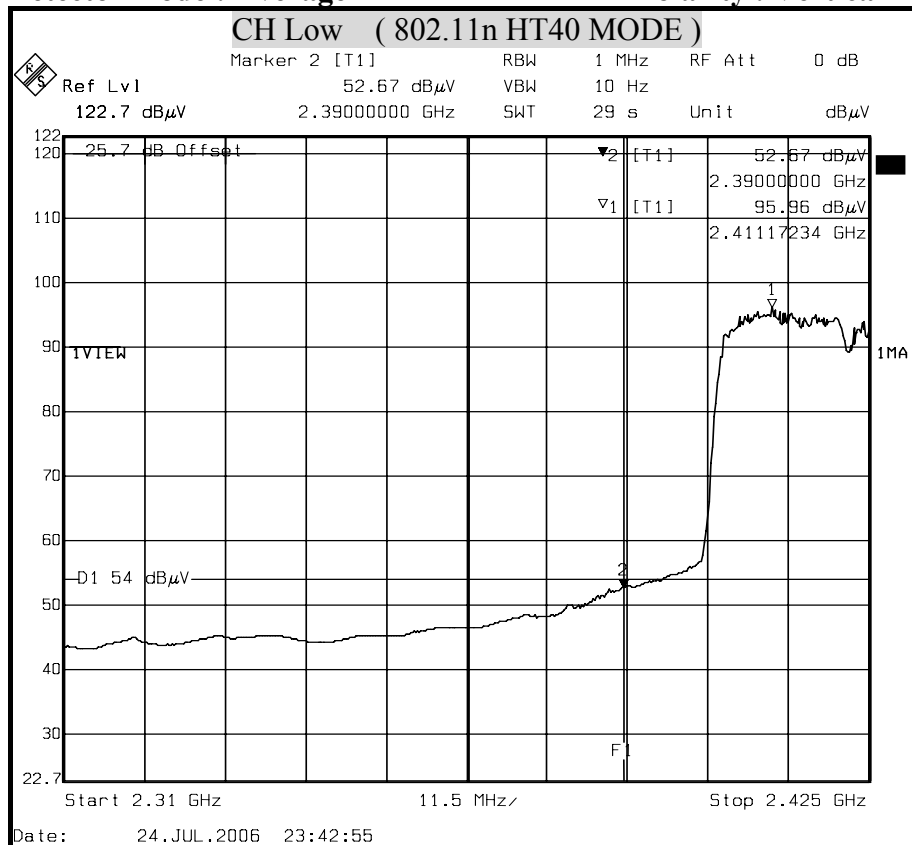
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

