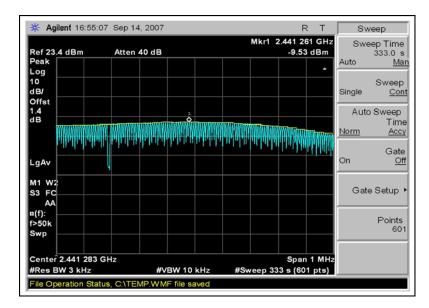


# FCC 15.247(e) POWER SPECTRAL DENSITY – CHANNEL 1

| 🔆 Ag                      | ilent 17  | 7:02:21               | Sep 14     | , 2007   |        |       |          |          | F                 | ₹Т                 | Marker ©      |
|---------------------------|-----------|-----------------------|------------|----------|--------|-------|----------|----------|-------------------|--------------------|---------------|
| Ref 23<br>Peak            |           |                       | Atten      | 40 d B   |        |       |          | Mkr1     | 2.413 6<br>-10.3  | 39 GHz<br>5 dBm    | Mkr © CF      |
| Log<br>10<br>dB/<br>Offst | 2.4       | rker<br>1363<br>.35 d | 9000<br>Bm | GH       | z      |       |          |          |                   | *                  | Mkr © CF Step |
| 1.4<br>dB                 | MAMAR     |                       | YWW        | (muu     | MANA A | WANYW |          | WWW      |                   |                    | Mkr © Start   |
| LgAv                      | 1 Juri I. | ort for l             | ովեզիս     | Julal II | լորվո  | աղող  | ahandada | di di di | ւկոլիրիս          | նվեվեց             | Mkr © Stop    |
| M1 W2<br>S3 FC<br>AA      |           |                       |            |          |        |       |          |          |                   |                    | Mkr Ʃ Span    |
| ¤(f):<br>f>50k<br>Swp     |           |                       |            |          |        |       |          |          |                   |                    | MkrƩCF        |
| Center<br>#Res E          |           | 000 GH<br>Hz          | İz         | #V       | BW 10  | kHz   | #Sw      | veep 3   | Span<br>333 s (60 | n 1 MHz<br>)1 pts) | Mkr © Ref LvI |
| Allowal                   | ble CF    | for curr              | ent spar   | n excee  | ded    |       |          |          |                   |                    |               |

802.11b

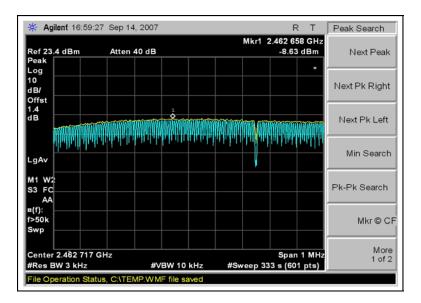
## FCC 15.247(e) POWER SPECTRAL DENSITY – CHANNEL 7



802.11b

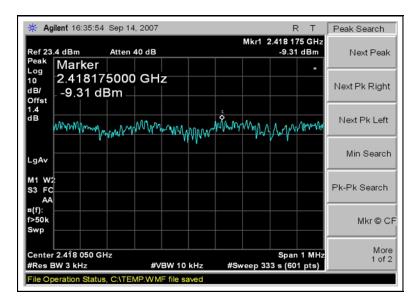








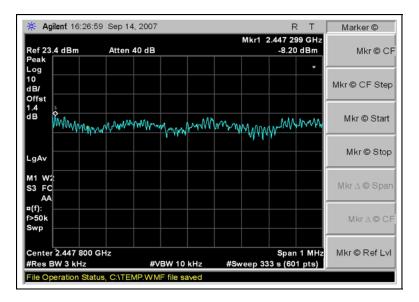
## FCC 15.247(e) POWER SPECTRAL DENSITY – CHANNEL 1





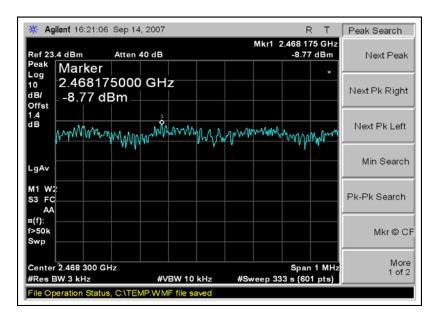








# FCC 15.247(e) POWER SPECTRAL DENSITY – CHANNEL 11







#### **BAND EDGE**

#### **Test Equipment**

| Function          | S/N        | Calibration Date | Cal Due Date | Asset # |
|-------------------|------------|------------------|--------------|---------|
| Antenna cable     | Cable#17   | 09/19/2006       | 09/19/2008   | P04382  |
| Horn Antenna      | 9603-4683  | 06/29/2006       | 06/29/2008   | 01646   |
| Microwave Pre-amp | 3123A00282 | 06/05/2007       | 06/5/2009    | 00787   |
| Cable Big Blue    | 12237/4A   | 11/28/2005       | 11/28/2007   | P05421  |
| Spectrum Analyzer | US44300438 | 01/03/2007       | 01/03/2009   | 02672   |
| Antenna Cable     | Hi Freq    | 09/18/2006       | 09/18/2008   | P05563  |

