

FCC Radio Test Report

FCC ID: T5U-US106

This report concerns (check one) : Original Grant Class I Change

Issued Date : Aug. 06, 2008

Report No. : R0807007

Equipment : IEEE 801.11 b/g WLAN USB Module

Model No. : US106

Applicant : Quanta Microsystems, Inc.

Address : 188 WenHwa 2nd Rd., Kueishan Hsiang
Taoyuan 333, Taiwan, R.O.C.

Tested by:

Neutron Engineering Inc. EMC Laboratory

Data of Test:

Jul. 09, 2008 ~ Jul. 29, 2008

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Declaration

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1. CERTIFICATION

Equipment : IEEE 801.11 b/g WLAN USB Module
Brand Name : QMI
Model No. : US106
Applicant : Quanta Microsystems, Inc.
Data of Test : Jul. 09, 2008 ~ Jul. 29, 2008
Test Item : ENGINEERING SAMPLE
Standards : FCC Part15, Subpart C / RSS-210: 2007 / ANCI C63.4 : 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-R0807007) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and CNLA according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| FCC Part15, Subpart C ; RSS-210 | | | | |
|--|--|-------------------------------------|----------|--------|
| Standard Section | | Test Item | Judgment | Remark |
| RSS-210 | FCC | | | |
| ----- | 15.207 | Conducted Emission | PASS | |
| A8.5 | 15.247 (c) | Antenna conducted Spurious Emission | PASS | |
| A8.2 (a) | 15.247 (a)(2) | 6dB Bandwidth | PASS | |
| A8.4 (4) | 15.247 (b) | Peak Output Power | PASS | |
| A2.7 Table 2 | 15.247 (c) | Radiated Spurious Emission | PASS | |
| A8.2 (b) | 15.247 (d) | Power Spectral Density | PASS | |
| ----- | 15.203 | Antenna Requirement | PASS | |
| ----- | 1.1307 1.1310 2.1091 2.1093 | RF Exposure Compliance | PASS | |

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **C01/OS01** at the location of No.132-1, Lane 329, Sec. 2, Palian Road, Shijr City, Taipei, Taiwan.

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95 %**.

A. Conducted Measurement :

| Test Site | Method | Measurement Frequency Range | U , (dB) | NOTE |
|-----------|--------|-----------------------------|----------|------|
| C01 | ANSI | 150 KHz ~ 30MHz | 1.94 | |

B. Radiated Measurement :

| Test Site | Method | Measurement Frequency Range | Ant. H / V | U , (dB) | NOTE |
|-----------|--------|-----------------------------|------------|----------|------|
| OS-01 | ANSI | 30MHz ~ 200MHz | V | 3.82 | |
| | | 30MHz ~ 200MHz | H | 3.60 | |
| | | 200MHz ~ 1,000MHz | V | 3.86 | |
| | | 200MHz ~ 1,000MHz | H | 3.94 | |
| OS-02 | ANSI | 30MHz ~ 200MHz | V | 2.48 | |
| | | 30MHz ~ 200MHz | H | 2.16 | |
| | | 200MHz ~ 1,000MHz | V | 2.50 | |
| | | 200MHz ~ 1,000MHz | H | 2.66 | |

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

| | | |
|--|---|---|
| Equipment | IEEE 801.11 b/g WLAN USB Module | |
| Model No. | US106 | |
| OEM Brand/Model No. | QMI | |
| Model Difference | N/A | |
| Product Description | The EUT is a IEEE 801.11 b/g WLAN USB Module. | |
| | Operation Frequency: | 2412~2462 MHz |
| | Product Class: | Class 1 |
| | Receiver Class: | Class 3 |
| | Modulation Type: | 802.11b:CCK, QPSK, BPSK 802.11g:OFDM |
| | Bit Rate of Transmitter | 802.11b:1/2/5.5/11 Mbps 802.11g:6/9/12/18/24/36/48/54M bps |
| | Number Of Channel | 11CH .Please see Note 2. |
| | Antenna Designation: | Please see Note 3. |
| | Antenna Gain(Peak) | Please see Note 3. |
| | EIRP Power(Max): | 802.11b:19.05 dBm (Max.) 802.11g:22.12 dBm (Max.) |
| Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual. | | |
| Channel List | Please refer to the Note 2. | |
| Power Source | Supplied from Notebook PC. | |
| Power Rating | DC 3.3V | |
| Connecting I/O Port(s) | Please refer to the User's Manual | |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

| Channel List | | | | | |
|--------------|-----------------|-----------|-----------------|-----------|-----------------|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 01 | 2412 | 05 | 2432 | 09 | 2452 |
| 02 | 2417 | 06 | 2437 | 10 | 2457 |
| 03 | 2422 | 07 | 2442 | 11 | 2462 |
| 04 | 2427 | 08 | 2447 | | |

3. Table for Filed Antenna

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|------------|------------|--------------|---------------|------------|
| 1 | SPEED TECH | DPLP-112 | PCB ANTENNA | UFL, INTERNAL | 2.13 |

3.2 DESCRIPTION OF TEST MODES

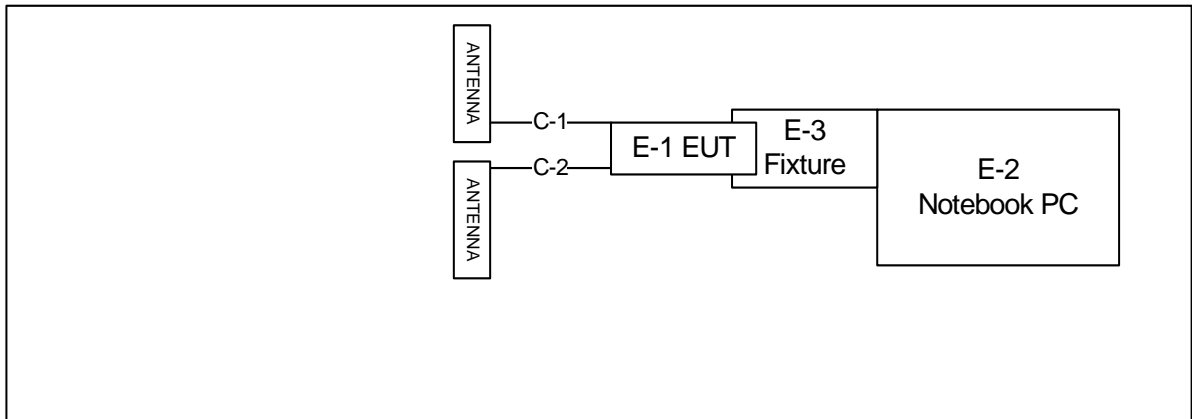
To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Test Mode | Description |
|-------------------|-------------|
| Mode 1 | CH01 |
| Mode 2 | CH06 |
| Mode 3 | CH11 |

| For Conducted Test | |
|--------------------|-------------|
| Final Test Mode | Description |
| Mode 2 | CH06 |

| For Radiated Test | |
|-------------------|-------------|
| Final Test Mode | Description |
| Mode 1 | CH01 |
| Mode 2 | CH06 |
| Mode 3 | CH11 |

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



C-1 RF CABLE
C-2 RF CABLE

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment | Mfr/Brand | Model/Type No. | FCC ID | Series No. | Note |
|------|---------------------------------------|-----------|----------------|-----------|------------|------|
| E-1 | IEEE 801.11 b/g WLAN USB Module | QMI | US106 | T5U-US106 | N/A | EUT |
| E-2 | Notebook PC | DELL | D600 | DOC | 7T390 A03 | |
| E-3 | Fixture | N/A | N/A | N/A | N/A | |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
| C-1 | NO | NO | 0.1M | |
| C-2 | NO | NO | 0.1M | |

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

| FREQUENCY (MHz) | Class A (dBuV) | | Class B (dBuV) | |
|-----------------|----------------|---------|----------------|-----------|
| | Quasi-peak | Average | Quasi-peak | Average |
| 0.15 -0.5 | 79.00 | 66.00 | 66 - 56 * | 56 - 46 * |
| 0.50 -5.0 | 73.00 | 60.00 | 56.00 | 46.00 |
| 5.0 -30.0 | 73.00 | 60.00 | 60.00 | 50.00 |

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

4.1.2 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|-----------------|-----------|------------|------------------|
| 1 | LISN | Rolf Heine | NNB-2/16Z | 98053 | Dec. 18, 2007 |
| 2 | Pulse Limiter | Electro-Metrics | EM-7600 | 112644 | Nov. 28, 2007 |
| 3 | Test Cable | N/A | C01 | N/A | Nov. 28, 2007 |
| 4 | EMI Test Receiver | R&S | ESCI | 100082 | Jan. 31, 2008 |

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

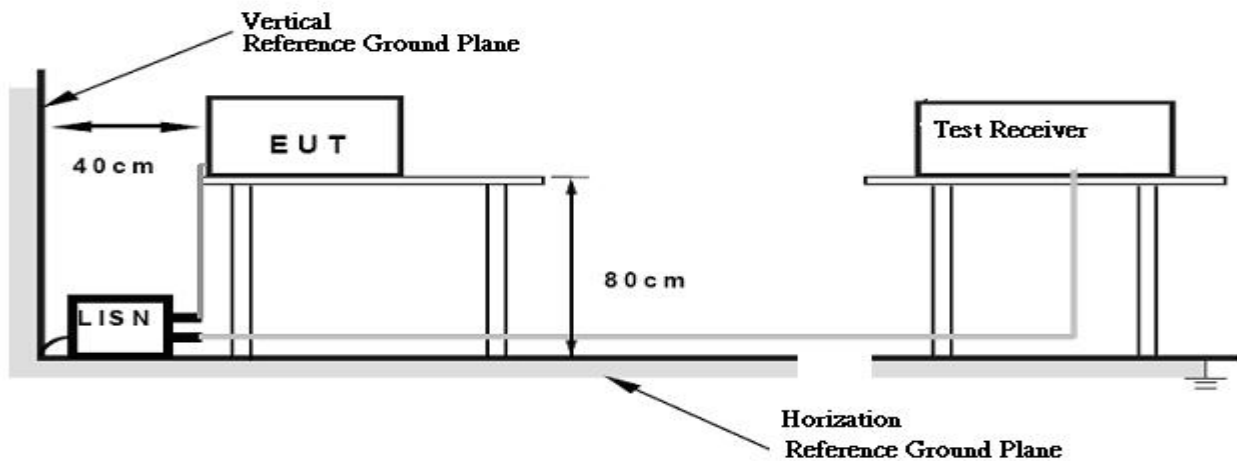
4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. 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.
- c. 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.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



4.1.6 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

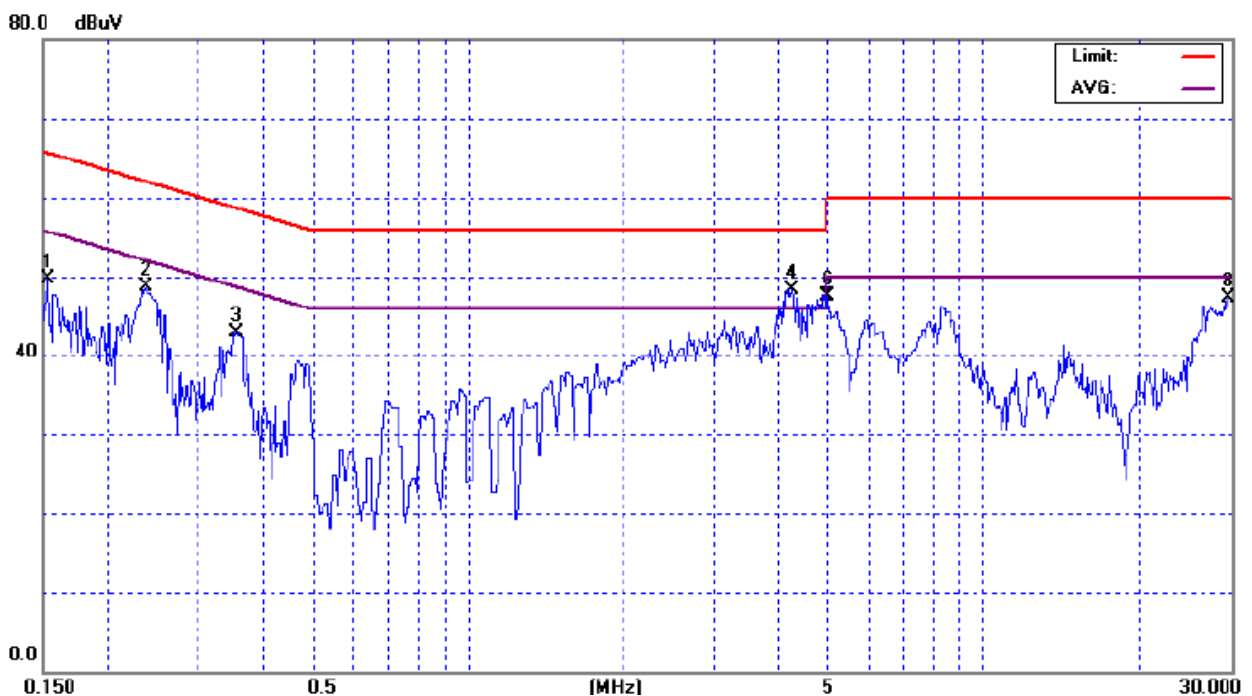
4.1.7 TEST RESULTS

| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55% |
| Pressure : | 1011 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | CH06 | | |

| Freq. (MHz) | Terminal L/N | Measured(dBuV) | | Limits(dBuV) | | Margin (dB) | Note |
|-------------|--------------|----------------|---------|--------------|---------|-------------|------|
| | | QP-Mode | AV-Mode | QP-Mode | AV-Mode | | |
| 0.15 | Line | 49.76 | * | 65.81 | 55.81 | -16.05 | (QP) |
| 0.24 | Line | 48.67 | * | 62.18 | 52.18 | -13.51 | (QP) |
| 0.36 | Line | 42.85 | * | 58.83 | 48.83 | -15.98 | (QP) |
| 4.24 | Line | 48.30 | 27.18 | 56.00 | 46.00 | -7.70 | (QP) |
| 5.00 | Line | 47.58 | 30.24 | 56.00 | 46.00 | -8.42 | (QP) |
| 29.75 | Line | 46.07 | * | 60.00 | 50.00 | -13.93 | (QP) |

Remark

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz; SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.3 sec./MHz ◦ Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz ◦
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform ◦ In this case, a “ * ” marked in AVG Mode column of Interference Voltage Measured ◦
- (3) Measuring frequency range from 150KHz to 30MHz ◦

