



# SPORTON International Inc.

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## FCC RADIO TEST REPORT

|                        |                                                                                  |
|------------------------|----------------------------------------------------------------------------------|
| Applicant's company    | Trapeze Networks Inc.                                                            |
| Applicant Address      | 5753 W. Las Positas Blvd. Pleasanton, CA 94588, US                               |
| FCC ID                 | QZE250                                                                           |
| Manufacturer's company | Alpha Networks Inc.                                                              |
| Manufacturer Address   | No. 8, Li-Hsin VII Road, Science-Based Industrial Park, Hsin-Chu, Taiwan, R.O.C. |

|                   |                                       |
|-------------------|---------------------------------------|
| Product Name      | Dual mode 2.4GHz / 5GHz Access Point  |
| Brand Name        | Trapeze Networks, Enterasys           |
| Model Name        | 400, RBT-161x-xx                      |
| Test Rule Part(s) | 47 CFR FCC Part 15 Subpart C § 15.247 |
| Test Freq. Range  | 2400 ~ 2483.5MHz / 5725 ~ 5850 MHz    |
| Received Date     | Oct. 27, 2006                         |
| Final Test Date   | Nov. 30, 2006                         |
| Submission Type   | Original Equipment                    |



### Statement

**Test result included is only for the 802.11b/g part and 802.11a (5725 ~ 5850MHz) of the product.**

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.4-2003** and **47 CFR FCC Part 15 Subpart C**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

NVLAQ®

Lab Code: 200079-0

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## History of This Test Report

Original Issue Date: Dec. 01, 2006

Report No.: FR6O2612AB

☒ No additional attachment.

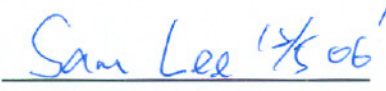
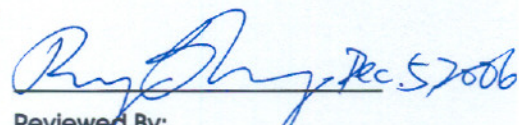
☐ Additional attachment were issued as following record:

| Attachment No. | Issue Date | Description |
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## 1. CERTIFICATE OF COMPLIANCE

Product Name : Dual mode 2.4GHz / 5GHz Access Point  
Brand Name : Trapeze Networks, Enterasys  
Model Name : 400, RBT-161x-xx  
Applicant : Trapeze Networks Inc.  
Test Rule Part(s) : 47 CFR FCC Part 15 Subpart C § 15.247

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Oct. 27, 2006 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

|                                                                                     |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| Prepared By:                                                                        | Tested By:                                                                           | Reviewed By:                                                                          |
| Tina Jao / Specialist                                                               | Sam Lee / Engineer                                                                   | Roger Sheng / Manager                                                                 |

## 2. SUMMARY OF THE TEST RESULT

| Applied Standard: 47 CFR FCC Part 15 Subpart C |              |                                     |          |             |
|------------------------------------------------|--------------|-------------------------------------|----------|-------------|
| Part                                           | Rule Section | Description of Test                 | Result   | Under Limit |
| 4.1                                            | 15.207       | AC Power Line Conducted Emissions   | Complies | 1.98 dB     |
| 4.2                                            | 15.247(b)(3) | Maximum Peak Conducted Output Power | Complies | 3.06 dB     |
| 4.3                                            | 15.247(e)    | Power Spectral Density              | Complies | 3.63 dB     |
| 4.4                                            | 15.247(a)(2) | 6dB Spectrum Bandwidth              | Complies | -           |
| 4.5                                            | 15.247(d)    | Radiated Emissions                  | Complies | 1.10 dB     |
| 4.6                                            | 15.247(d)    | Band Edge Emissions                 | Complies | 1.16 dB     |
| 4.7                                            | 15.203       | Antenna Requirements                | Complies | -           |

| Test Items                                  | Uncertainty              | Remark                   |
|---------------------------------------------|--------------------------|--------------------------|
| AC Power Line Conducted Emissions           | $\pm 2.3\text{dB}$       | Confidence levels of 95% |
| Maximum Peak Conducted Output Power         | $\pm 0.8\text{dB}$       | Confidence levels of 95% |
| Power Spectral Density                      | $\pm 0.5\text{dB}$       | Confidence levels of 95% |
| 6dB Spectrum Bandwidth                      | $\pm 8.5 \times 10^{-8}$ | Confidence levels of 95% |
| Radiated Emissions (9kHz~30MHz)             | $\pm 0.8\text{dB}$       | Confidence levels of 95% |
| Radiated Emissions (30MHz~1000MHz)          | $\pm 1.9\text{dB}$       | Confidence levels of 95% |
| Radiated / Band Edge Emissions (1GHz~18GHz) | $\pm 1.9\text{dB}$       | Confidence levels of 95% |
| Radiated Emissions (18GHz~40GHz)            | $\pm 1.9\text{dB}$       | Confidence levels of 95% |
| Temperature                                 | $\pm 0.7$                | Confidence levels of 95% |
| Humidity                                    | $\pm 3.2\%$              | Confidence levels of 95% |
| DC / AC Power Source                        | $\pm 1.4\%$              | Confidence levels of 95% |

### 3. GENERAL INFORMATION

#### 3.1. Product Details

EUT is a Wireless Access Point with IEEE 802.11a/b/g radio functions. Only the radio detail of WLAN is shown in the table below. For more detailed features description, please refer to the manufacturer's specifications or user's manual.

This equipment will be marketed and installed by specific contract retailer.

The installation of this equipment is only be performed by well-trained and qualified personnel.

| Items                    | Description                                                                            |
|--------------------------|----------------------------------------------------------------------------------------|
| Power Type               | 48V DC from POE                                                                        |
| Modulation               | DSSS for IEEE 802.11b ; OFDM for IEEE 802.11a/g                                        |
| Data Modulation          | DSSS (BPSK / QPSK / CCK) ; OFDM (BPSK / QPSK / 16QAM / 64QAM)                          |
| Data Rate (Mbps)         | DSSS (1/ 2/ 5.5/11) ; OFDM (6/9/12/18/24/36/48/54)                                     |
| Frequency Range          | 2400 ~ 2483.5MHz / 5725~5850 MHz                                                       |
| Channel Number           | 11b/g: 11 ; 11a: 5                                                                     |
| Channel Band Width (99%) | 5725~5850 MHz : 16.56 MHz<br>2400 ~ 2483.5MHz : 11b: 15.92 MHz ; 11g: 16.52 MHz        |
| Conducted Output Power   | 2400 ~ 2483.5MHz / 5725~5850 MHz :<br>11b: 26.16 dBm ; 11g: 26.94 dBm ; 11a: 24.25 dBm |

#### 3.2. Accessories

N/A

### 3.3. Table for Filed Antenna

#### For 5GHz Band antennas

| Ant. | Brand Name           | Model Name         | Antenna Type    | Connector    | Gain (dBi) | REMARK     |
|------|----------------------|--------------------|-----------------|--------------|------------|------------|
| 1    | Wha Yu Industrial Co | C037-520720-A*     | F Type          | NA           | 3.00       | (Internal) |
| 2    | ASTRON               | ANT-5180 (ASTN6H)  | 180° Panel Ant. | Reversed-SMA | 10.80      | (External) |
| 3    | ASTRON               | ANT-5120 (ASTN6T)  | 120° Panel Ant. | Reversed-SMA | 12.50      | (External) |
| 4    | ASTRON               | ANT-5060 (ASTN6S)* | 60° Panel Ant.  | Reversed-SMA | 14.50      | (External) |

“\*”: The antenna internal F Type (3.00dBi) and external 60° Panel Antenna (14.50dBi) with highest antenna gain were configured with EUT during test.

#### For 2.4GHz Band antennas

| Ant. | Brand Name           | Model Name        | Antenna Type    | Connector    | Gain (dBi) | REMARK     |
|------|----------------------|-------------------|-----------------|--------------|------------|------------|
| 1    | Wha Yu Industrial Co | C037-520721-A*    | F Type          | NA           | 3.00       | (Internal) |
| 2    | ASTRON               | AST12H (ANT1180)  | 180° Panel Ant. | Reversed-SMA | 6.00       | (External) |
| 3    | ASTRON               | ASTG11T (ANT1120) | 120° Panel Ant. | Reversed-SMA | 7.00       | (External) |
| 4    | ASTRON               | ASTG11* (ANT1060) | 60° Panel Ant.  | Reversed-SMA | 10.00      | (External) |

“\*”: The antenna internal F Type (3.00dBi) and external 60° Panel Antenna (10dBi) with highest antenna gain were configured with EUT during test.

#### Dual band antennas

##### For 5GHz Band

| Ant. | Brand Name   | Model Name             | Antenna Type             | Connector | Gain (dBi) | REMARK     |
|------|--------------|------------------------|--------------------------|-----------|------------|------------|
| 1    | HUBER+SUHNER | SWA<br>2459/360/7/20/V | OMNI Antenna             | N Type*   | 8.00       | (External) |
| 2    | MAXRAD       | MMO24580608            | Omni directional Antenna | N Type*   | 8.00       | (External) |

Both antennas were configured with EUT during test.

\*: For professional installation

##### For 2.4GHz Band

| Ant. | Brand Name   | Model Name                          | Antenna Type             | Connector | Gain (dBi) | REMARK     |
|------|--------------|-------------------------------------|--------------------------|-----------|------------|------------|
| 1    | HUBER+SUHNER | SWA<br>2459/360/7/20/V<br>(ANT7360) | OMNI Antenna             | N Type*   | 6.00       | (External) |
| 2    | MAXRAD       | MMO24580608<br>(ANT-7360-OUT)       | Omni directional Antenna | N Type*   | 6.00       | (External) |

Both antennas were configured with EUT during test.

\*: For professional installation

### 3.4. Table for Carrier Frequencies

#### Frequency Allocation for 802.11b/g

| Frequency Band | Channel No. | Frequency | Channel No. | Frequency |
|----------------|-------------|-----------|-------------|-----------|
| 2400~2483.5MHz | 1           | 2412 MHz  | 7           | 2442 MHz  |
|                | 2           | 2417 MHz  | 8           | 2447 MHz  |
|                | 3           | 2422 MHz  | 9           | 2452 MHz  |
|                | 4           | 2427 MHz  | 10          | 2457 MHz  |
|                | 5           | 2432 MHz  | 11          | 2462 MHz  |
|                | 6           | 2437 MHz  |             |           |

#### Frequency Allocation for 802.11a

| Frequency Band                       | Channel No. | Frequency | Channel No. | Frequency |
|--------------------------------------|-------------|-----------|-------------|-----------|
| 5725~5850 MHz<br>(USA/Canada/Taiwan) | 149         | 5745 MHz  | 161         | 5805 MHz  |
|                                      | 153         | 5765 MHz  | 165         | 5825 MHz  |
|                                      | 157         | 5785 MHz  |             |           |

### 3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

| Test Items                        | Mode        | Data Rate | Channel     |
|-----------------------------------|-------------|-----------|-------------|
| AC Power Line Conducted Emissions | Normal Link | 11 Mbps   | 6           |
| Max. Peak Conducted Output Power  | 11b/CCK     | 11 Mbps   | 1/6/11      |
| Power Spectral Density            | 11g/BPSK    | 6 Mbps    | 1/6/11      |
| 6dB Spectrum Bandwidth            | 11a/BPSK    | 6 Mbps    | 149/157/165 |
| Radiated Emissions Below 1GHz     | 11g/BPSK    | 6 Mbps    | 6           |
| Radiated Emissions Above 1GHz     | 11b/CCK     | 11 Mbps   | 1/6/11      |
| Band Edge Emissions               | 11g/BPSK    | 6 Mbps    | 1/6/11      |
|                                   | 11a/BPSK    | 6 Mbps    | 149/157/165 |
| Band Edge Emissions               | 11b/CCK     | 11 Mbps   | 1/11        |
|                                   | 11g/BPSK    | 6 Mbps    | 1/11        |
|                                   | 11a/BPSK    | 6 Mbps    | 149/165     |

Note: There are four test modes shown in the table below:

Mode 1: Internal F Type Antenna, **C037-520721-A**, for IEEE 802.11a and IEEE 802.11b/g.

Mode 2: External Antenna, **ANT-5060 (ASTN6S)**, for IEEE 802.11a and external Antenna, **ASTG11**, for IEEE 802.11b/g.

Mode 3: External Antenna, **SWA 2459/360/7/20/V**, for IEEE 802.11a and IEEE 802.11b/g.

Mode 4: External Antenna, **MMO24580608**, for IEEE 802.11a and IEEE 802.11b/g.

### 3.6. Table for Testing Locations

| Test Site No. | Site Category | Location | FCC Reg. No. | IC File No. | VCCI Reg. No |
|---------------|---------------|----------|--------------|-------------|--------------|
| 03CH03-HY     | SAC           | Hwa Ya   | 101377       | IC 4088     | -            |
| CO04-HY       | Conduction    | Hwa Ya   | -            | -           | -            |
| TH01-HY       | OVEN Room     | Hwa Ya   | -            | -           | -            |

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC); Fully Anechoic Chamber (FAC).

Please refer section 6 for Test Site Address.

### 3.7. Table for Supporting Units

| Support Unit                     | Brand   | Model     | FCC ID |
|----------------------------------|---------|-----------|--------|
| Notebook<br>(Remote workstation) | DELL    | PP01L     | DoC    |
| POE                              | Trapeze | MXR-2     | DoC    |
| Adapter                          | LB      | SA06L48-V | DoC    |

### 3.8. Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Mode 1: Internal F Type Antenna, **C037-520721-A**, for IEEE 802.11a

| Test Software Version | ART V5.2 |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 5745 MHz | 5785 MHz | 5825 MHz |
| IEEE 802.11a          | 20       | 20       | 20       |

Mode 1: Internal F Type Antenna, **C037-520721-A**, for IEEE 802.11b/g

| Test Software Version | ART V5.2 |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 2412 MHz | 2437 MHz | 2462 MHz |
| IEEE 802.11b          | 21       | 21       | 21       |
| IEEE 802.11g          | 21.5     | 22       | 21       |

Mode 2: External Antenna, **ANT-5060 (ASTN6S)**, for IEEE 802.11a

| Test Software Version | ART V5.2 |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 5745 MHz | 5785 MHz | 5825 MHz |
| IEEE 802.11a          | 17       | 17.5     | 17.5     |

Mode 2: External Antenna, **ASTG11**, for IEEE 802.11b/g.

| Test Software Version | ART V5.2 |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 2412 MHz | 2437 MHz | 2462 MHz |
| IEEE 802.11b          | 15.5     | 18       | 18       |
| IEEE 802.11g          | 11       | 16       | 12       |

Mode 3: External Antenna, **SWA 2459/360/7/20/V**, for IEEE 802.11a

| Test Software Version | ART V5.2 |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 5745 MHz | 5785 MHz | 5825 MHz |
| IEEE 802.11a          | 22       | 22       | 22       |

Mode 3: External Antenna, **SWA 2459/360/7/20/V**, for IEEE 802.11b/g.

| Test Software Version | ART V5.2 |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 2412 MHz | 2437 MHz | 2462 MHz |
| IEEE 802.11b          | 21       | 21       | 21       |
| IEEE 802.11g          | 19       | 21       | 21       |

Mode 4: External Antenna, **MMO24580608**, for IEEE 802.11a.

| Test Software Version | ART V5.2 |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 5745 MHz | 5785 MHz | 5825 MHz |
| IEEE 802.11a          | 22       | 22       | 22       |

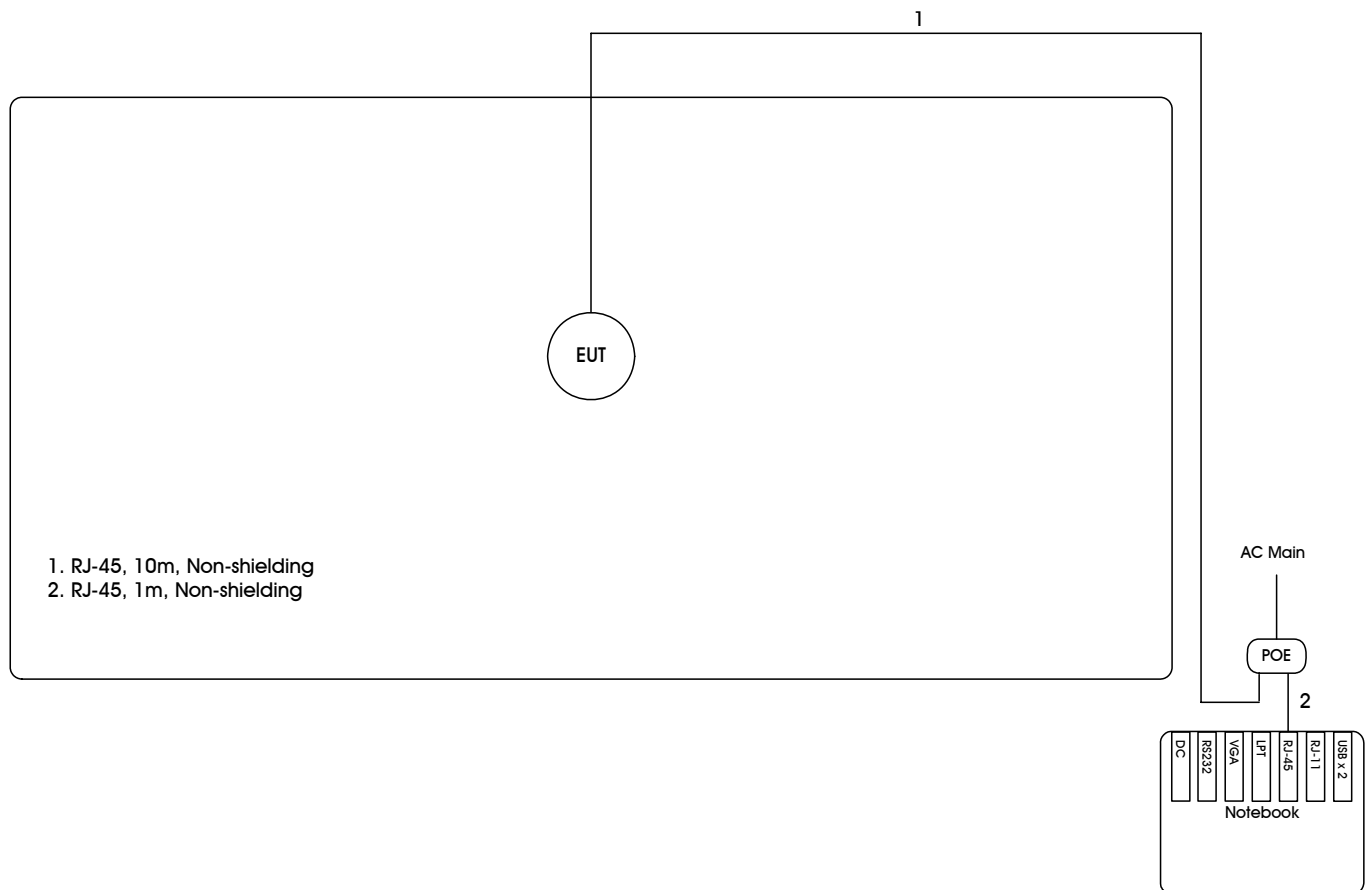
Mode 4: External Antenna, **MMO24580608**, for IEEE 802.11b/g.

| Test Software Version | ART V5.2 |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 2412 MHz | 2437 MHz | 2462 MHz |
| IEEE 802.11b          | 21       | 21       | 20.5     |
| IEEE 802.11g          | 16.5     | 16.5     | 16.5     |

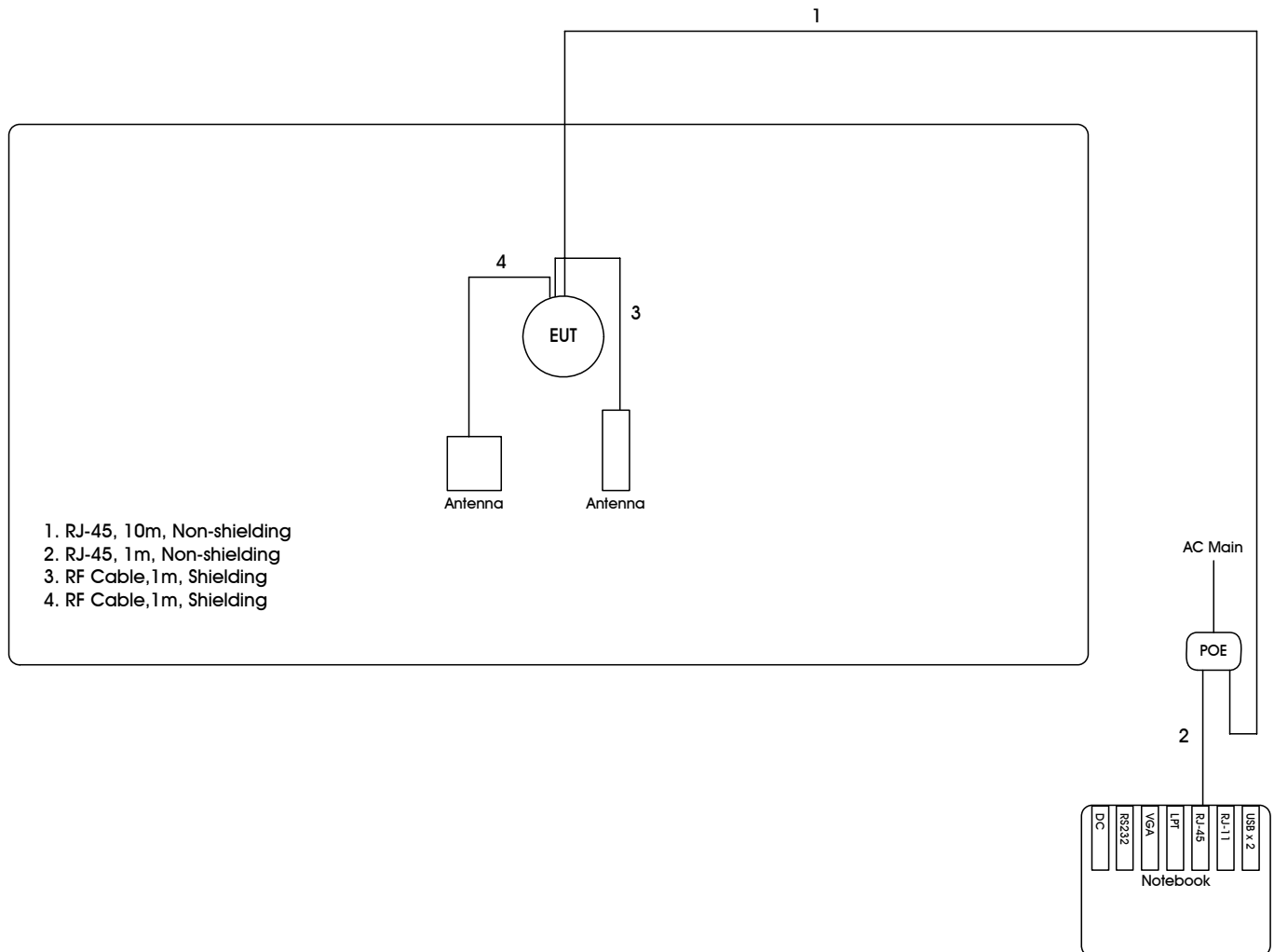
### 3.9. Test Configurations

#### 3.9.1. Radiation Emissions Test Configuration

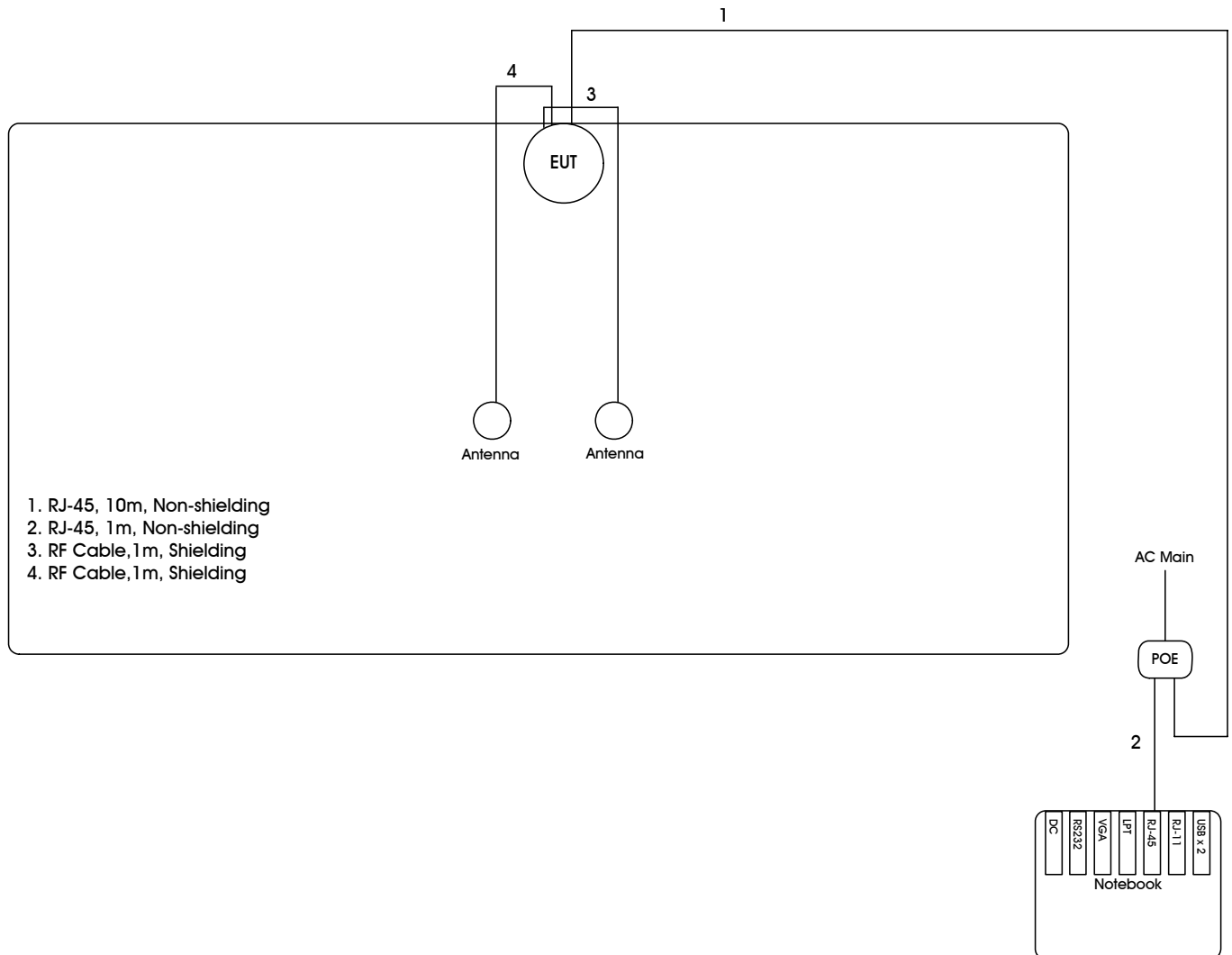
Mode 1: Internal Antenna (F Type Ant. 1) for IEEE 802.11a