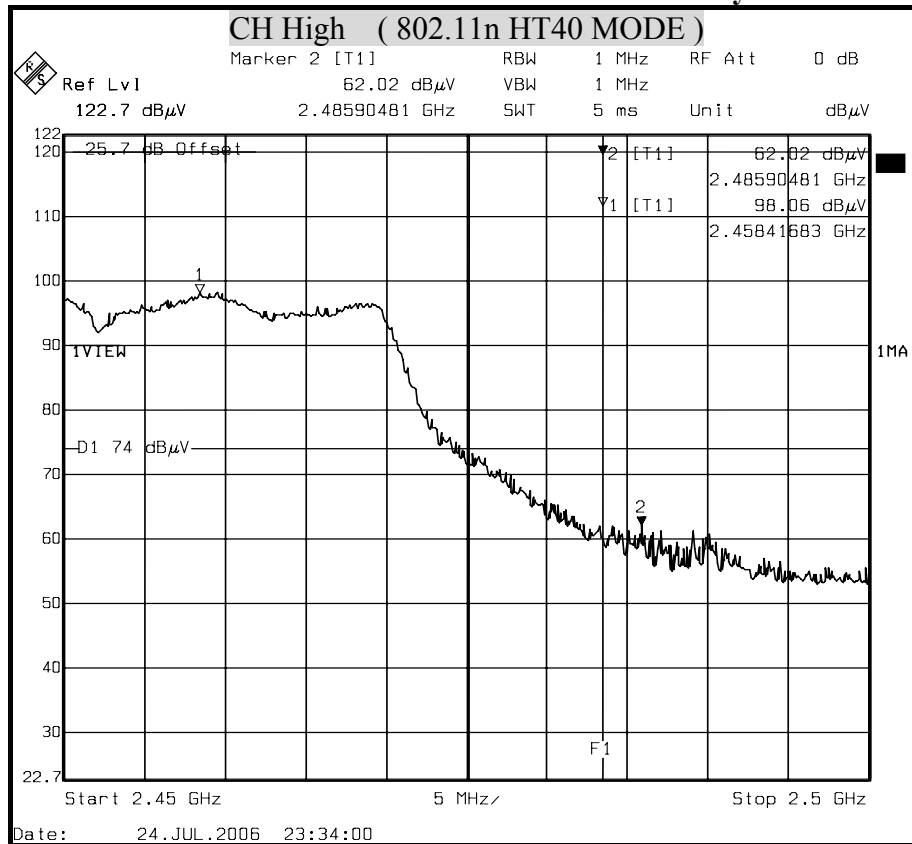
Polarity : Vertical





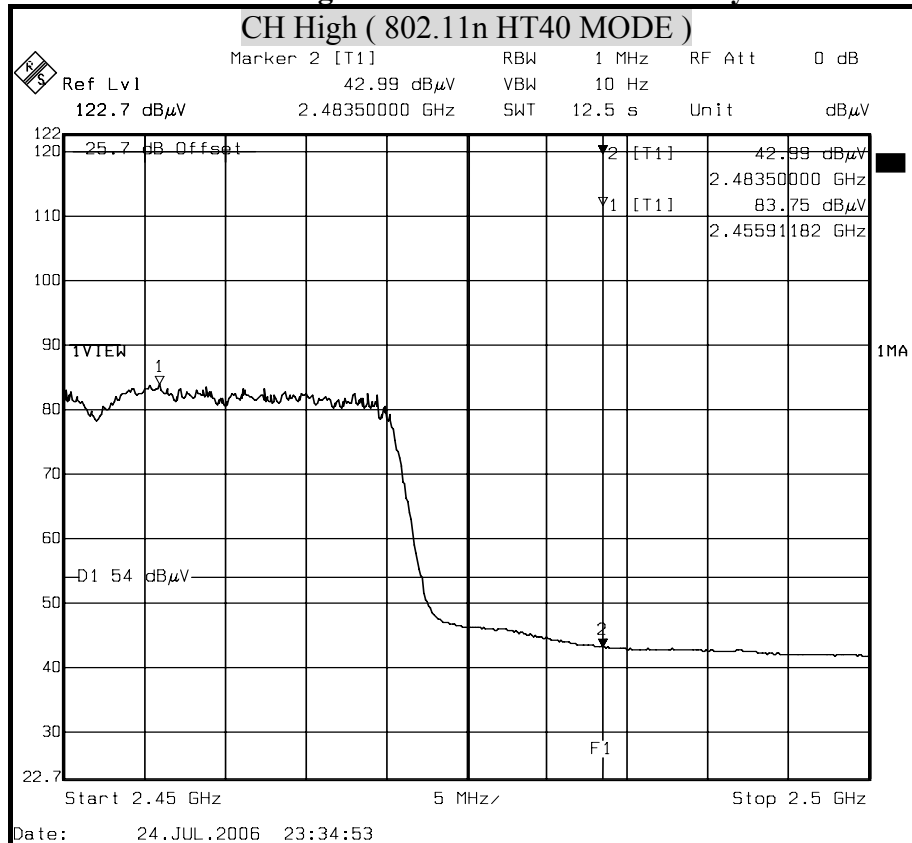
Detector mode : Peak

Polarity : Horizontal



Detector mode : Average

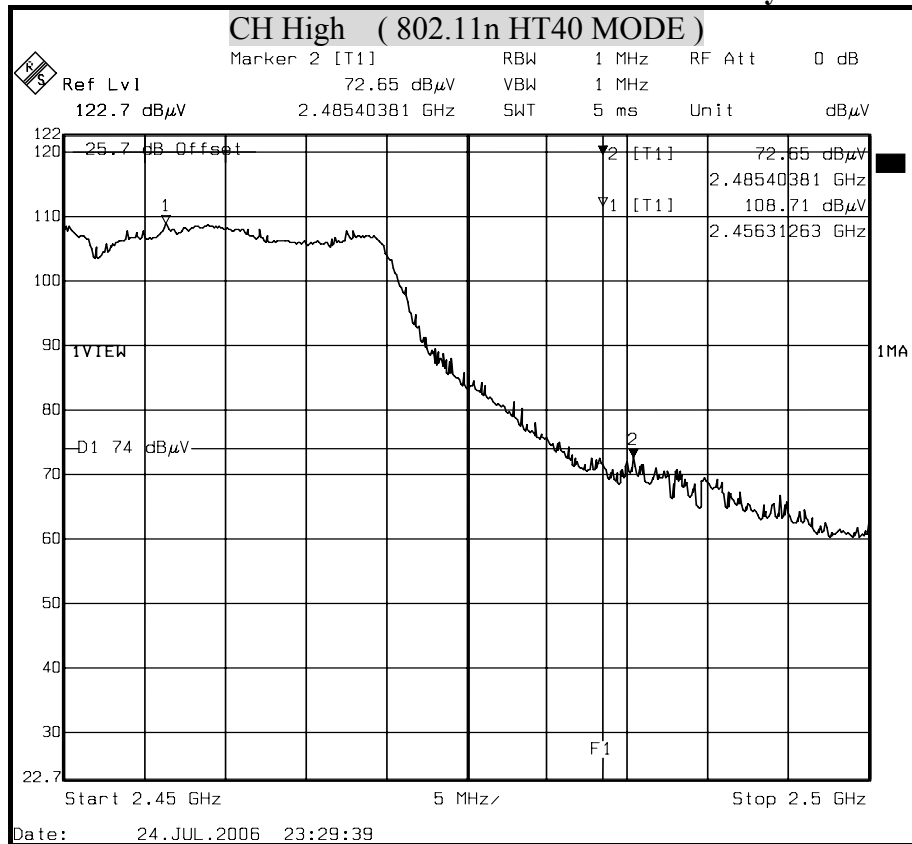
Polarity : Horizontal





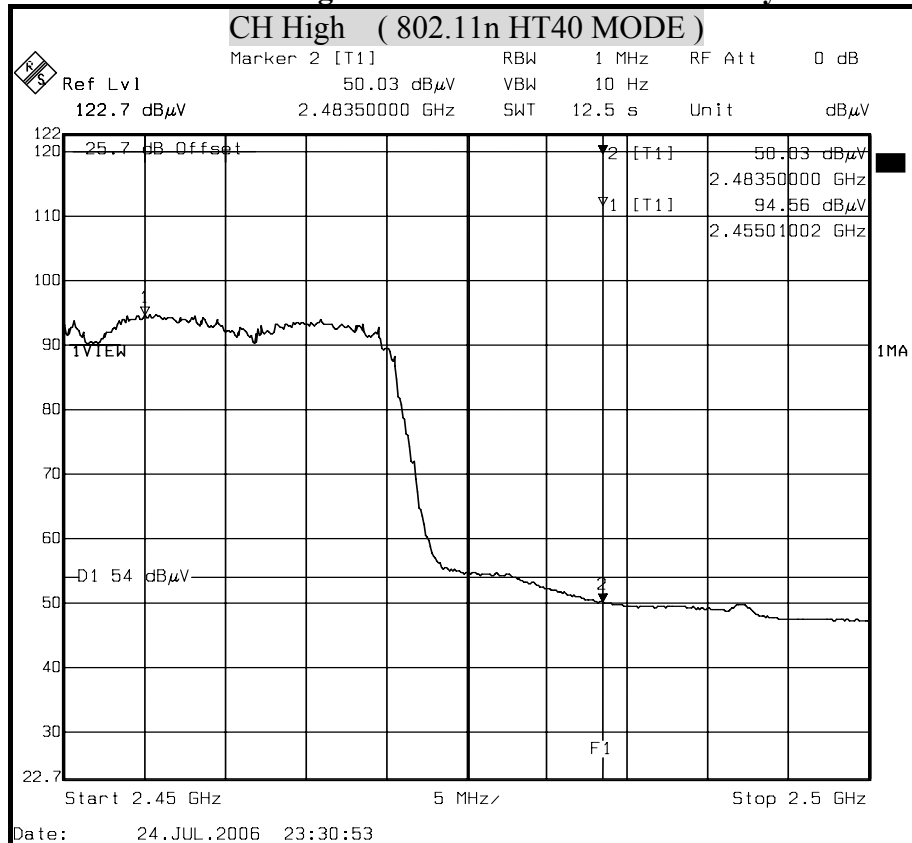
Detector mode : Peak

Polarity : Vertical



Detector mode : Average

Polarity : Vertical





## 8.9 POWERLINE CONDUCTED EMISSIONS

### LIMITS

§ 15.207 (a) Except as shown in paragraph (b) and (c) this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