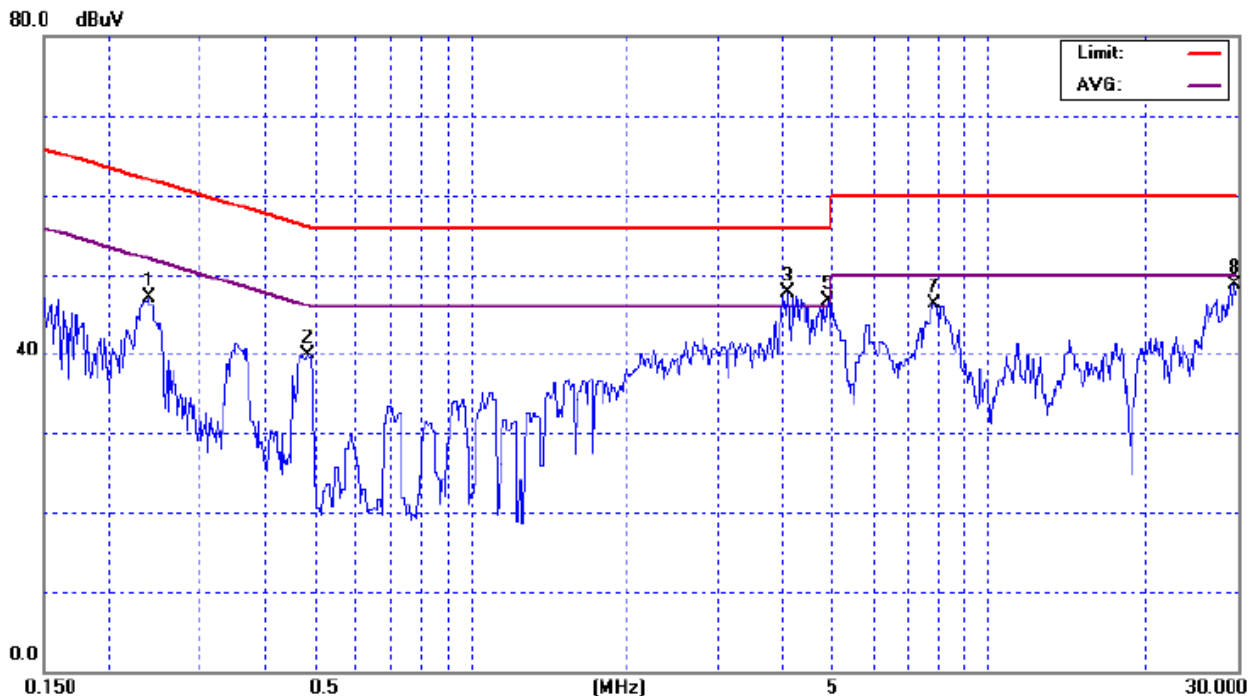


| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55% |
| Pressure : | 1011 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | CH06 | | |

| Freq. (MHz) | Terminal L/N | Measured(dBuV) | | Limits(dBuV) | | Margin (dB) | Note |
|-------------|--------------|----------------|---------|--------------|---------|-------------|------|
| | | QP-Mode | AV-Mode | QP-Mode | AV-Mode | | |
| 0.24 | Neutral | 47.01 | * | 62.13 | 52.13 | -15.12 | (QP) |
| 0.49 | Neutral | 39.87 | * | 56.24 | 46.24 | -16.37 | (QP) |
| 4.11 | Neutral | 47.64 | 25.97 | 56.00 | 46.00 | -8.36 | (QP) |
| 4.88 | Neutral | 46.66 | 27.23 | 56.00 | 46.00 | -9.34 | (QP) |
| 7.85 | Neutral | 46.23 | * | 60.00 | 50.00 | -13.77 | (QP) |
| 29.70 | Neutral | 48.65 | 31.97 | 60.00 | 50.00 | -11.35 | (QP) |

Remark

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz; SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.3 sec./MHz ◦ Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz ◦
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 'Note'. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform ◦ In this case, a " * " marked in AVG Mode column of Interference Voltage Measured ◦
- (3) Measuring frequency range from 150KHz to 30MHz ◦



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

| Frequencies (MHz) | Field Strength (micorvolts/meter) | Measurement Distance (meters) |
|-------------------|-----------------------------------|-------------------------------|
| 0.009~0.490 | 2400/F(KHz) | 300 |
| 0.490~1.705 | 24000/F(KHz) | 30 |
| 1.705~30.0 | 30 | 30 |
| 30~88 | 100 | 3 |
| 88~216 | 150 | 3 |
| 216~960 | 200 | 3 |
| Above 960 | 500 | 3 |

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| FREQUENCY (MHz) | Class B (dBuV/m) (at 3m) | |
|-----------------|--------------------------|---------|
| | PEAK | AVERAGE |
| Above 1000 | 74 | 54 |

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

4.2.2 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------------|------------------|--------------|------------|------------------|
| 1 | Log-Bicon Antenna | Schwarzbeck | VULB 9160 | 3176 | Jul. 01, 2009 |
| 2 | Test Cable | N/A | 10M_OS01 | N/A | Oct. 10, 2008 |
| 3 | Test Cable | N/A | OS01-1/-2 | N/A | Oct. 10, 2008 |
| 4 | Pre-Amplifier | Anritsu | MH648A(OS01) | M09961 | Oct. 10, 2008 |
| 5 | Test Receiver | MEB | SMV41 | 130 | Jul. 27, 2009 |
| 6 | Antenna Mast | Chance Most | CMTB-1.5 | N/A | N/A |
| 7 | Turn Table | Chance Most | CMTB-1.5 | N/A | N/A |
| 8 | Spectrum Analyzer | ADVAN TEST | R3132 | 81700025 | Mar. 30. 2009 |
| 9 | Spectrum Analyzer | R&S | FSP_40 | 100129 | Aug. 16, 2008 |
| 10 | Horn Antenna | EMCO | 3115 | 9120D-325 | Aug. 19, 2008 |
| 11 | Microwave Pre_amplifier | Agilent | 8449B | 3008A01714 | Apr. 23, 2009 |
| 12 | Microflex Cable | NA | NA | 1m | Sep. 16, 2008 |
| 13 | Microflex Cable | United Microwave | A30A30-5006 | 10M | Jul. 23, 2009 |

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

4.2.3 TEST PROCEDURE

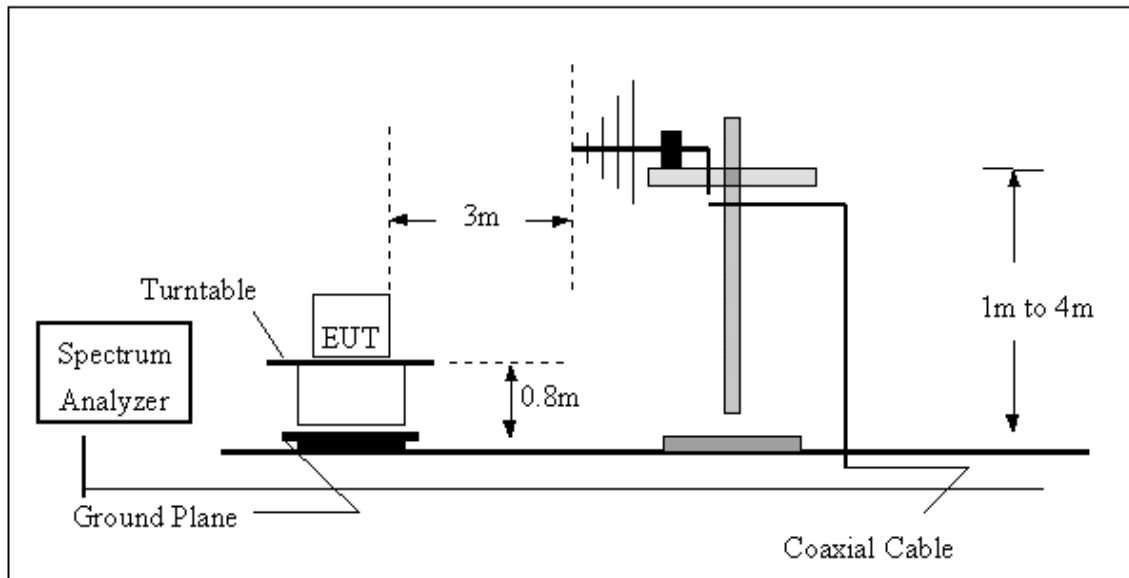
- a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.4 DEVIATION FROM TEST STANDARD

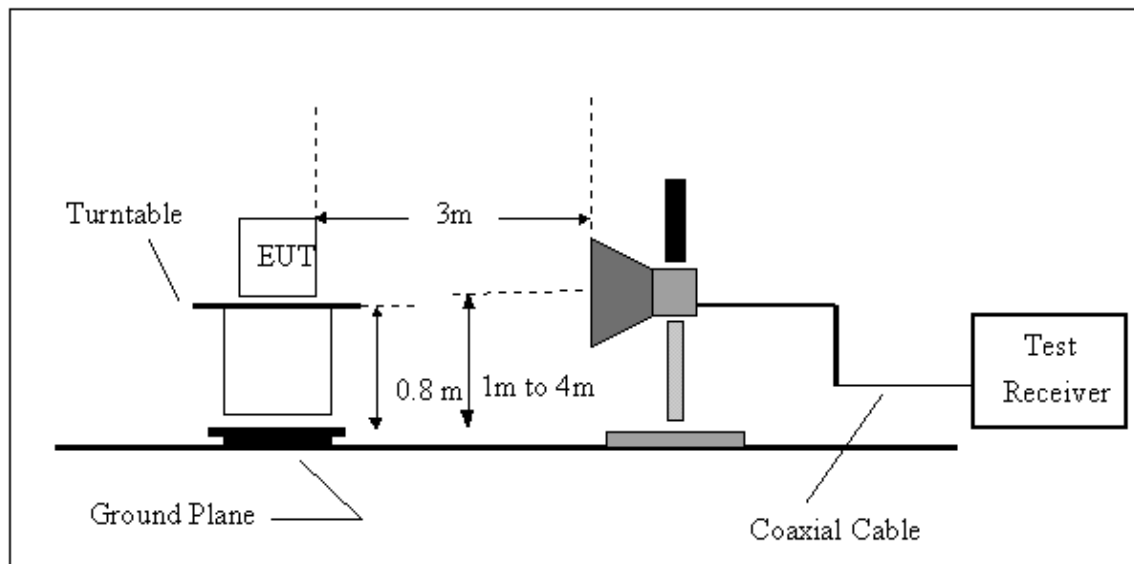
No deviation

4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



4.2.6 EUT OPERATING 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.

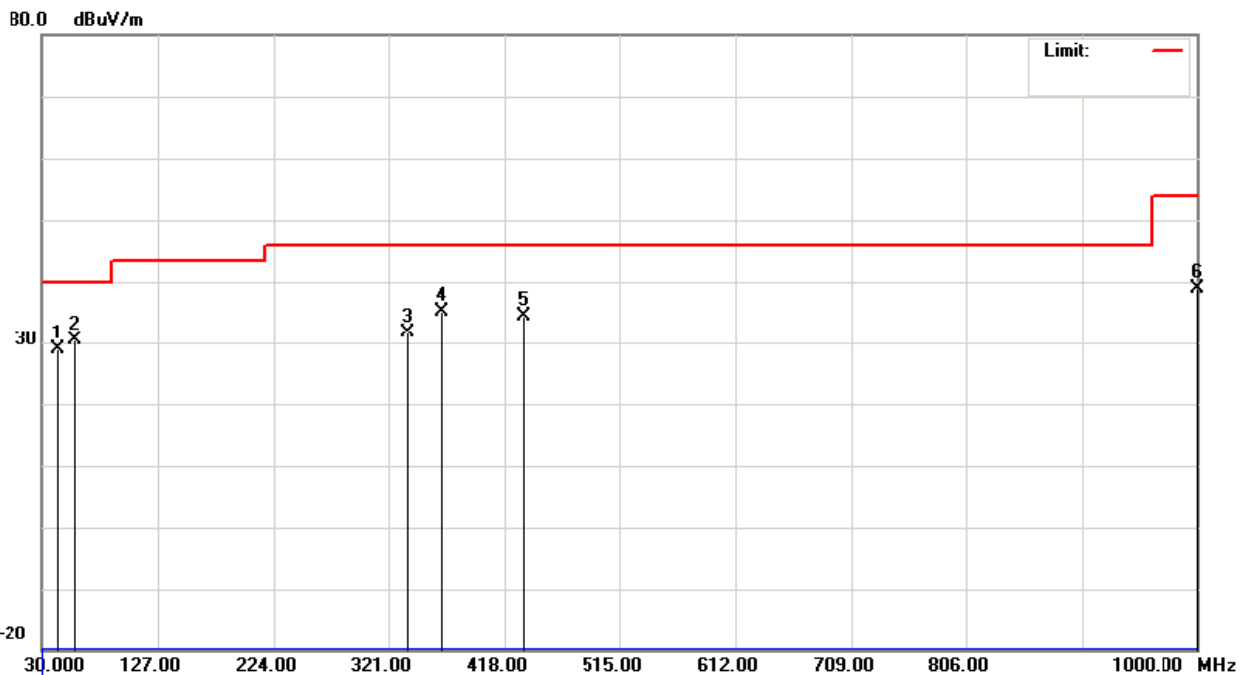
4.2.7 TEST RESULTS-BETWEEN 30MHZ AND 1000MHZ

| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | CH06 | | |

| Freq. (MHz) | Ant. H/V | Reading(RA) (dBuV) | Corr.Factor(CF) (dB) | Measured(FS) (dBuV/m) | Limits(QP) (dBuV/m) | Margin (dB) | Note |
|-------------|----------|--------------------|----------------------|-----------------------|---------------------|-------------|------|
| 43.58 | V | 38.33 | -9.45 | 28.88 | 40.00 | - 11.12 | (QP) |
| 57.16 | V | 39.84 | -9.54 | 30.30 | 40.00 | - 9.70 | (QP) |
| 336.52 | V | 38.22 | -6.67 | 31.55 | 46.00 | - 14.45 | (QP) |
| 365.62 | V | 41.19 | -6.09 | 35.10 | 46.00 | - 10.90 | (QP) |
| 433.52 | V | 38.69 | -4.25 | 34.44 | 46.00 | - 11.56 | (QP) |
| 1000.00 | V | 36.83 | 2.16 | 38.99 | 54.00 | - 15.01 | (QP) |

Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ “F” denotes fundamental frequency; “ H” denotes spurious frequency. “E” denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

