

## 5. BANDWIDTH TEST

### 5.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C |           |   |                       |        |
|---------------------------------|-----------|---|-----------------------|--------|
| Section                         | Test Item | Limit                                   | Frequency Range (MHz) | Result |
| 15.247<br>(a)(2)                | Bandwidth | $\geq 500\text{KHz}$<br>(6dB bandwidth) | 2400-2483.5           | PASS   |

#### 5.1.1 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer | R&S          | FSP_40   | 100129     | Jan. 09, 2007    |

Remark: " N/A" denotes No Model No. , Serial No. or No Calibration specified.

#### 5.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

#### 5.1.3 DEVIATION FROM STANDARD

No deviation.

#### 5.1.4 TEST SETUP



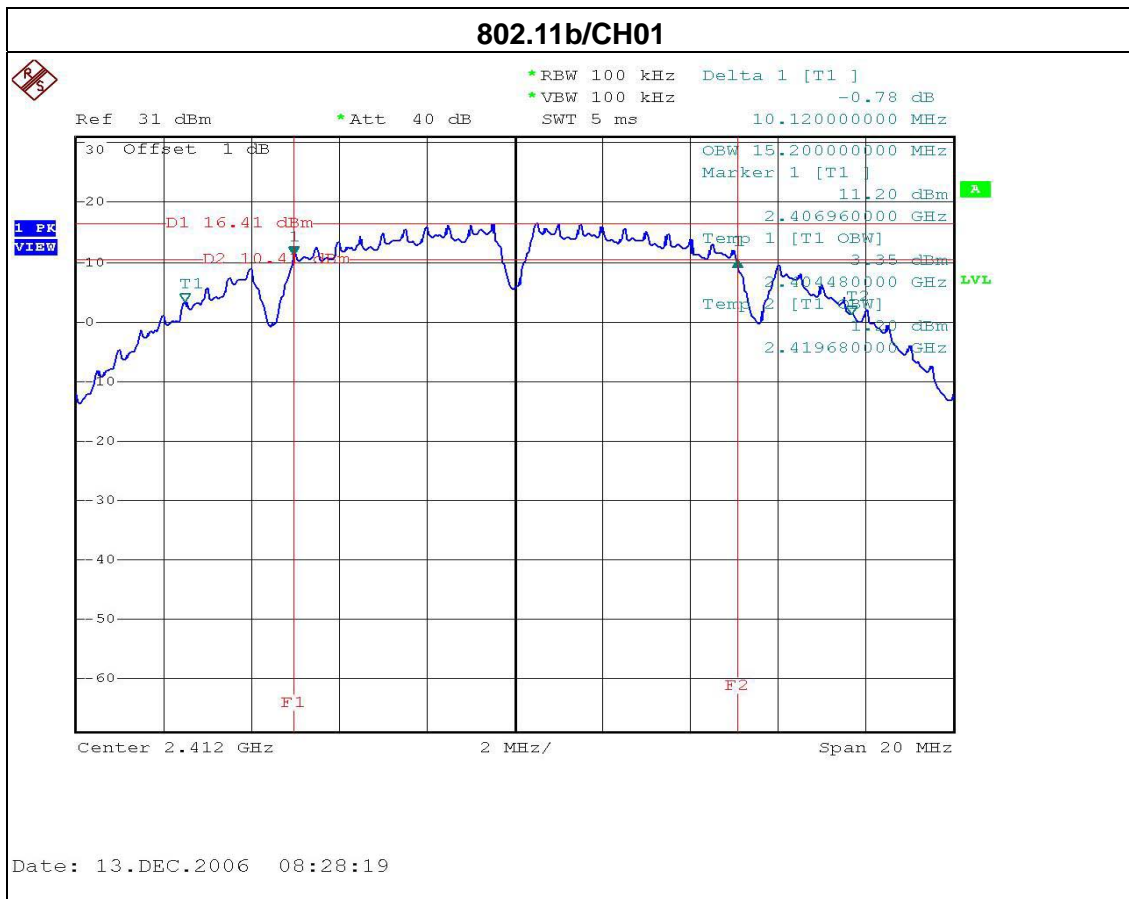
#### 5.1.5 EUT OPERATION CONDITIONS

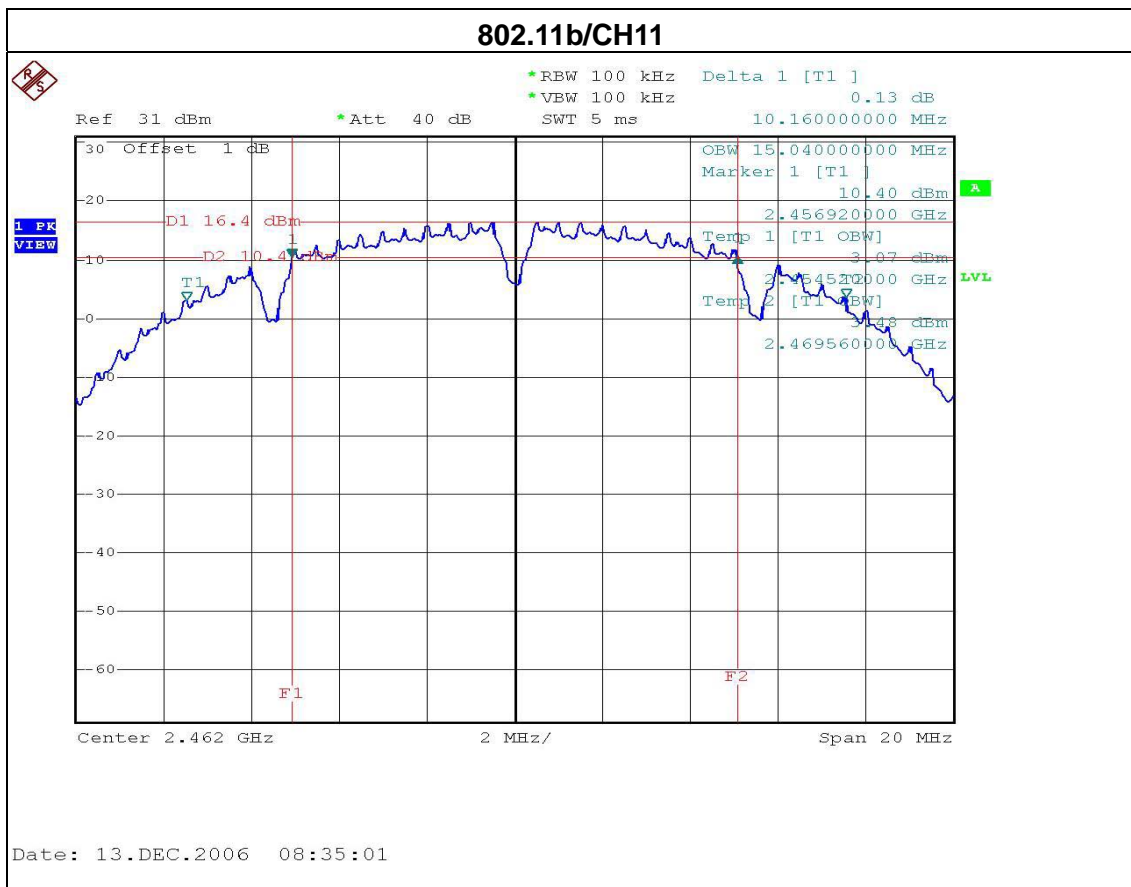
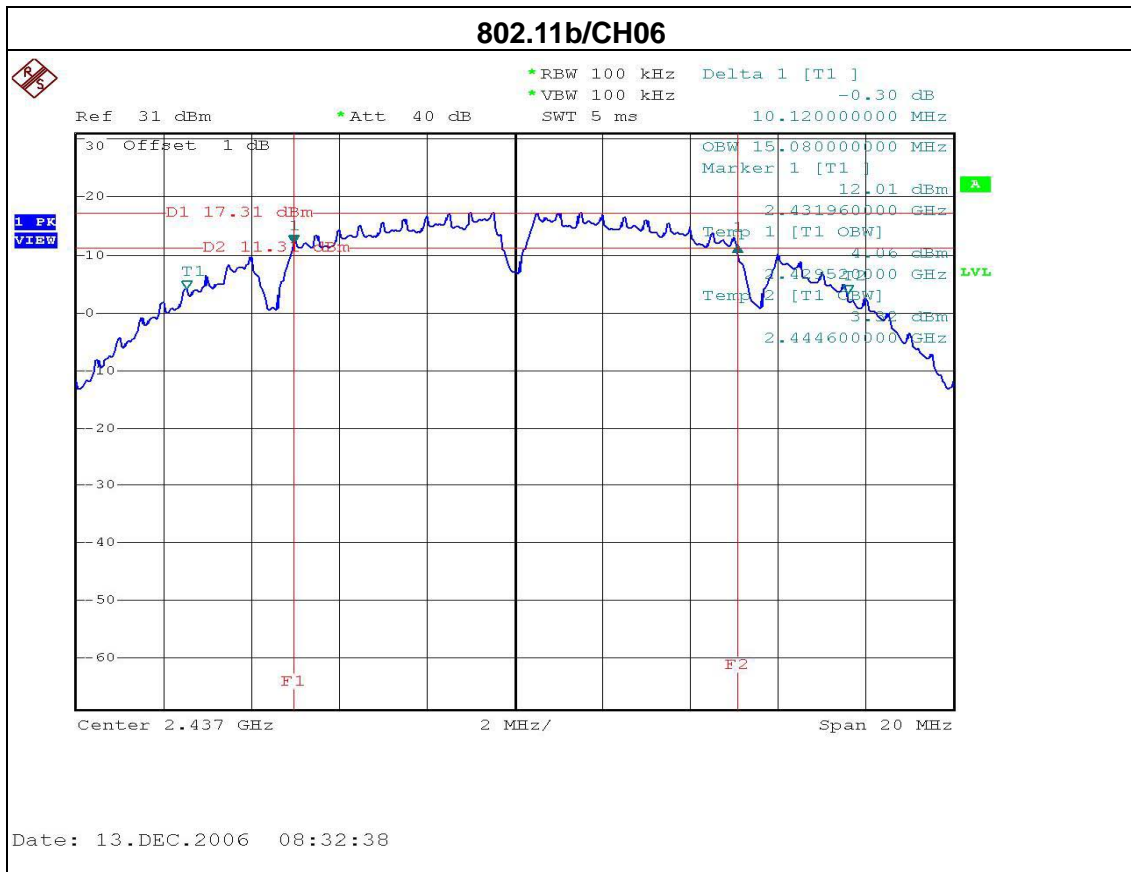
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.6 TEST RESULTS