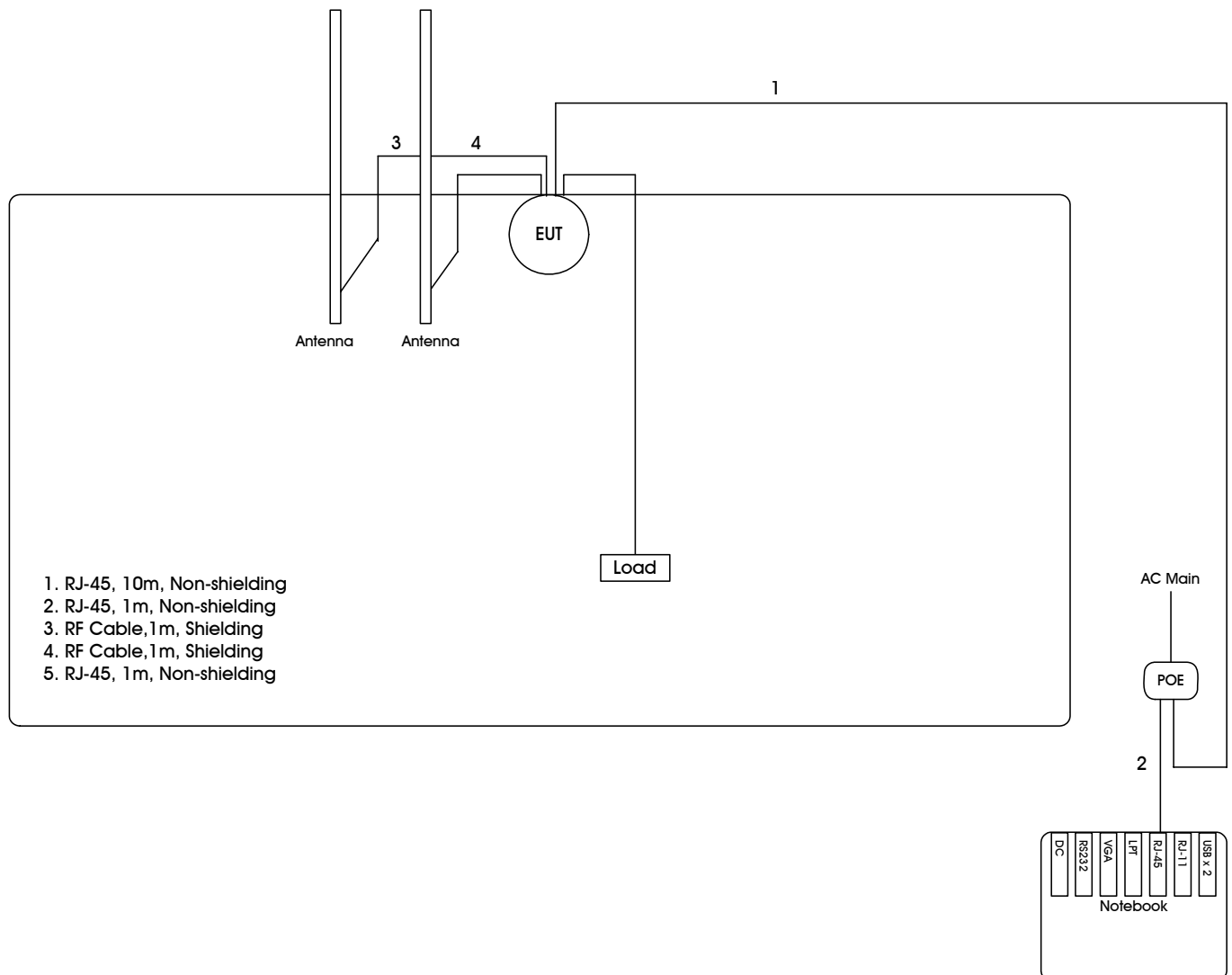
Mode 2: External Antenna, ANT-5060 (ASTN6S), for IEEE 802.11a and external Antenna, ASTG11, for IEEE 802.11b/g.



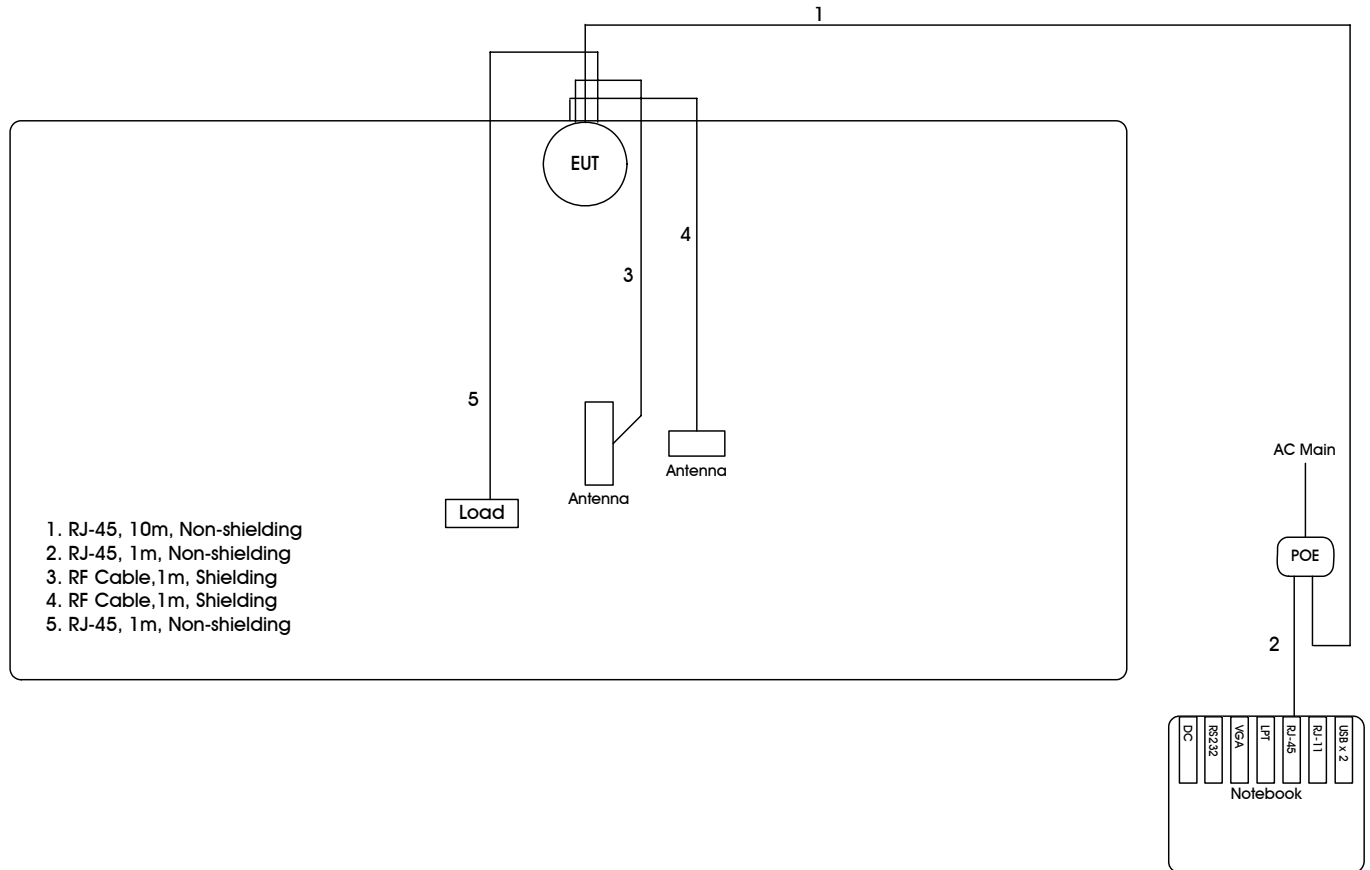
### Mode 3: Omni ANT for 5GHz and 2.4GHz.



#### Mode 4: Omnidirectional for 5GHz and 2.4GHz.



### 3.9.2. AC Power Line Conduction Emissions Test Configuration



## 4. TEST RESULT

### 4.1. AC Power Line Conducted Emissions Measurement

#### 4.1.1. Limit

For this product which is designed to be connected to the 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 below limits table.

| Frequency (MHz) | QP Limit (dBuV) | AV Limit (dBuV) |
|-----------------|-----------------|-----------------|
| 0.15~0.5        | 66~56           | 56~46           |
| 0.5~5           | 56              | 46              |
| 5~30            | 60              | 50              |

#### 4.1.2. Measuring Instruments and Setting

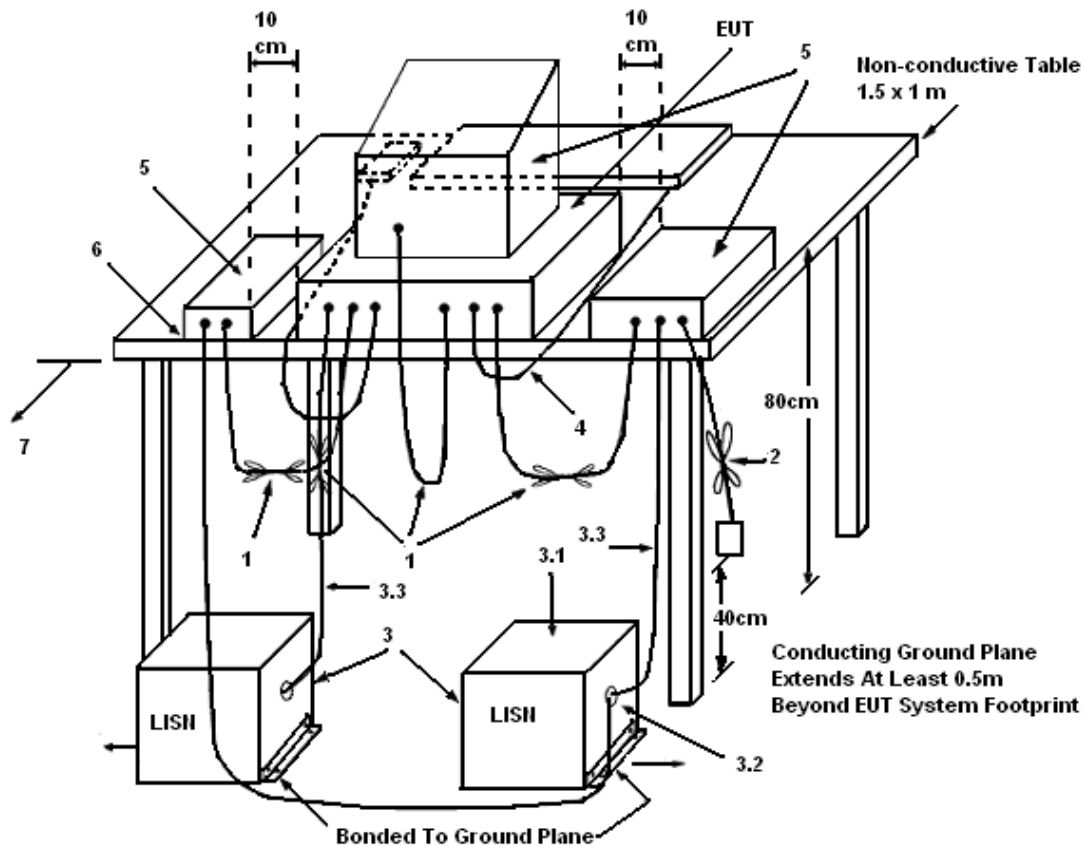
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

| Receiver Parameters | Setting  |
|---------------------|----------|
| Attenuation         | 10 dB    |
| Start Frequency     | 0.15 MHz |
| Stop Frequency      | 30 MHz   |
| IF Bandwidth        | 9 KHz    |

#### 4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.4. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 KHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

#### 4.1.4. Test Setup Layout



#### LEGEND:

- (1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- (2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- (3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50  $\Omega$ . LISN can be placed on top of, or immediately beneath, reference ground plane.
  - (3.1) All other equipment powered from additional LISN(s).
  - (3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
  - (3.3) LISN at least 80 cm from nearest part of EUT chassis.
- (4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
- (5) Non-EUT components of EUT system being tested.
- (6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
- (7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

#### 4.1.5. Test Deviation

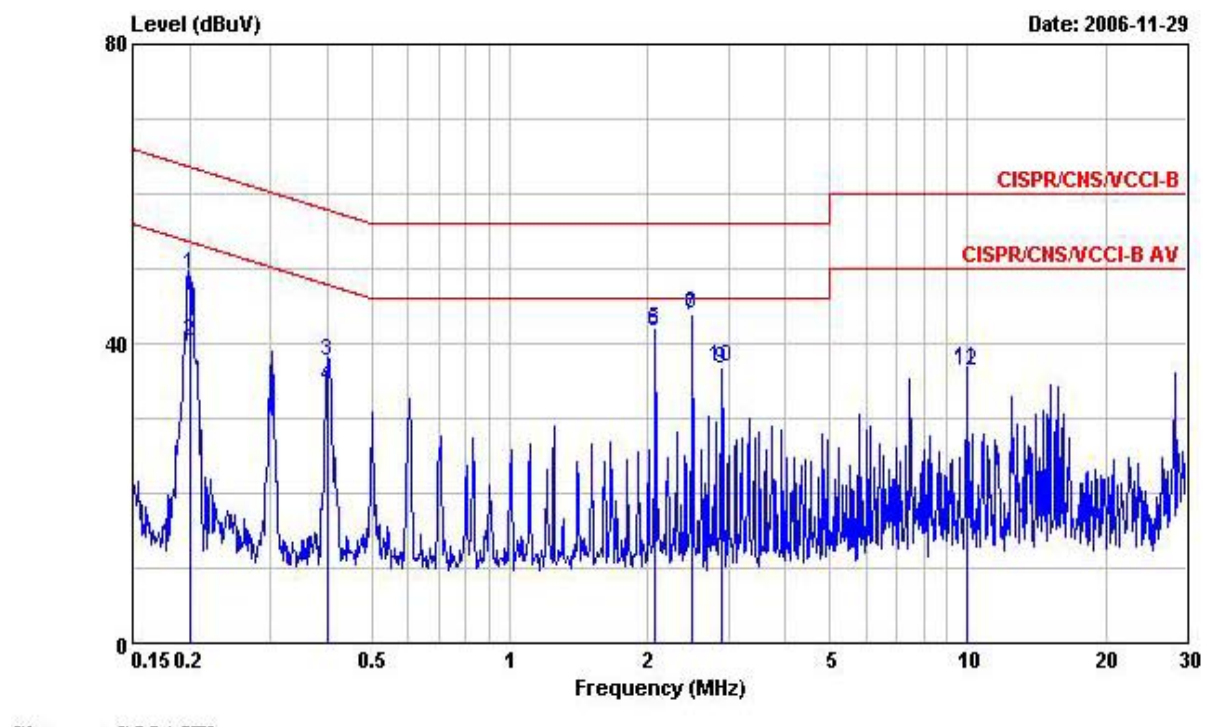
There is no deviation with the original standard.

#### 4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

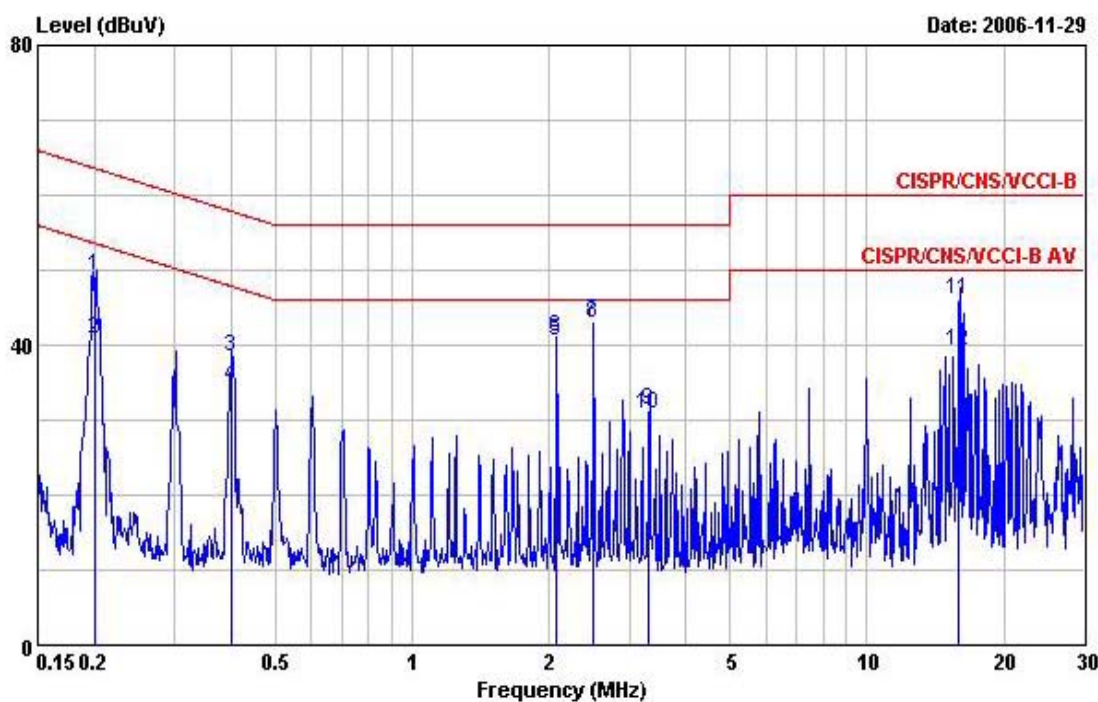
#### 4.1.7. Results of AC Power Line Conducted Emissions Measurement

|               |             |          |      |
|---------------|-------------|----------|------|
| Temperature   | 26          | Humidity | 55%  |
| Test Engineer | Duncan      | Phase    | Line |
| Configuration | Normal Mode |          |      |



|    | Freq      | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark  |
|----|-----------|-------|------------|------------|------------|-------------|------------|---------|
|    | MHz       | dBuV  | dB         | dBuV       | dBuV       | dB          | dB         |         |
| 1  | 0.2009010 | 49.24 | -14.33     | 63.57      | 48.94      | 0.10        | 0.20       | QP      |
| 2  | 0.2009010 | 40.25 | -13.32     | 53.57      | 39.95      | 0.10        | 0.20       | Average |
| 3  | 0.4018680 | 37.74 | -20.07     | 57.81      | 37.53      | 0.10        | 0.11       | QP      |
| 4  | 0.4018680 | 34.18 | -13.63     | 47.81      | 33.97      | 0.10        | 0.11       | Average |
| 5  | 2.075     | 41.85 | -4.15      | 46.00      | 41.54      | 0.10        | 0.21       | Average |
| 6  | 2.075     | 41.49 | -14.51     | 56.00      | 41.18      | 0.10        | 0.21       | QP      |
| 7  | 2.490     | 43.58 | -12.42     | 56.00      | 43.23      | 0.10        | 0.25       | QP      |
| 8  | 2.490     | 44.02 | -1.98      | 46.00      | 43.67      | 0.10        | 0.25       | Average |
| 9  | 2.905     | 36.66 | -9.34      | 46.00      | 36.27      | 0.10        | 0.29       | Average |
| 10 | 2.905     | 36.93 | -19.07     | 56.00      | 36.54      | 0.10        | 0.29       | QP      |
| 11 | 9.961     | 36.62 | -13.38     | 50.00      | 36.02      | 0.20        | 0.40       | Average |
| 12 | 9.961     | 36.31 | -23.69     | 60.00      | 35.71      | 0.20        | 0.40       | QP      |

|               |             |          |         |
|---------------|-------------|----------|---------|
| Temperature   | 26          | Humidity | 55%     |
| Test Engineer | Duncan      | Phase    | Neutral |
| Configuration | Normal Mode |          |         |



SN: 2006-11-29

|    | Freq      | Level | Over   | Limit | Read  | LISN   | Cable |         |
|----|-----------|-------|--------|-------|-------|--------|-------|---------|
|    | MHz       | dBuV  | Limit  | Line  | Level | Factor | Loss  | Remark  |
|    | MHz       | dBuV  | dB     | dBuV  | dBuV  | dB     | dB    |         |
| 1  | 0.2004330 | 49.30 | -14.29 | 63.59 | 49.00 | 0.10   | 0.20  | QP      |
| 2  | 0.2004330 | 40.75 | -12.84 | 53.59 | 40.45 | 0.10   | 0.20  | Average |
| 3  | 0.4018680 | 38.34 | -19.47 | 57.81 | 38.13 | 0.10   | 0.11  | QP      |
| 4  | 0.4018680 | 34.58 | -13.23 | 47.81 | 34.37 | 0.10   | 0.11  | Average |
| 5  | 2.074     | 40.54 | -15.46 | 56.00 | 40.23 | 0.10   | 0.21  | QP      |
| 6  | 2.074     | 40.95 | -5.05  | 46.00 | 40.64 | 0.10   | 0.21  | Average |
| 7  | 2.490     | 43.23 | -2.77  | 46.00 | 42.85 | 0.13   | 0.25  | Average |
| 8  | 2.490     | 42.86 | -13.14 | 56.00 | 42.48 | 0.13   | 0.25  | QP      |
| 9  | 3.320     | 31.22 | -24.78 | 56.00 | 30.75 | 0.17   | 0.30  | QP      |
| 10 | 3.320     | 30.88 | -15.12 | 46.00 | 30.41 | 0.17   | 0.30  | Average |
| 11 | 15.850    | 45.95 | -14.05 | 60.00 | 45.15 | 0.30   | 0.50  | QP      |
| 12 | 15.850    | 39.25 | -10.75 | 50.00 | 38.45 | 0.30   | 0.50  | Average |

Note:

Level = Read Level + LISN Factor + Cable Loss.

## 4.2. Maximum Peak Output Power Measurement

### 4.2.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. The limited has to be reduced by the amount in dB that the gain of the antenna exceed 6dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi. Systems operating in the 5725-5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted output power.

### 4.2.2. Measuring Instruments and Setting

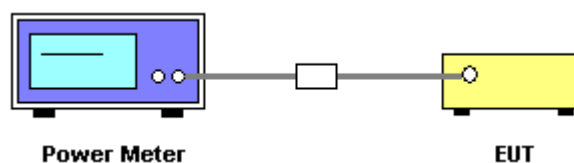
Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

| Power Meter Parameter | Setting            |
|-----------------------|--------------------|
| Filter No.            | Auto               |
| Measurement time      | 0.135 s ~ 26 s     |
| Used Peak Sensor      | NRV-Z32 (model 04) |

### 4.2.3. Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. Turn on the EUT and power meter and then record the peak power value.
3. Repeat above procedures on all channels needed to be tested.

### 4.2.4. Test Setup Layout



### 4.2.5. Test Deviation

There is no deviation with the original standard.

### 4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

#### 4.2.7. Test Result of Maximum Peak Output Power

|               |         |                |             |
|---------------|---------|----------------|-------------|
| Temperature   | 26.8    | Humidity       | 54%         |
| Test Engineer | Sam Lee | Configurations | 802.11a/b/g |

Mode 1

Configuration IEEE 802.11a

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 149     | 5745 MHz  | 23.81                 | 30.00            | Complies |
| 157     | 5785 MHz  | 23.91                 | 30.00            | Complies |
| 165     | 5825 MHz  | 23.46                 | 30.00            | Complies |

Configuration IEEE 802.11b

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 1       | 2412 MHz  | 25.02                 | 30.00            | Complies |
| 6       | 2437 MHz  | 25.48                 | 30.00            | Complies |
| 11      | 2462 MHz  | 25.46                 | 30.00            | Complies |

Configuration IEEE 802.11g

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 1       | 2412 MHz  | 25.84                 | 30.00            | Complies |
| 6       | 2437 MHz  | 26.35                 | 30.00            | Complies |
| 11      | 2462 MHz  | 25.92                 | 30.00            | Complies |

## Mode 2

### Configuration IEEE 802.11a

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 149     | 5745 MHz  | 20.70                 | 21.50            | Complies |
| 157     | 5785 MHz  | 21.20                 | 21.50            | Complies |
| 165     | 5825 MHz  | 21.04                 | 21.50            | Complies |

### Configuration IEEE 802.11b

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 1       | 2412 MHz  | 19.81                 | 26.00            | Complies |
| 6       | 2437 MHz  | 23.68                 | 26.00            | Complies |
| 11      | 2462 MHz  | 23.37                 | 26.00            | Complies |

### Configuration IEEE 802.11g

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 1       | 2412 MHz  | 15.31                 | 26.00            | Complies |
| 6       | 2437 MHz  | 23.01                 | 26.00            | Complies |
| 11      | 2462 MHz  | 17.19                 | 26.00            | Complies |

### Mode 3

#### Configuration IEEE 802.11a

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 149     | 5745 MHz  | 24.25                 | 28.00            | Complies |
| 157     | 5785 MHz  | 24.01                 | 28.00            | Complies |
| 165     | 5825 MHz  | 23.73                 | 28.00            | Complies |

#### Configuration IEEE 802.11b

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 1       | 2412 MHz  | 26.04                 | 30.00            | Complies |
| 6       | 2437 MHz  | 26.16                 | 30.00            | Complies |
| 11      | 2462 MHz  | 25.72                 | 30.00            | Complies |

#### Configuration IEEE 802.11g

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 1       | 2412 MHz  | 26.04                 | 30.00            | Complies |
| 6       | 2437 MHz  | 26.94                 | 30.00            | Complies |
| 11      | 2462 MHz  | 26.89                 | 30.00            | Complies |

#### Mode 4

##### Configuration IEEE 802.11a

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 149     | 5745 MHz  | 24.25                 | 28.00            | Complies |
| 157     | 5785 MHz  | 24.01                 | 28.00            | Complies |
| 165     | 5825 MHz  | 23.73                 | 28.00            | Complies |

##### Configuration IEEE 802.11b

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 1       | 2412 MHz  | 26.11                 | 30.00            | Complies |
| 6       | 2437 MHz  | 26.08                 | 30.00            | Complies |
| 11      | 2462 MHz  | 26.05                 | 30.00            | Complies |

##### Configuration IEEE 802.11g

| Channel | Frequency | Conducted Power (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|-----------------------|------------------|----------|
| 1       | 2412 MHz  | 23.51                 | 30.00            | Complies |
| 6       | 2437 MHz  | 23.72                 | 30.00            | Complies |
| 11      | 2462 MHz  | 23.28                 | 30.00            | Complies |

For IEEE 802.11a there are for test modes shown in the table below:

Mode 1: Internal Antenna (F Type Antenna- 1 @3dBi) for IEEE 802.11a and internal Antenna (F Type Antenna- 1 @3dBi) for IEEE 802.11b/g.