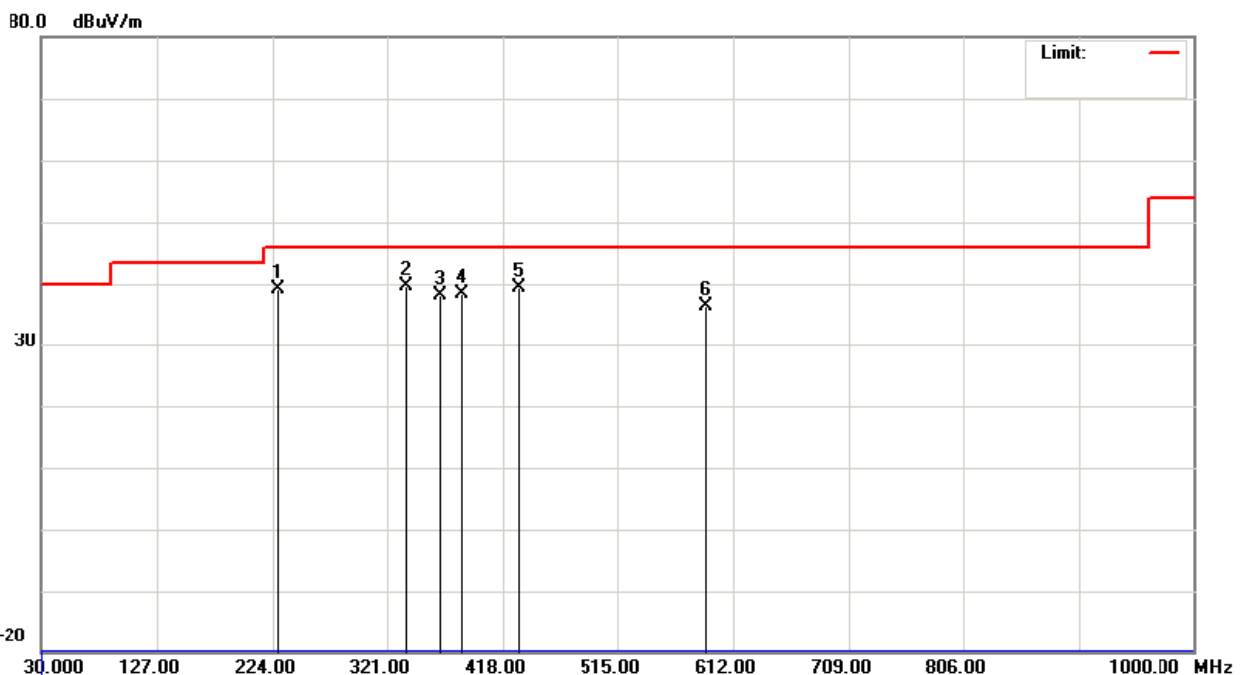


| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | CH06 | | |

| Freq. (MHz) | Ant. H/V | Reading(RA) (dBuV) | Corr.Factor(CF) (dB) | Measured(FS) (dBuV/m) | Limits(QP) (dBuV/m) | Margin (dB) | Note |
|-------------|----------|--------------------|----------------------|-----------------------|---------------------|-------------|------|
| 227.88 | H | 49.40 | -10.15 | 39.25 | 46.00 | - 6.75 | (QP) |
| 336.52 | H | 46.19 | -6.67 | 39.52 | 46.00 | - 6.48 | (QP) |
| 365.62 | H | 44.34 | -6.09 | 38.25 | 46.00 | - 7.75 | (QP) |
| 383.08 | H | 44.10 | -5.61 | 38.49 | 46.00 | - 7.51 | (QP) |
| 431.58 | H | 43.60 | -4.32 | 39.28 | 46.00 | - 6.72 | (QP) |
| 588.72 | H | 37.10 | -0.78 | 36.32 | 46.00 | - 9.68 | (QP) |

Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ “F” denotes fundamental frequency; “ H” denotes spurious frequency. “E” denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



4.2.8 TEST RESULTS-ABOVE 1000MHZ

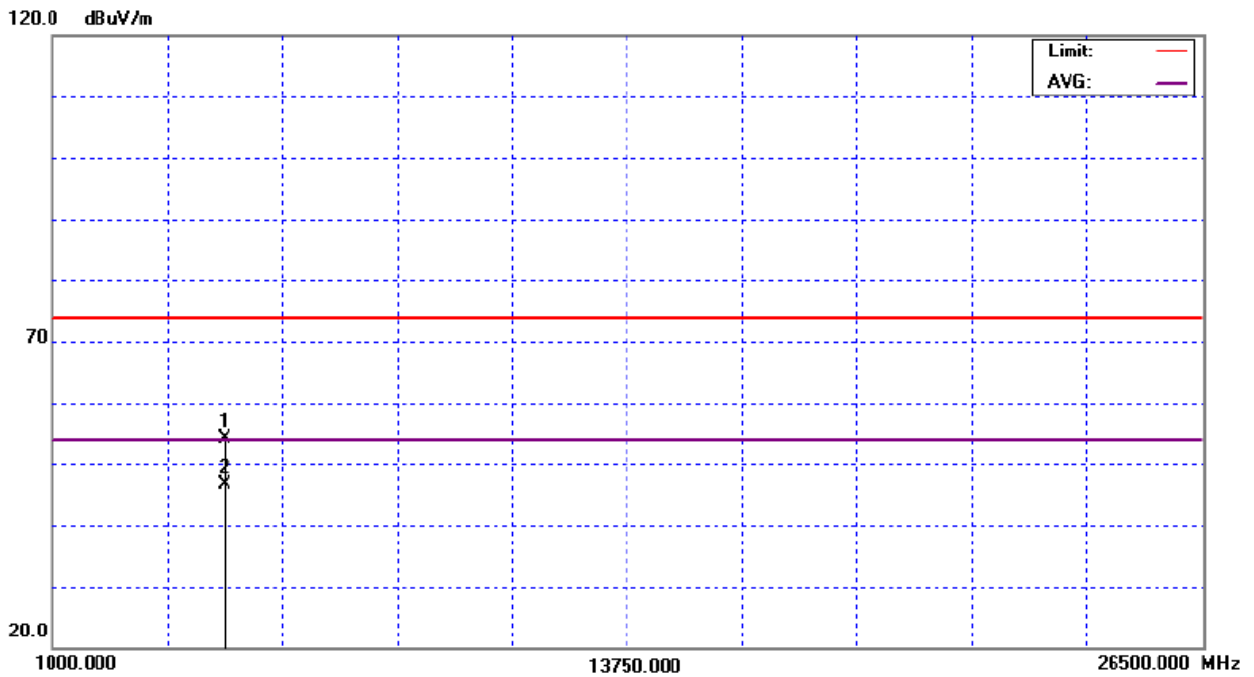
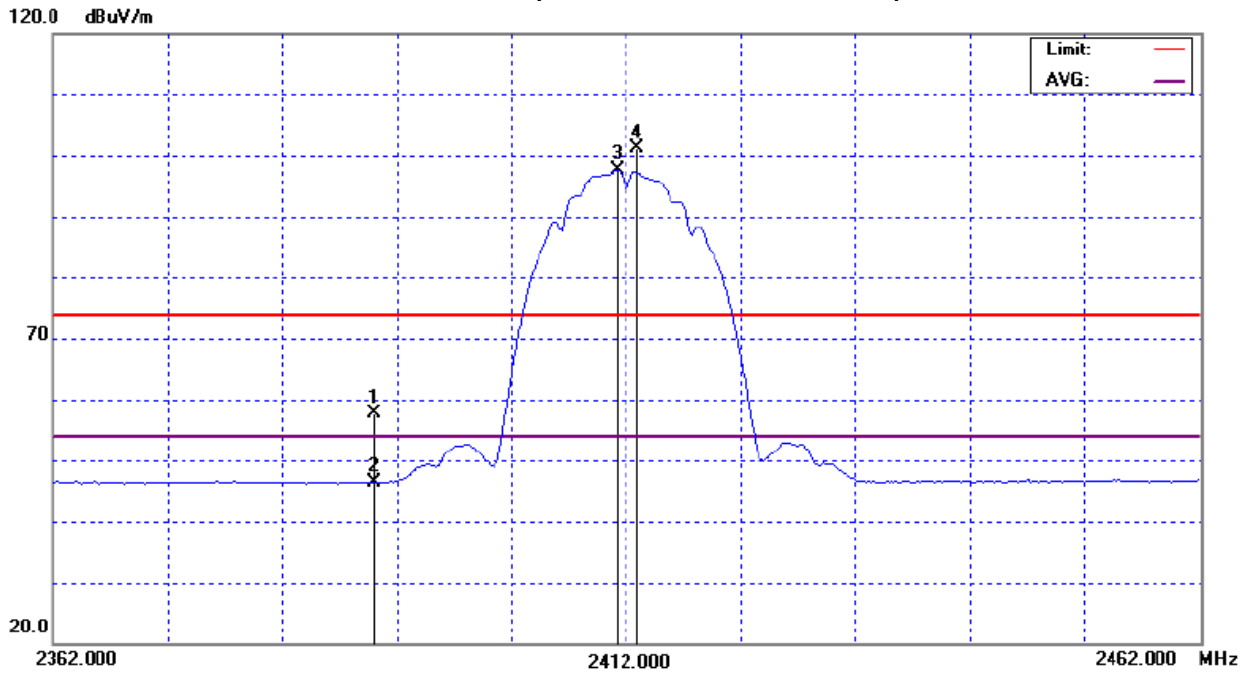
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | TX 802.11b_CH01 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2390.00 | V | 24.97 | 13.86 | 32.57 | 57.54 | 46.43 | 74.00 | 54.00 | X/H |
| 2411.20 | V | 68.48 | 65.06 | 32.69 | 101.17 | 97.75 | | | X/F |
| 4823.97 | V | 50.11 | 42.47 | 4.04 | 54.15 | 46.51 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11b_CH01(Above 1000 MHz, Vertical)



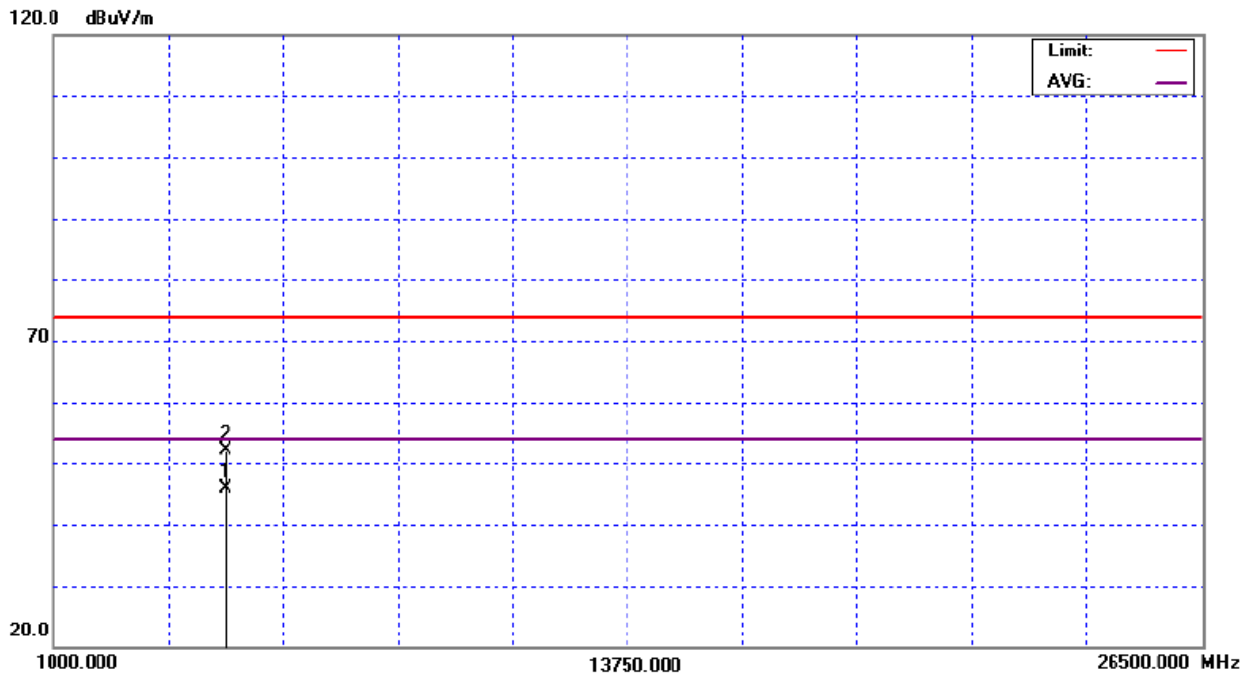
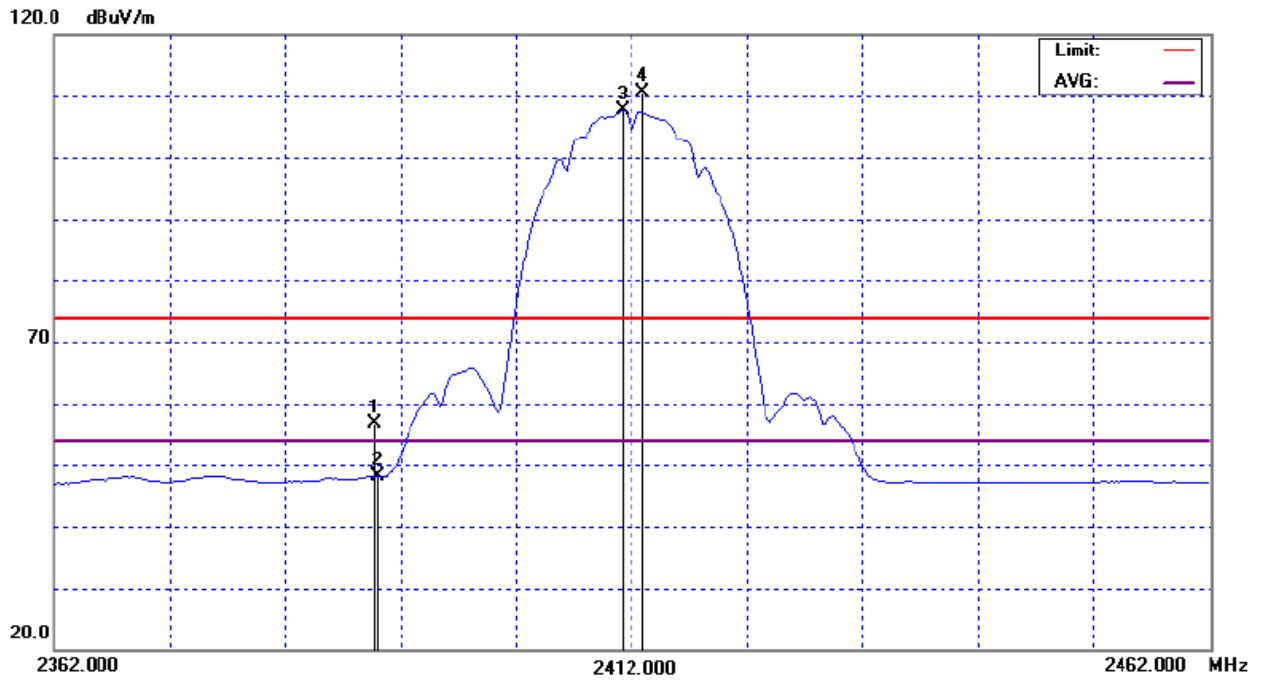
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH01 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2390.00 | H | 24.09 | 15.50 | 32.57 | 56.66 | 48.07 | 74.00 | 54.00 | X/H |
| 2411.20 | H | 78.02 | 74.95 | 32.69 | 110.71 | 107.64 | | | X/F |
| 4823.97 | H | 48.03 | 41.92 | 4.04 | 52.07 | 45.96 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown “ * ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11b_CH01(Above 1000 MHz, Horizontal)