|               |                                     |                     |              |
|---------------|-------------------------------------|---------------------|--------------|
| EUT :         | 802.11g Super Wireless Access Point | Model No. :         | SPA30G       |
| Temperature : | 27 °C                               | Relative Humidity : | 55 %         |
| Pressure :    | 1004 hPa                            | Test Power :        | AC 120V/60Hz |
| Test Mode :   | 802.11b/CH01, CH06, CH11            |                     |              |

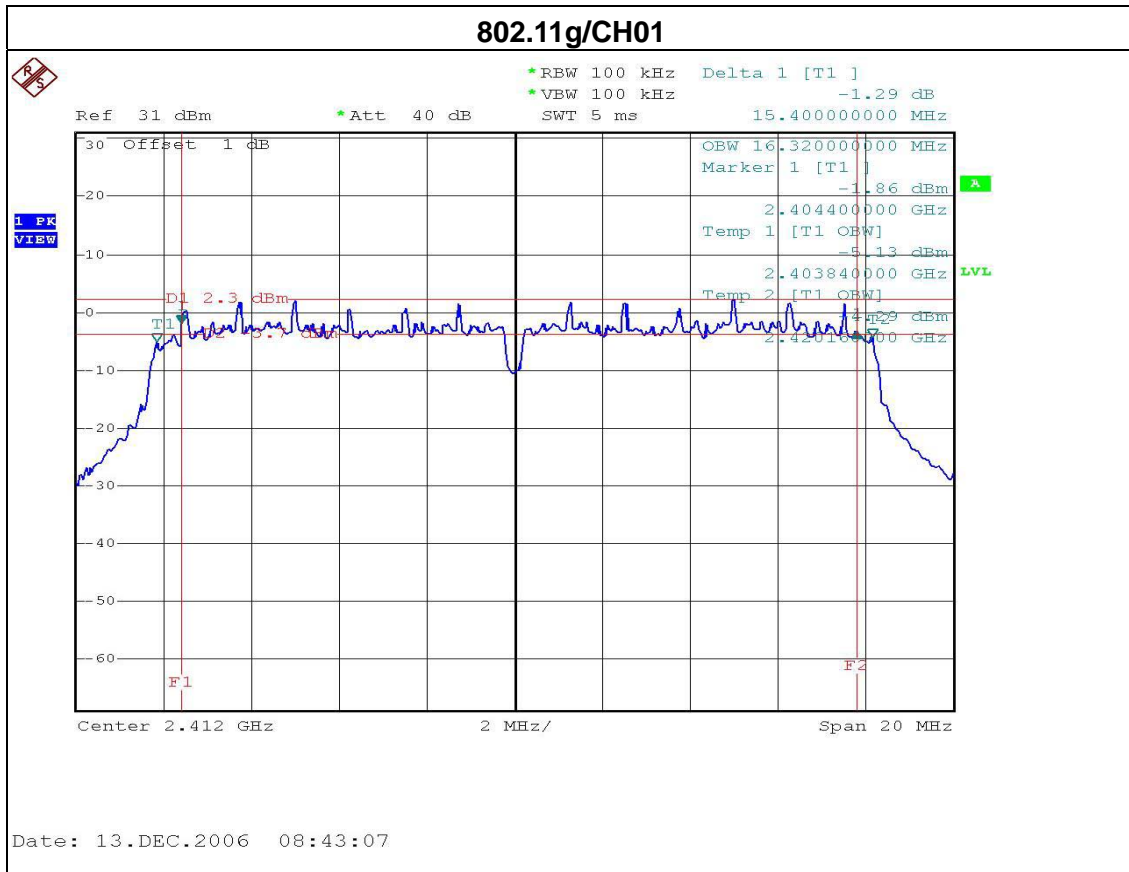
| Test Channel | Frequency (MHz) | Bandwidth (MHz) | LIMIT (MHz) |
|--------------|-----------------|-----------------|-------------|
| CH01         | 2412            | 10.12           | >=500KHz    |
| CH06         | 2437            | 10.12           | >=500KHz    |
| CH11         | 2462            | 10.16           | >=500KHz    |