Mode 2: External Antenna (Panel Antenna- 4 @14.50dBi) for IEEE 802.11a and External Antenna (Panel Antenna- 4 @10.00dBi) for IEEE 802. b/g.

Mode 3: External Antenna for 5GHz and 2.4GHz (OMNI Antenna – 1 @8.00dBi for IEEE 802.11a and OMNI Antenna – 1 @6.00dBi for IEEE 802. b/g),

Mode 4: External Antenna (Omnidirectional Antenna –2 @8.00dBi for IEEE 802.11a and Omnidirectional Antenna –2 @6.00dBi for IEEE 802. b/g)

Max Power limit for mode 1 is 30dBm,

Max Power limit for Mode 2 is 21.50dBm for IEEE 802.11a and is 26 dBm for the IEEE 802.11b/g.

Max Power limit for Mode 3 is 28dBm for IEEE 802.11a and is 30 dBm for the IEEE 802.11b/g.

Max Power limit for Mode 4 is 28dBm for IEEE 802.11a and is 30 dBm for the IEEE 802.11b/g.

### 4.3. Power Spectral Density Measurement

#### 4.3.1. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

#### 4.3.2. Measuring Instruments and Setting

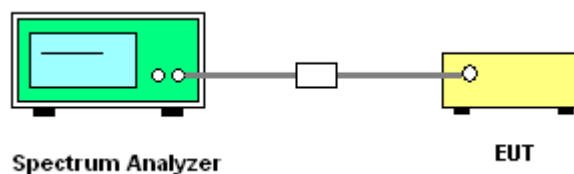
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| Span Frequency     | 1.5MHz   |
| RB                 | 3 kHz    |
| VB                 | 30 kHz   |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | 500s     |

#### 4.3.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser.
2. Set RBW of spectrum analyzer to 3kHz and VBW to 30kHz. Set Detector to Peak, Trace to Max Hold.
3. Mark the frequency with maximum peak power as the center of the display of the spectrum.
4. Set the span to 1.5MHz and the sweep time to 500s and record the maximum peak value.

#### 4.3.4. Test Setup Layout



#### 4.3.5. Test Deviation

There is no deviation with the original standard.

#### 4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

#### 4.3.7. Test Result of Power Spectral Density

|               |         |                |             |
|---------------|---------|----------------|-------------|
| Temperature   | 26.8    | Humidity       | 54%         |
| Test Engineer | Sam Lee | Configurations | 802.11a/b/g |

##### Mode 1

##### Configuration IEEE 802.11a

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 149     | 5745 MHz  | -9.23               | 8.00             | Complies |
| 157     | 5785 MHz  | -10.97              | 8.00             | Complies |
| 165     | 5825 MHz  | -11.94              | 8.00             | Complies |

##### Configuration IEEE 802.11b

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 1       | 2412 MHz  | 1.84                | 8.00             | Complies |
| 6       | 2437 MHz  | 4.37                | 8.00             | Complies |
| 11      | 2462 MHz  | 3.58                | 8.00             | Complies |

##### Configuration IEEE 802.11g

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 1       | 2412 MHz  | 0.18                | 8.00             | Complies |
| 6       | 2437 MHz  | -0.83               | 8.00             | Complies |
| 11      | 2462 MHz  | -0.57               | 8.00             | Complies |

## Mode 2

### Configuration IEEE 802.11a

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 149     | 5745 MHz  | -12.00              | -0.5             | Complies |
| 157     | 5785 MHz  | -10.71              | -0.5             | Complies |
| 165     | 5825 MHz  | -11.20              | -0.5             | Complies |

### Configuration IEEE 802.11b

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 1       | 2412 MHz  | -4.14               | 4.00             | Complies |
| 6       | 2437 MHz  | 1.09                | 4.00             | Complies |
| 11      | 2462 MHz  | 0.44                | 4.00             | Complies |

### Configuration IEEE 802.11g

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 1       | 2412 MHz  | -14.04              | 4.00             | Complies |
| 6       | 2437 MHz  | -12.55              | 4.00             | Complies |
| 11      | 2462 MHz  | -13.67              | 4.00             | Complies |

### Mode 3

#### Configuration IEEE 802.11a

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 149     | 5745 MHz  | -5.45               | 6.00             | Complies |
| 157     | 5785 MHz  | -5.35               | 6.00             | Complies |
| 165     | 5825 MHz  | -5.61               | 6.00             | Complies |

#### Configuration IEEE 802.11b

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 1       | 2412 MHz  | 0.78                | 8.00             | Complies |
| 6       | 2437 MHz  | -0.20               | 8.00             | Complies |
| 11      | 2462 MHz  | 2.57                | 8.00             | Complies |

#### Configuration IEEE 802.11g

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 1       | 2412 MHz  | -3.16               | 8.00             | Complies |
| 6       | 2437 MHz  | -1.94               | 8.00             | Complies |
| 11      | 2462 MHz  | -2.15               | 8.00             | Complies |

#### Mode 4

##### Configuration IEEE 802.11a

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 149     | 5745 MHz  | -5.45               | 6.00             | Complies |
| 157     | 5785 MHz  | -5.35               | 6.00             | Complies |
| 165     | 5825 MHz  | -5.61               | 6.00             | Complies |

##### Configuration IEEE 802.11b

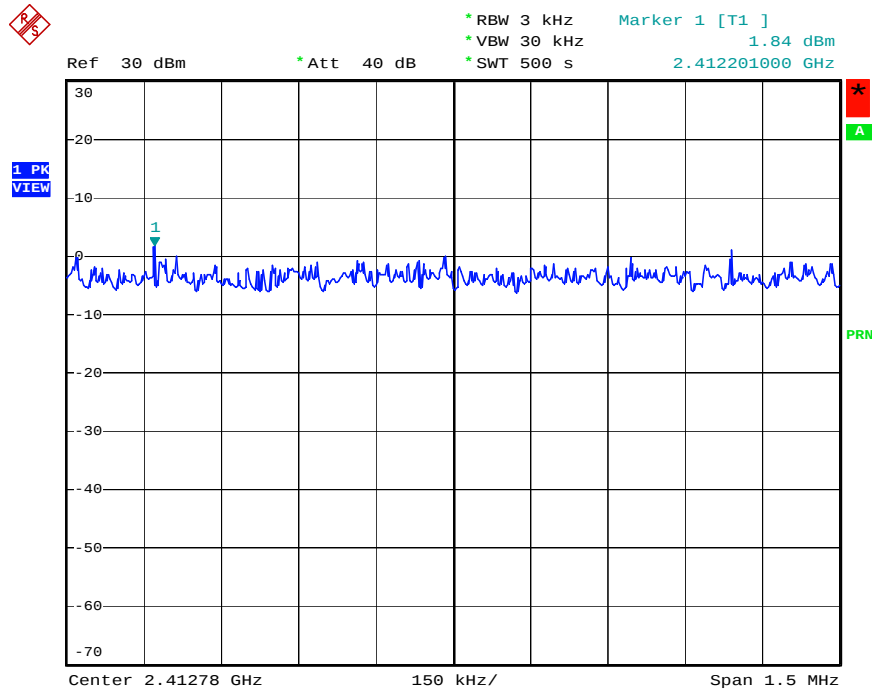
| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 1       | 2412 MHz  | 0.78                | 8.00             | Complies |
| 6       | 2437 MHz  | -0.20               | 8.00             | Complies |
| 11      | 2462 MHz  | -0.82               | 8.00             | Complies |

##### Configuration IEEE 802.11g

| Channel | Frequency | Power Density (dBm) | Max. Limit (dBm) | Result   |
|---------|-----------|---------------------|------------------|----------|
| 1       | 2412 MHz  | -7.49               | 8.00             | Complies |
| 6       | 2437 MHz  | -6.34               | 8.00             | Complies |
| 11      | 2462 MHz  | -6.66               | 8.00             | Complies |

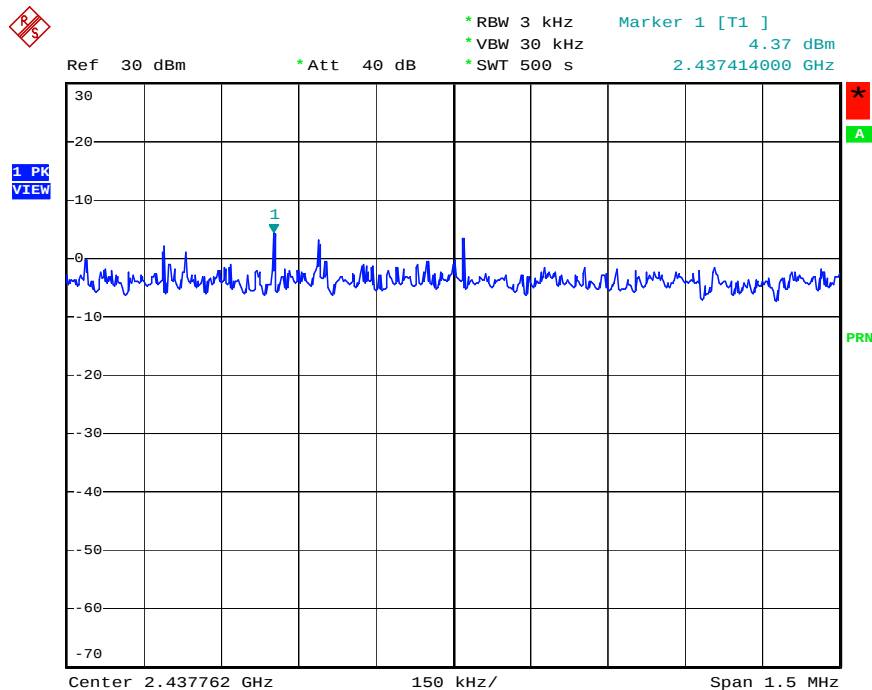
## Mode 1

### Power Density Plot on Configuration IEEE 802.11b / 2412 MHz



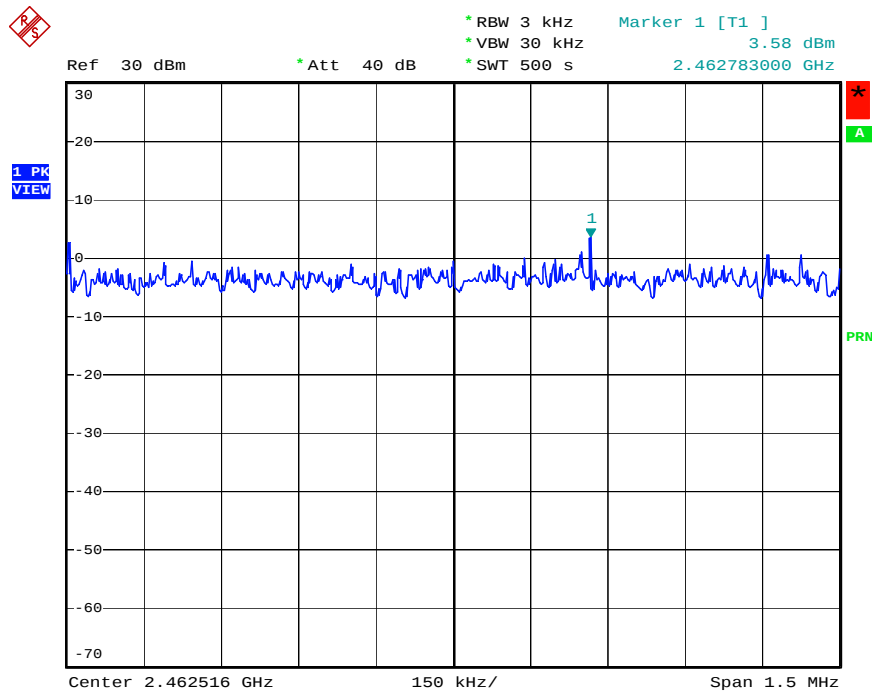
Date: 28.NOV.2006 19:14:24

### Power Density Plot on Configuration IEEE 802.11b / 2437 MHz



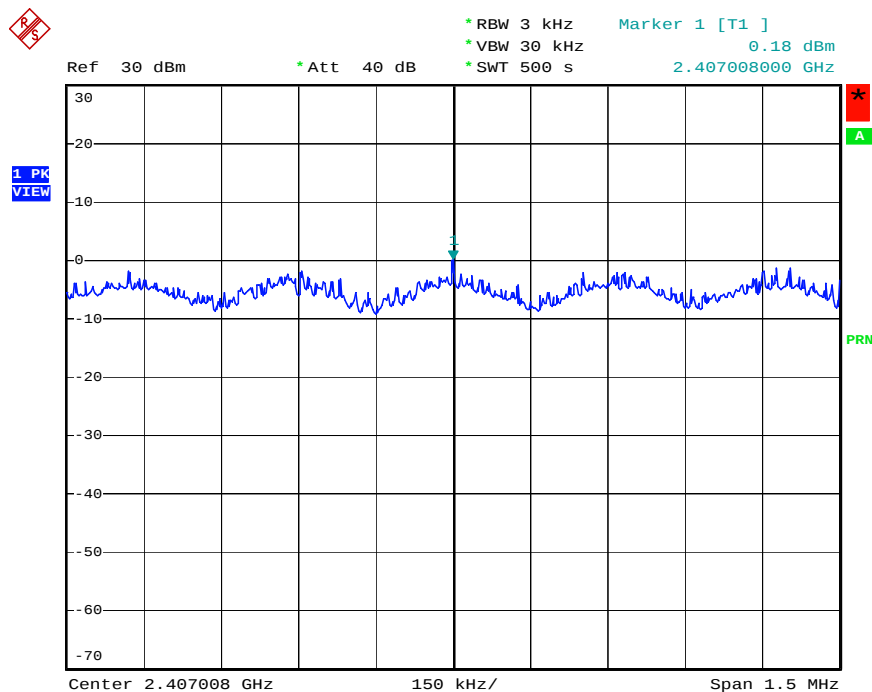
Date: 28.NOV.2006 19:12:33

### Power Density Plot on Configuration IEEE 802.11b / 2462 MHz



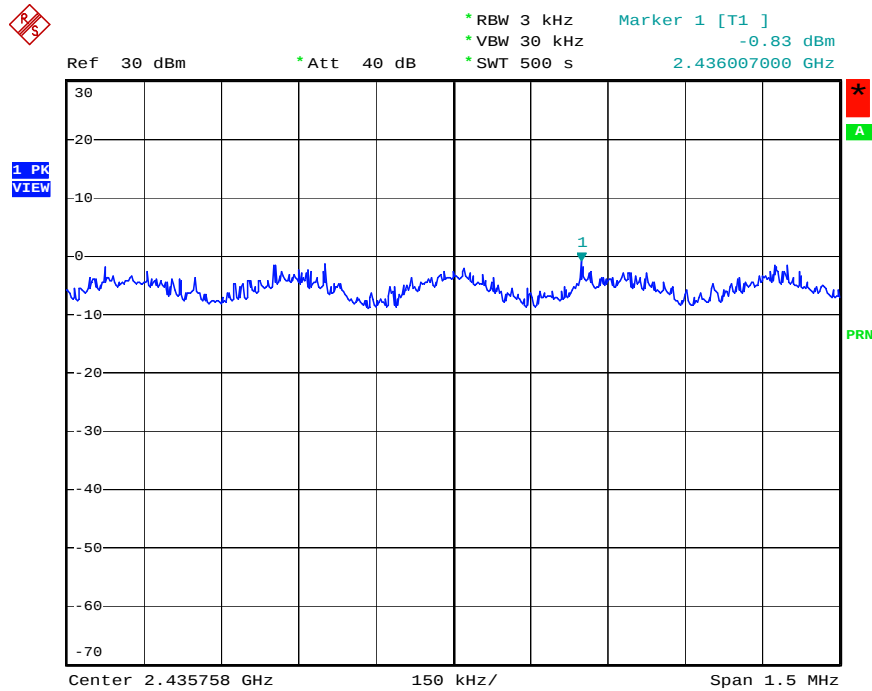
Date: 28.NOV.2006 19:11:19

### Power Density Plot on Configuration IEEE 802.11g / 2412 MHz



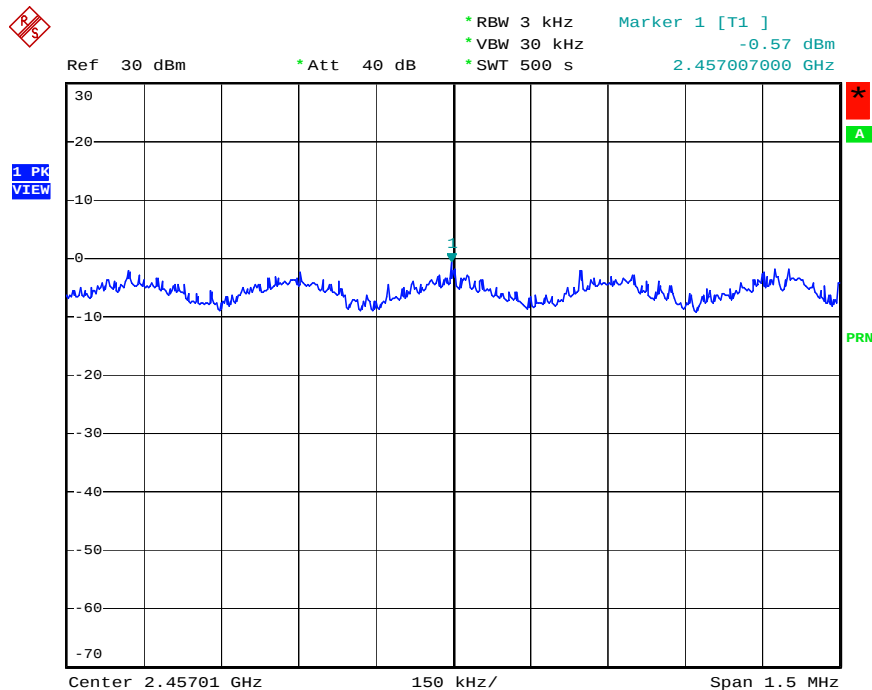
Date: 28.NOV.2006 19:20:29

### Power Density Plot on Configuration IEEE 802.11g / 2437 MHz



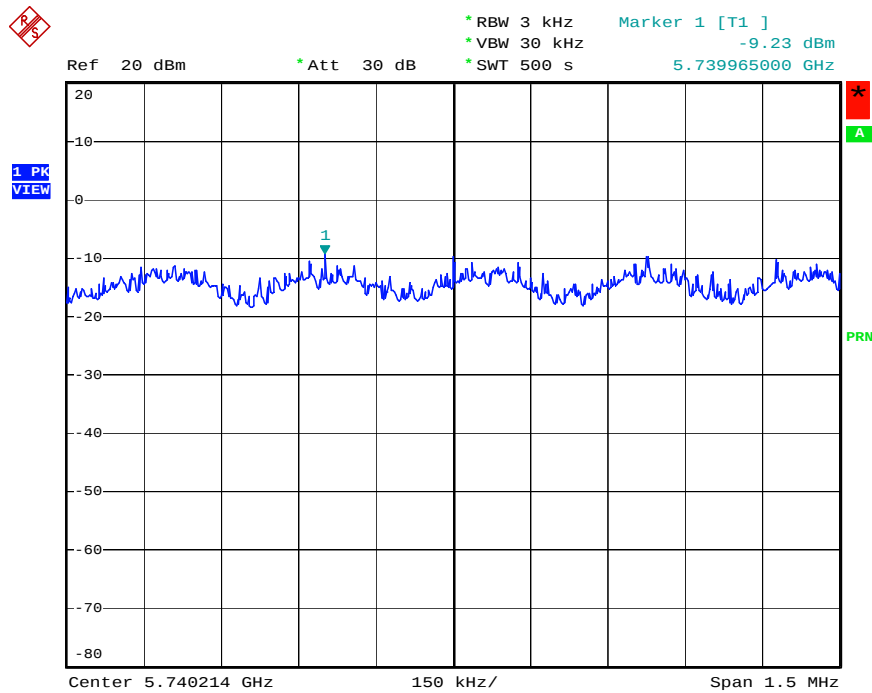
Date: 28.NOV.2006 19:22:28

### Power Density Plot on Configuration IEEE 802.11g / 2462 MHz



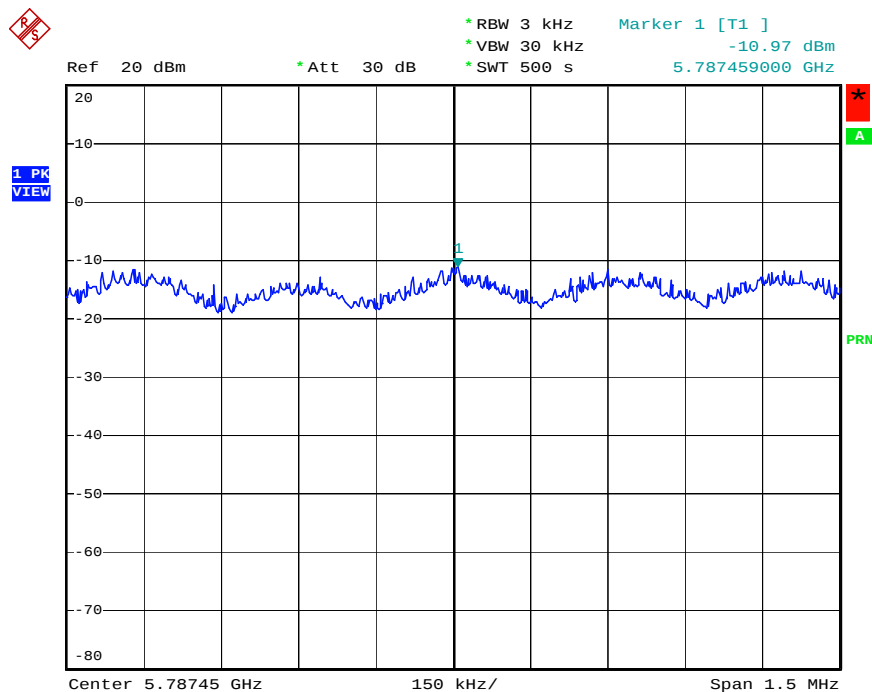
Date: 28.NOV.2006 19:25:08

### Power Density Plot on Configuration IEEE 802.11a / 5745 MHz



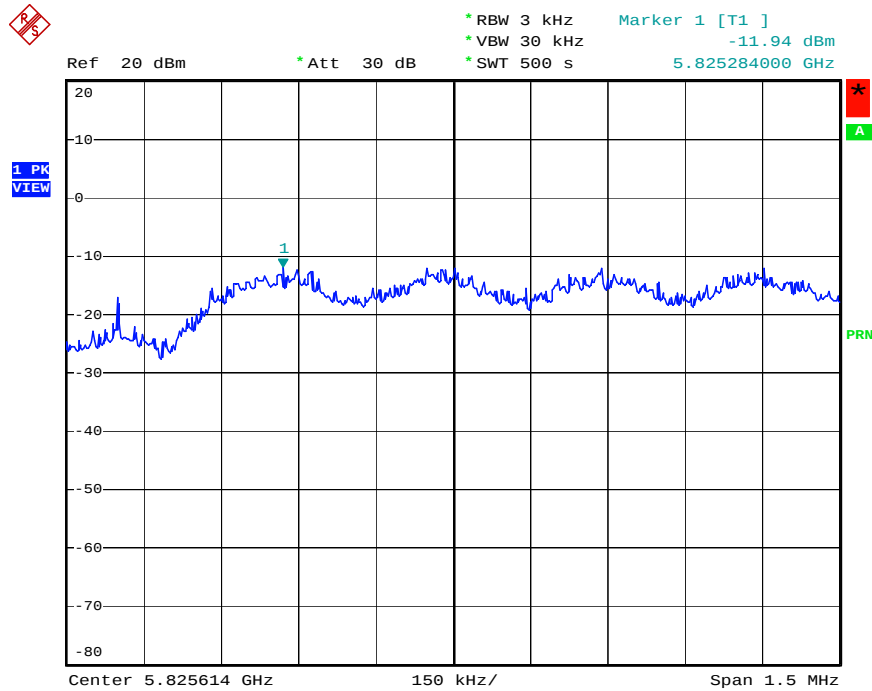
Date: 27.NOV.2006 13:30:44

### Power Density Plot on Configuration IEEE 802.11a / 5785 MHz



Date: 27.NOV.2006 13:24:37

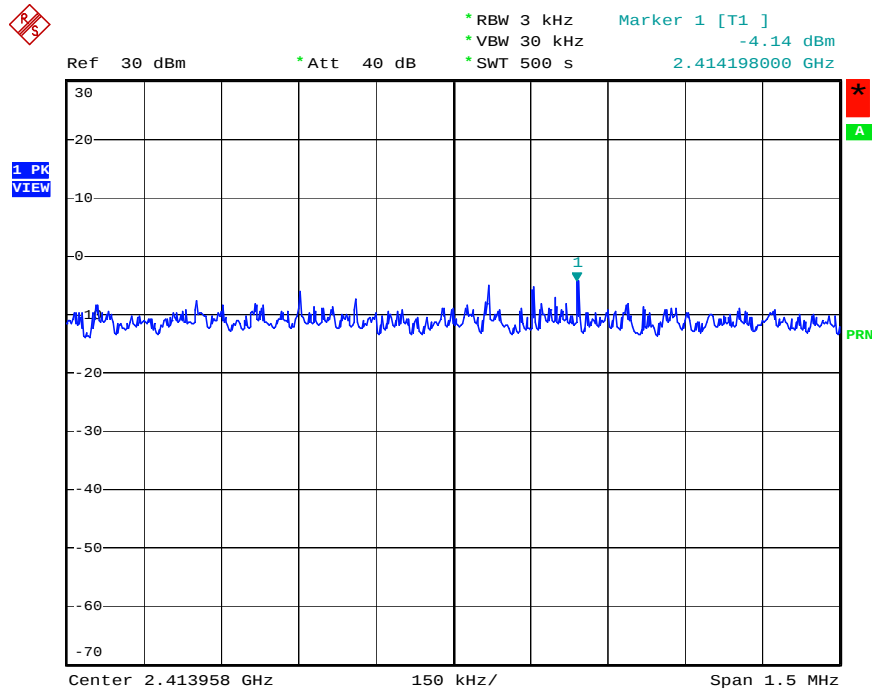
# Power Density Plot on Configuration IEEE 802.11a / 5825 MHz