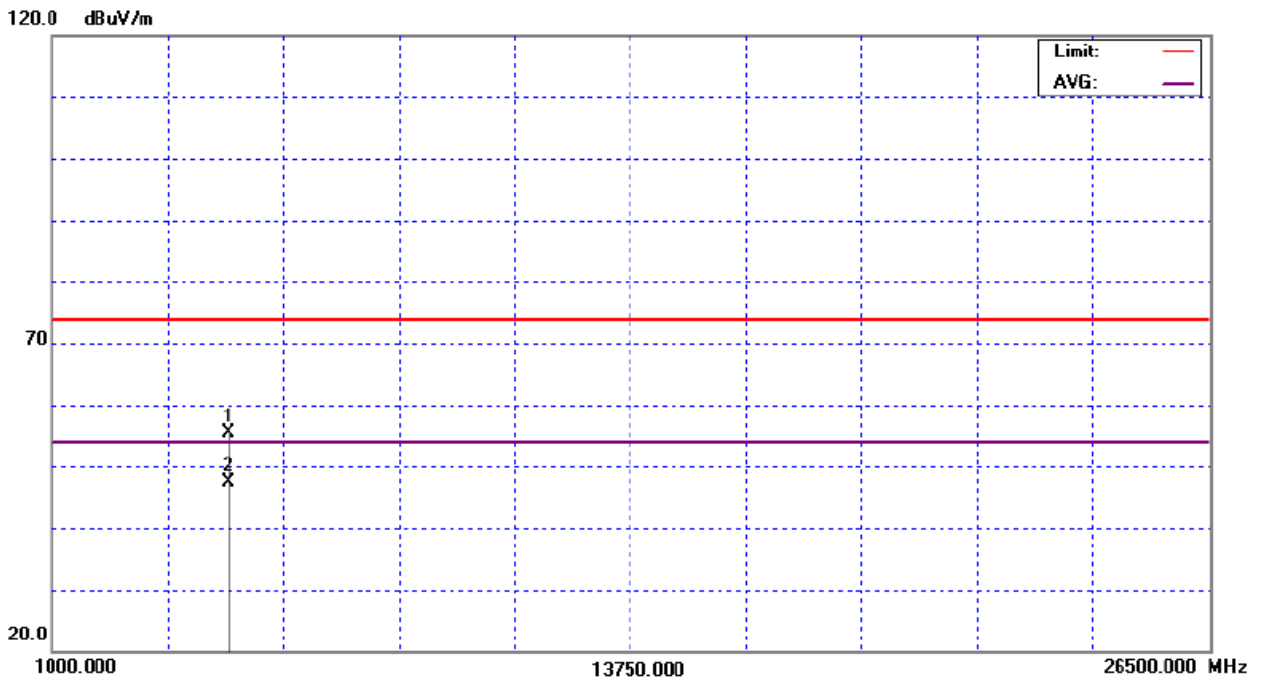
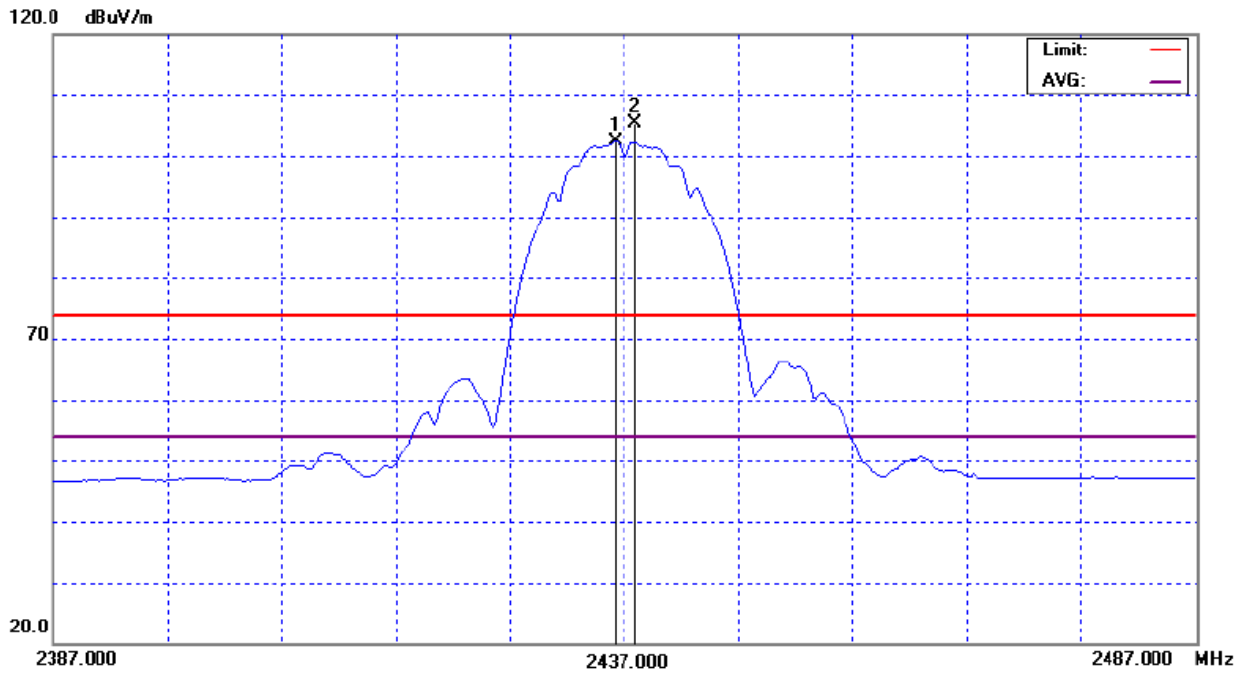
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH06 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2436.20 | V | 72.65 | 69.56 | 32.83 | 105.48 | 102.39 | | | X/F |
| 4873.94 | V | 51.03 | 43.16 | 4.29 | 55.32 | 47.45 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11b_CH06(Above 1000 MHz, Vertical)



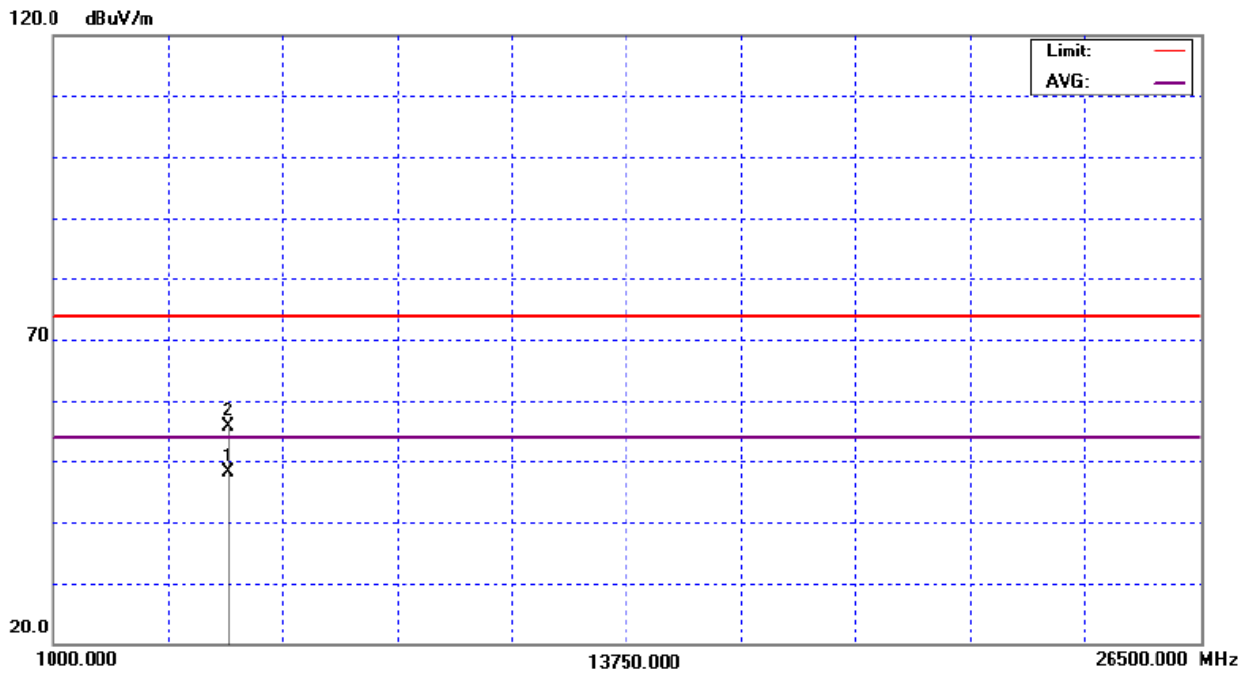
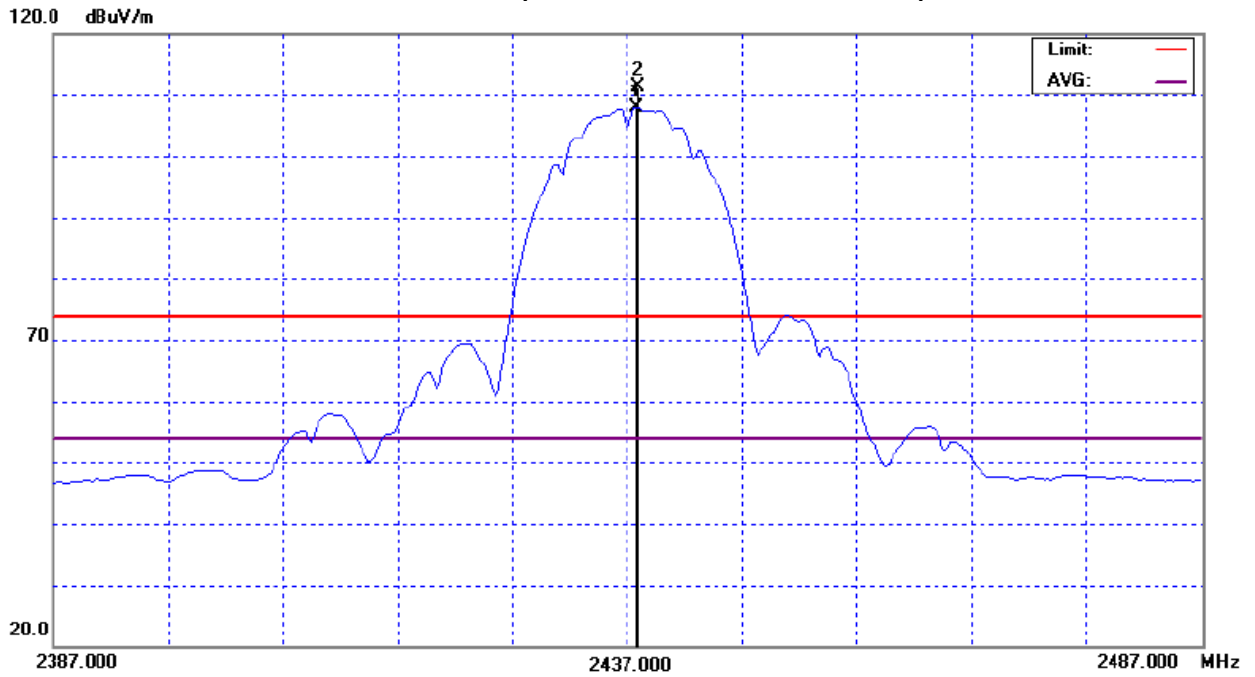
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH06 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2437.80 | H | 78.54 | 5.11 | 32.84 | 111.38 | 37.95 | | | X/F |
| 4873.94 | H | 51.36 | 43.81 | 4.29 | 55.65 | 48.10 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11b_CH06(Above 1000 MHz, Horizontal)