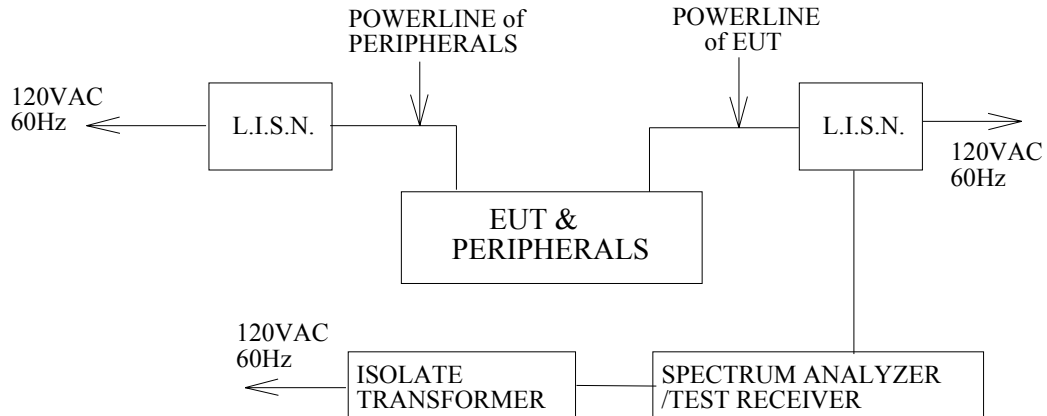
The lower limit applies at the boundary between the frequency ranges.

| Frequency of Emission (MHz) | Conducted limit (dB $\mu$ v) |          |
|-----------------------------|------------------------------|----------|
|                             | Quasi-peak                   | Average  |
| 0.15 - 0.5                  | 66 to 56                     | 56 to 46 |
| 0.5 - 5                     | 56                           | 46       |
| 5 - 30                      | 60                           | 50       |

### TEST EQUIPMENTS

The following test equipments are used during the conducted powerline tests:

| Manufacturer or Type   | Model No. | Serial No.  | Date of Calibration | Calibration Period | Remark |
|------------------------|-----------|-------------|---------------------|--------------------|--------|
| EMCO L.I.S.N.          | 3850/2    | 9311-1025   | January 16, 2006    | 1 Year             | FINAL  |
| CHASE L.I.S.N          | NNLK 8129 | 8129118     | January 16, 2006    | 1 Year             | FINAL  |
| R & S TEST RECEIVER    | ESHS30    | 838550/003  | February 27, 2006   | 1 Year             | FINAL  |
| KEENE SHIELDED ROOM    | 5983      | No.1        | N/A                 | N/A                | FINAL  |
| R & S PULSE LIMIT      | EHS3Z2    | 357.8810.52 | July 10, 2006       | 1 Year             | FINAL  |
| N TYPE COAXIAL CABLE   | -----     | -----       | August 21, 2006     | 1 Year             | FINAL  |
| 50 $\Omega$ TERMINATOR | -----     | -----       | July 10, 2006       | 1 Year             | FINAL  |

**TEST SETUP****TEST PROCEDURE**

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80cm above the horizontal ground plane. The EUT IS CONFIGURED IN ACCORDANCE WITH ANSI C63.4.

The resolution bandwidth is set to 9 kHz for both quasi-peak detection and average detection measurements.

Line conducted data is recorded for both NEUTRAL and LINE.