Date: 27.NOV.2006 13:23:23

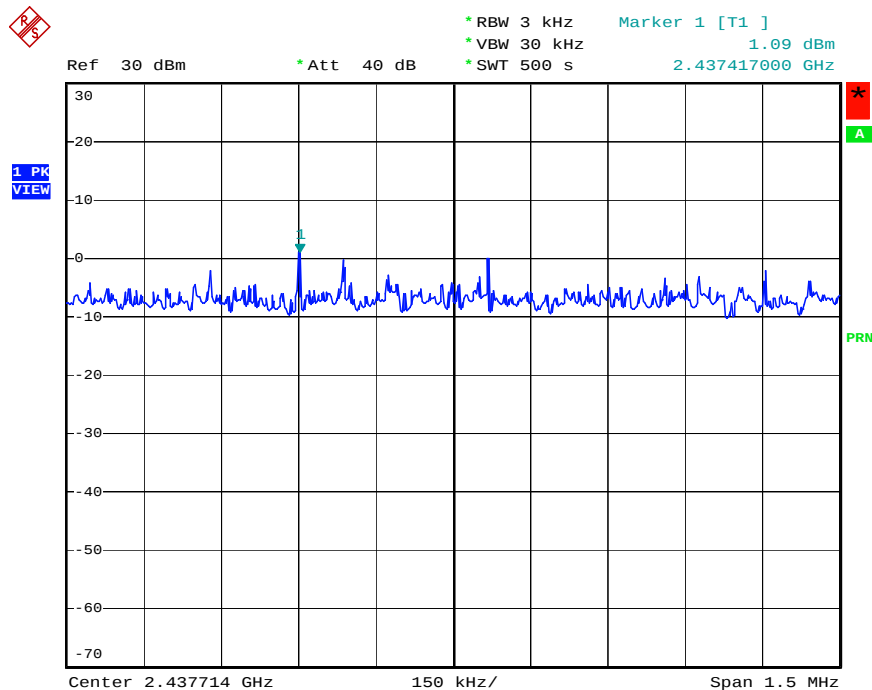
## Mode 2

### Power Density Plot on Configuration IEEE 802.11b / 2412 MHz



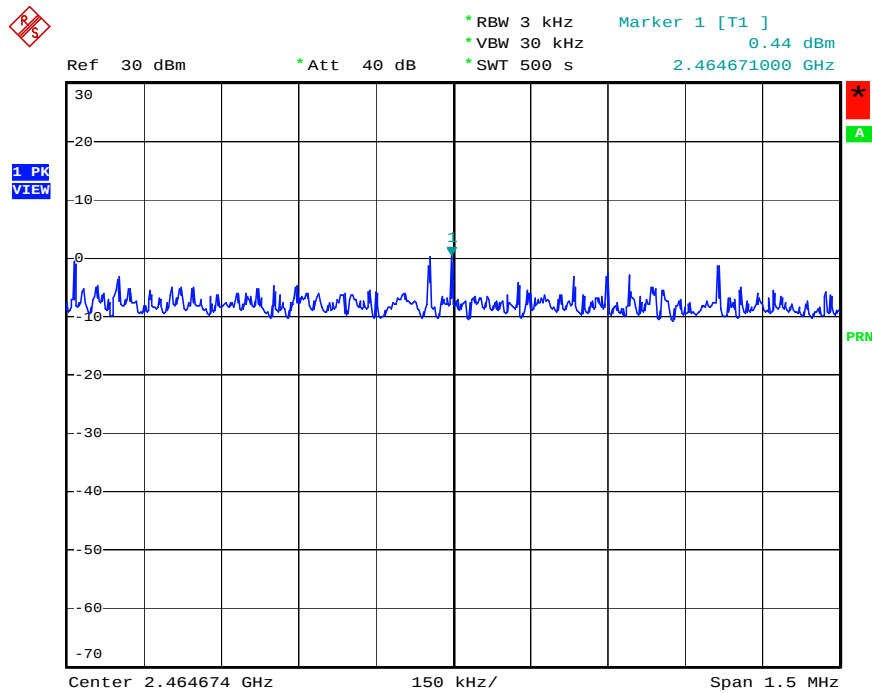
Date: 27.NOV.2006 20:27:11

### Power Density Plot on Configuration IEEE 802.11b / 2437 MHz



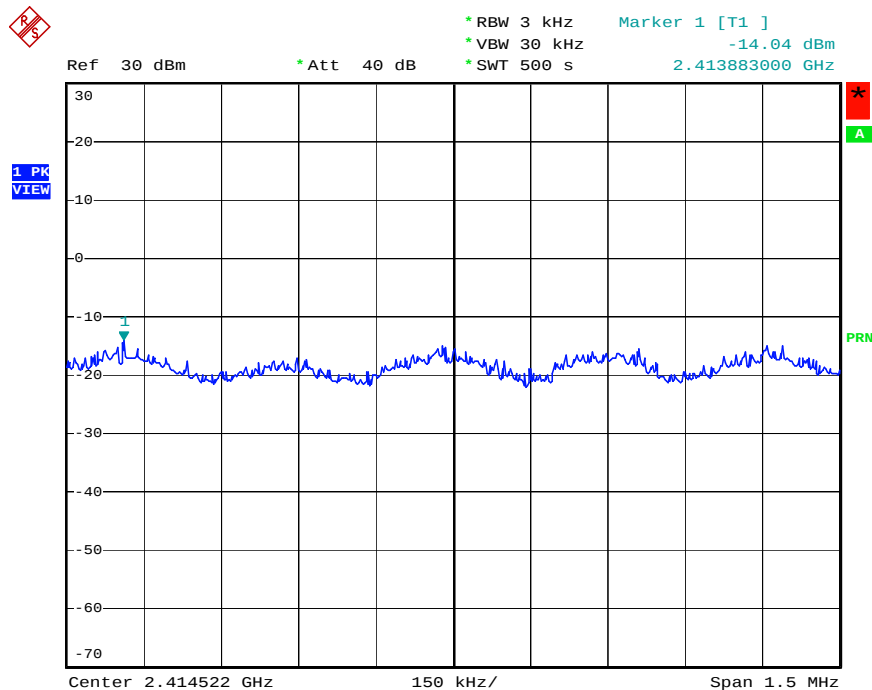
Date: 27.NOV.2006 20:24:24

### Power Density Plot on Configuration IEEE 802.11b / 2462 MHz



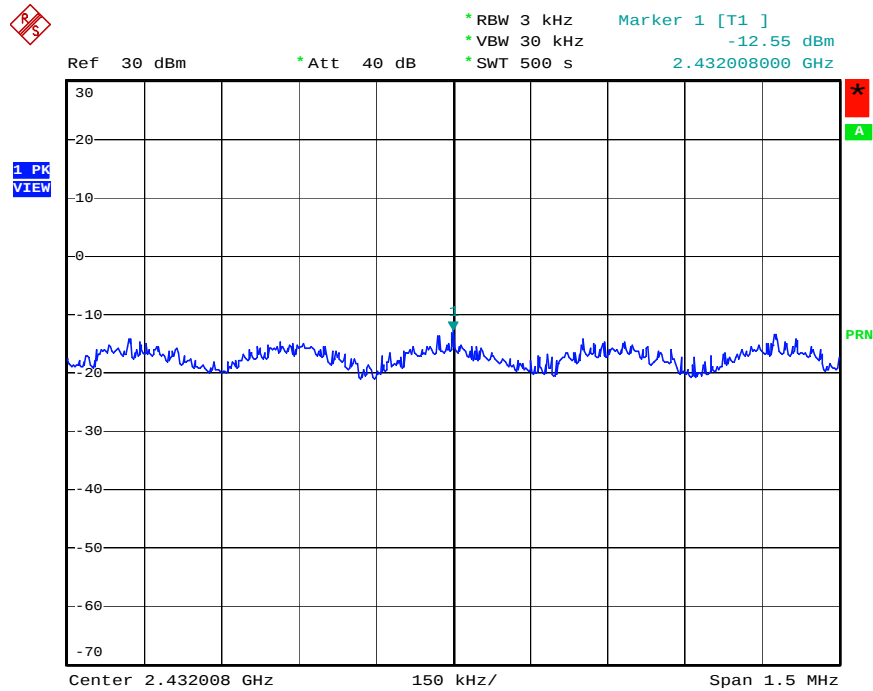
Date: 27.NOV.2006 20:22:21

### Power Density Plot on Configuration IEEE 802.11g / 2412 MHz



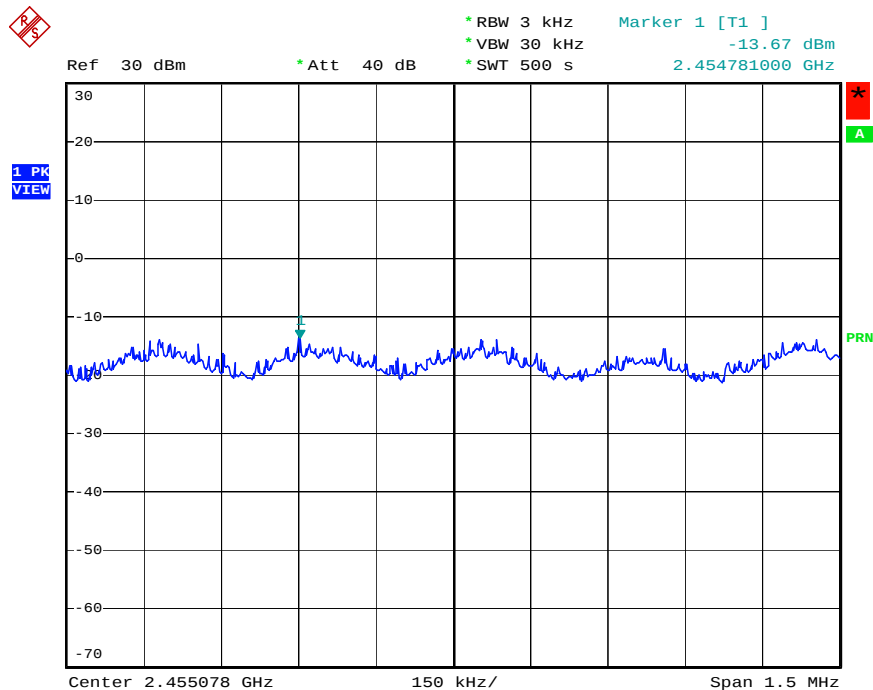
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### Power Density Plot on Configuration IEEE 802.11g / 2437 MHz



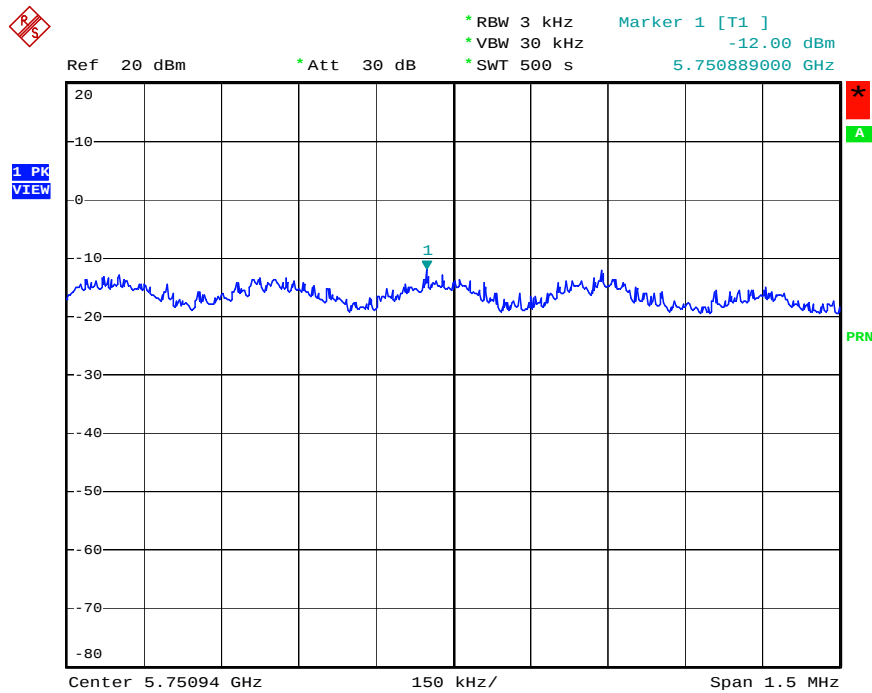
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### Power Density Plot on Configuration IEEE 802.11g / 2462 MHz



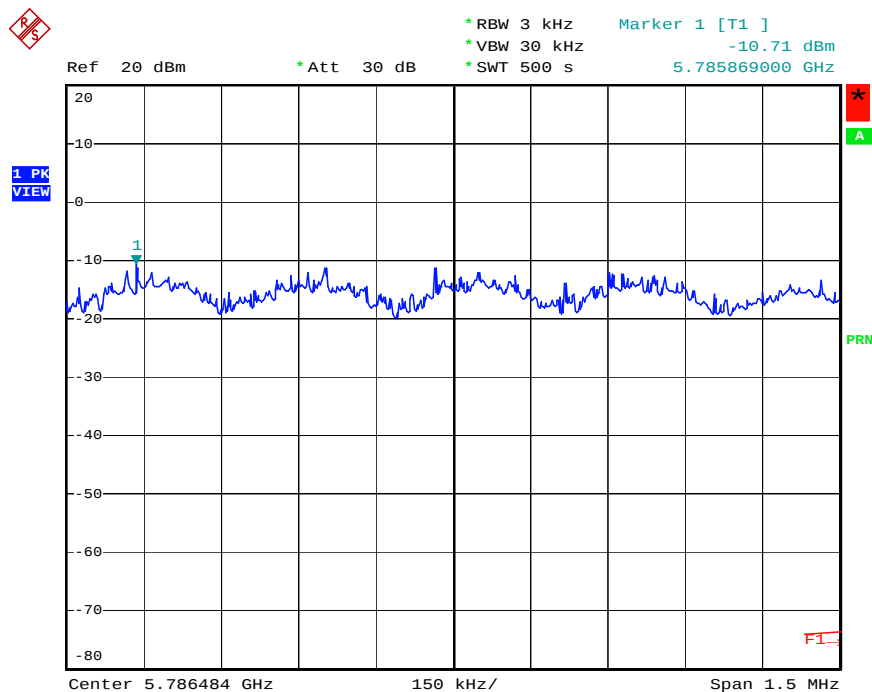
Date: 27.NOV.2006 20:34:41

### Power Density Plot on Configuration IEEE 802.11a / 5745 MHz



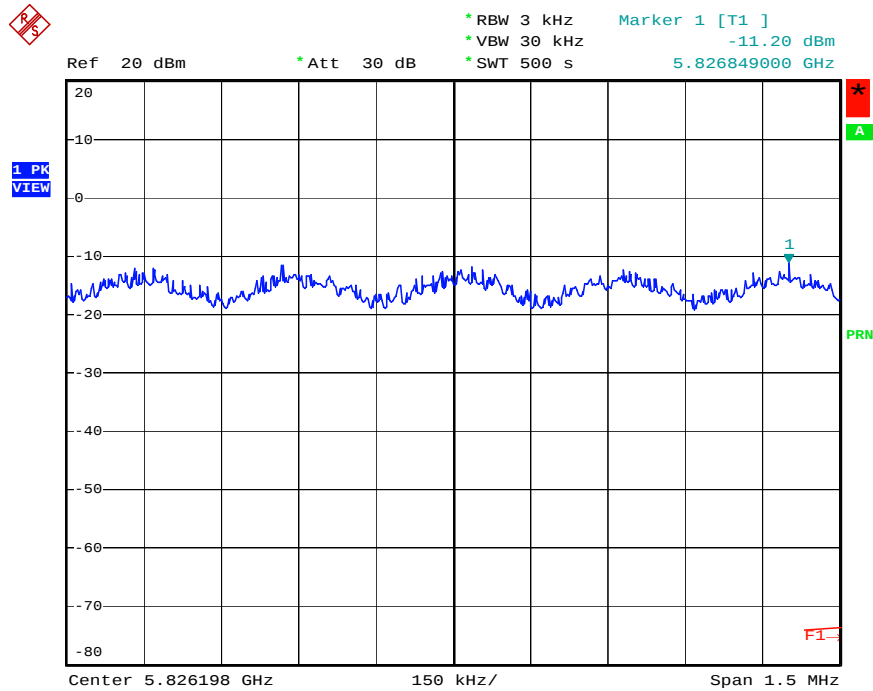
Date: 27.NOV.2006 08:48:15

### Power Density Plot on Configuration IEEE 802.11a / 5785 MHz



Date: 27.NOV.2006 08:39:22

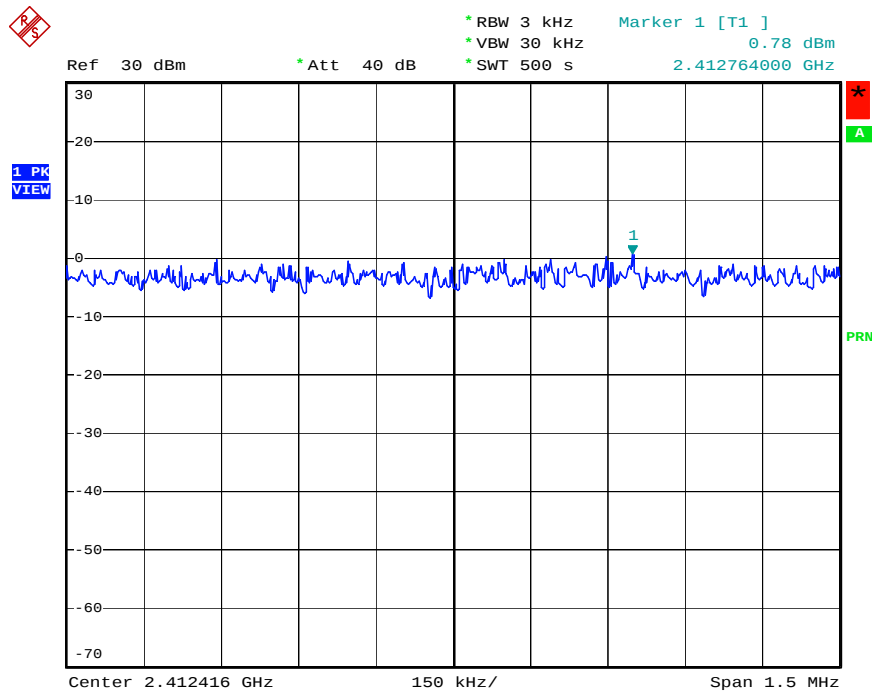
# Power Density Plot on Configuration IEEE 802.11a / 5825 MHz



Date: 27.NOV.2006 08:38:00

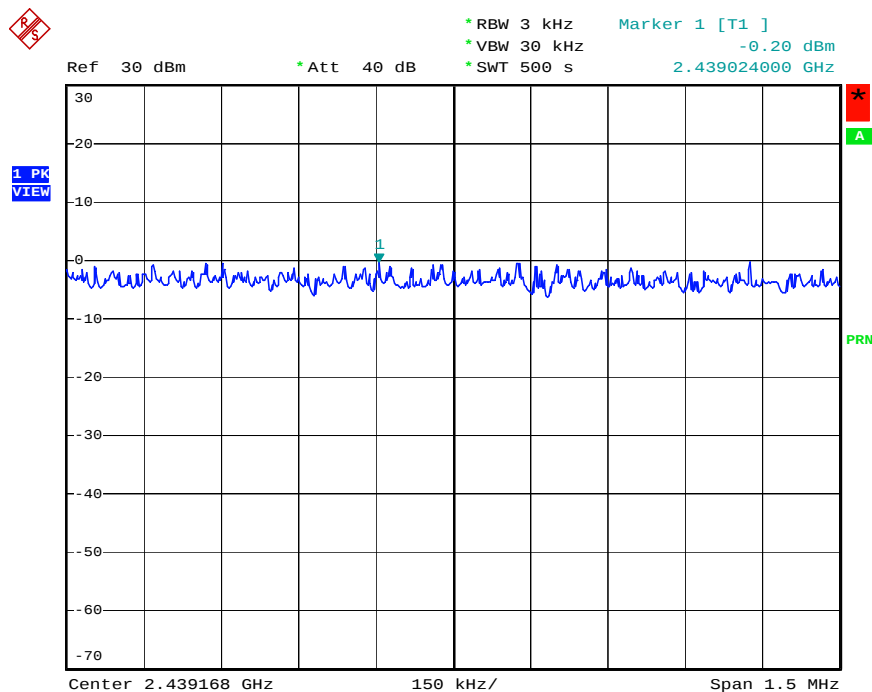
### Mode 3

#### Power Density Plot on Configuration IEEE 802.11b / 2412 MHz



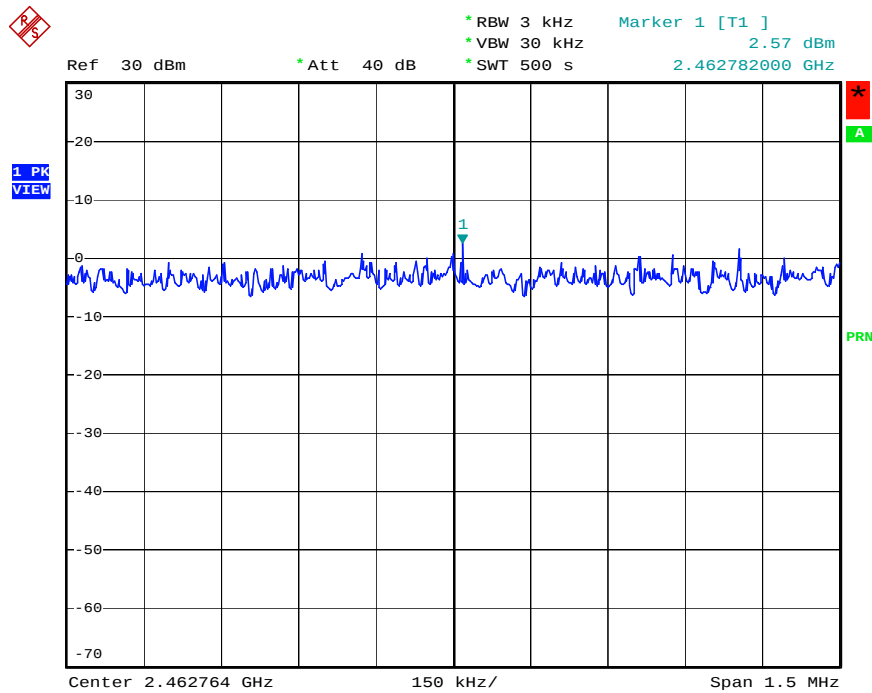
Date: 28.NOV.2006 19:50:09

#### Power Density Plot on Configuration IEEE 802.11b / 2437 MHz



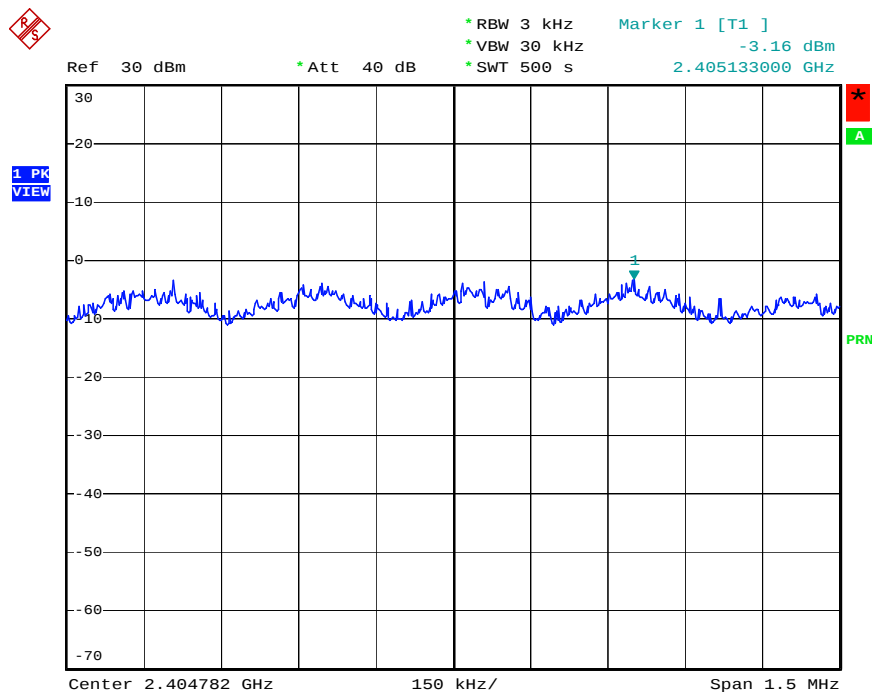
Date: 28.NOV.2006 19:48:48

### Power Density Plot on Configuration IEEE 802.11b / 2462 MHz



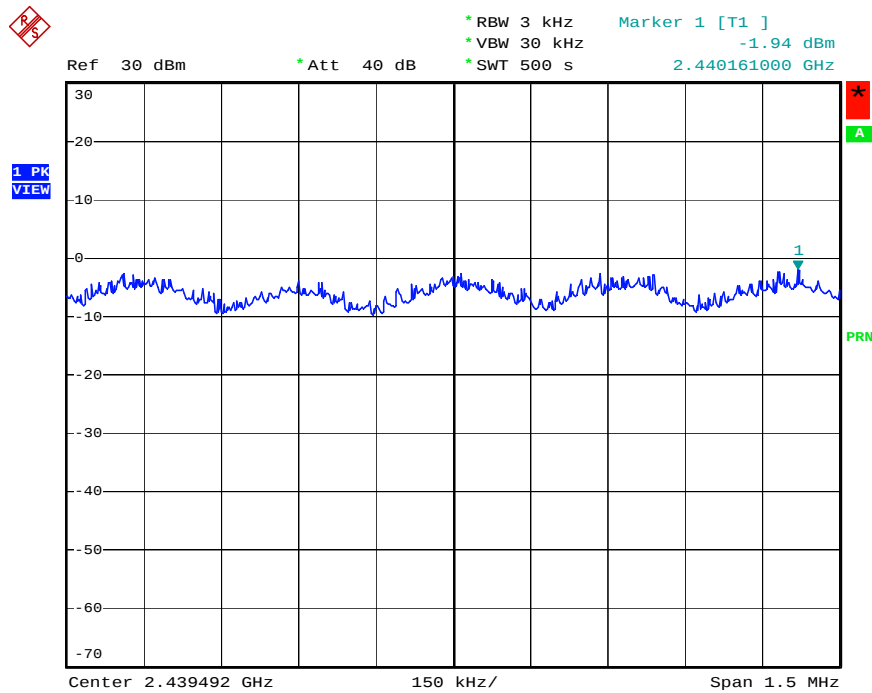
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### Power Density Plot on Configuration IEEE 802.11g / 2412 MHz