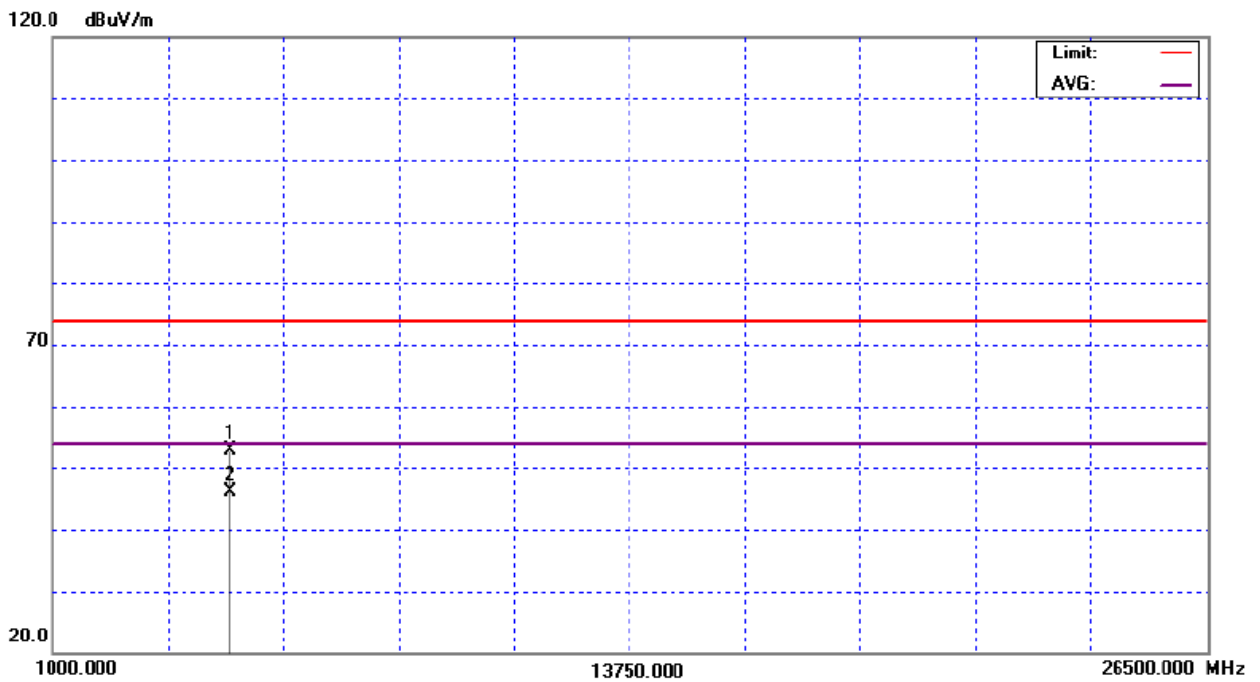
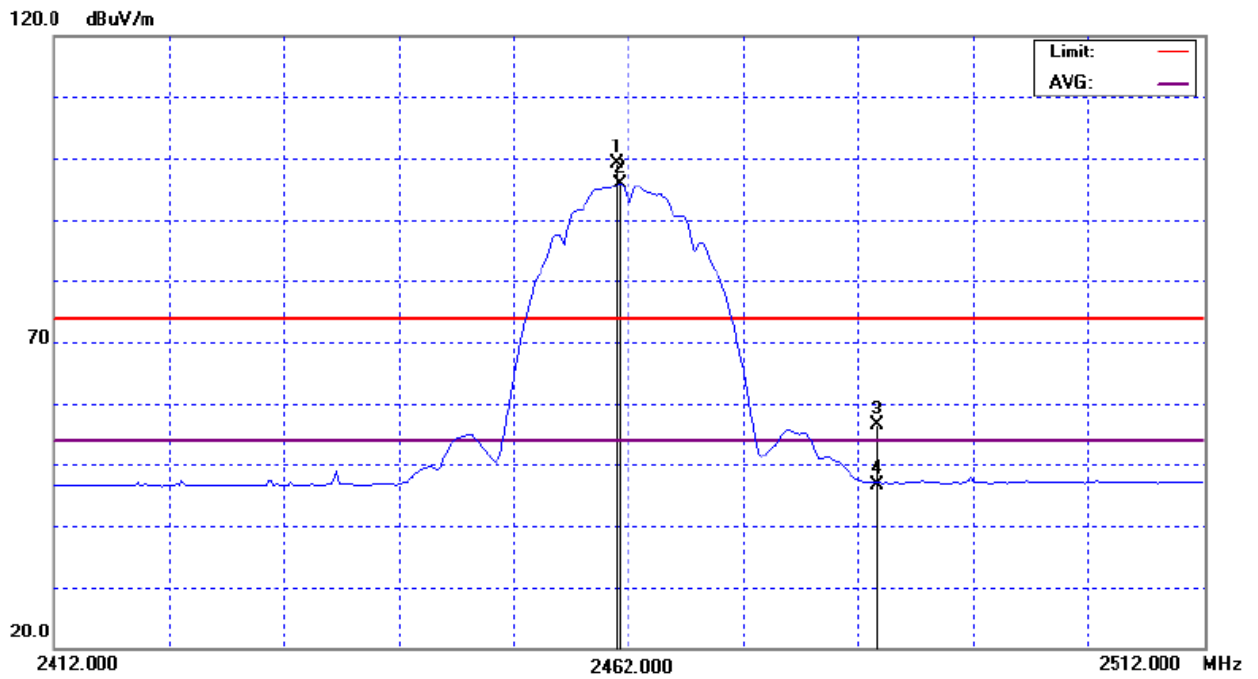
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH11 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2461.20 | V | 66.07 | 62.93 | 32.97 | 99.04 | 95.90 | | | X/F |
| 2483.50 | V | 23.23 | 13.61 | 33.10 | 56.33 | 46.71 | 74.00 | 54.00 | X/H |
| 4923.98 | V | 48.37 | 41.51 | 4.54 | 52.91 | 46.05 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11b_CH11(Above 1000 MHz, Vertical)



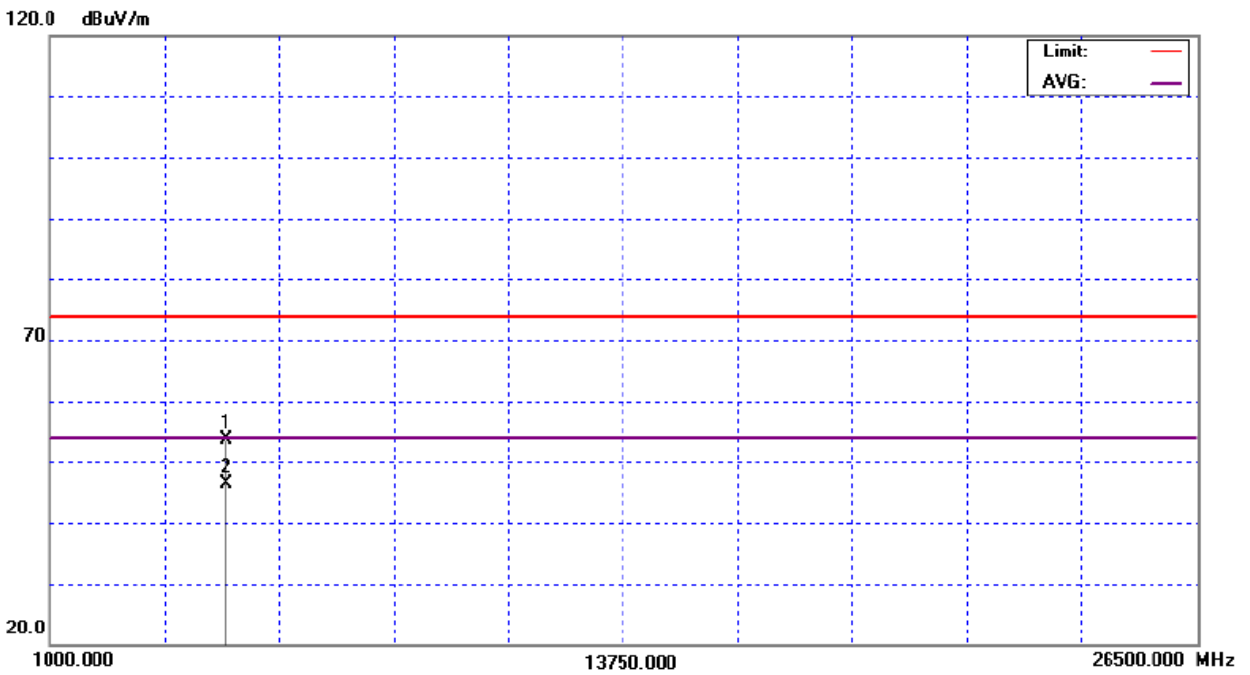
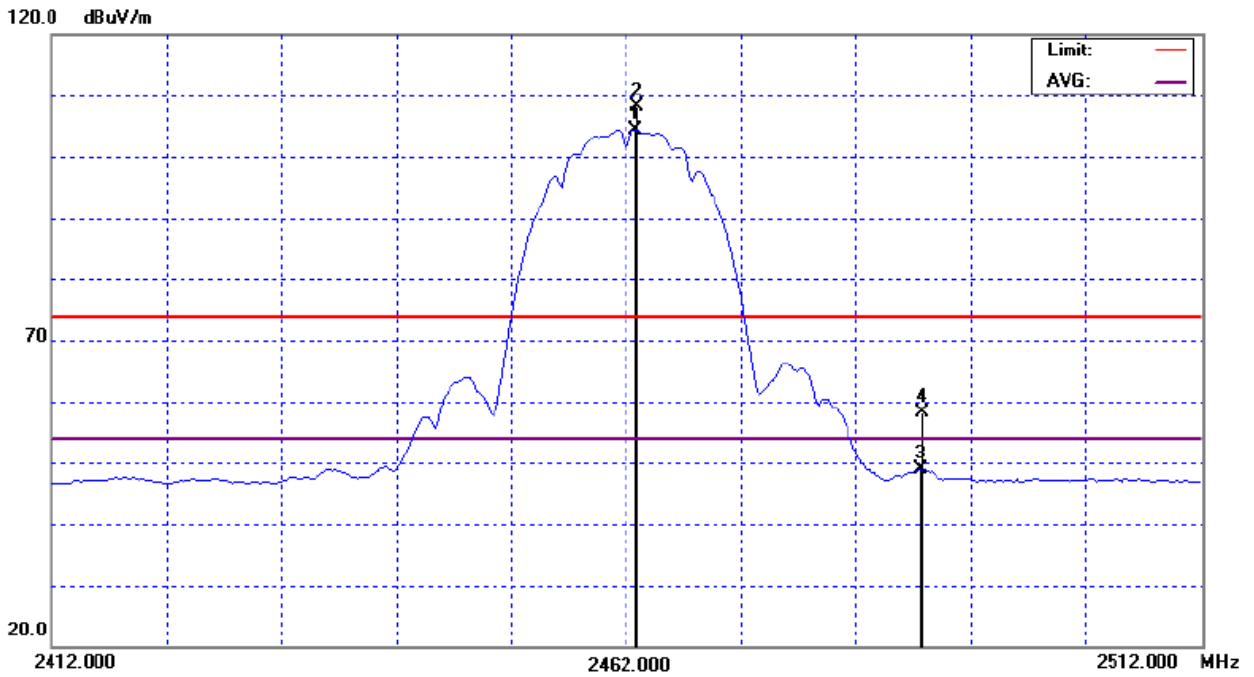
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH11 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2462.80 | H | 75.08 | 71.50 | 32.98 | 108.06 | 104.48 | | | X/F |
| 2487.50 | H | 25.00 | 15.64 | 33.12 | 58.12 | 48.76 | 74.00 | 54.00 | X/H |
| 4923.98 | H | 49.21 | 41.89 | 4.54 | 53.75 | 46.43 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown “ * ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11b_CH11(Above 1000 MHz, Horizontal)



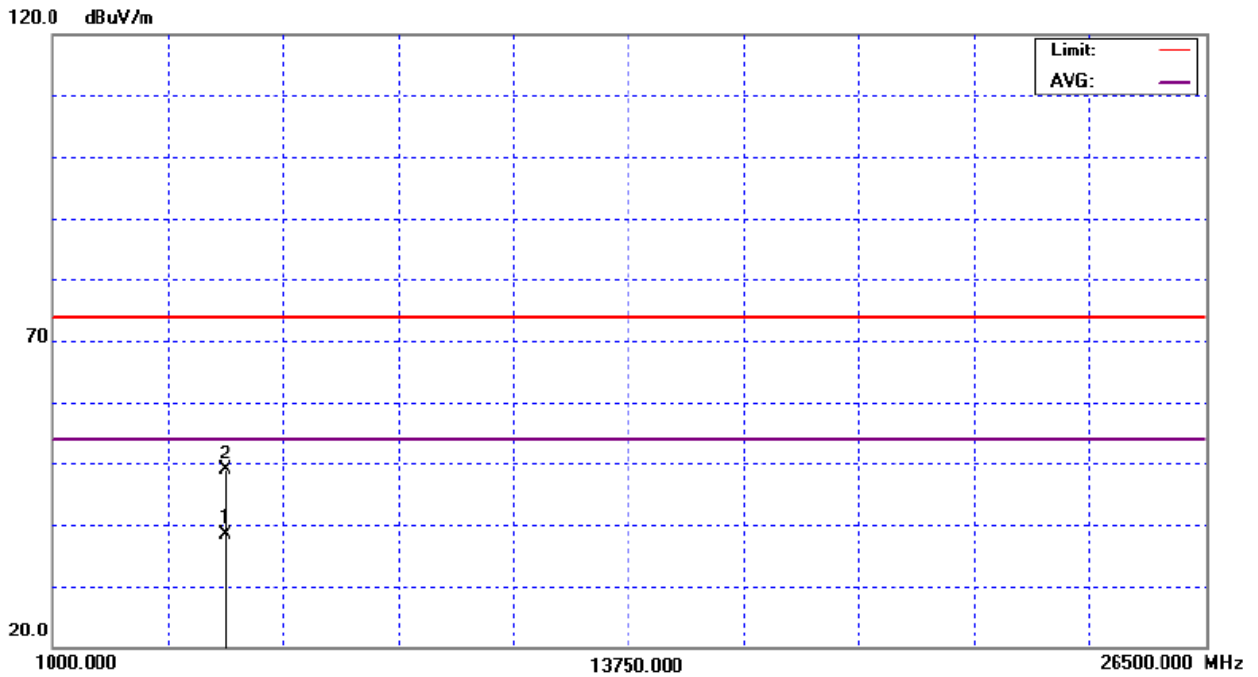
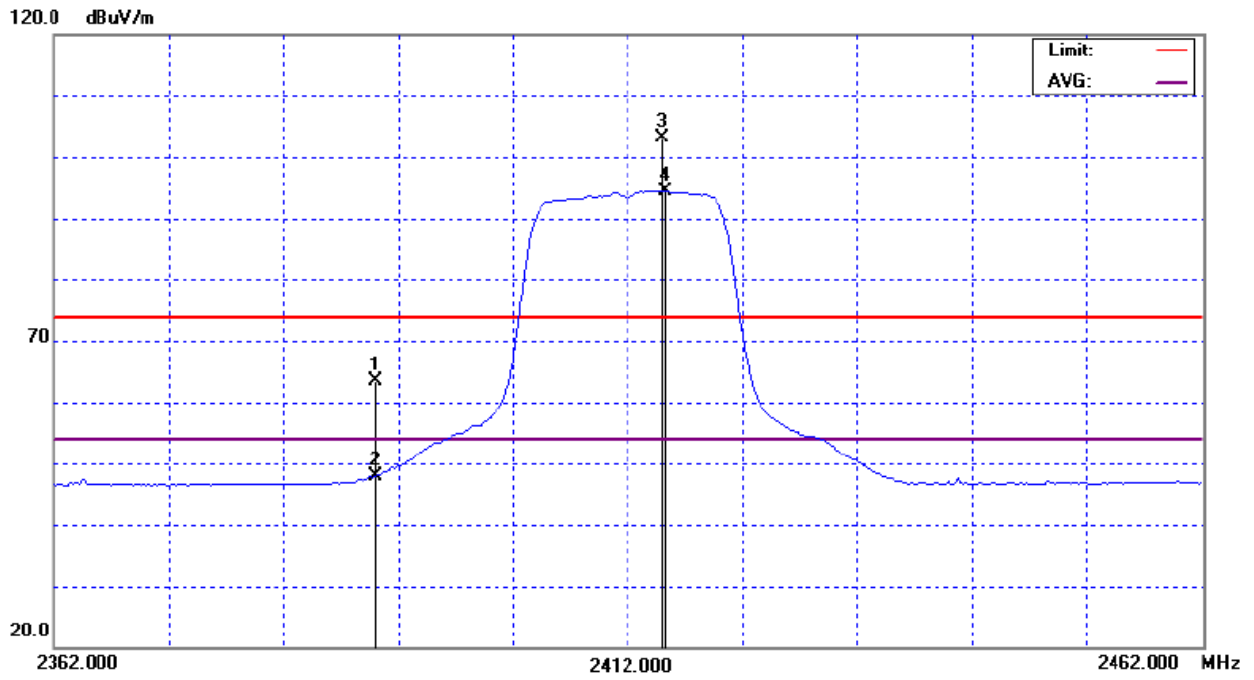
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | TX 802.11g_CH01 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2390.00 | V | 30.70 | 15.38 | 32.57 | 63.27 | 47.95 | 74.00 | 54.00 | X/H |
| 2415.20 | V | 70.44 | 61.73 | 32.72 | 103.16 | 94.45 | | | X/F |
| 4823.89 | V | 44.82 | 34.29 | 4.04 | 48.86 | 38.33 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11g_CH01(Above 1000 MHz, Vertical)