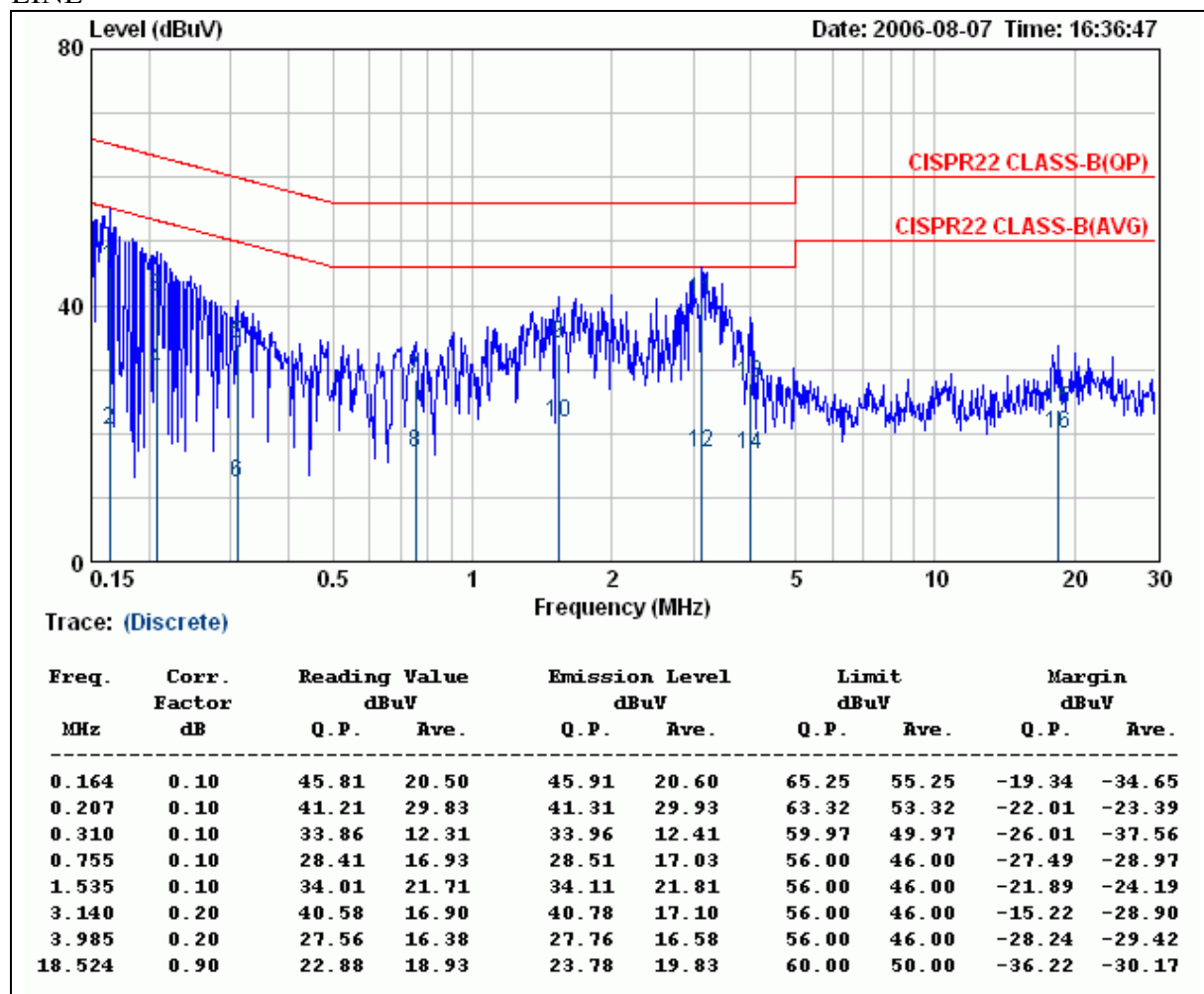
**TEST RESULTS**

No non-compliance noted

**CONDUCTED RF VOLTAGE MEASUREMENT**

|                     |                                               |                          |            |
|---------------------|-----------------------------------------------|--------------------------|------------|
| <b>Product Name</b> | 802.11b/g MIMO Mini-PCI Card                  | <b>Test Date</b>         | 2006/08/07 |
| <b>Model</b>        | WMP-N06                                       | <b>Test By</b>           | Alan Fan   |
| <b>Test Mode</b>    | 2dBi Antenna<br>Normal operating (worst case) | <b>TEMP&amp;Humidity</b> | 28°C, 52%  |