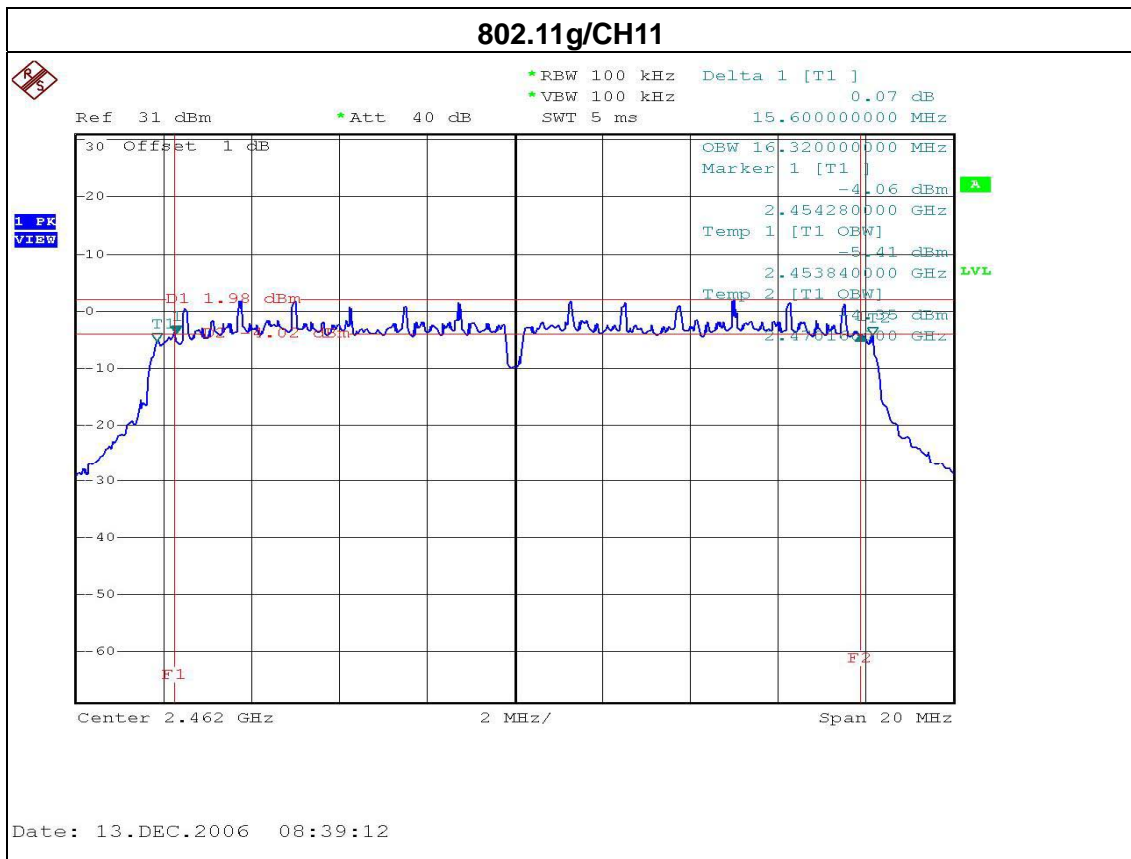
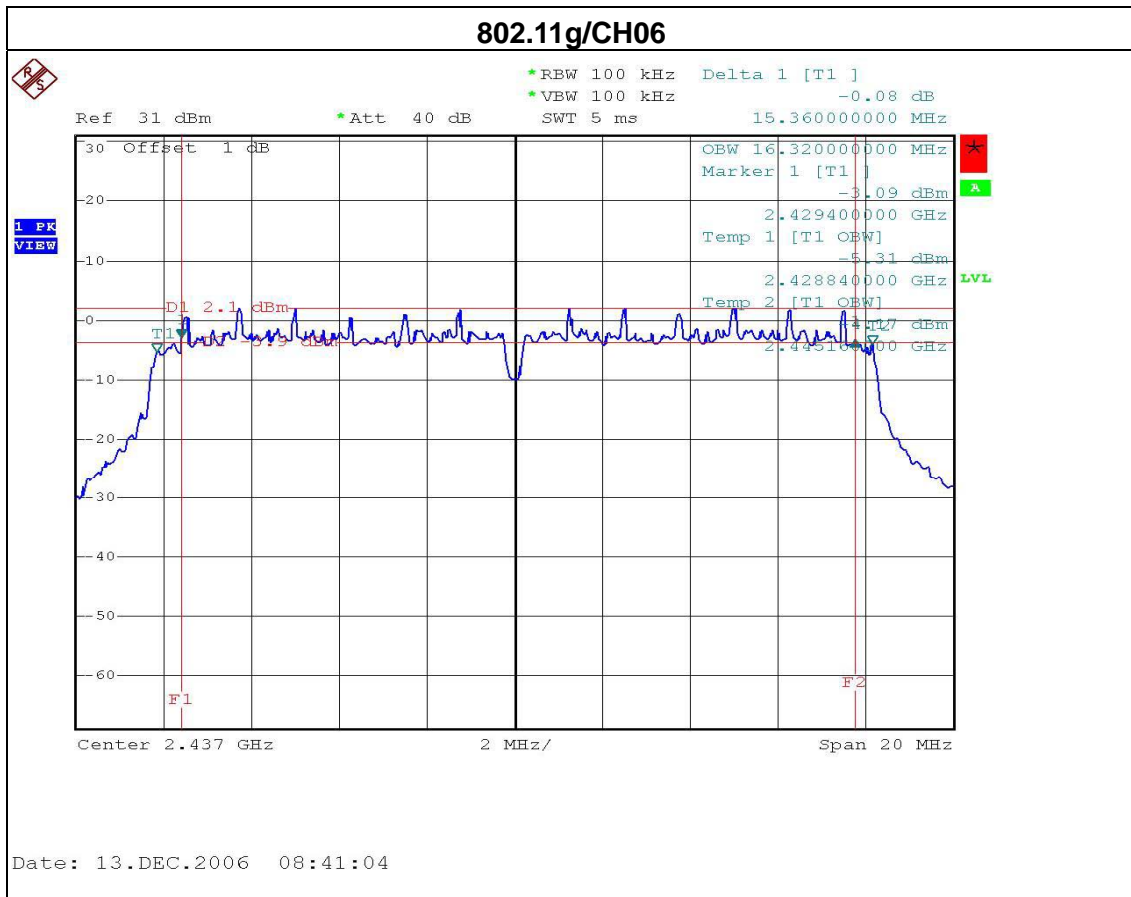




|               |                                     |                     |              |
|---------------|-------------------------------------|---------------------|--------------|
| EUT :         | 802.11g Super Wireless Access Point | Model No. :         | SPA30G       |
| Temperature : | 27 °C                               | Relative Humidity : | 55 %         |
| Pressure :    | 1004 hPa                            | Test Power :        | AC 120V/60Hz |
| Test Mode :   | 802.11g/CH01, CH06, CH11            |                     |              |

| Test Channel | Frequency (MHz) | Bandwidth (MHz) | LIMIT (MHz) |
|--------------|-----------------|-----------------|-------------|
| CH01         | 2412            | 15.40           | >=500KHz    |
| CH06         | 2437            | 15.36           | >=500KHz    |
| CH11         | 2462            | 15.60           | >=500KHz    |





**6. PEAK OUTPUT POWER TEST**

6.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C |                   |                 |                       |        |
|---------------------------------|-------------------|-----------------|-----------------------|--------|
| Section                         | Test Item         | Limit           | Frequency Range (MHz) | Result |
| 15.247 (b)(1)                   | Peak Output Power | 1 watt or 30dBm | 2400-2483.5           | PASS   |

6.1.1 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment  | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|--------------------|--------------|----------|------------|------------------|
| 1    | Power Meter        | Anritsu      | ML2487A  | 6K00001568 | Oct. 28, 2007    |
| 2    | Power Meter sorson | Anritsu      | MA2491A  | 030989     | Feb. 12, 2007    |

Remark: " N/A" denotes No Model No. , Serial No. or No Calibration specified.

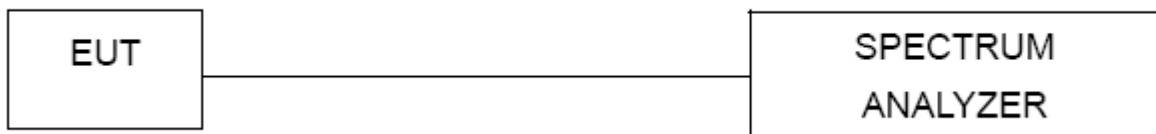
6.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 1MHz, VBW= 1MHz, Sweep time = Auto.

6.1.3 DEVIATION FROM STANDARD

No deviation.