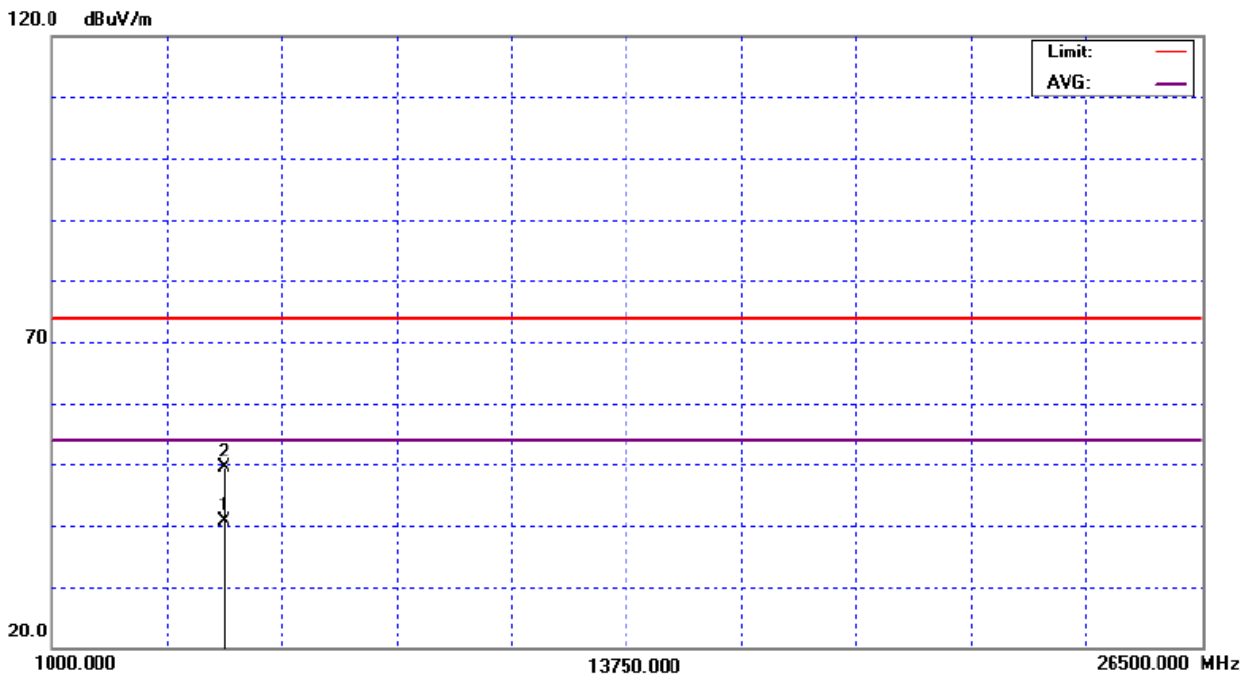
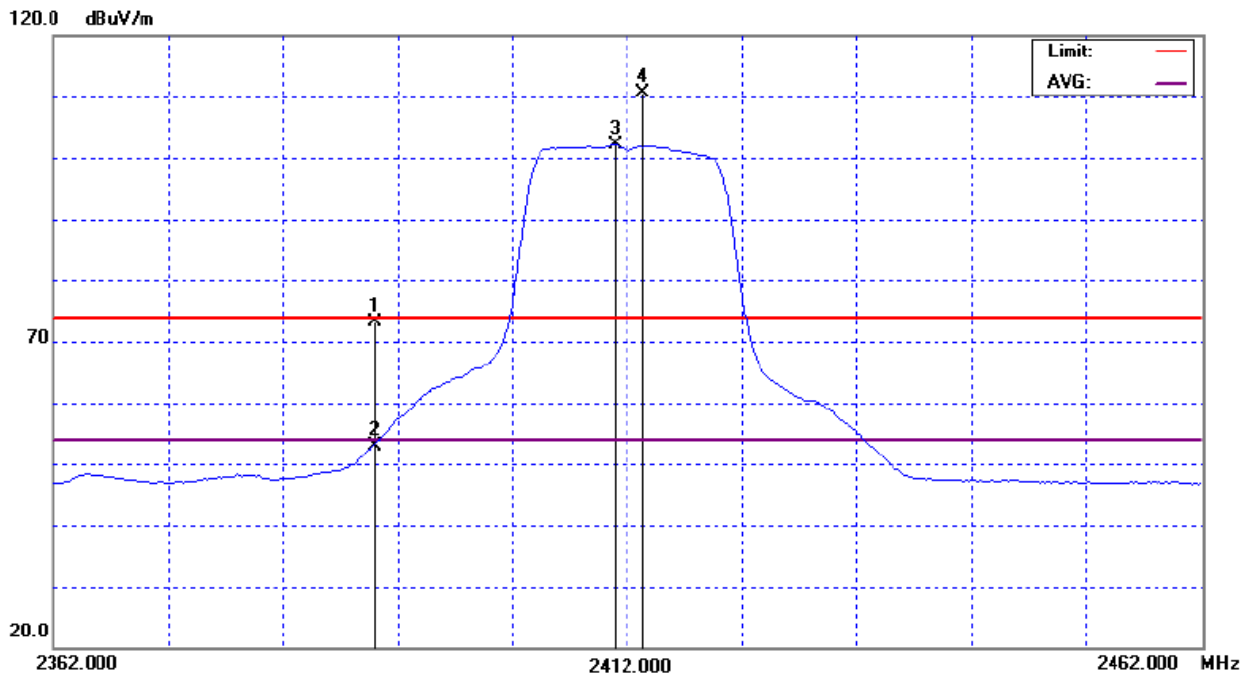
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH01 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2390.00 | H | 40.52 | 20.36 | 32.57 | 73.09 | 52.93 | 74.00 | 54.00 | X/H |
| 2411.00 | H | 77.86 | 69.39 | 32.69 | 110.55 | 102.08 | | | X/F |
| 4823.89 | H | 45.23 | 36.55 | 4.04 | 49.27 | 40.59 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown “ * ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11g_CH01(Above 1000 MHz, Horizontal)



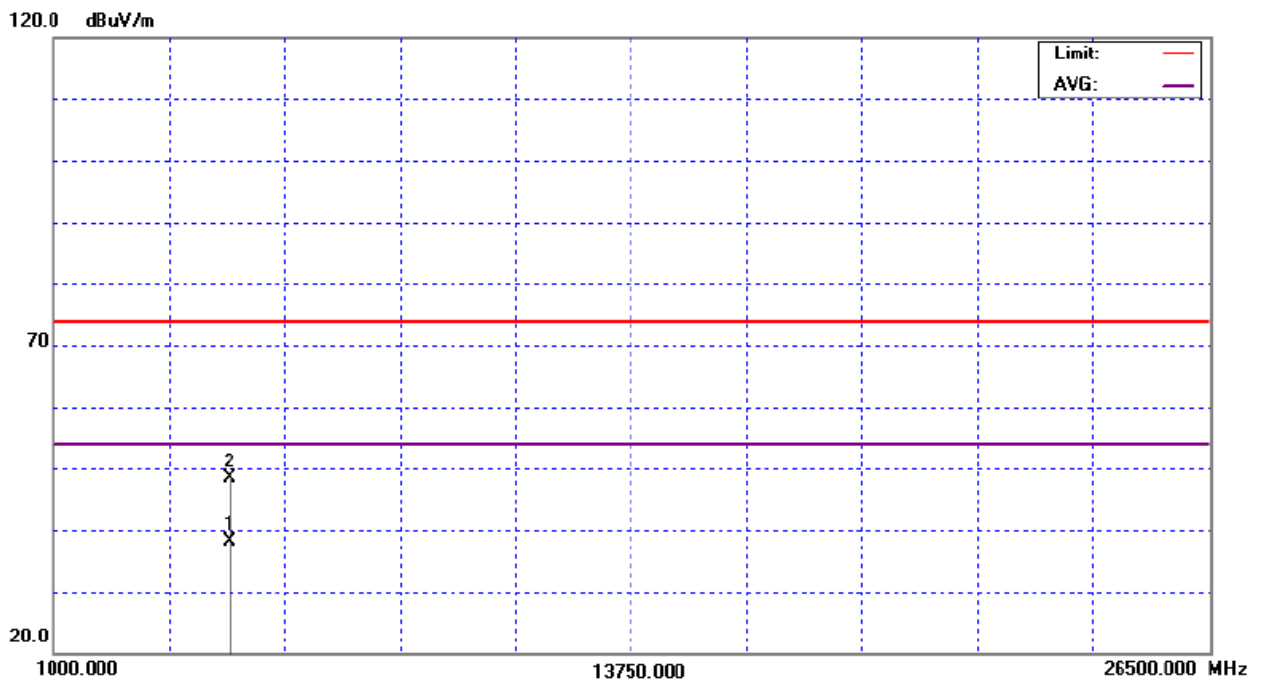
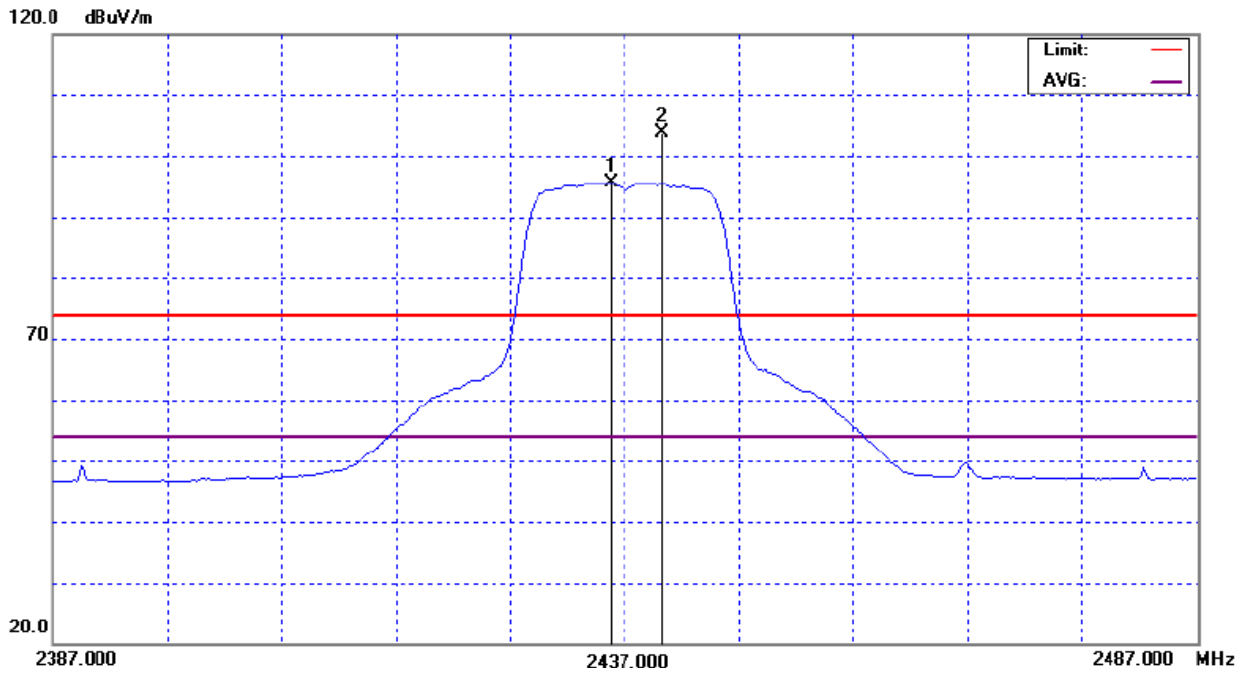
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH06 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2435.80 | V | 71.08 | 62.76 | 32.83 | 103.91 | 95.59 | | | X/F |
| 4874.06 | V | 44.05 | 33.76 | 4.29 | 48.34 | 38.05 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11g_CH06(Above 1000 MHz, Vertical)