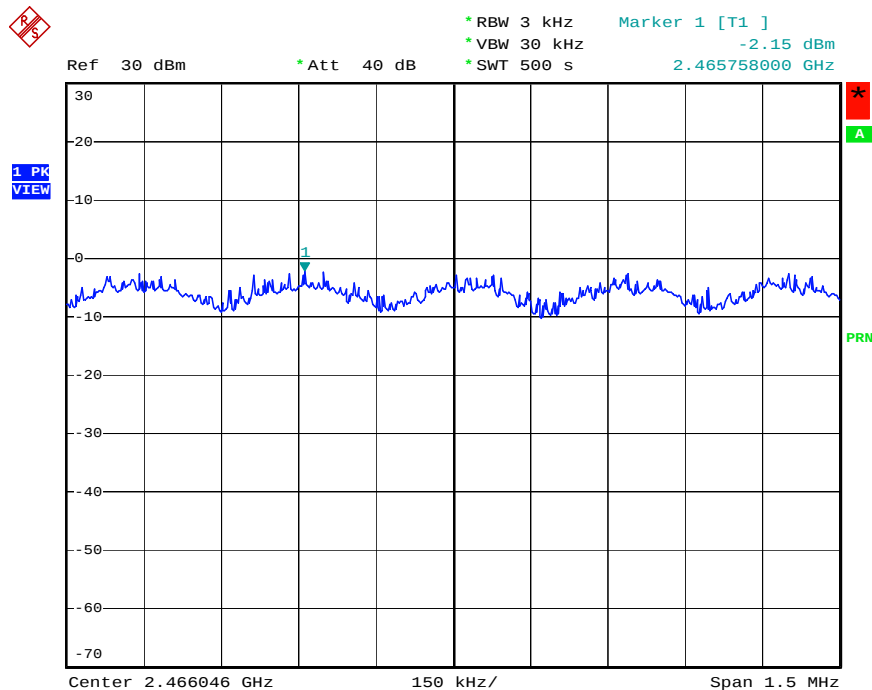
Date: 28.NOV.2006 20:01:11

### Power Density Plot on Configuration IEEE 802.11g / 2437 MHz



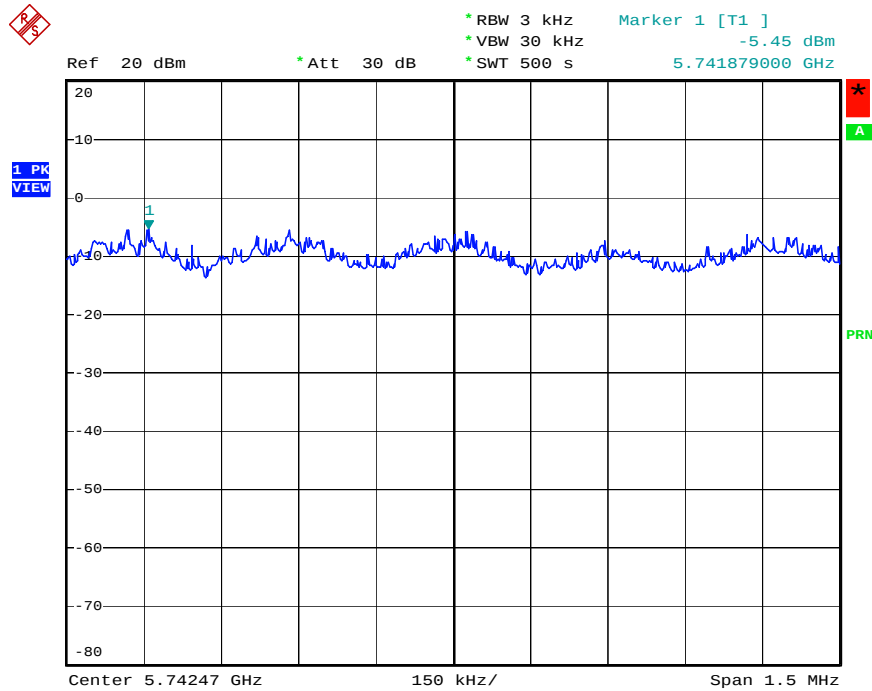
Date: 28.NOV.2006 20:02:25

### Power Density Plot on Configuration IEEE 802.11g / 2462 MHz



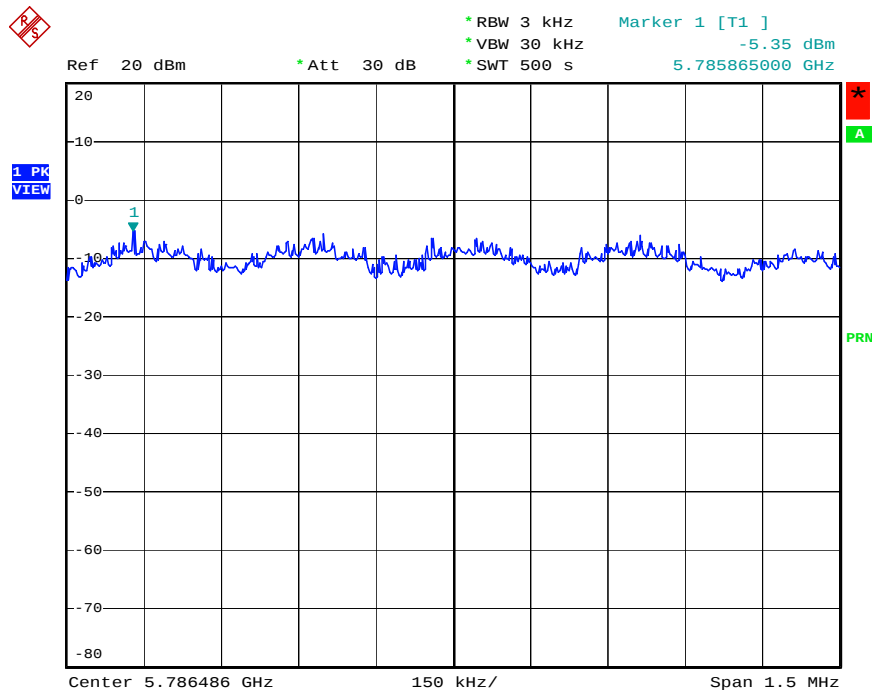
Date: 28.NOV.2006 20:04:06

### Power Density Plot on Configuration IEEE 802.11a / 5745 MHz



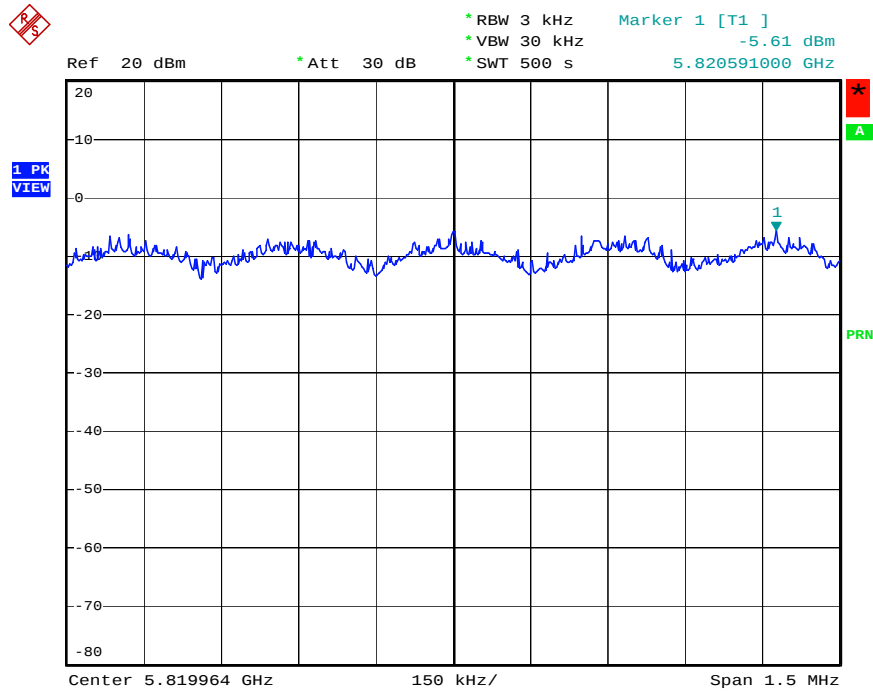
Date: 27.NOV.2006 10:40:26

### Power Density Plot on Configuration IEEE 802.11a / 5785 MHz



Date: 27.NOV.2006 10:35:43

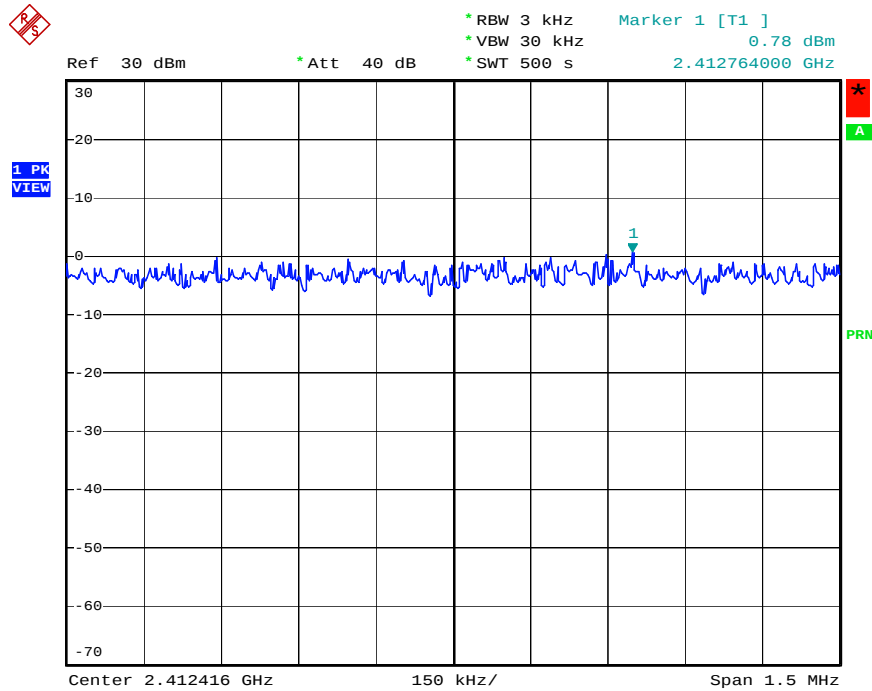
### Power Density Plot on Configuration IEEE 802.11a / 5825 MHz



Date: 27.NOV.2006 10:34:17

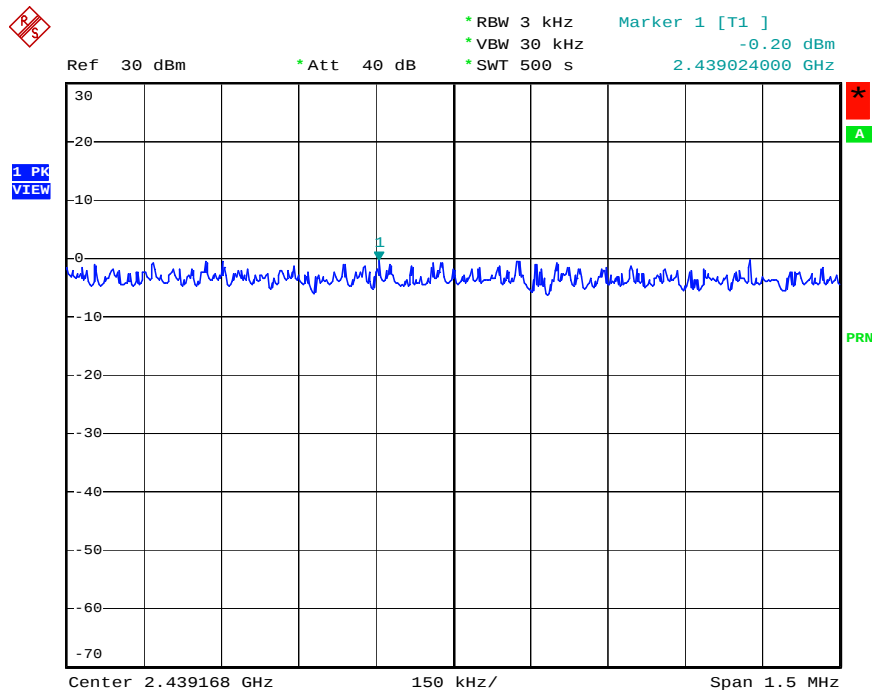
## Mode 4

### Power Density Plot on Configuration IEEE 802.11b / 2412 MHz



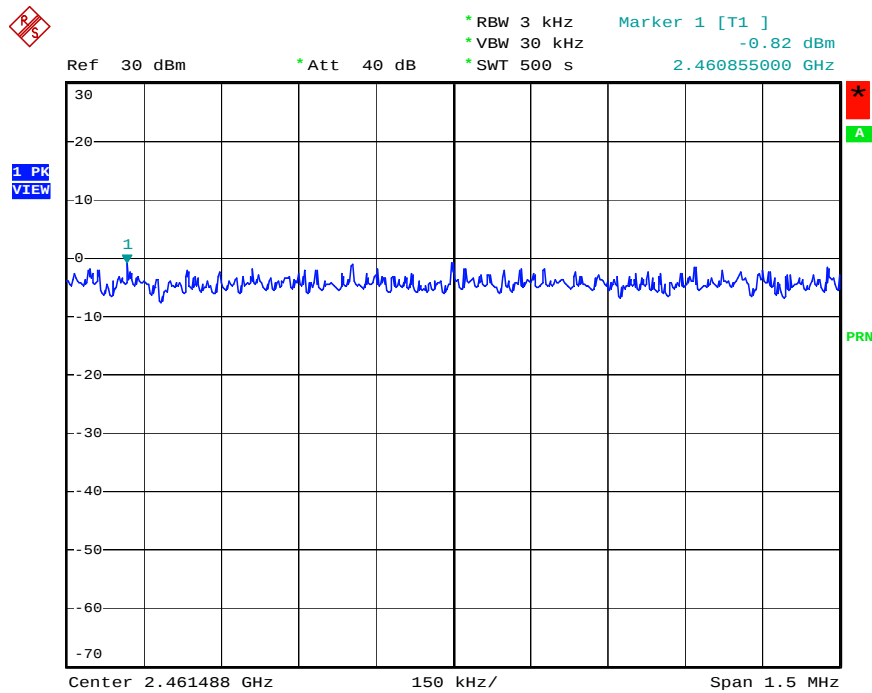
Date: 28.NOV.2006 19:50:09

### Power Density Plot on Configuration IEEE 802.11b / 2437 MHz



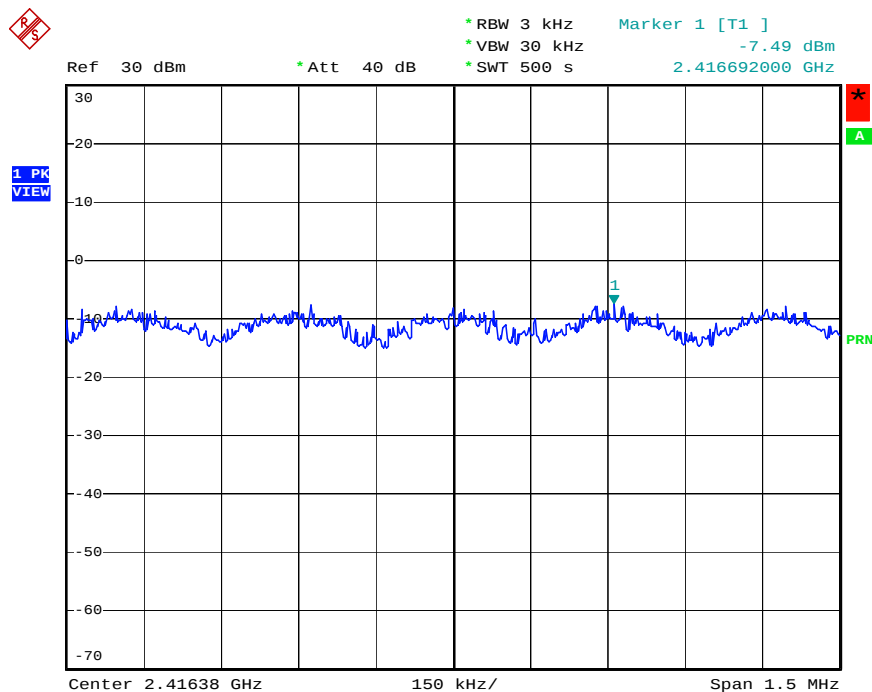
Date: 28.NOV.2006 19:48:48

### Power Density Plot on Configuration IEEE 802.11b / 2462 MHz



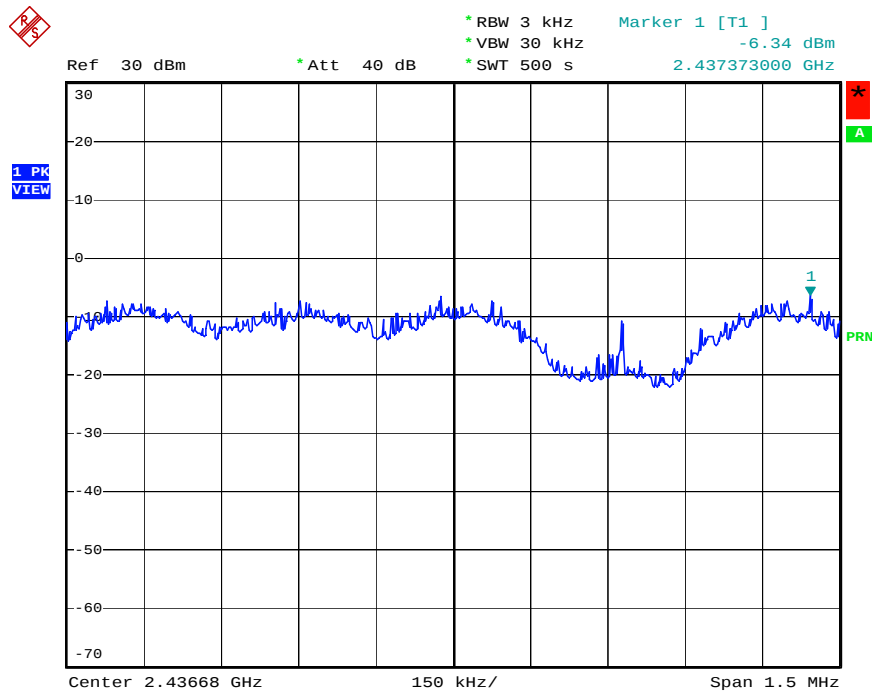
Date: 28.NOV.2006 19:52:20

### Power Density Plot on Configuration IEEE 802.11g / 2412 MHz



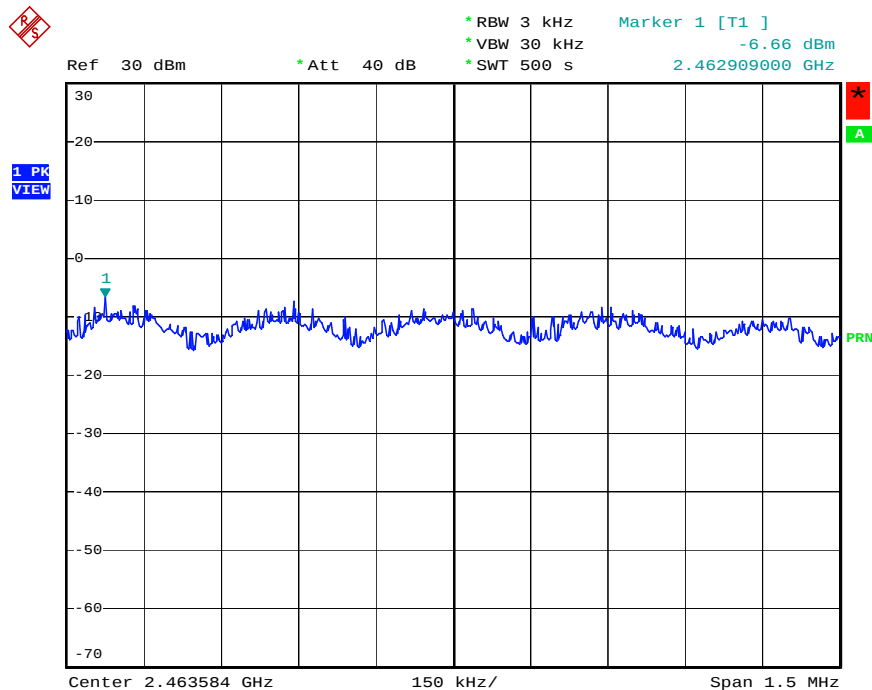
Date: 28.NOV.2006 20:10:38

### Power Density Plot on Configuration IEEE 802.11g / 2437 MHz



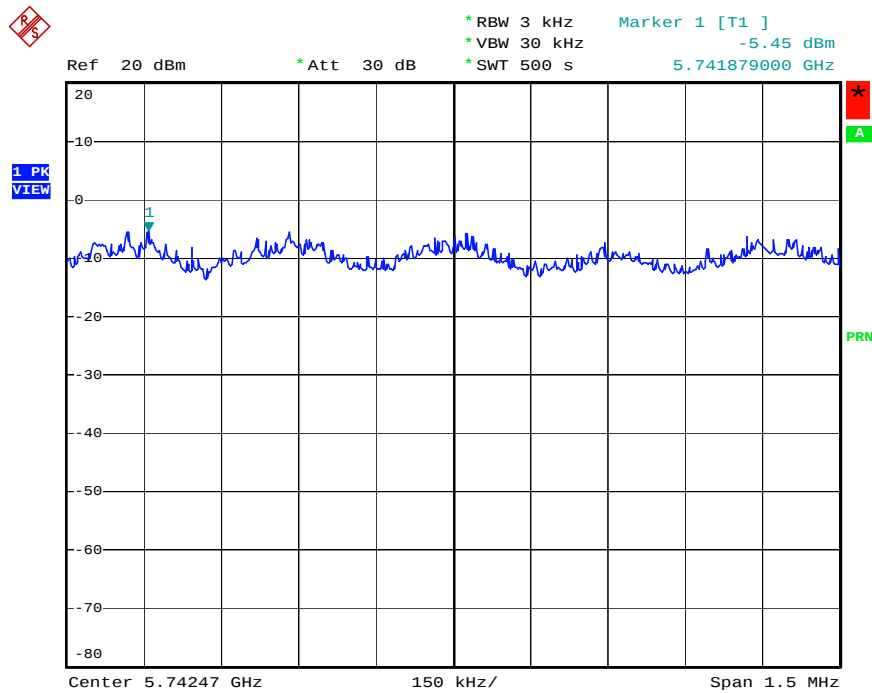
Date: 28.NOV.2006 20:09:25

### Power Density Plot on Configuration IEEE 802.11g / 2462 MHz



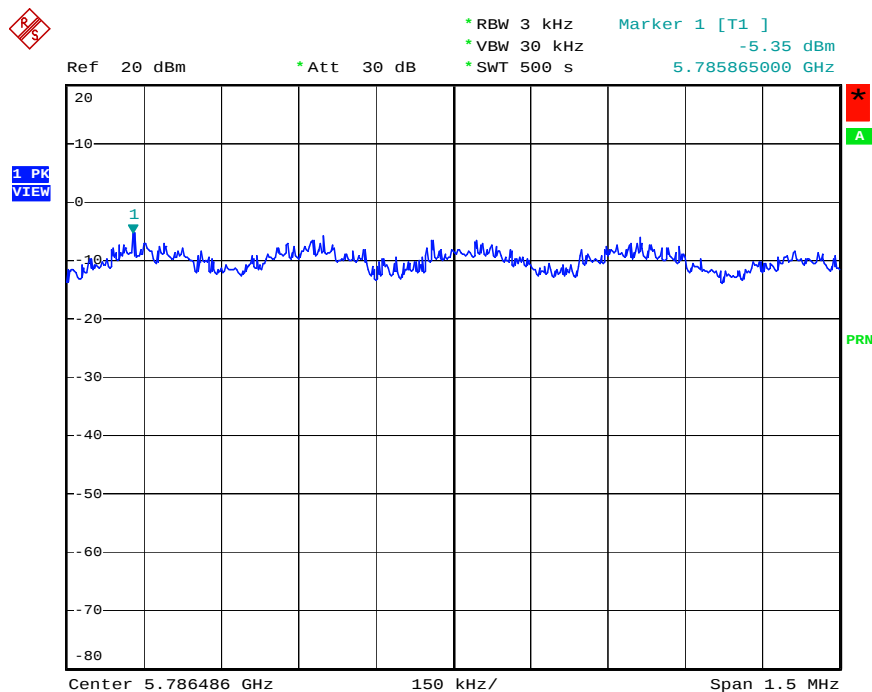
Date: 28.NOV.2006 20:07:37

### Power Density Plot on Configuration IEEE 802.11a / 5745 MHz



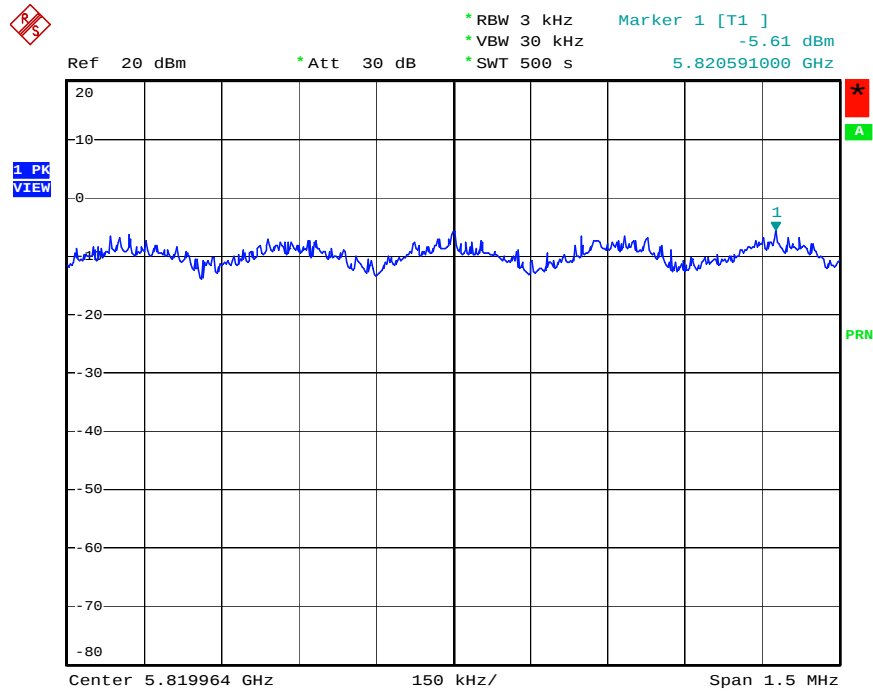
Date: 27.NOV.2006 10:40:26

### Power Density Plot on Configuration IEEE 802.11a / 5785 MHz



Date: 27.NOV.2006 10:35:43

# Power Density Plot on Configuration IEEE 802.11a / 5825 MHz



Date: 27.NOV.2006 10:34:17

#### 4.4. 6dB Spectrum Bandwidth Measurement

##### 4.4.1. Limit

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.