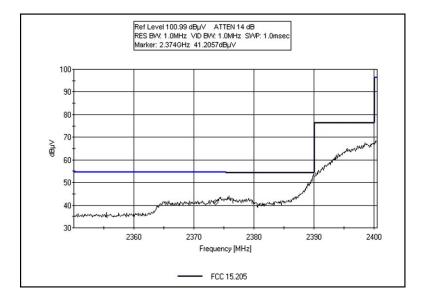
#### **Test Setup Photos**



**Test Conditions:** The EUT is on the table and all the probes and cables are connected to the unit. Measurements are made by direct connect with the Serial cable connected to the laptop computer, which is used to change the TX characteristics.

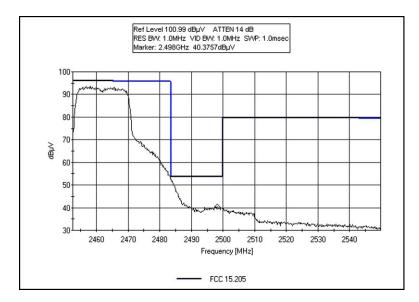


### BAND EDGE - CHANNEL 1 at 6 mb





### BAND EDGE - CHANNEL 11 at 6 mb



802.11g

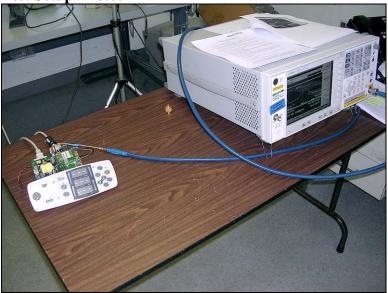


### FCC 15.247 OCCUPIED BANDWIDTH

#### **Test Equipment**

| Function                  | S/N         | Calibration Date | Cal Due Date | Asset #   |
|---------------------------|-------------|------------------|--------------|-----------|
| Spectrum Analyzer         | US44300438  | 01/04/2007       | 01/04/2009   | 02672     |
| Cable Huber & Suhner      | 12237/4A    | 11/28/2005       | 11/28/2007   | P05421    |
| Programmable Power Source | 01695/01696 | 05/15/07         | 05/15/09     | 250 / 245 |

### **Test Setup Photos**



**Test Conditions:** The EUT is on the table and all the probes and cables are connected to the unit. Measurements are made by direct connect with the Serial cable connected to the laptop computer, which is used to change the TX characteristics. There is a 1.4 dB offset to correct for the cable.

### **Summary Table**

| Channel | MBit | Mode    | Occupied Bandwidth<br>MHz |
|---------|------|---------|---------------------------|
| 1       | 1    | 802.11b | 36.69                     |
| 7       | 1    | 802.11b | 35.22                     |
| 11      | 1    | 802.11b | 34.65                     |
| 1       | 6    | 802.11g | 46.20                     |
| 7       | 6    | 802.11g | 44.18                     |
| 11      | 6    | 802.11g | 42.89                     |

The occupied bandwidth data was used in order to derive the correct the power measurements reading.

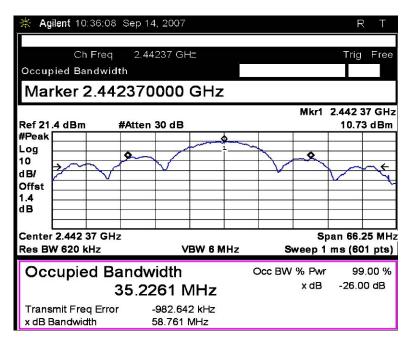


### FCC 15.247 OCCUPIED BANDWIDTH - CHANNEL 1 - 1 Mbit

|   |                       | Sep 14, 2007<br>2.41234 GHz<br>th                     |       |                      | R T<br>Trig Free              |
|---|-----------------------|---|-------|----------------------|-------------------------------|
| Ref 19.4                                      | dBm                   | #Atten 30 dB  |       | Mkr1                 | 2.413 66 GHz<br>12.43 dBm     |
| #Peak<br>Log<br>10 →<br>dB/ /<br>Offst<br>1.4 |                       | <b>9</b>  | 1     |                      |                               |
| dB  | 412 34 GH:<br>320 kHz | z<br>VBW 6  | 6 MHz |                      | Span 66.1 MHz<br>ms (601 pts) |
|   | t Freq Error          | andwidth<br>36.6975 MHz<br>-378.532 kHz<br>59.660 MHz |       | Occ BW % Pwr<br>x dB |                               |