6.1.4 TEST SETUP



6.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

**6.1.6 TEST RESULTS**

|               |                                     |                     |              |
|---------------|-------------------------------------|---------------------|--------------|
| EUT :         | 802.11g Super Wireless Access Point | Model No. :         | SPA30G       |
| Temperature : | 27 °C                               | Relative Humidity : | 55 %         |
| Pressure :    | 1004 hPa                            | Test Power :        | AC 120V/60Hz |
| Test Mode :   | CH01, CH06, CH11                    |                     |              |

| <b>802.11b</b> |                 |                         |             |           |
|----------------|-----------------|-------------------------|-------------|-----------|
| Test Channel   | Frequency (MHz) | Peak Output Power (dBm) | LIMIT (dBm) | LIMIT (W) |
| CH01           | 2412            | 23.13                   | 30          | 1         |
| CH06           | 2437            | 23.14                   | 30          | 1         |
| CH11           | 2462            | 23.13                   | 30          | 1         |

| <b>802.11g</b> |                 |                         |             |           |
|----------------|-----------------|-------------------------|-------------|-----------|
| Test Channel   | Frequency (MHz) | Peak Output Power (dBm) | LIMIT (dBm) | LIMIT (W) |
| CH01           | 2412            | 23.20                   | 30          | 1         |
| CH06           | 2437            | 23.17                   | 30          | 1         |
| CH11           | 2462            | 23.17                   | 30          | 1         |

## 7. ANTENNA CONDUCTED SPURIOUS EMISSION

### 7.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C |                                     |  |                       |        |
|---------------------------------|-------------------------------------|--|-----------------------|--------|
| Section                         | Test Item                           | Limit  | Frequency Range (MHz) | Result |
| 15.247 (c)                      | Antenna conducted Spurious Emission | 20dB less than the peak value of fundamental frequency | 30-25000              | PASS   |

#### 7.1.1 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer | R&S          | FSP_40   | 100129     | Jan. 09, 2007    |

Remark: " N/A" denotes No Model No. , Serial No. or No Calibration specified.

#### 7.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

#### 7.1.3 DEVIATION FROM STANDARD

No deviation.

#### 7.1.4 TEST SETUP



#### 7.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



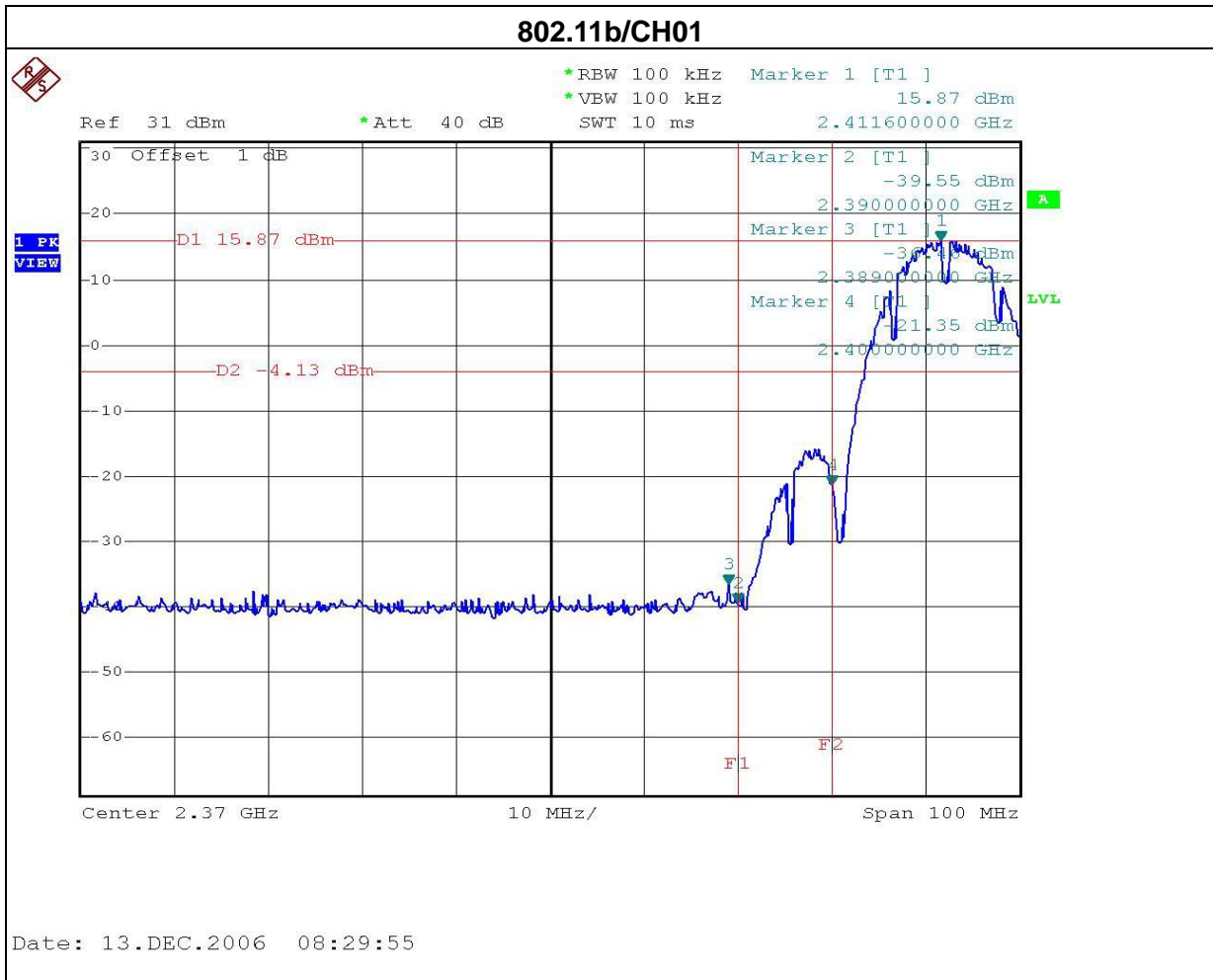
7.1.6 TEST RESULTS

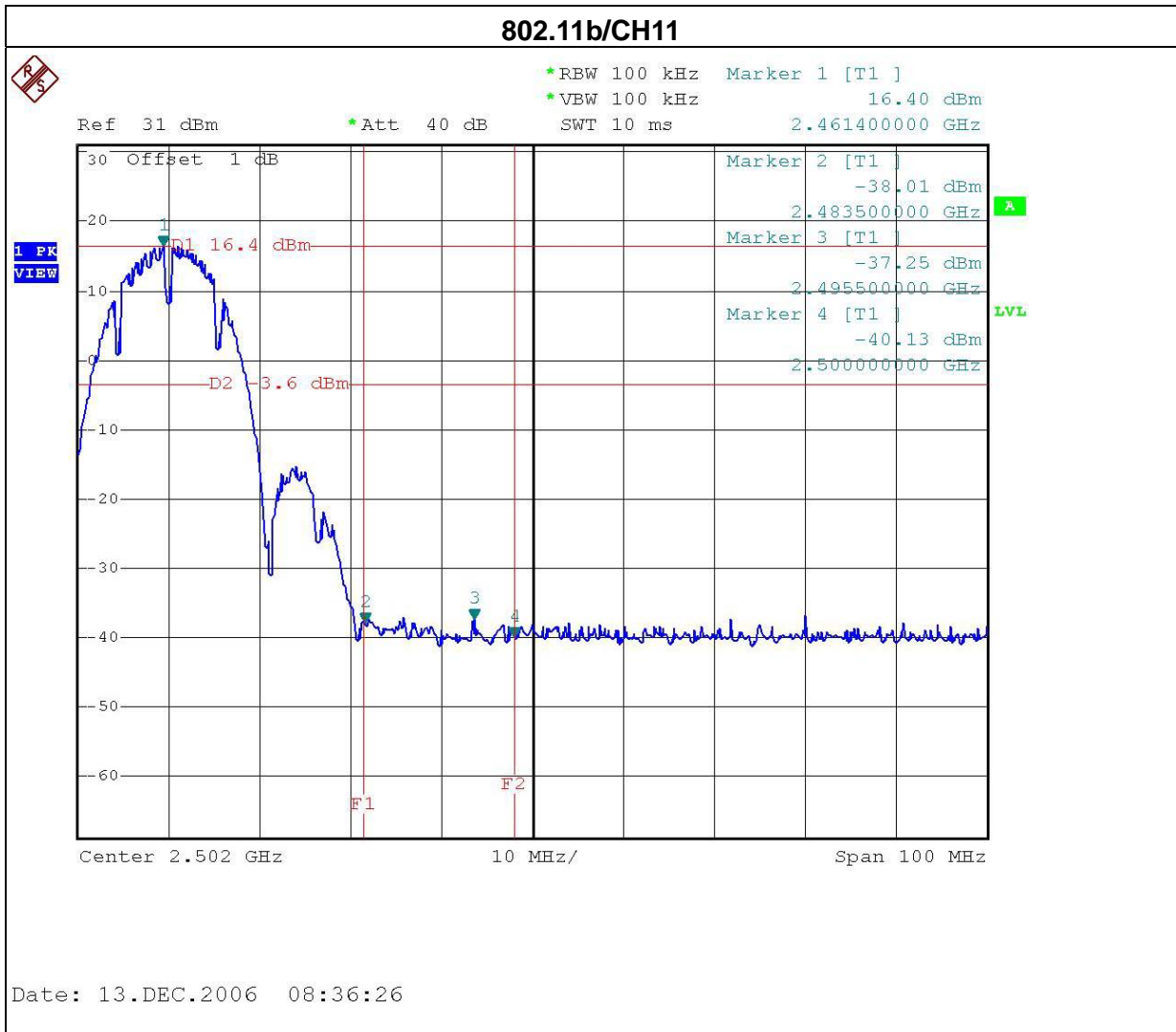
|               |                                     |                     |              |
|---------------|-------------------------------------|---------------------|--------------|
| EUT :         | 802.11g Super Wireless Access Point | Model No. :         | SPA30G       |
| Temperature : | 27 °C                               | Relative Humidity : | 55 %         |
| Pressure :    | 1004 hPa                            | Test Power :        | AC 120V/60Hz |
| Test Mode :   | 802.11b/CH01, CH11                  |                     |              |