##### 4.4.2. Measuring Instruments and Setting

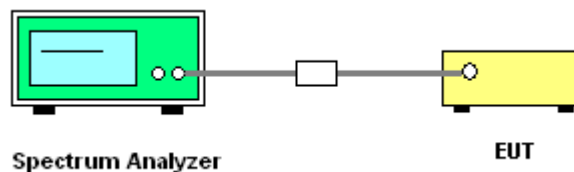
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

| Spectrum Parameters | Setting         |
|---------------------|-----------------|
| Attenuation         | Auto            |
| Span Frequency      | > 6dB Bandwidth |
| RB                  | 100 kHz         |
| VB                  | 100 kHz         |
| Detector            | Peak            |
| Trace               | Max Hold        |
| Sweep Time          | Auto            |

##### 4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
2. The resolution bandwidth of 100 kHz and the video bandwidth of 100 kHz were used.
3. Measured the spectrum width with power higher than 6dB below carrier.

##### 4.4.4. Test Setup Layout



##### 4.4.5. Test Deviation

There is no deviation with the original standard.

##### 4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

#### 4.4.7. Test Result of 6dB Spectrum Bandwidth

|               |         |                |             |
|---------------|---------|----------------|-------------|
| Temperature   | 26.8    | Humidity       | 54%         |
| Test Engineer | Sam Lee | Configurations | 802.11a/b/g |

Mode 1

Configuration IEEE 802.11a

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 149     | 5745 MHz  | 16.40               | 16.56                        | 500              | Complies    |
| 157     | 5785 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 165     | 5825 MHz  | 16.40               | 16.52                        | 500              | Complies    |

Configuration IEEE 802.11b

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 1       | 2412 MHz  | 11.72               | 15.44                        | 500              | Complies    |
| 6       | 2437 MHz  | 11.72               | 15.84                        | 500              | Complies    |
| 11      | 2462 MHz  | 11.28               | 15.92                        | 500              | Complies    |

Configuration IEEE 802.11g

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 1       | 2412 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 6       | 2437 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 11      | 2462 MHz  | 16.40               | 16.48                        | 500              | Complies    |

## Mode 2

### Configuration IEEE 802.11a

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 149     | 5745 MHz  | 16.44               | 16.52                        | 500              | Complies    |
| 157     | 5785 MHz  | 16.40               | 16.48                        | 500              | Complies    |
| 165     | 5825 MHz  | 16.44               | 16.52                        | 500              | Complies    |

### Configuration IEEE 802.11b

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 1       | 2412 MHz  | 12.00               | 15.28                        | 500              | Complies    |
| 6       | 2437 MHz  | 12.00               | 15.36                        | 500              | Complies    |
| 11      | 2462 MHz  | 11.48               | 15.32                        | 500              | Complies    |

### Configuration IEEE 802.11g

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 1       | 2412 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 6       | 2437 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 11      | 2462 MHz  | 16.40               | 16.52                        | 500              | Complies    |

### Mode 3

#### Configuration IEEE 802.11a

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 149     | 5745 MHz  | 16.40               | 16.56                        | 500              | Complies    |
| 157     | 5785 MHz  | 16.36               | 16.56                        | 500              | Complies    |
| 165     | 5825 MHz  | 16.44               | 16.56                        | 500              | Complies    |

#### Configuration IEEE 802.11b

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 1       | 2412 MHz  | 11.76               | 15.32                        | 500              | Complies    |
| 6       | 2437 MHz  | 11.72               | 15.32                        | 500              | Complies    |
| 11      | 2462 MHz  | 11.76               | 15.28                        | 500              | Complies    |

#### Configuration IEEE 802.11g

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 1       | 2412 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 6       | 2437 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 11      | 2462 MHz  | 16.40               | 16.52                        | 500              | Complies    |

# Mode 4

## Configuration IEEE 802.11a

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 149     | 5745 MHz  | 16.40               | 16.56                        | 500              | Complies    |
| 157     | 5785 MHz  | 16.36               | 16.56                        | 500              | Complies    |
| 165     | 5825 MHz  | 16.44               | 16.56                        | 500              | Complies    |

## Configuration IEEE 802.11b

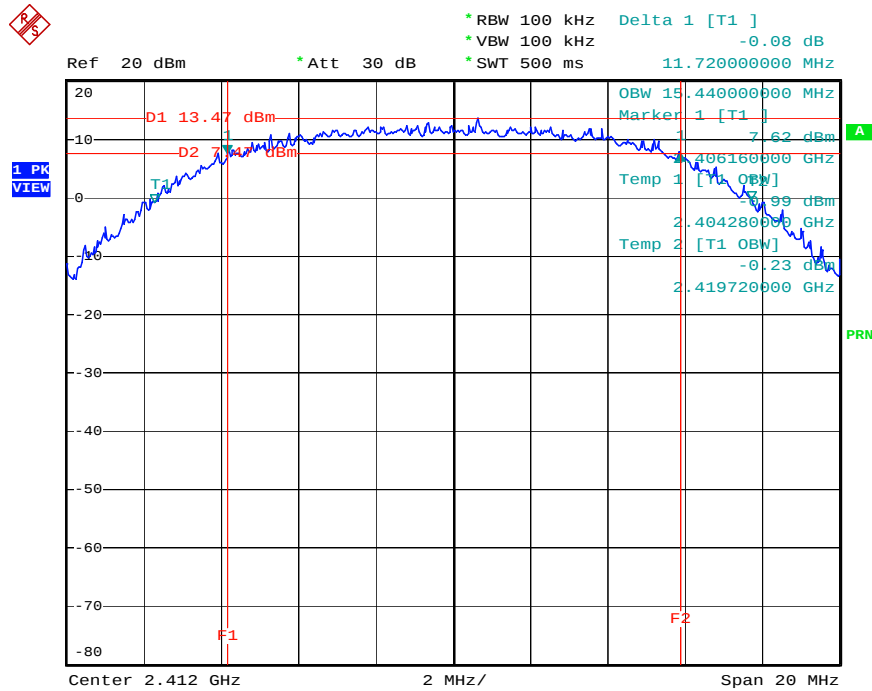
| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 1       | 2412 MHz  | 11.76               | 15.32                        | 500              | Complies    |
| 6       | 2437 MHz  | 11.72               | 15.32                        | 500              | Complies    |
| 11      | 2462 MHz  | 11.76               | 15.28                        | 500              | Complies    |

## Configuration IEEE 802.11g

| Channel | Frequency | 6dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---------|-----------|---------------------|------------------------------|------------------|-------------|
| 1       | 2412 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 6       | 2437 MHz  | 16.40               | 16.52                        | 500              | Complies    |
| 11      | 2462 MHz  | 16.40               | 16.52                        | 500              | Complies    |

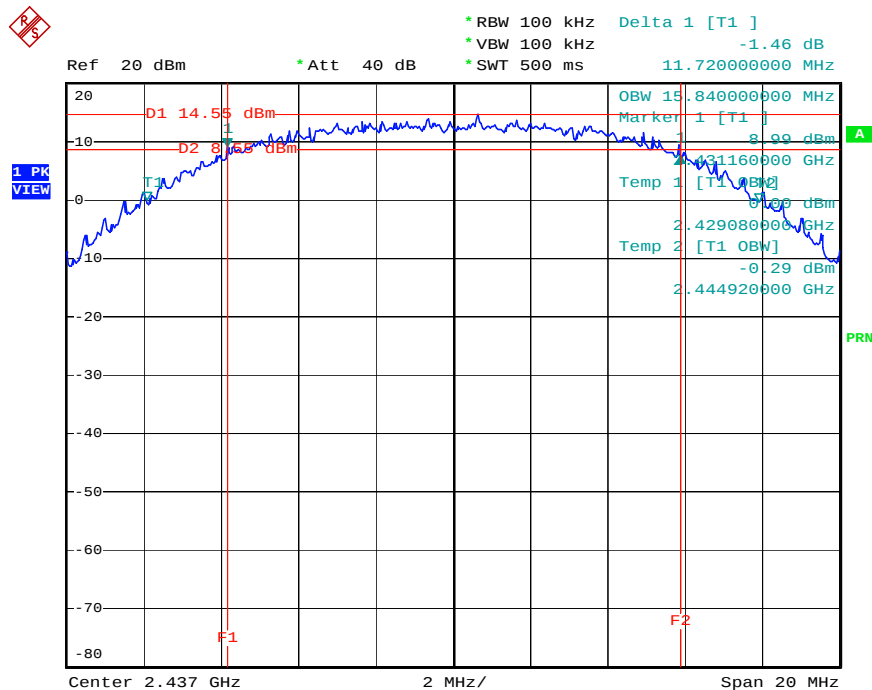
## Mode 1

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2412 MHz



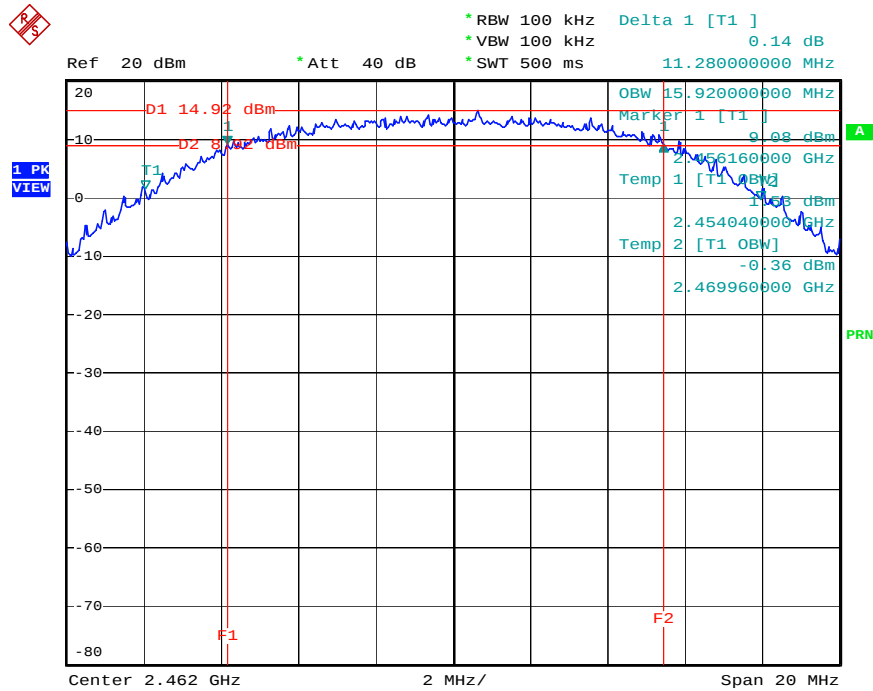
Date: 27.NOV.2006 16:27:27

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2437 MHz



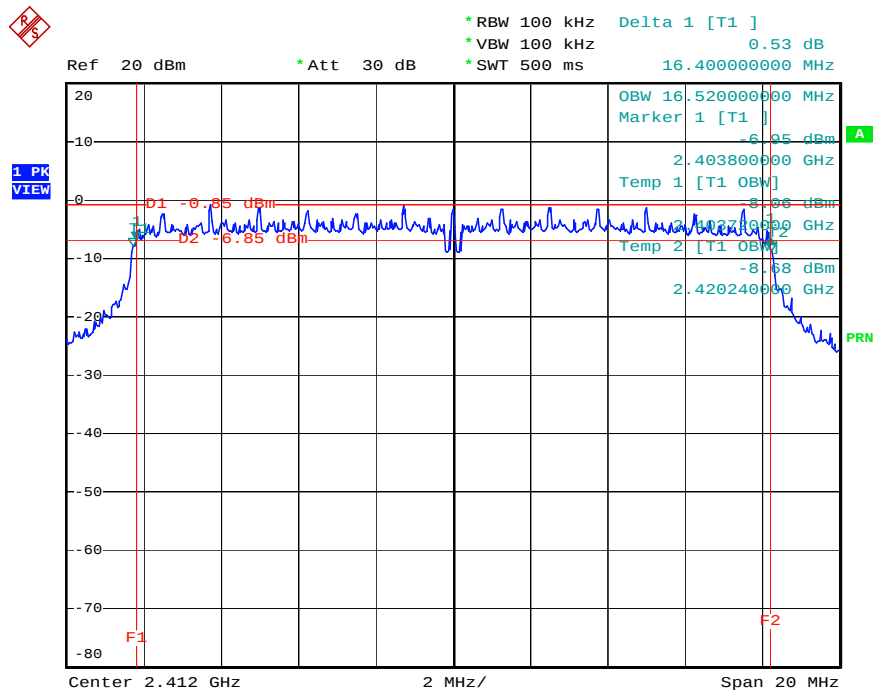
Date: 27.NOV.2006 16:41:25

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462 MHz



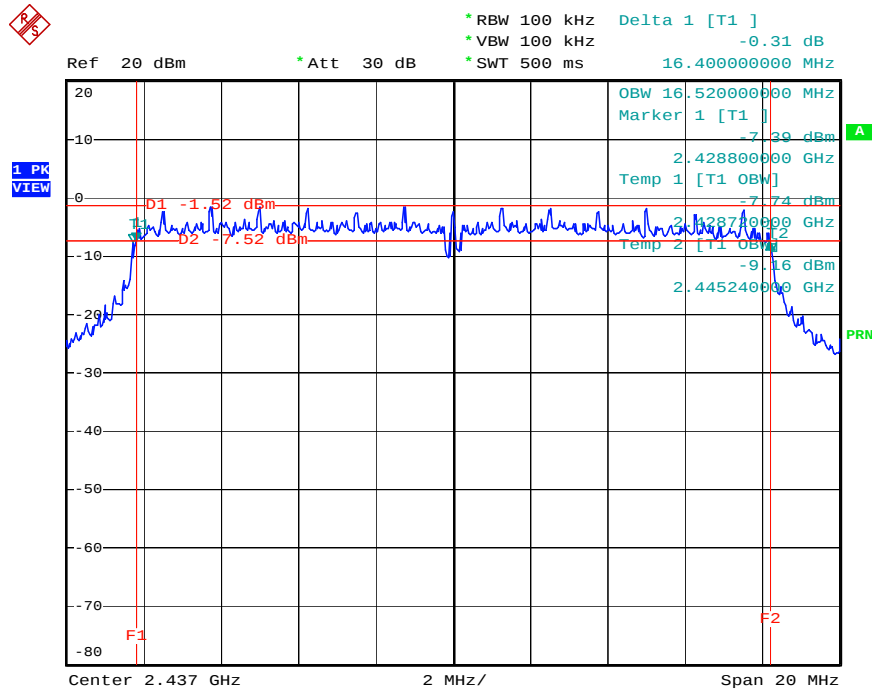
Date: 27.NOV.2006 16:56:42

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2412 MHz



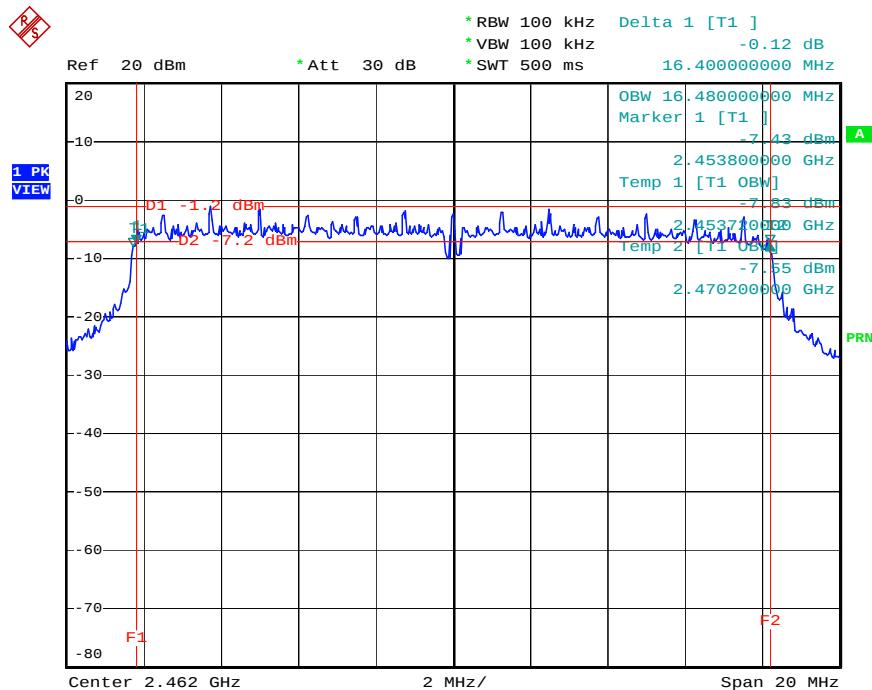
Date: 1.NOV.2006 09:04:43

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz



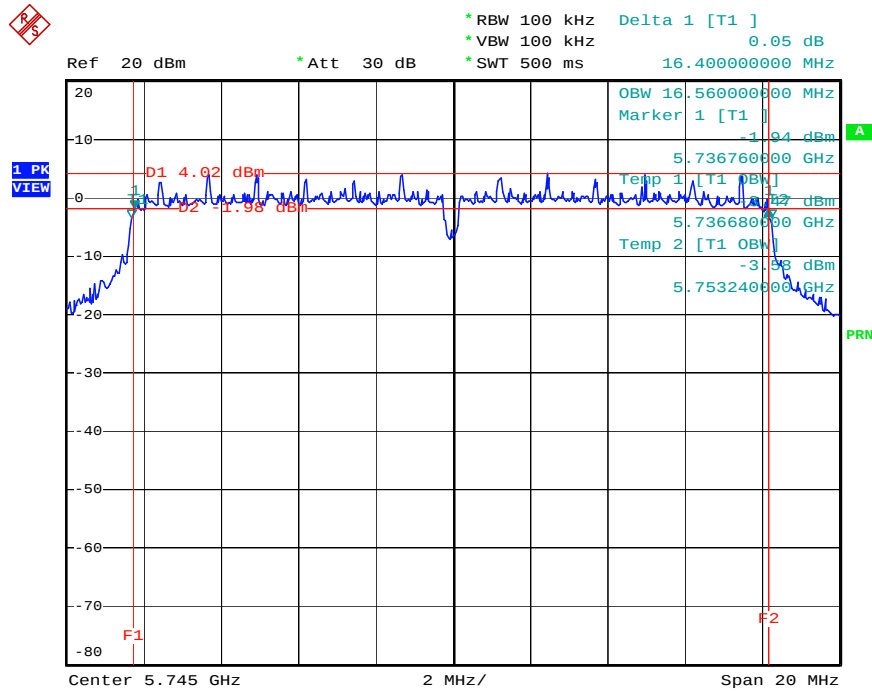
Date: 1.NOV.2006 09:10:17

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2462 MHz



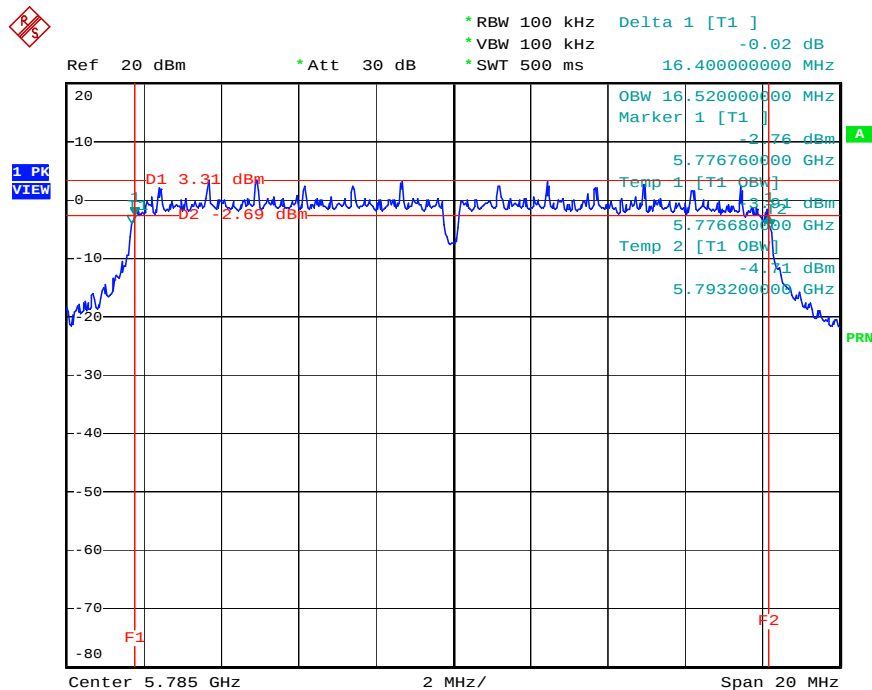
Date: 1.NOV.2006 09:11:58

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5745 MHz



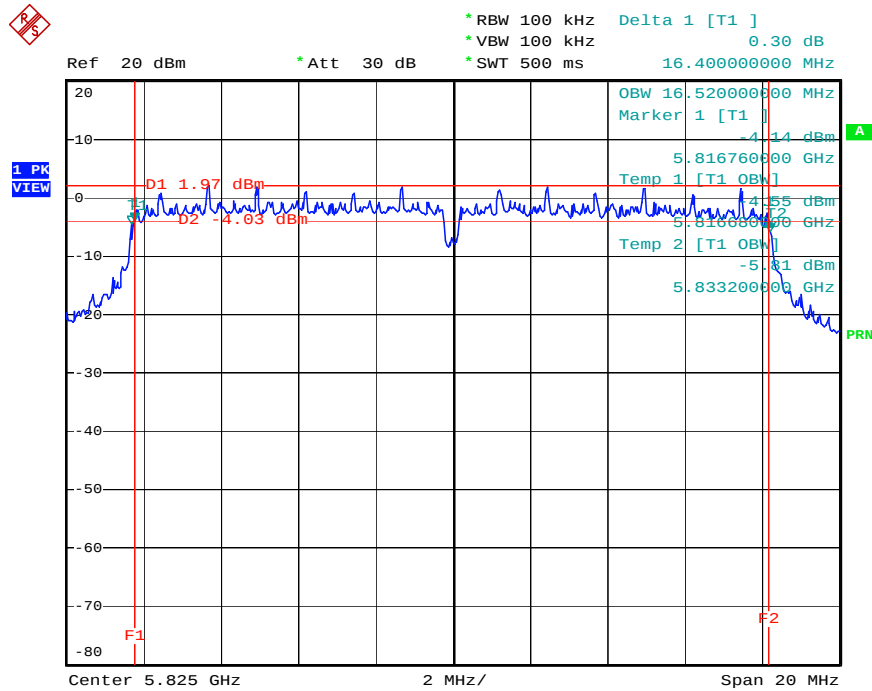
Date: 27.NOV.2006 13:28:45

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5785 MHz



Date: 27.NOV.2006 13:25:54

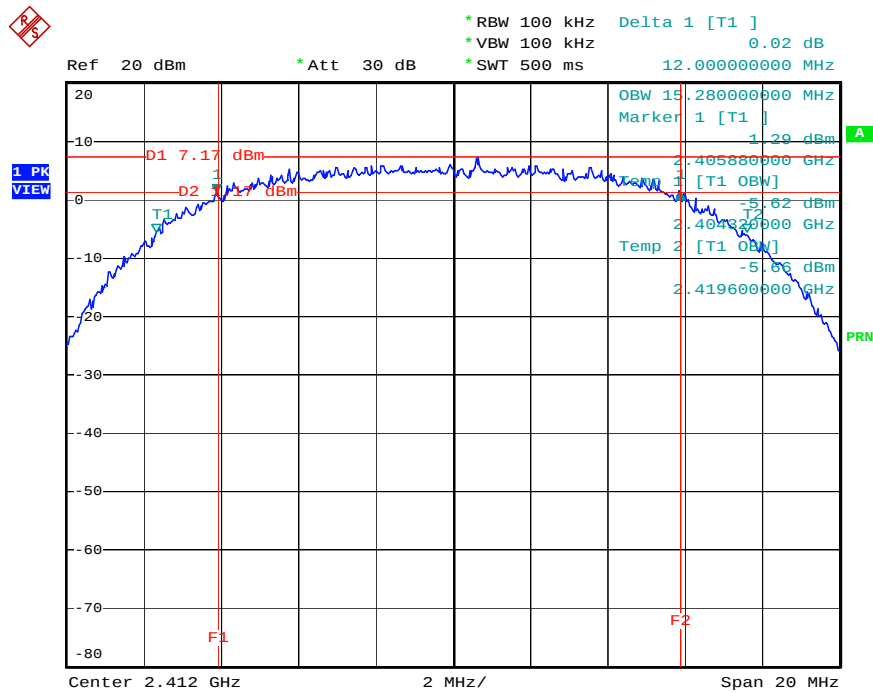
# 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5825 MHz