LINE

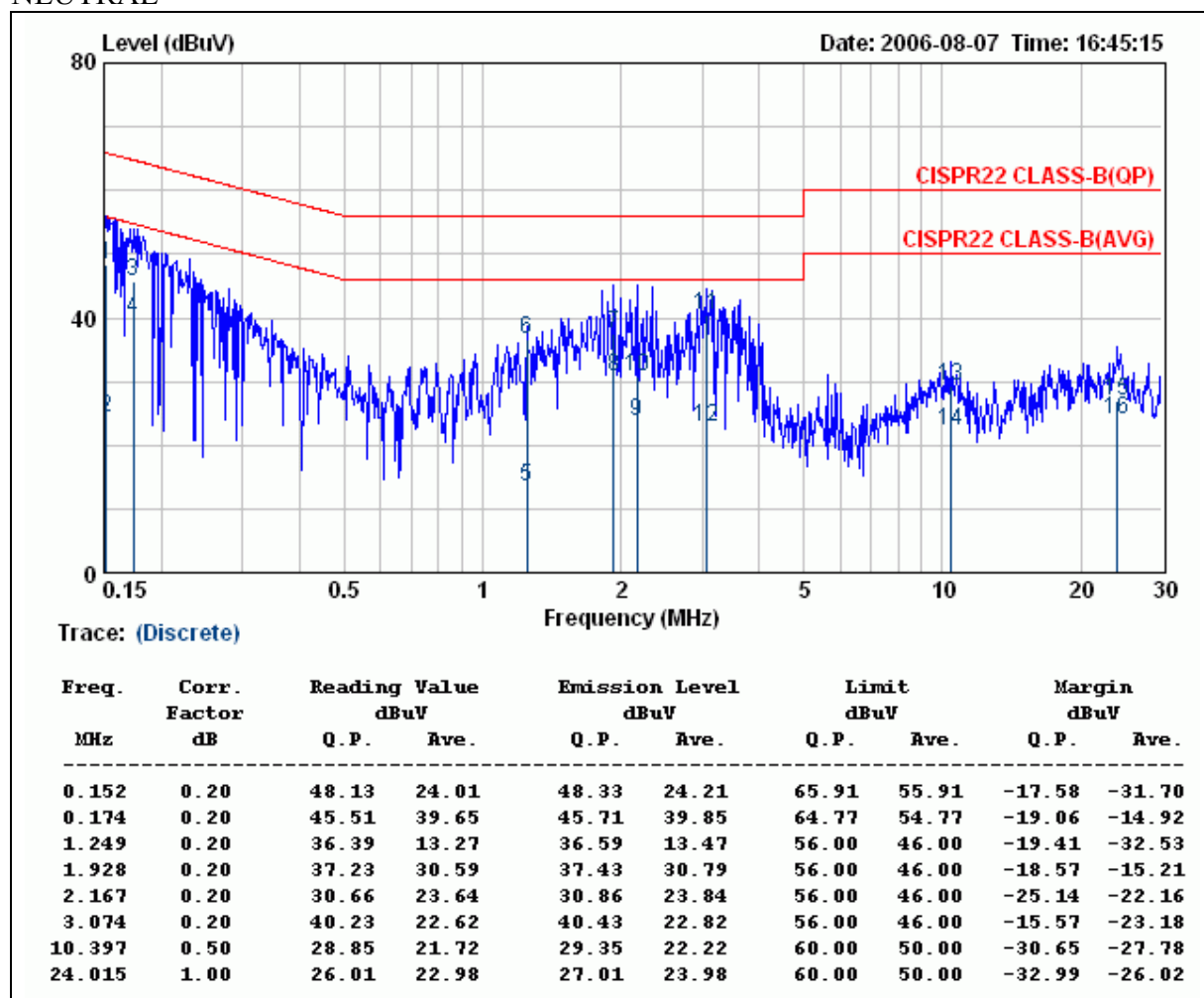
**Remark:**

1. Correction Factor = Insertion loss + cable loss
2. Margin value = Emission level – Limit value



|              |                                               |               |            |
|--------------|-----------------------------------------------|---------------|------------|
| Product Name | 802.11b/g MIMO Mini-PCI Card                  | Test Date     | 2006/08/07 |
| Model        | WMP-N06                                       | Test By       | Alan Fan   |
| Test Mode    | 2dBi Antenna<br>Normal operating (worst case) | TEMP&Humidity | 28°C, 52%  |