802.11b

## FCC 15.247 OCCUPIED BANDWIDTH - CHANNEL 7 - 1 MBit



802.11b



### FCC 15.247 OCCUPIED BANDWIDTH - CHANNEL 11 - 1 MBit

| 🔆 Ag      | <b>ilent</b> 10:37:37 S      | ep 14, 2007               |     |              |        | R       | C T    |
|-----------|------------------------------|---------------------------|-----|--------------|--------|---------|--------|
| Occu      | Ch Freq<br>pied Bandwidth    | 2.46105 GHz               | l   |              |        | Trig    | Free   |
|           |                              |                           |     |              | Mkr1   | 2.462 9 | 3 GHz  |
|           |                              | tten 32 dB                |     |              |        | 11.10   | 6 d Bm |
| #Peak     |                              |                           | 2   | m.           |        |         |        |
| Log<br>10 |                              | 2m                        | 1   |              | -      |         |        |
| dB/       | *                            |                           |     | $\checkmark$ |        | 1       | ~ t    |
| Offst     |                              |                           |     |              |        | V       |        |
| 1.4       |                              |                           | -   | _            |        |         |        |
| dB        |                              |                           |     |              |        |         |        |
| Conto     | r 2.461 05 GHz               |                           |     |              | Sn     | an 66 1 | 25 MHz |
|           | W 620 kHz                    | VBW 6                     | MHz | S            | veep 1 |         |        |
| Oci       | cupied Bar                   | ndwidth                   |     | Occ BW       | % Pwr  | 99      | .00 %  |
|           | 34.6505 MHz                  |                           |     |              | x dB   | -26.0   | 0 dB   |
|           | smit Freq Error<br>Bandwidth | 340.766 kHz<br>57.806 MHz |     |              |        |         |        |

802.11b

# FCC 15.247 OCCUPIED BANDWIDTH - CHANNEL 1 - 6 MBit

| * Agilent 11:03:         | 58 Sep 14, 2007 |             |              | RT            |
|--------------------------|-----------------|-------------|--------------|---------------|
| Ch Fre<br>Occupied Bandw |                 |             |              | Trig Free     |
|                          |                 |             | Mkr1         | 2.417 94 GHz  |
| Ref 21.4 dBm<br>#Peak    | #Atten 32 dB    | -           | •            | 16.75 dBm     |
|                          | mont            | munteren    | -1 m         |               |
| 10                       |                 |             | - monore     | morena        |
| 10                       |                 |             |              | mon month     |
| Offst                    |                 |             |              |               |
| 1.4                      |                 |             |              |               |
| dB                       |                 |             |              |               |
|                          |                 |             | + +          |               |
| Center 2.410 54 G        | Hz Hz           |             | S            | oan 77.96 MHz |
| #Res BW 1 MHz            | VBV             | V8MHz       | 201          | ms (601 pts)  |
| Occupied                 | Bandwidth       |             | Occ BW % Pwr | 99.00 %       |
|                          | 46.2060 MI      | ٦z          | x dB         | -26.00 dB     |
| Transmit Freq Er         | ror -440.764    | <b>«</b> Hz |              |               |
| x dB Bandwidth           | 70.443 MH       |             |              |               |
| x ub bandwidth           | 70.443 MF       | 72          |              |               |

802.11g

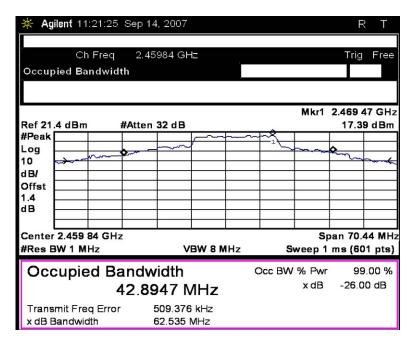


#### FCC 15.247 OCCUPIED BANDWIDTH - CHANNEL 7 - 6 MBit

| 🔆 Ag  | <b>ilent</b> 11:17:2        | 3 Sep 14, 2007          |  |        | RT                        |
|---|-----------------------------|-------------------------|--|--------|---------------------------|
| Occup   | Ch Frec<br>bied Bandwi      |                         |  |        | Trig Free                 |
| Ref 21<br>#Peak   | .4 dBm                      | #Atten 32 dB            |  | Mkr1   | 2.444 57 GHz<br>17.14 dBm |
| Log<br>10<br>dB/<br>Offst   | www.and                     |                         |  |        | and and a start           |
|   | 2.438 59 GI                 |                         |  | - COS. | an 77.96 MHz              |
| #Res BW 1 MHz VBW 8 MHz Sweep 1 ms (601 pt   Occupied Bandwidth Occ BW % Pwr 99.00   44.1885 MHz × dB -26.00 dE |                             |                         |  |        |                           |
|   | smit Freq Erro<br>Bandwidth | or 1.457 MH<br>65.122 M | and the second sec |        |                           |