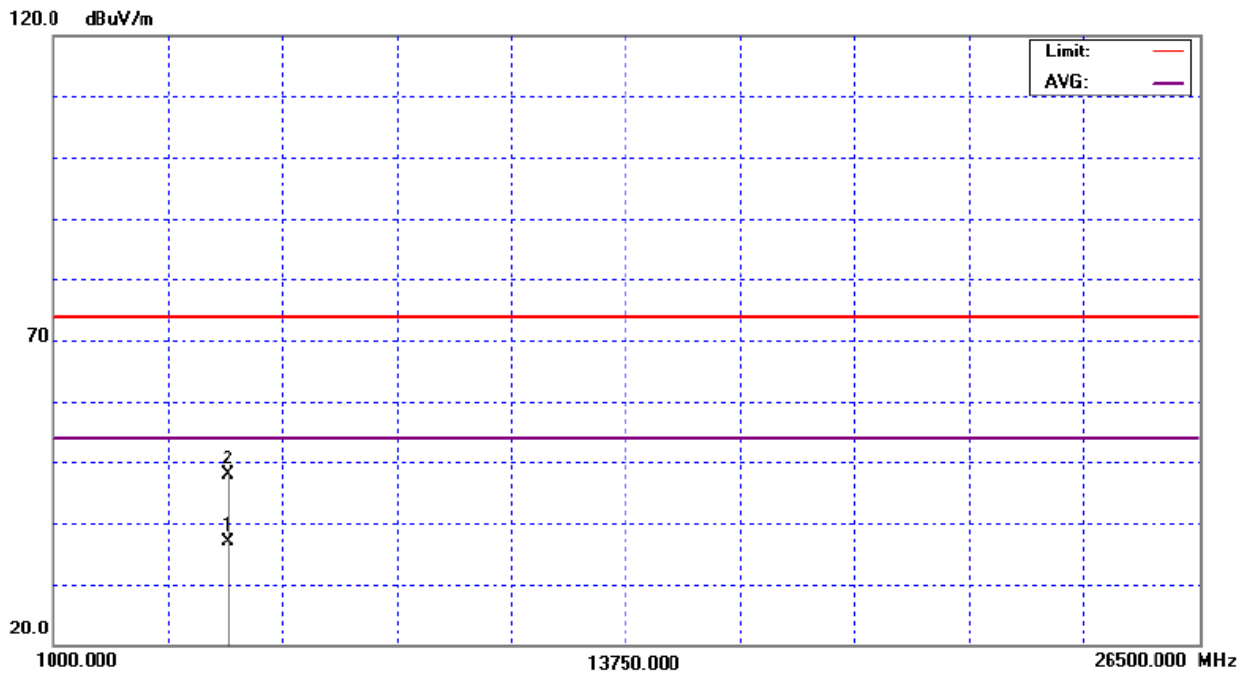
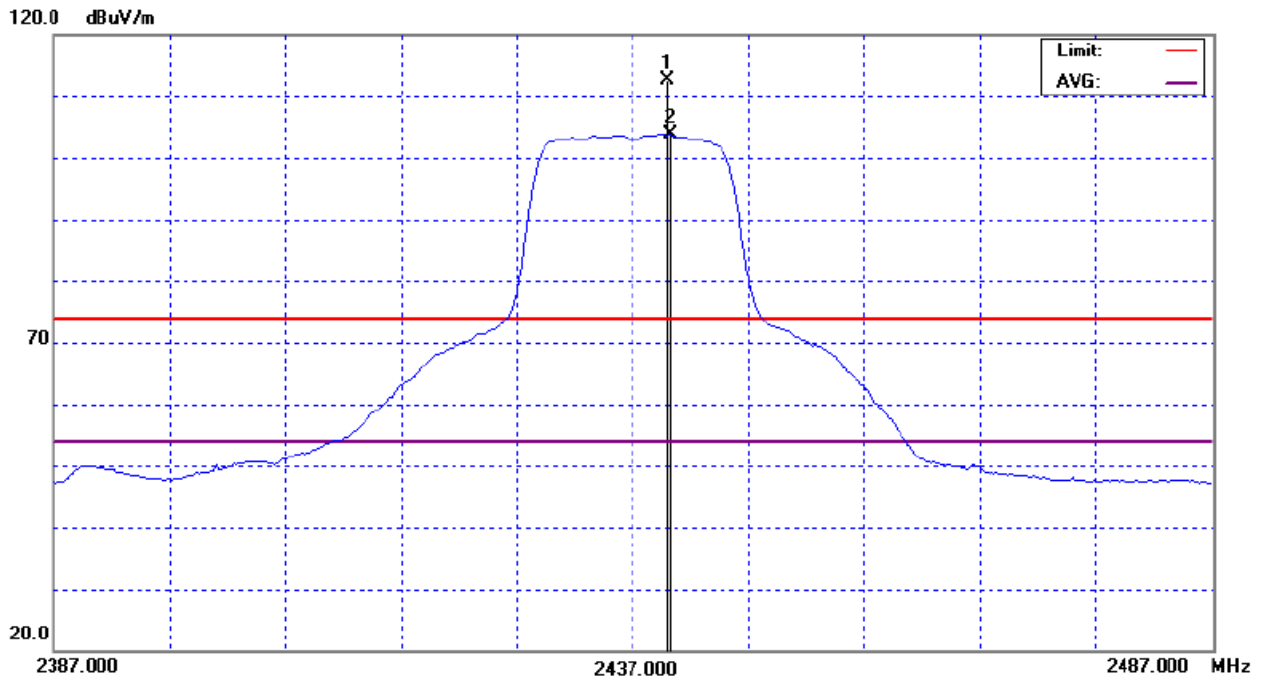
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH06 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2440.20 | H | 79.66 | 70.95 | 32.86 | 112.52 | 103.81 | | | X/F |
| 4874.02 | H | 43.67 | 32.51 | 4.29 | 47.96 | 36.80 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown “ * ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11g_CH06(Above 1000 MHz, Horizontal)



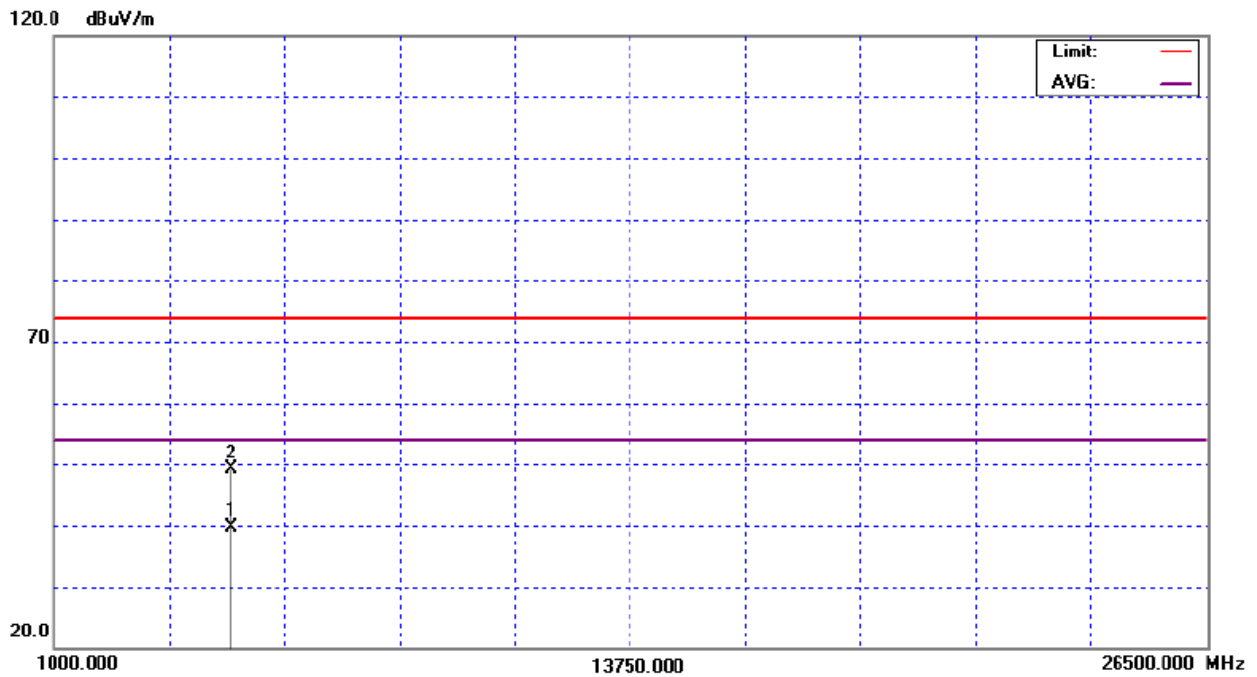
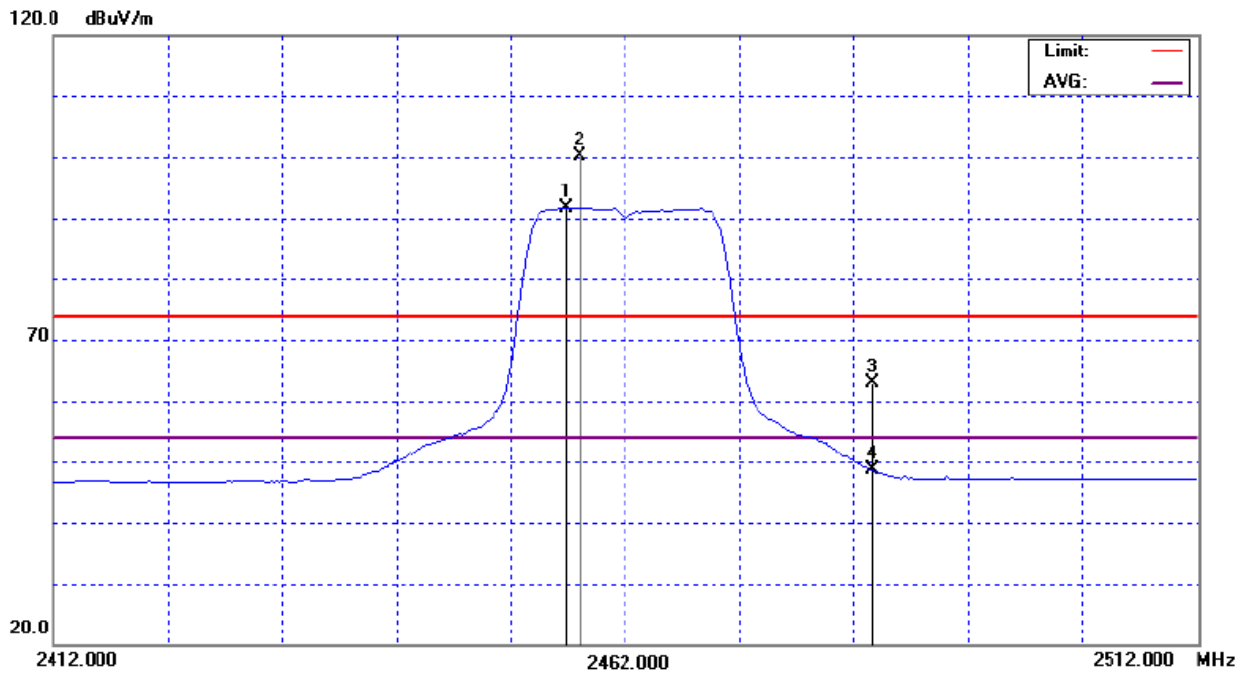
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH11 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2456.80 | V | 67.24 | 58.76 | 32.95 | 100.19 | 91.71 | | | X/F |
| 2483.50 | V | 29.86 | 15.52 | 33.10 | 62.96 | 48.62 | 74.00 | 54.00 | X/H |
| 4924.06 | V | 44.58 | 35.02 | 4.54 | 49.12 | 39.56 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown " * " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11g_CH11(Above 1000 MHz, Vertical)



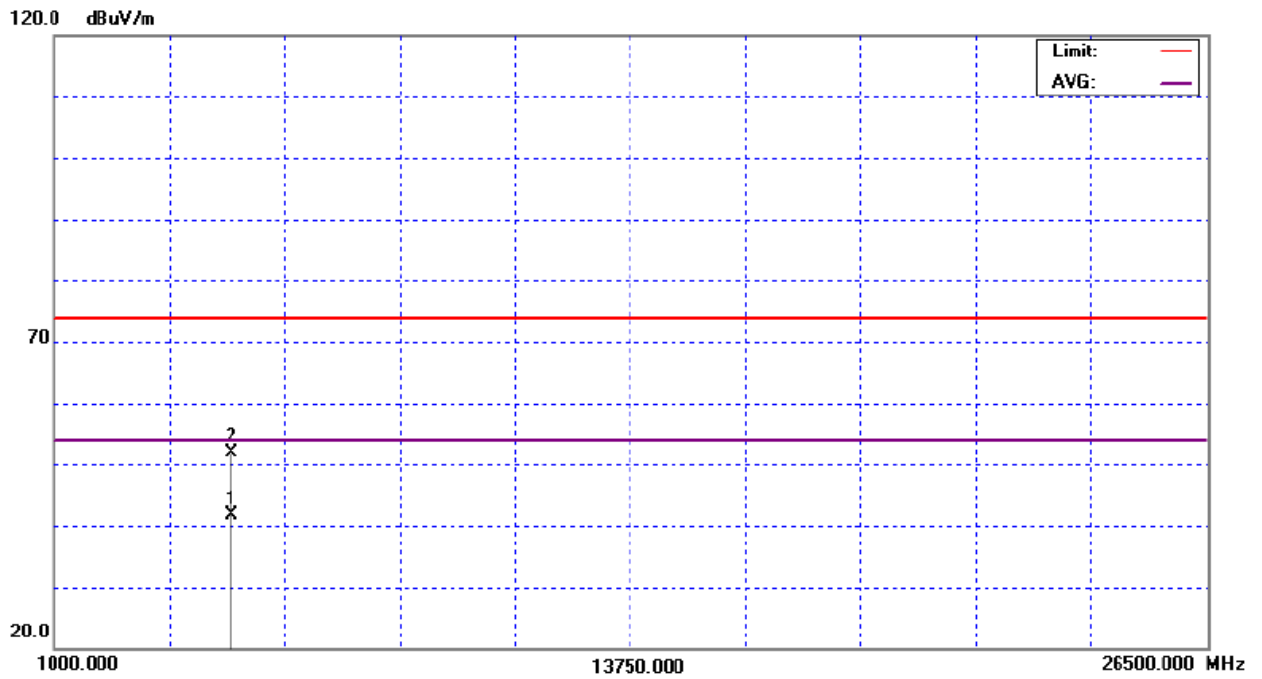
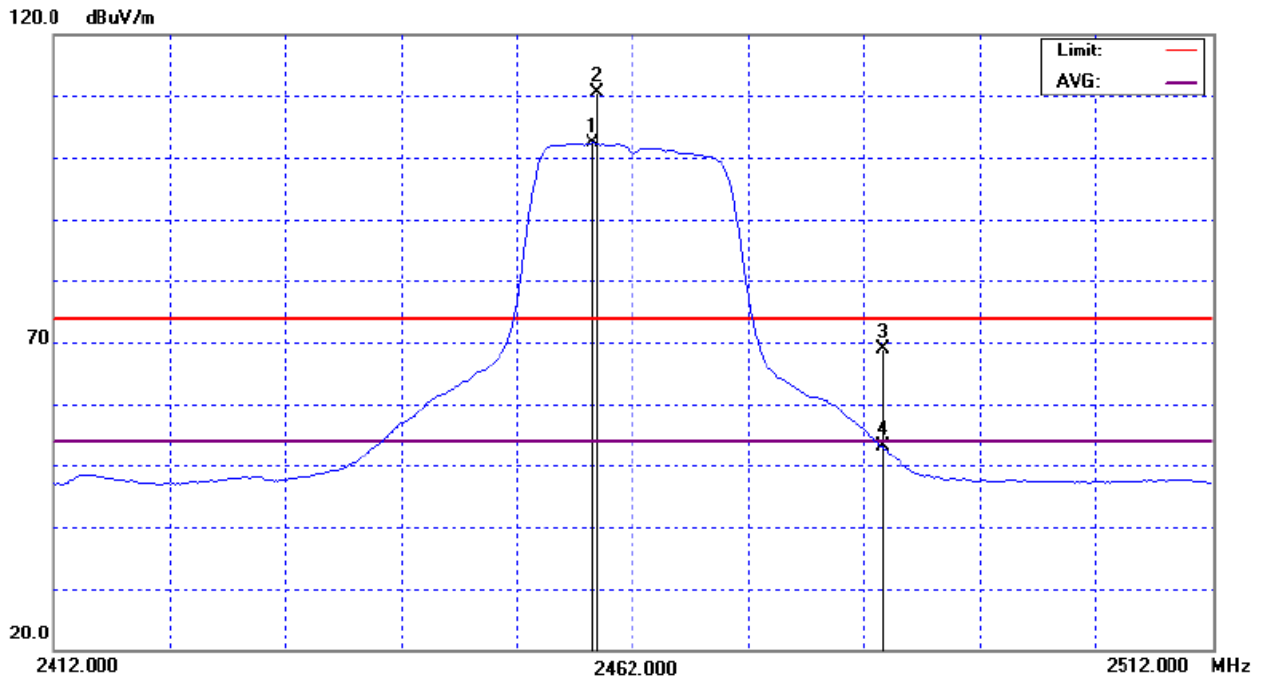
| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH11 | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2458.60 | H | 77.76 | 69.32 | 32.96 | 110.72 | 102.28 | | | X/F |
| 2483.50 | H | 35.87 | 19.95 | 33.10 | 68.97 | 53.05 | 74.00 | 54.00 | X/H |
| 4924.06 | H | 47.29 | 37.11 | 4.54 | 51.83 | 41.65 | 74.00 | 54.00 | X/H |