NEUTRAL

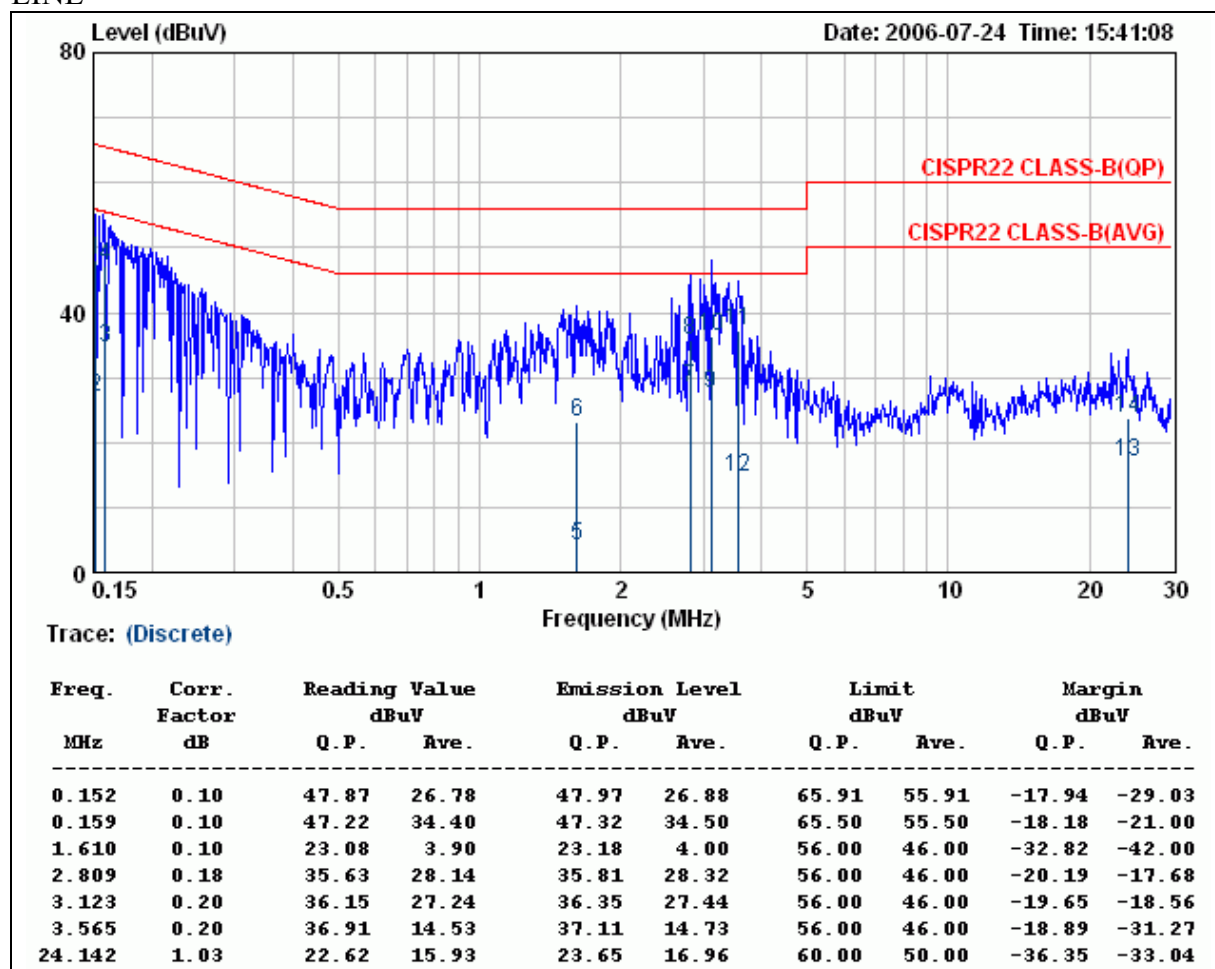
**Remark:**

1. Correction Factor = Insertion loss + cable loss
2. Margin value = Emission level - Limit value



|              |                                               |               |            |
|--------------|-----------------------------------------------|---------------|------------|
| Product Name | 802.11b/g MIMO Mini-PCI Card                  | Test Date     | 2006/07/24 |
| Model        | WMP-N06                                       | Test By       | Alan Fan   |
| Test Mode    | 3dBi Antenna<br>Normal operating (worst case) | TEMP&Humidity | 29°C, 50%  |