802.11g

## FCC 15.247 OCCUPIED BANDWIDTH - CHANNEL 11 - 6 MBit



802.11g

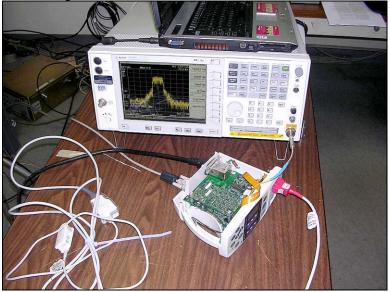


## FCC 15.407(a) OCCUPIED BANDWIDTH

#### **Test Equipment**

| <u> </u>              |            |                  |              |         |  |
|-----------------------|------------|------------------|--------------|---------|--|
| Function              | S/N        | Calibration Date | Cal Due Date | Asset # |  |
| Spectrum Analyzer     | US44300438 | 01/03/2007       | 01/03/2009   | 02672   |  |
| Attenuator, 20 dB Pad | 01432      | 09/13/2007       | 09/13/2009   | P01392  |  |

### **Test Setup Photos**



**Test Conditions:** The EUT is on the table and all the probes and cables are connected to the unit. Measurements are made by direct connect with the Serial cable connected to the laptop computer, which is used to change the TX characteristics. The 32db offset is 20 db for the attenuator, 2 db for the antenna gain. The other 10 db is the bandwidth integration.

#### **Summary Table**

| Channel | MBit | Mode    | Occupied Bandwidth<br>MHz |
|---------|------|---------|---------------------------|
| 36      | 6    | 802.11a | 16.44                     |
| 44      | 6    | 802.11a | 16.48                     |
| 48      | 6    | 802.11a | 16.42                     |
| 149     | 6    | 802.11a | 16.48                     |
| 157     | 6    | 802.11a | 16.35                     |
| 161     | 6    | 802.11a | 16.30                     |



# FCC 15.407 OCCUPIED BANDWIDTH - CHANNEL 36 - 6 MBit

|  | i <b>lent</b> 10:18:3<br>Ch Free<br>pied Bandw | q 5.17 |       |        | Ì   |        |               | F<br>Trig | R T                |
|--|--|--------|-------|--------|-----|--------|---------------|-----------|--------------------|
| Ref 15<br>#Peak<br>Log<br>10<br>dB/<br>Offst<br>32<br>dB | 8.5 mW   | #Atten | 10 dB |        |     |        | Mkr1          | 2.        | 11 GHz<br>31 mW    |
|  | 5.179 70 G<br>3W 270 kHz                       | Hz     | #VE   | SW 2.7 | MHz | s      | Sp<br>weep 1  |           | .45 MHz<br>01 pts) |
| Trans  | smit Freq Err<br>Bandwidth                     | 16.44  |       | kHz    |     | Occ BW | ′% Pwr<br>xdB | _         | 9.00 %<br>00 dB    |

802.11A

# FCC 15.407 OCCUPIED BANDWIDTH - CHANNEL 44 - 6 MBit

| 🌞 Ag        | Agilent 10:26:22 Sep 20, 2007 R T |                   |          |        |           |          |                  |  |
|-------------|-----------------------------------|-------------------|----------|--------|-----------|----------|------------------|--|
| Occur       | Ch Freq<br>bied Bandwidt          | 5.21929 GF        |          |        | Trig      | Free     |                  |  |
| occu        | Jea Danawia                       |                   |          |        |           |          |                  |  |
| Ref 15      | 8.5 mW #                          | #Atten 10 dB      |          |        | Mkr       | 1 5.224  | 74 GHz<br>55 m W |  |
| #Peak       |                                   |                   |          |        | 1         |          |                  |  |
| Log<br>10   |                                   | 9                 |          | ~~~~~~ |           | ę        |                  |  |
| d B/        | month man and                     |                   |          |        |           |          | mon              |  |
| Offst<br>32 |                                   |                   |          |        |           |          |                  |  |
| dB          |                                   |                   |          |        |           |          |                  |  |
| Conto       | 5.219 29 GHz                      |                   |          |        |           | Span 28. | 45 MHz           |  |
|             | 3W 270 kHz                        |                   | BW 2.7 N | Hz     |           | 1 ms (60 |                  |  |
| Oco         | cupied Ba                         | ndwidth           |          | Oc     | c BW % Pv | vr 99    | 9.00 %           |  |
|             | 16.4762 MHz                       |                   |          |        |           | 3 -26.0  | 00 dB            |  |
|             | smit Freq Error<br>Bandwidth      | 638.938<br>23.786 |          |        |           |          |                  |  |

802.11A