| Channel of Worst Data: CH11   |            |  |            |
|---|------------|--|------------|
| The max. radio frequency power in any 100kHz bandwidth outside the frequency band |            | The max. radio frequency power in any 100 kHz bandwidth within the frequency band. |            |
| FREQUENCY(MHz)  | POWER(dBm) | FREQUENCY(MHz)   | POWER(dBm) |
| 2495.5  | -37.25     | 2461.4   | 16.4       |

Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.



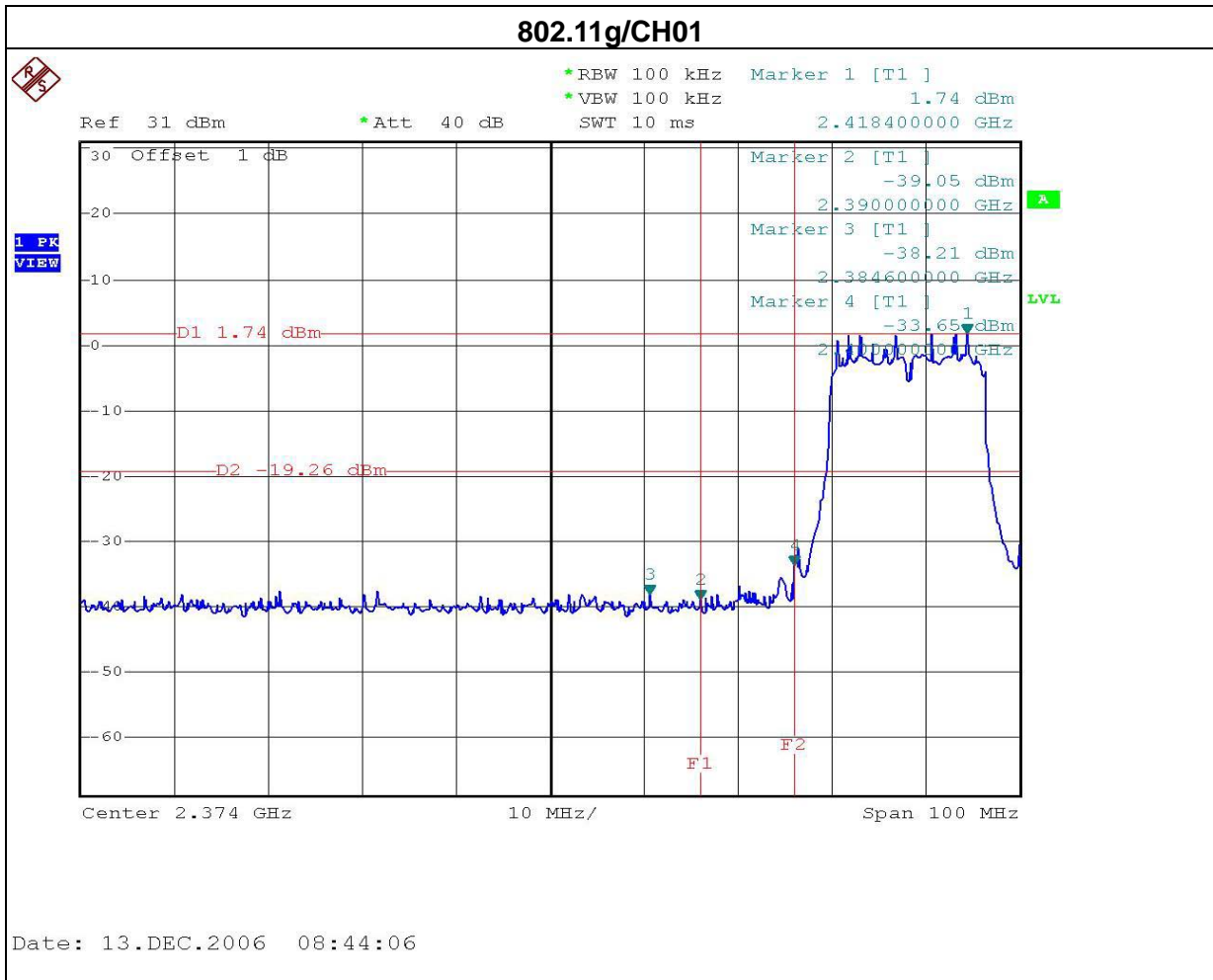


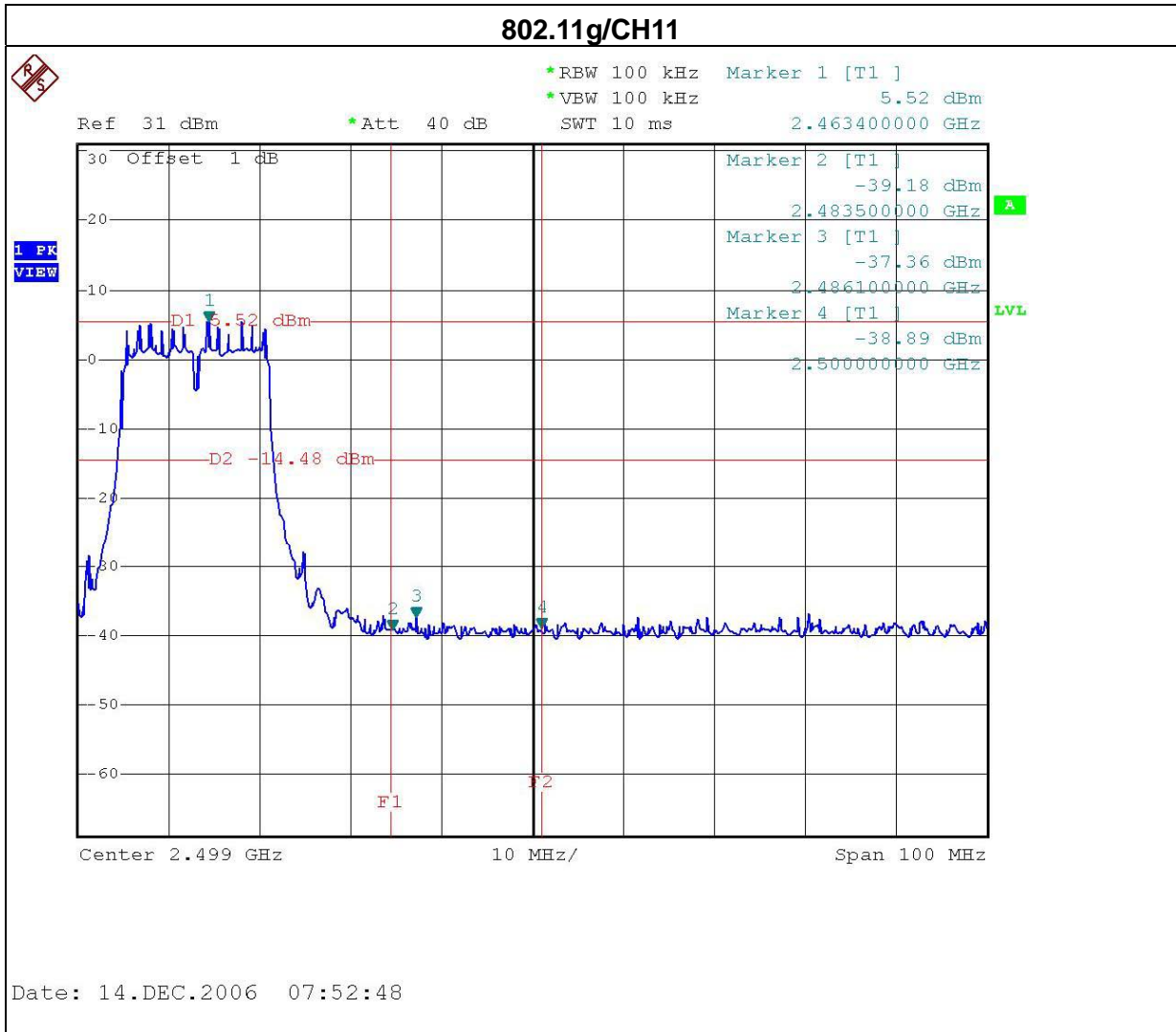
|               |                                     |                     |              |
|---------------|-------------------------------------|---------------------|--------------|
| EUT :         | 802.11g Super Wireless Access Point | Model No. :         | SPA30G       |
| Temperature : | 27 °C                               | Relative Humidity : | 55 %         |
| Pressure :    | 1004 hPa                            | Test Power :        | AC 120V/60Hz |
| Test Mode :   | 802.11g/CH01, CH11                  |                     |              |