Date: 27.NOV.2006 13:20:24

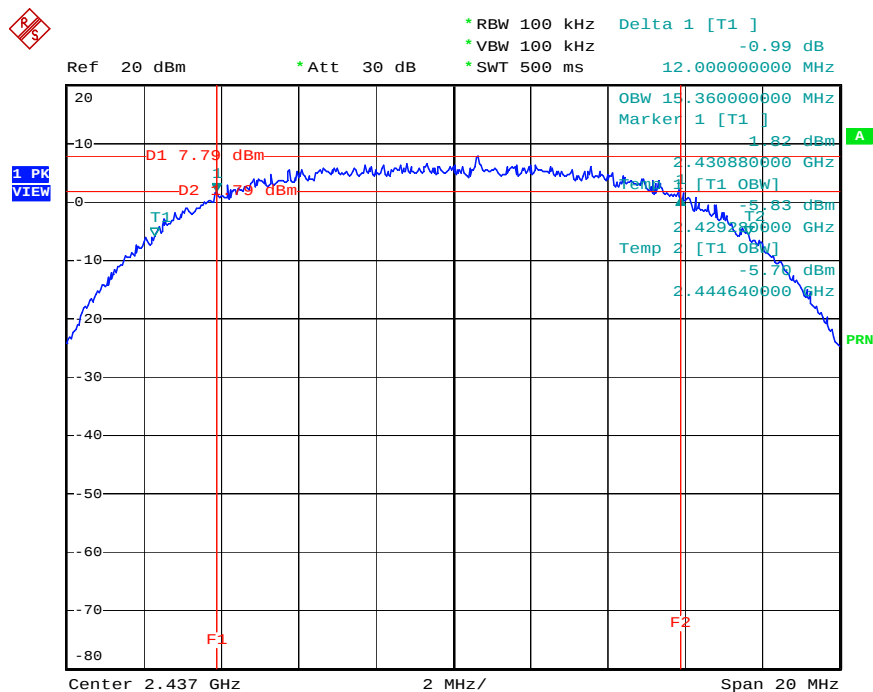
## Mode 2

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2412 MHz



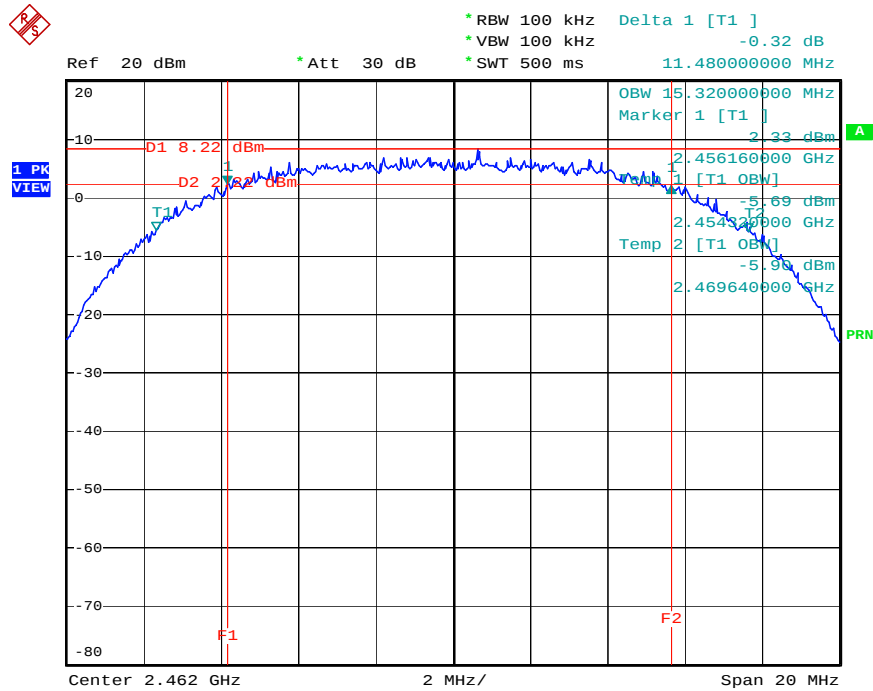
Date: 21.NOV.2006 09:17:01

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2437 MHz



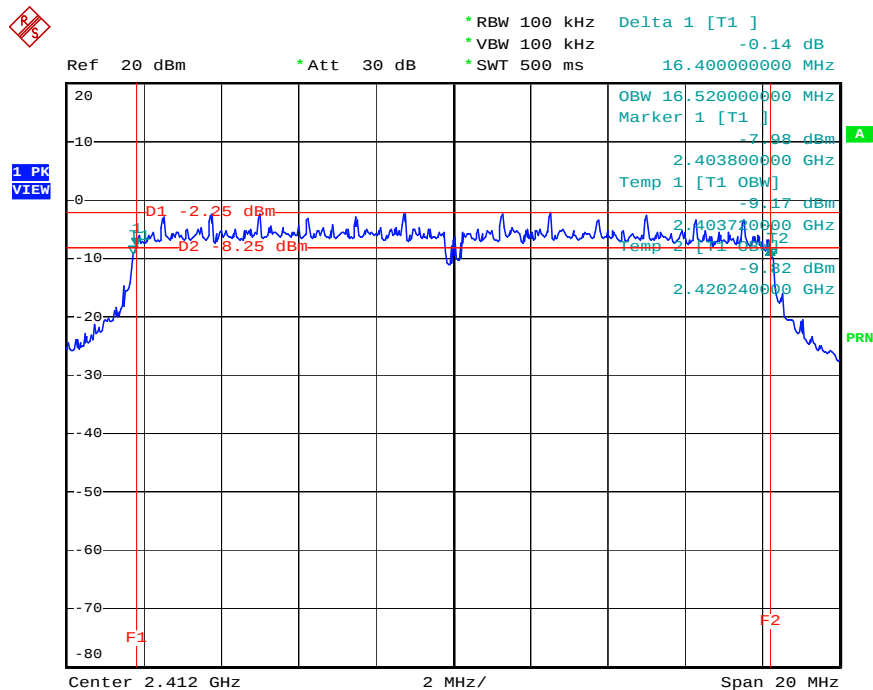
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### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462 MHz



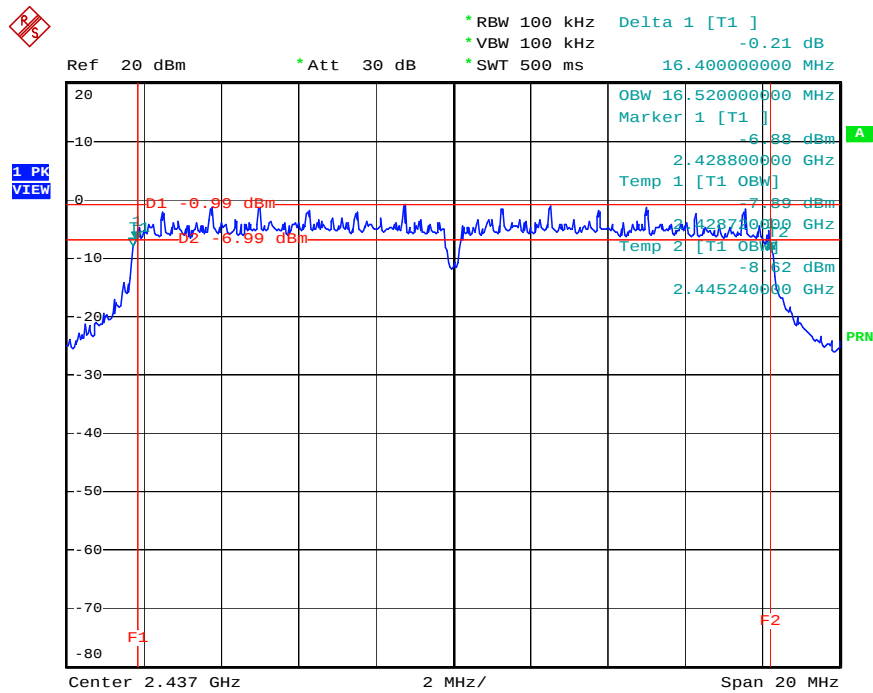
Date: 21.NOV.2006 09:24:29

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2412 MHz



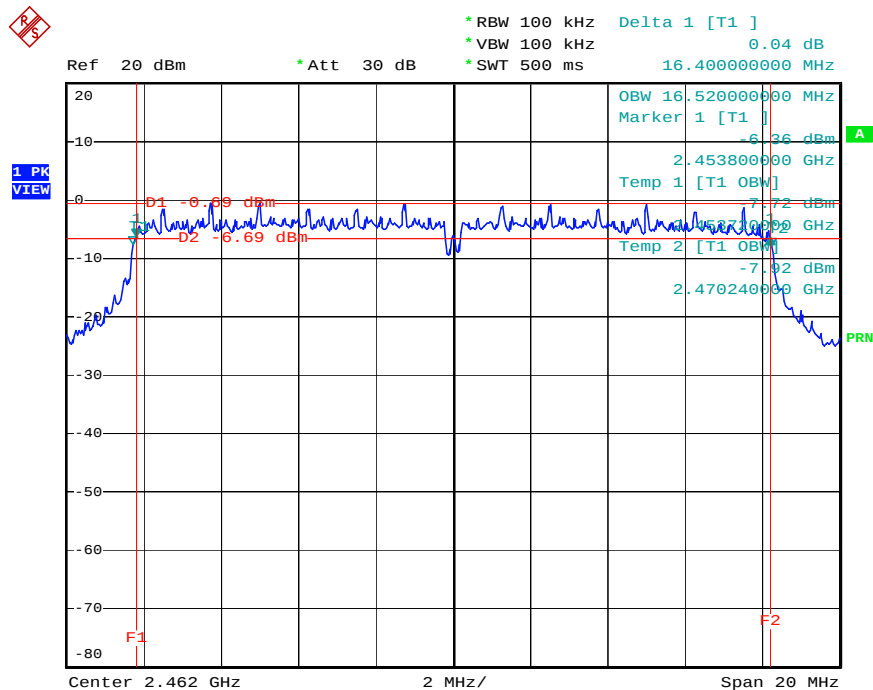
Date: 21.NOV.2006 09:59:10

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz



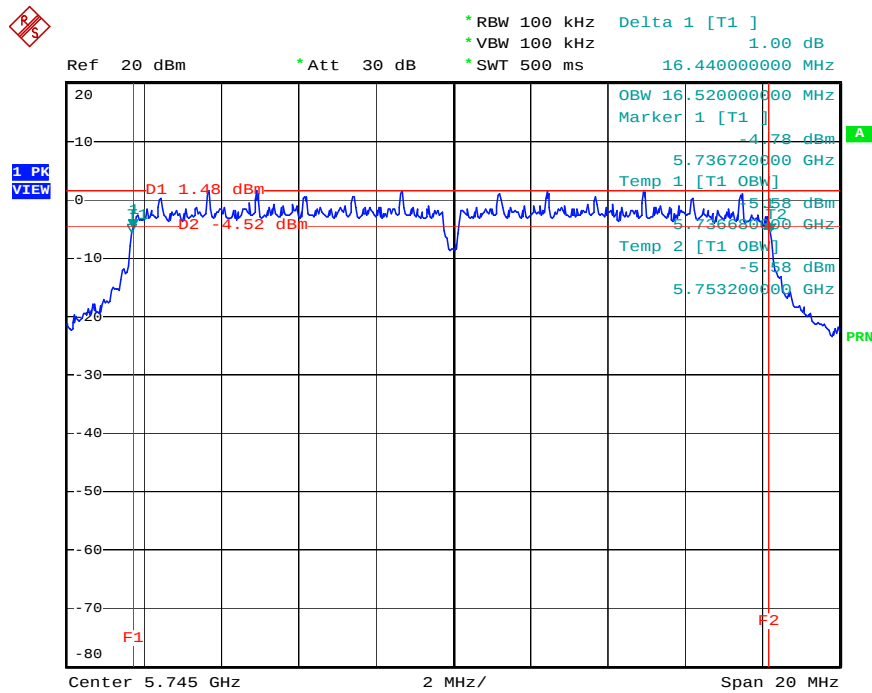
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### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2462 MHz



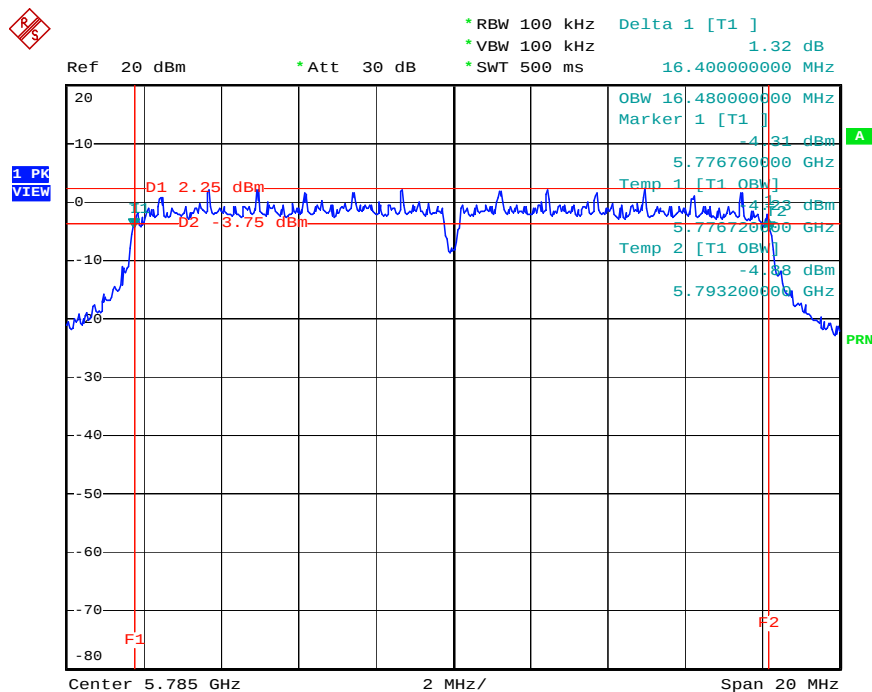
Date: 21.NOV.2006 10:07:35

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5745 MHz



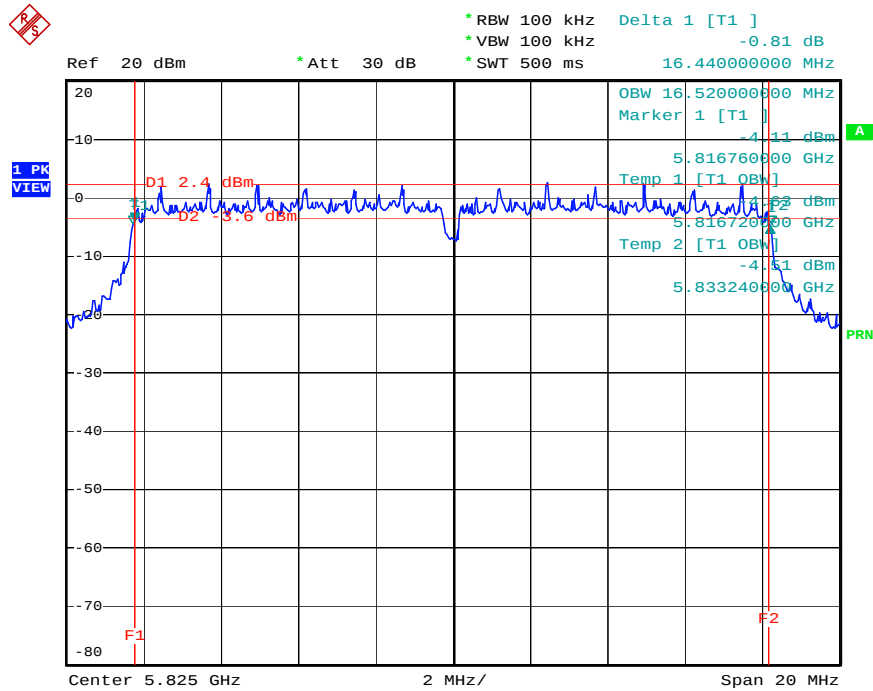
Date: 27.NOV.2006 08:42:55

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5785 MHz



Date: 27.NOV.2006 08:41:15

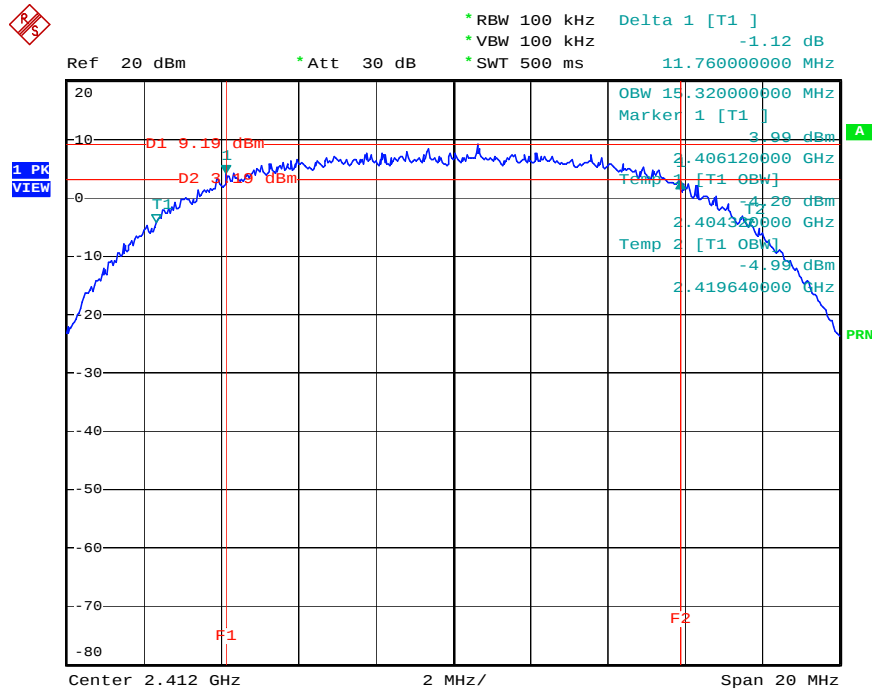
# 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5825 MHz