LINE

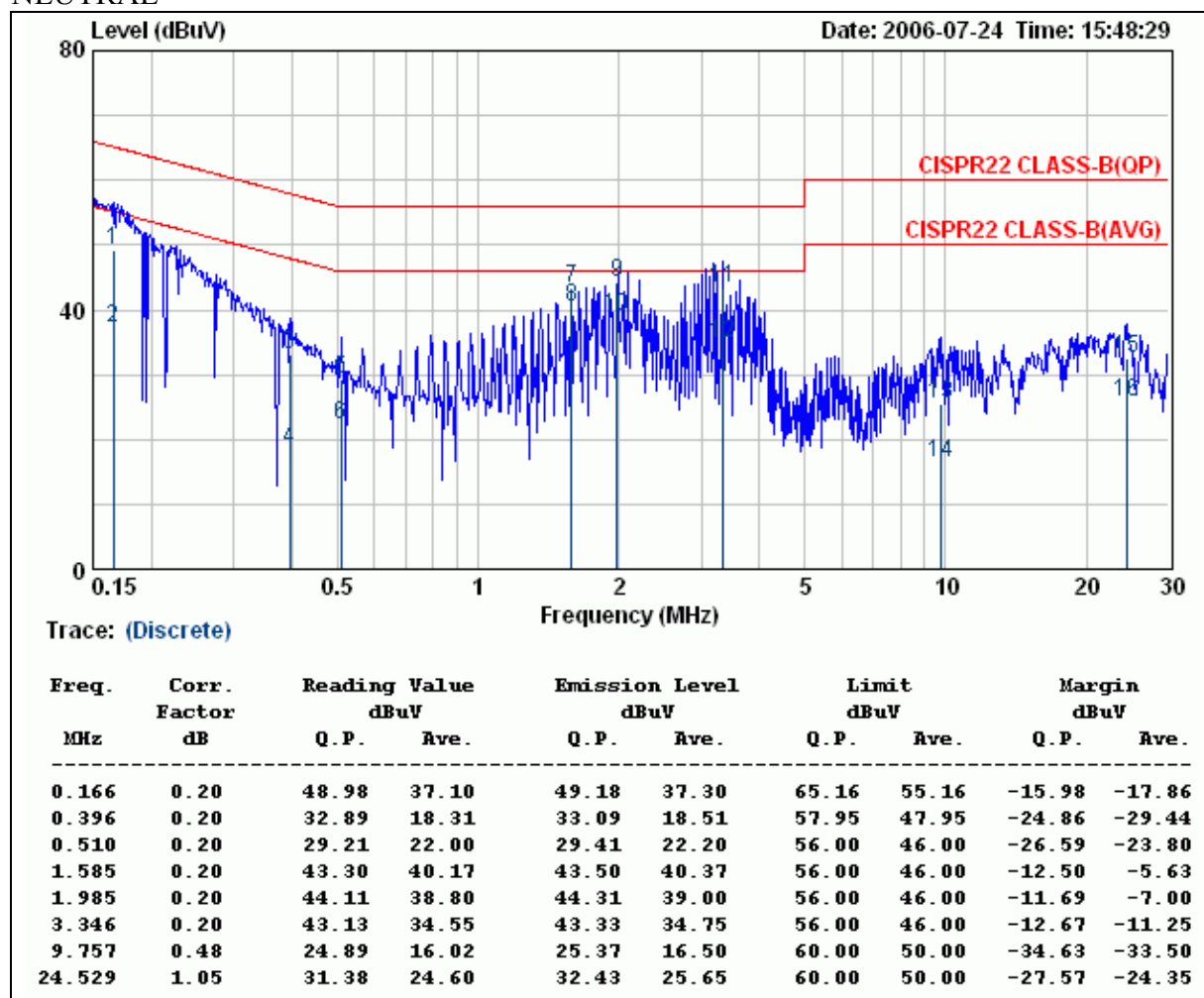
**Remark:**

1. Correction Factor = Insertion loss + cable loss
2. Margin value = Emission level - Limit value



|              |                                               |               |            |
|--------------|-----------------------------------------------|---------------|------------|
| Product Name | 802.11b/g MIMO Mini-PCI Card                  | Test Date     | 2006/07/24 |
| Model        | WMP-N06                                       | Test By       | Alan Fan   |
| Test Mode    | 3dBi Antenna<br>Normal operating (worst case) | TEMP&Humidity | 29°C, 50%  |

NEUTRAL

**Remark:**

1. Correction Factor = Insertion loss + cable loss
2. Margin value = Emission level - Limit value



## **9. ANTENNA REQUIREMENT**

### **9.1 STANDARD APPLICABLE**

For intentional device, according to FCC 47 CFR Section 15.203, 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.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### **9.2 ANTENNA CONNECTED CONSTRUCTION**

The antenna used for this product is Dipole antenna. The peak Gain of this antenna is 2dBi and 3dBi at 2.4GHz.