| Channel of Worst Data: CH11   |            |  |            |
|---|------------|--|------------|
| The max. radio frequency power in any 100kHz bandwidth outside the frequency band |            | The max. radio frequency power in any 100 kHz bandwidth within the frequency band. |            |
| FREQUENCY(MHz)  | POWER(dBm) | FREQUENCY(MHz)   | POWER(dBm) |
| 2486.1  | -37.26     | 2463.4   | 5.52       |

Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.





## 8. POWER SPECTRAL DENSITY TEST

### 8.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C |                        |                     |                       |        |
|---------------------------------|------------------------|---------------------|-----------------------|--------|
| Section                         | Test Item              | Limit               | Frequency Range (MHz) | Result |
| 15.247 (d)                      | Power Spectral Density | 8 dBm (in any 3KHz) | 2400-2483.5           | PASS   |

#### 8.1.1 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer | R&S          | FSP_40   | 100129     | Jan. 09, 2007    |

Remark: " N/A" denotes No Model No. , Serial No. or No Calibration specified.

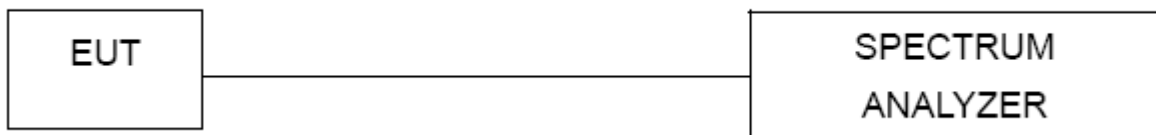
#### 8.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW=3KHz, VBW=30KHz, Sweep time = 500s.

#### 8.1.3 DEVIATION FROM STANDARD

No deviation.