Date: 27.NOV.2006 08:35:01

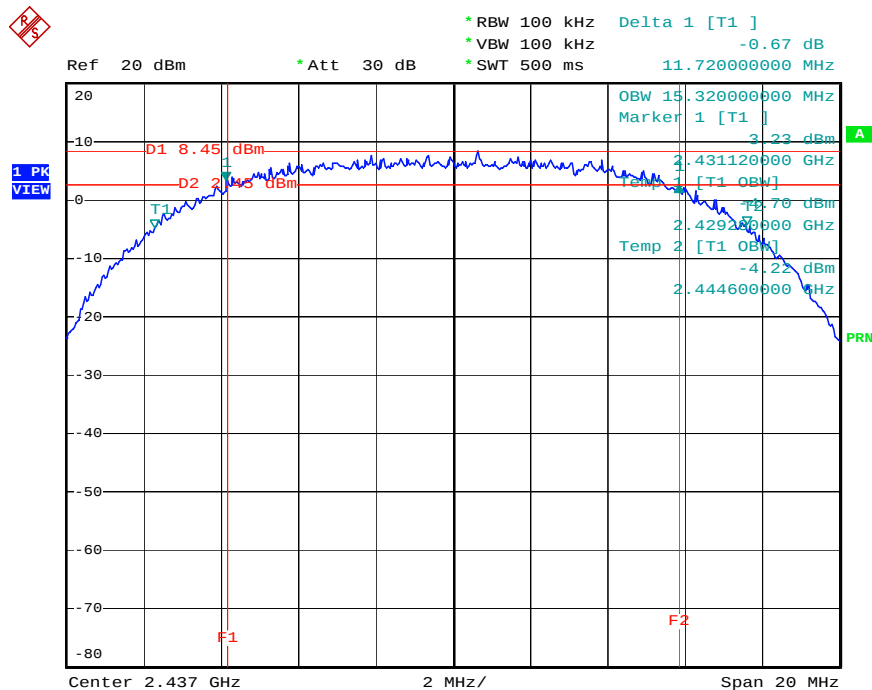
### Mode 3

#### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2412 MHz



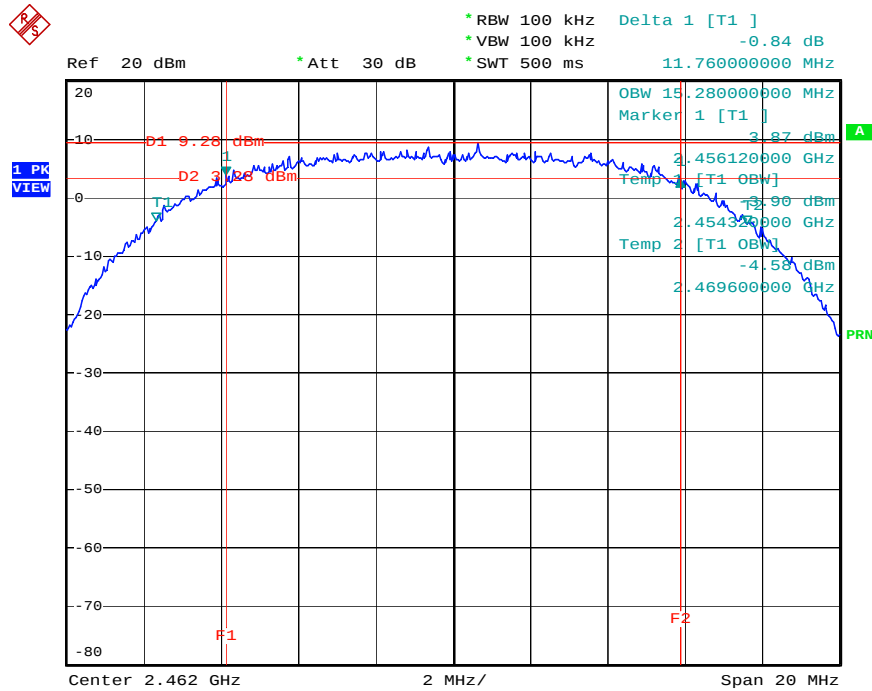
Date: 21.NOV.2006 10:59:03

#### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2437 MHz



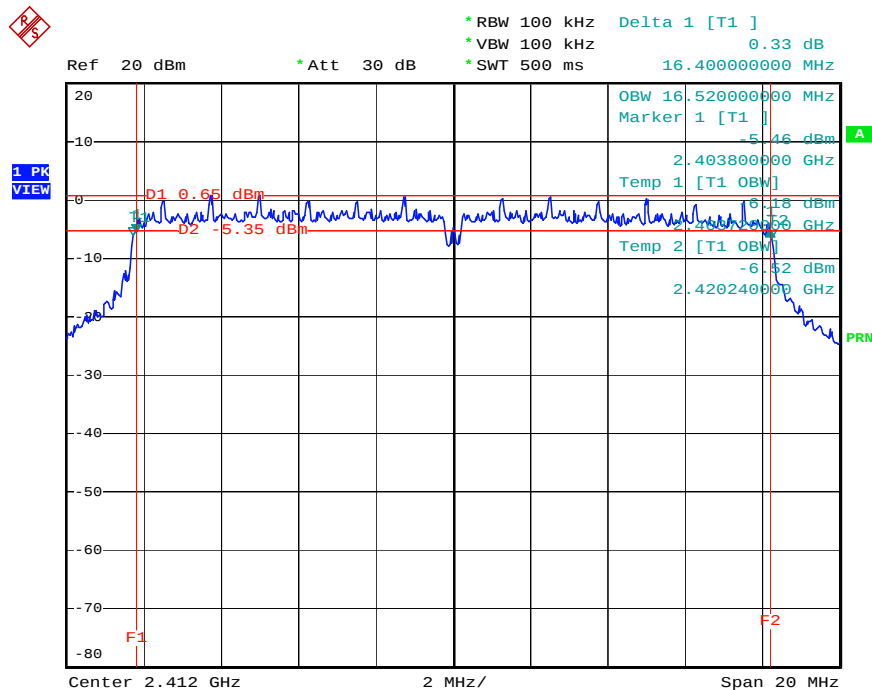
Date: 21.NOV.2006 11:04:30

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462 MHz



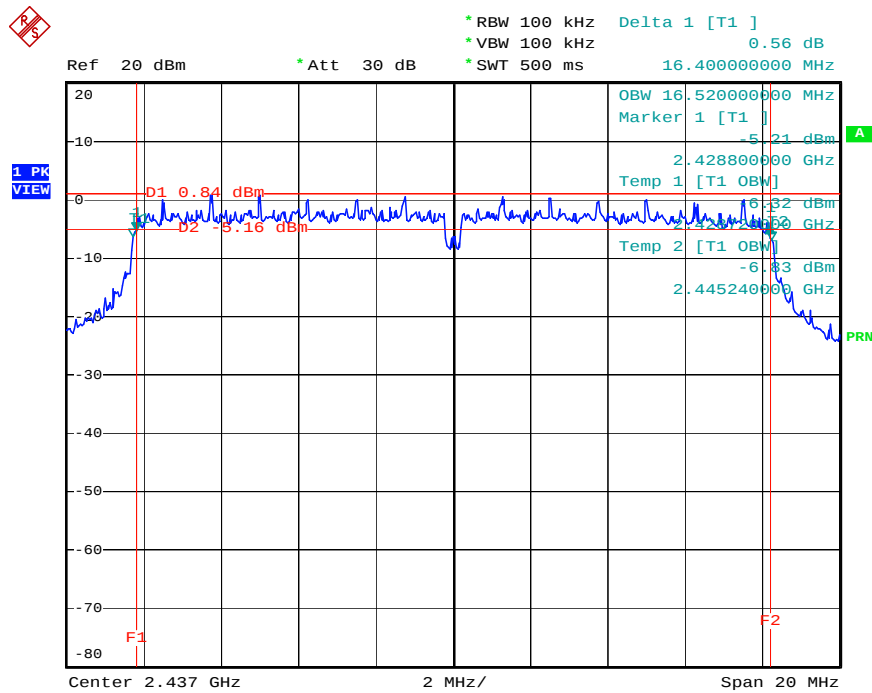
Date: 21.NOV.2006 11:05:39

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2412 MHz



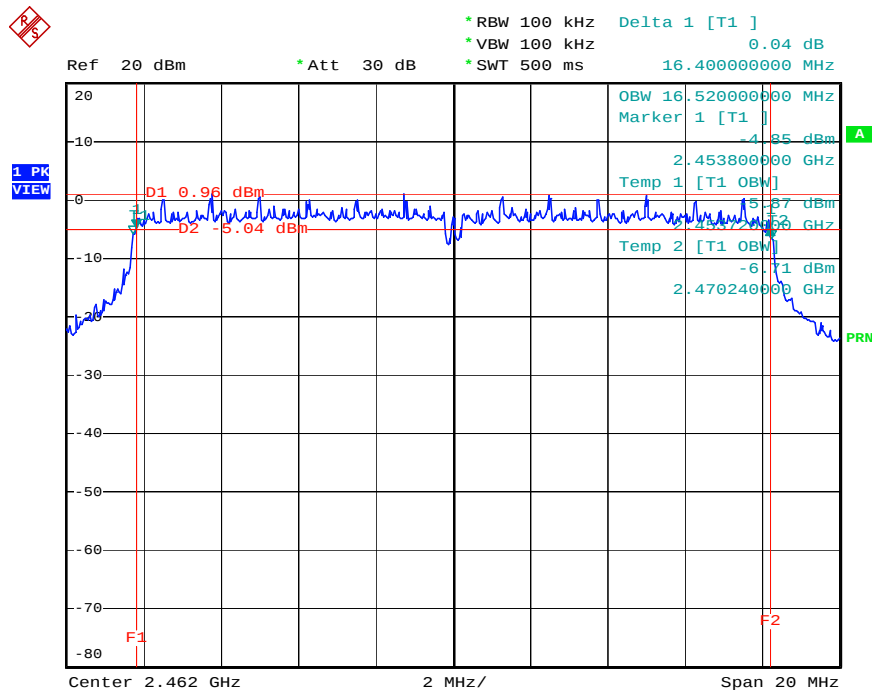
Date: 21.NOV.2006 10:33:08

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz



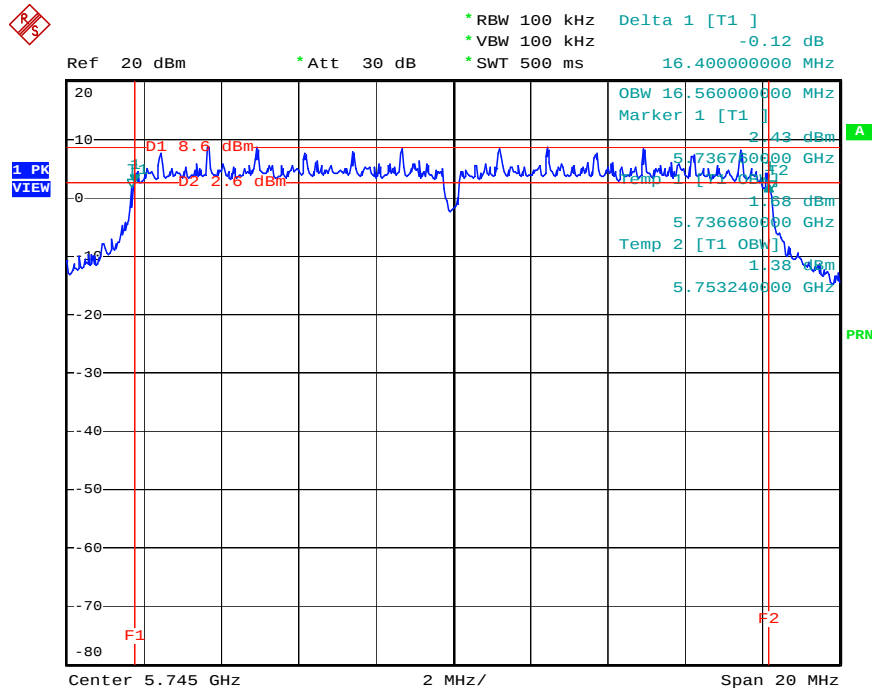
Date: 21.NOV.2006 10:46:04

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2462 MHz



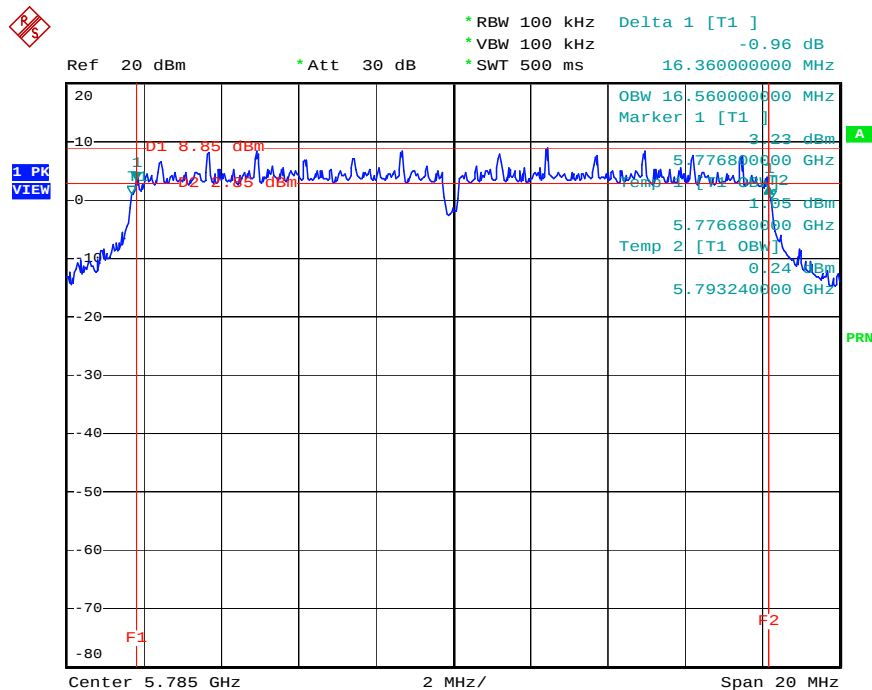
Date: 21.NOV.2006 10:47:06

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5745 MHz



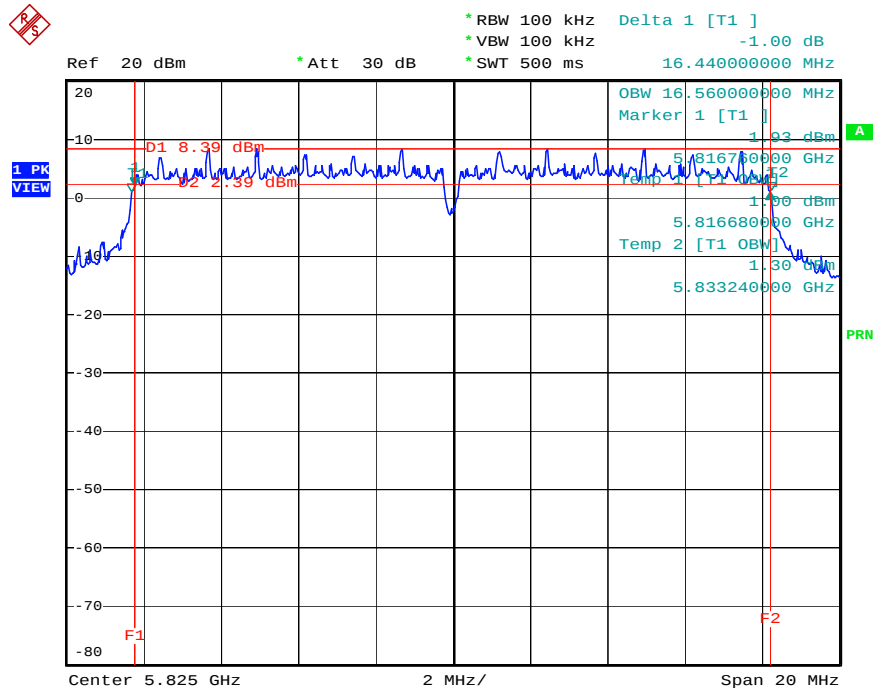
Date: 27.NOV.2006 10:37:57

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5785 MHz



Date: 27.NOV.2006 10:37:01

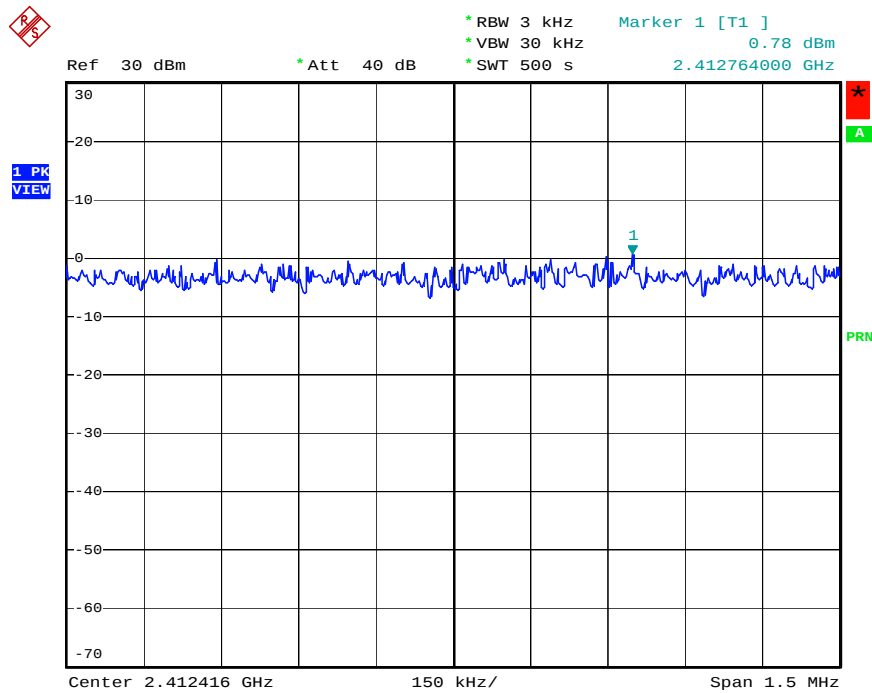
# 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5825 MHz



Date: 27.NOV.2006 10:31:18

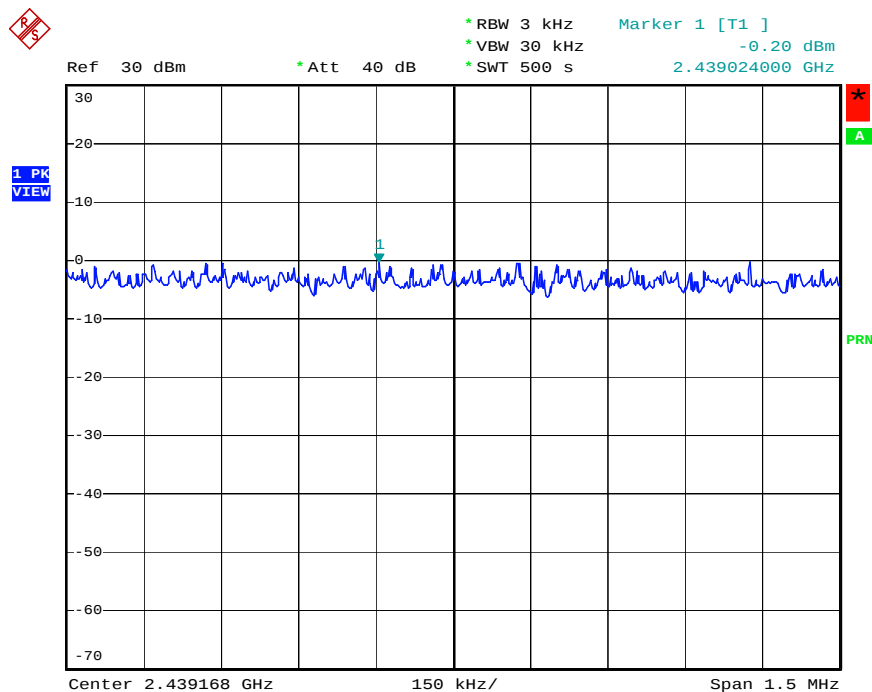
## Mode 4

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2412 MHz



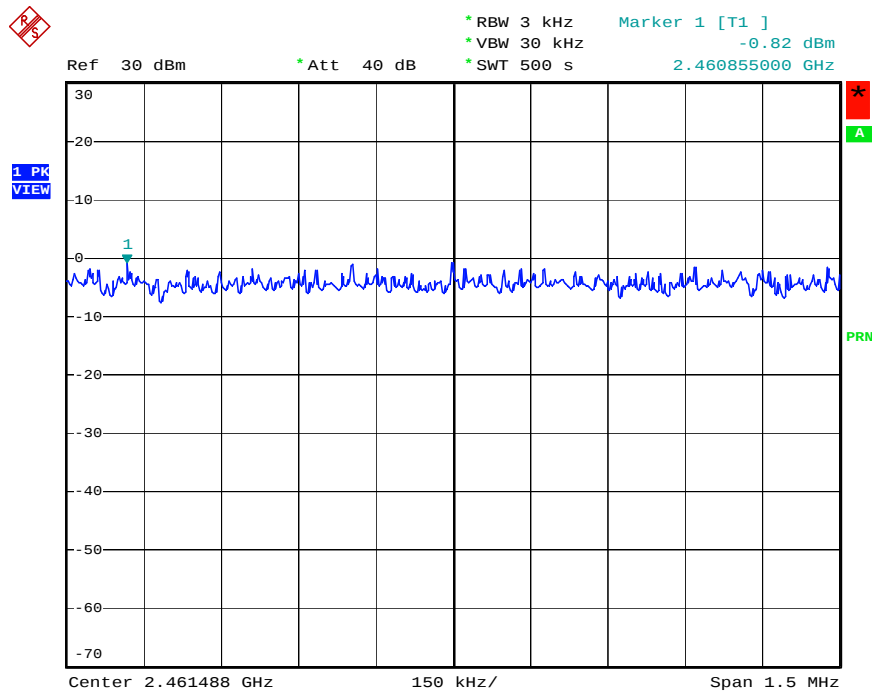
Date: 28.NOV.2006 19:50:09

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2437 MHz



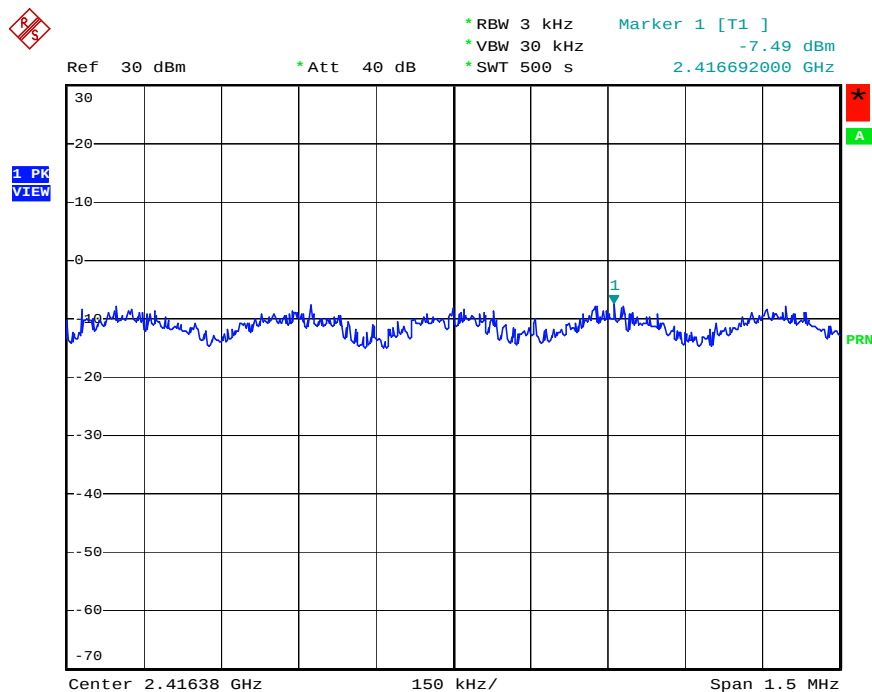
Date: 28.NOV.2006 19:48:48

### 6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462 MHz



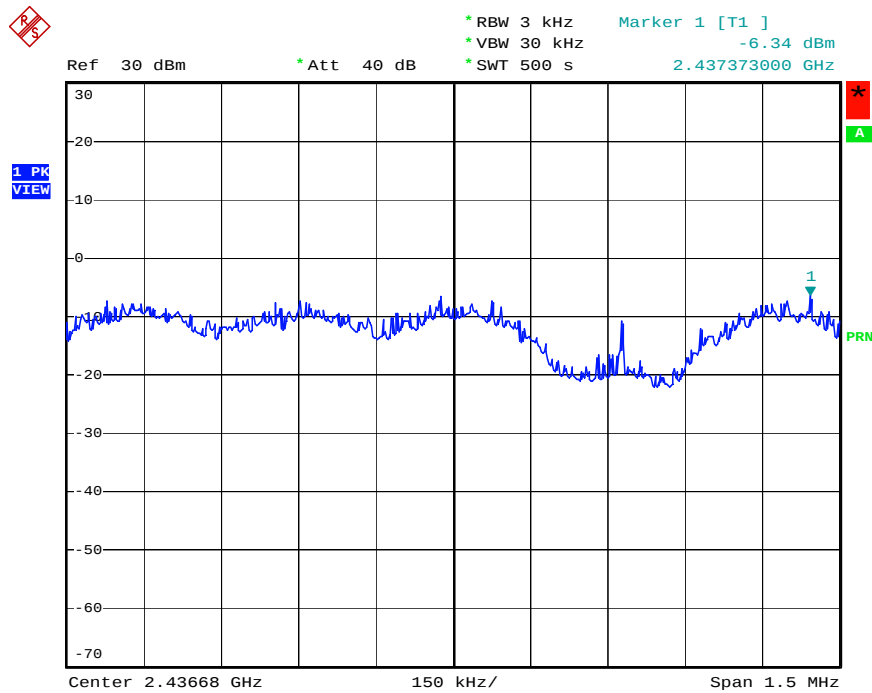
Date: 28.NOV.2006 19:52:20

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2412 MHz



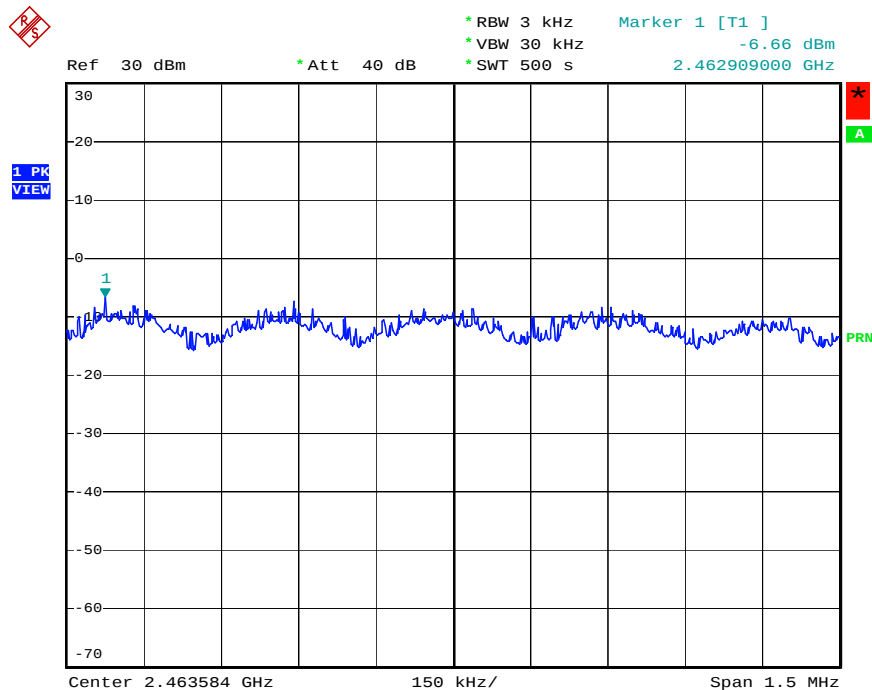
Date: 28.NOV.2006 20:10:38

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz



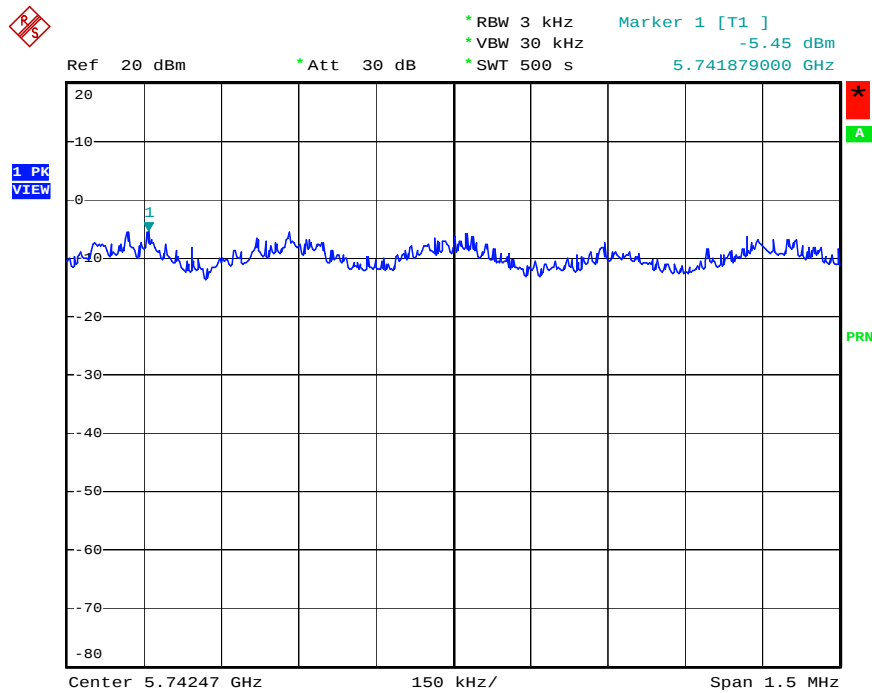
Date: 28.NOV.2006 20:09:25

### 6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2462 MHz



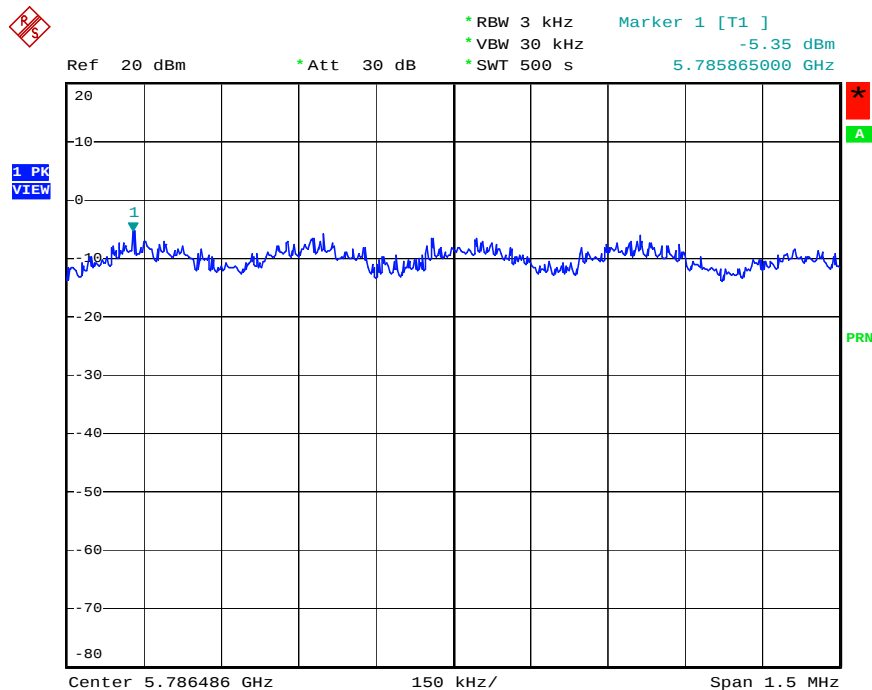
Date: 28.NOV.2006 20:07:37

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5745 MHz



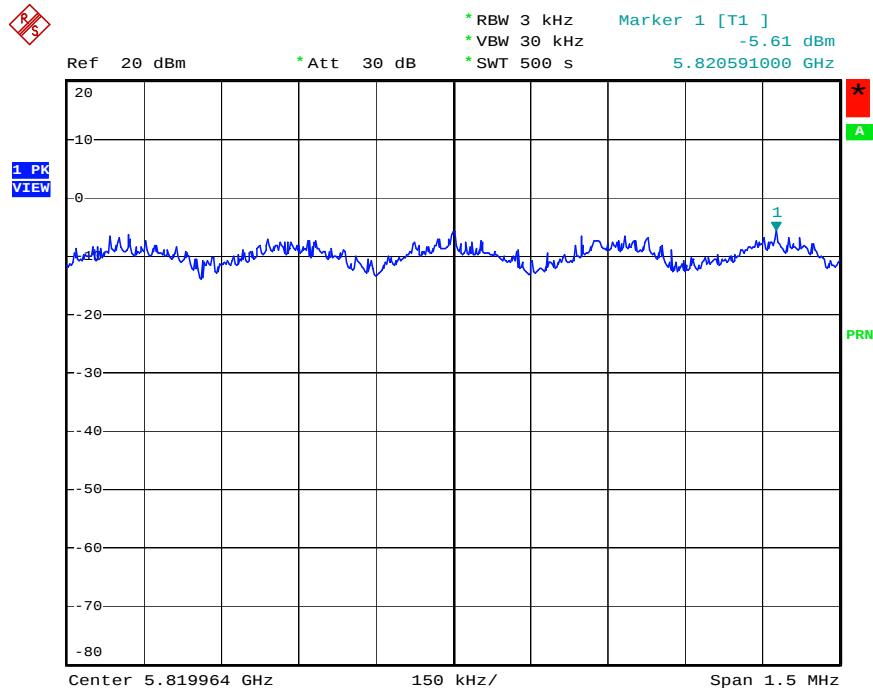
Date: 27.NOV.2006 10:40:26

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5785 MHz



Date: 27.NOV.2006 10:35:43

# 6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5825 MHz



Date: 27.NOV.2006 10:34:17