#### 8.1.4 TEST SETUP



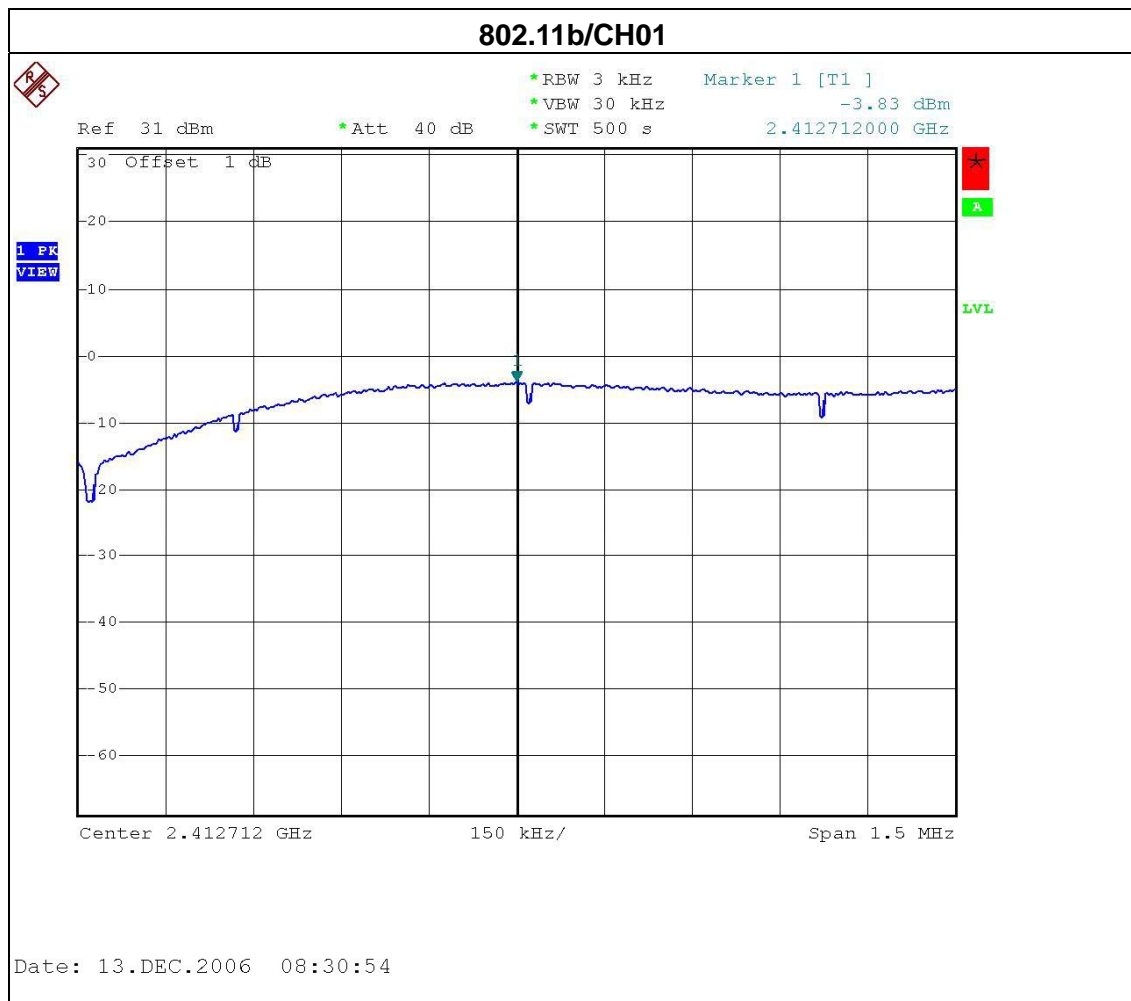
#### 8.1.5 EUT OPERATION CONDITIONS

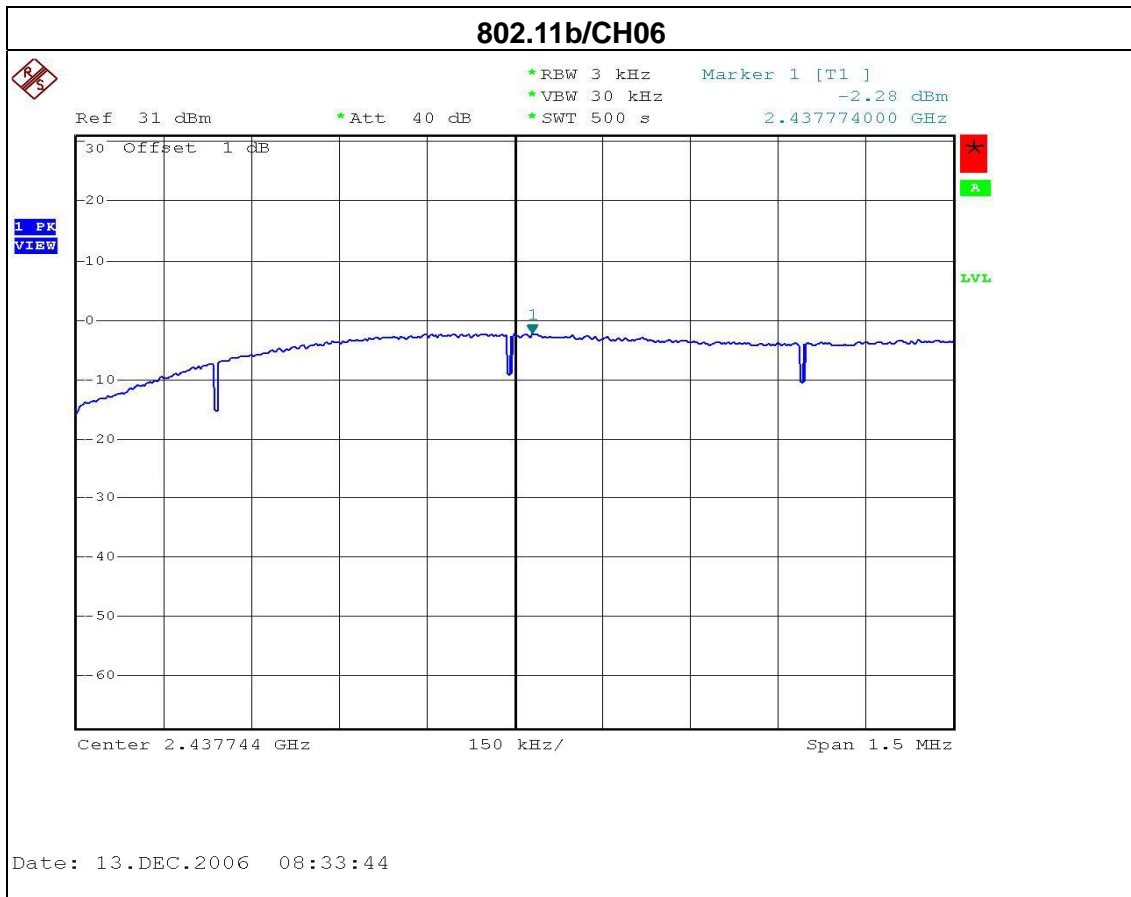
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.6 TEST RESULTS

|               |                                     |                     |              |
|---------------|-------------------------------------|---------------------|--------------|
| EUT :         | 802.11g Super Wireless Access Point | Model No. :         | SPA30G       |
| Temperature : | 27 °C                               | Relative Humidity : | 55 %         |
| Pressure :    | 1004 hPa                            | Test Power :        | AC 120V/60Hz |
| Test Mode :   | 802.11b/CH01, CH06, CH11            |                     |              |

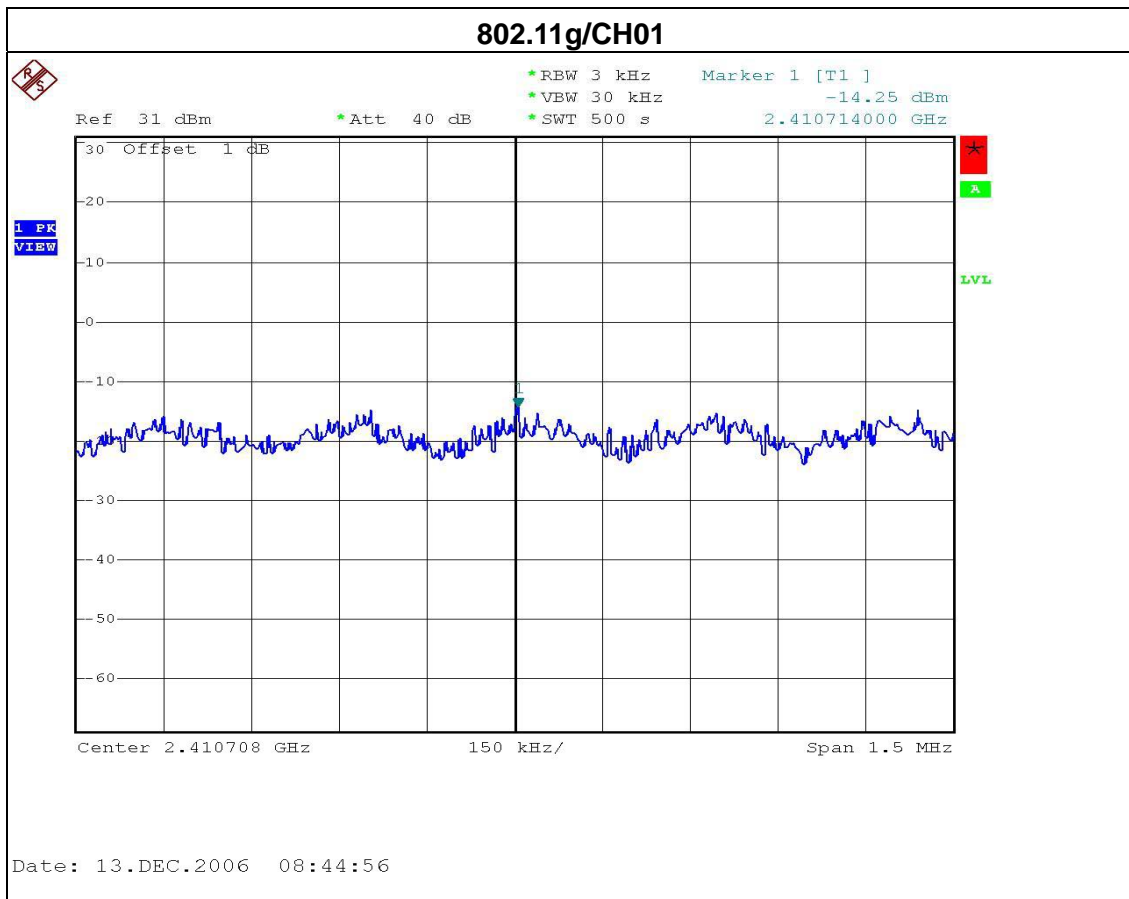
| Test Channel | Frequency (MHz) | Peak Output Power (dBm) | LIMIT (dBm) |
|--------------|-----------------|-------------------------|-------------|
| CH01         | 2412            | -3.83                   | 8           |
| CH06         | 2437            | -2.28                   | 8           |
| CH11         | 2462            | -3.33                   | 8           |



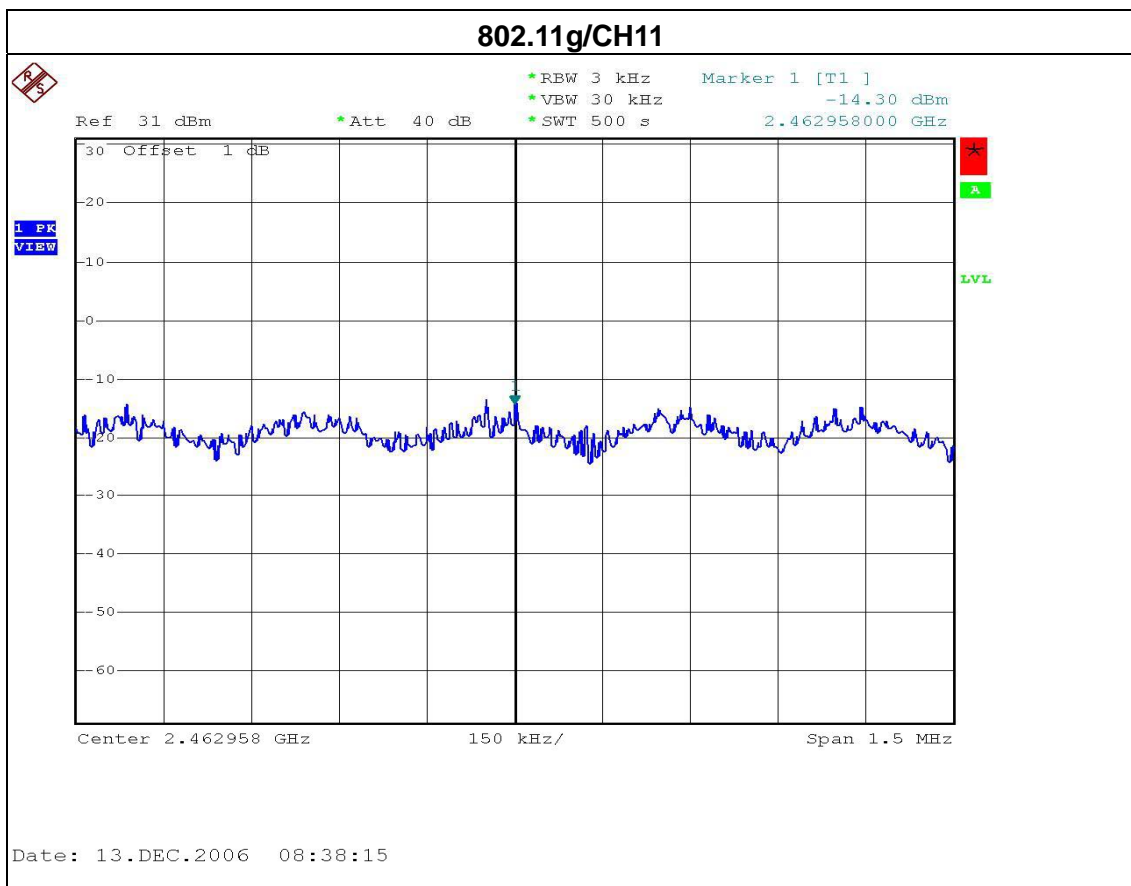
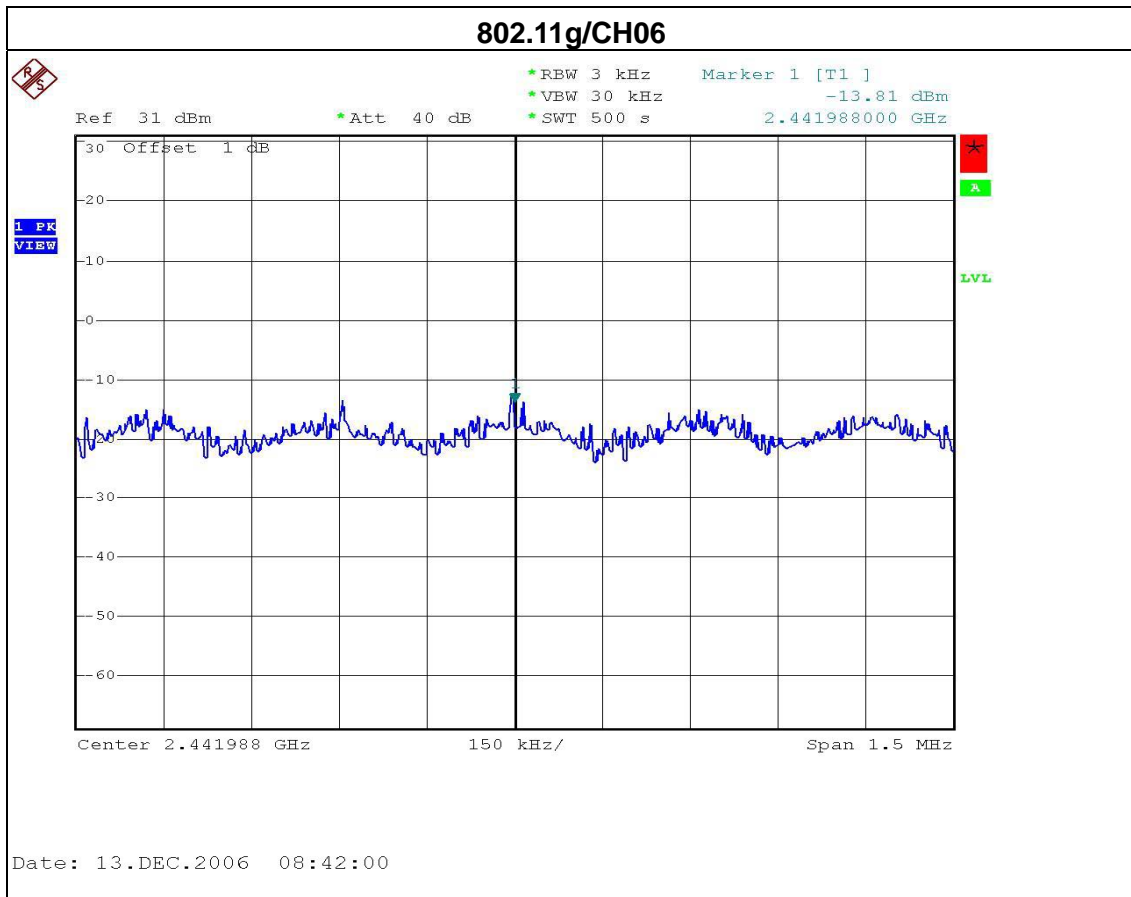


|               |                                     |                     |              |
|---------------|-------------------------------------|---------------------|--------------|
| EUT :         | 802.11g Super Wireless Access Point | Model No. :         | SPA30G       |
| Temperature : | 27 °C                               | Relative Humidity : | 55 %         |
| Pressure :    | 1004 hPa                            | Test Power :        | AC 120V/60Hz |
| Test Mode :   | 802.11g/CH01, CH06, CH11            |                     |              |

| Test Channel | Frequency (MHz) | Peak Output Power (dBm) | LIMIT (dBm) |
|--------------|-----------------|-------------------------|-------------|
| CH01         | 2412            | -14.25                  | 8           |
| CH06         | 2437            | -13.81                  | 8           |
| CH11         | 2462            | -14.30                  | 8           |







### 9. RF EXPOSURE TEST

#### 9.1 APPLIED PROCEDURES / LIMIT

| Based upon the new TCB exclusion list published by FCC on July 2002 |                                |
|---|--------------------------------|
| Frequency Range(MHz)  | LIMIT<br>(mW/cm <sup>2</sup> ) |
| 2402-2480   | 1                              |

#### 9.1.1 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer | R&S          | FSP_40   | 100129     | Jan. 09, 2007    |

Remark: " N/A" denotes No Model No. , Serial No. or No Calibration specified.

**9.1.2 TEST RESULTS**

|               |                                     |                     |              |
|---------------|-------------------------------------|---------------------|--------------|
| EUT :         | 802.11g Super Wireless Access Point | Model No. :         | SPA30G       |
| Temperature : | 27 °C                               | Relative Humidity : | 55 %         |
| Pressure :    | 1004 hPa                            | Test Power :        | AC 120V/60Hz |
| Test Mode :   | As bellow                           |                     |              |

| <b>802.11b</b>          |                |          |        |   |                             |
|-------------------------|----------------|----------|--------|---|-----------------------------|
| Peak output power (dBm) | Ant Gain (dBi) | EIRP (1) |        | The maximum power density at 20cm distance: S | LIMIT (mW/cm <sup>2</sup> ) |
|                         |                | (dBm)    | mW     |   |                             |
| 23.14                   | 2              | 25.14    | 326.58 | 0.0649  | 1                           |

| <b>802.11g</b>          |                |          |        |   |                             |
|-------------------------|----------------|----------|--------|---|-----------------------------|
| Peak output power (dBm) | Ant Gain (dBi) | EIRP (1) |        | The maximum power density at 20cm distance: S | LIMIT (mW/cm <sup>2</sup> ) |
|                         |                | (dBm)    | mW     |   |                             |
| 23.2                    | 2              | 25.2     | 331.13 | 0.0658  | 1                           |

NOTE: Distance >20cm

- (1) EIRP= Peak output power + Ant Gain
- (2)  $S \text{ (mW/cm}^2\text{)} = \text{EIRP} / (4\pi R^2)$   
Distance <=20cm
- (3) EIRP= Peak output power + Ant Gain
- (4) LIMIT=60/2.412(GHz)=24.87(mw)
- (5) This device hasn't to submit the test report of SAR evaluation.

**10. EUT TEST PHOTO**

**Conducted Measurement Photos**



**Radiated Measurement Photos**  
**X**