Remark :

- (1) Spectrum Setting :
 QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (5) Data of measurement within this frequency range shown “ * ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :
 “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis : X
802.11g_CH11(Above 1000 MHz, Horizontal)



4.2.9 TEST RESULTS-RESTRICTED BANDS REQUIREMENTS

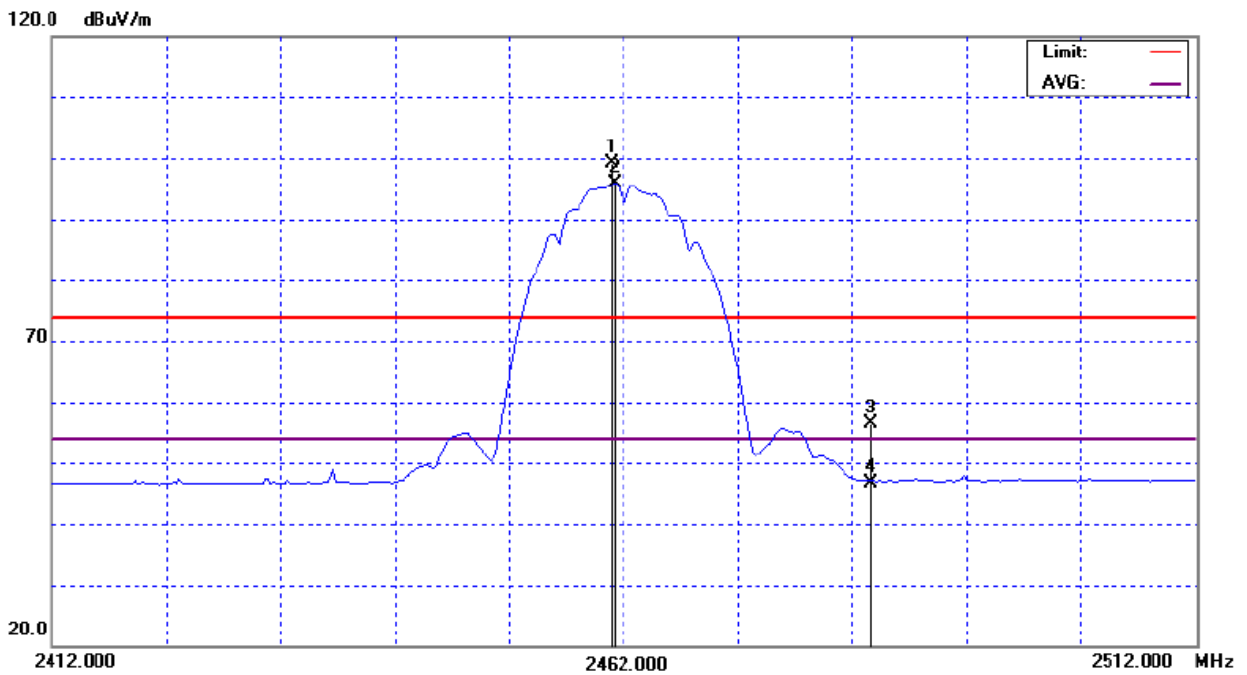
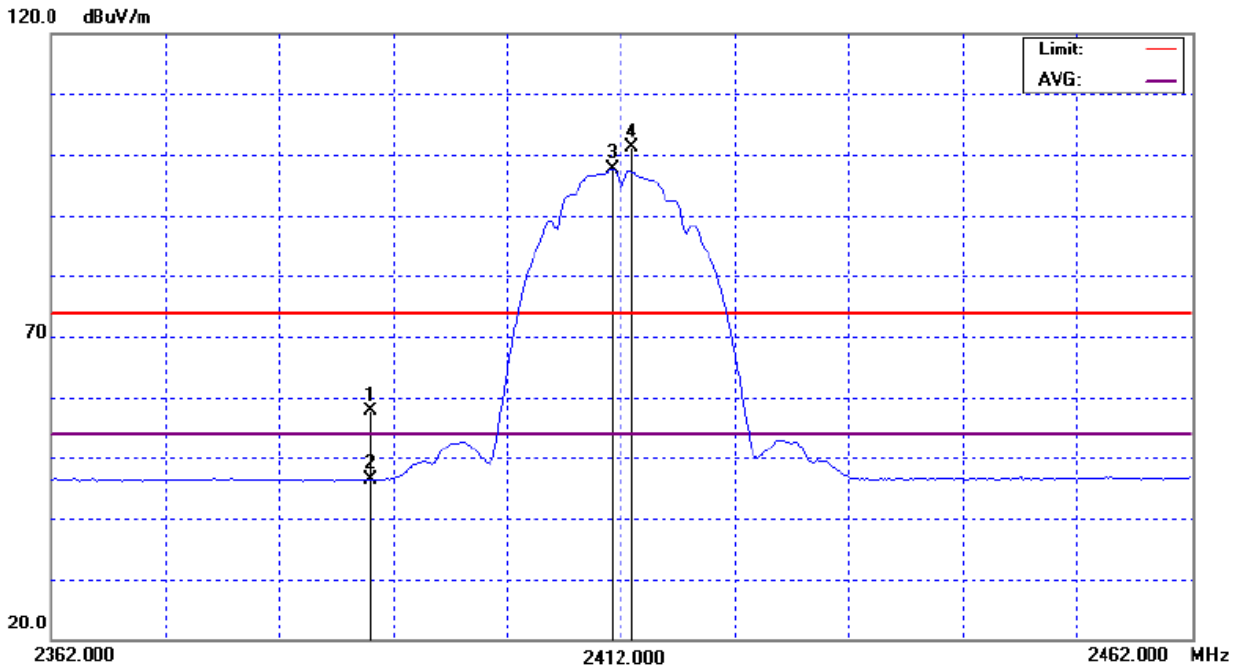
| | | | |
|---------------|---|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH01/CH11(Vertical) | | |
| Note : | <p>The emission of the carrier radiated field strength is measured for CH01/CH11 (Peak and AV) as following:</p> <ol style="list-style-type: none"> 1. The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel (CH01). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was configured with the worst case antenna and setup to transmit at the highest channel (CH11). Then the field strength was measured at 2483.5-2500 MHz. | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2390.00 | V | 24.97 | 13.86 | 32.57 | 57.54 | 46.43 | 74.00 | 54.00 | X |
| 2483.50 | V | 23.23 | 13.61 | 33.10 | 56.33 | 46.71 | 74.00 | 54.00 | X |

Remark :

- (1) Spectrum Setting :
 - QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 - 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 - AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (3) EUT Orthogonal Axes :
 - “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand

802.11b_CH01/CH11 (Restricted Bands Requirements, Vertical)



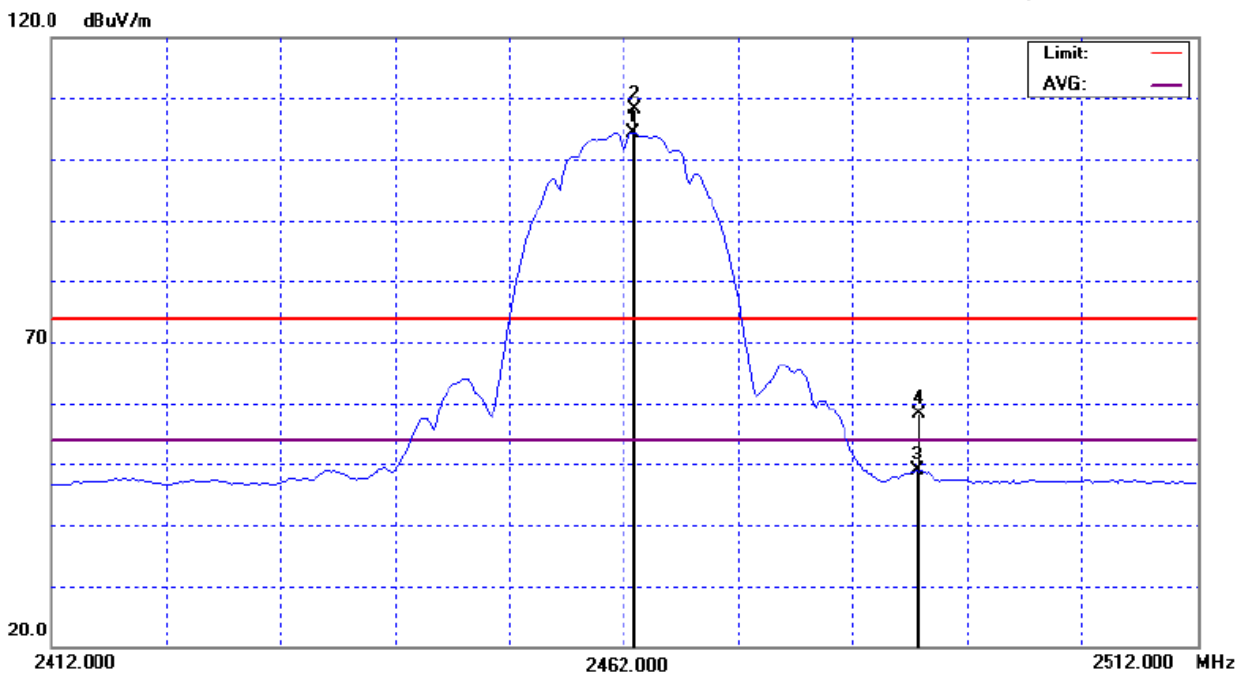
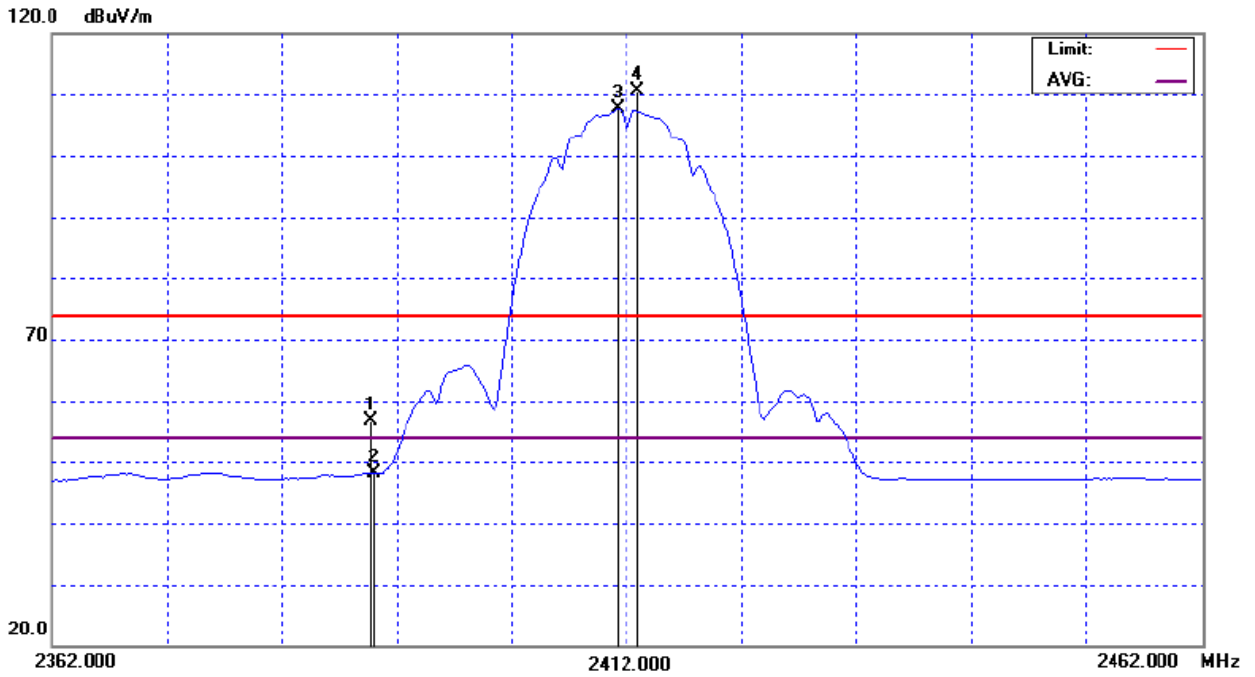
| | | | |
|---------------|---|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH01/CH11(Horizontal) | | |
| Note : | <p>The emission of the carrier radiated field strength is measured for CH01/CH11 (Peak and AV) as following:</p> <ol style="list-style-type: none"> 1. The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel (CH01). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was configured with the worst case antenna and setup to transmit at the highest channel (CH11). Then the field strength was measured at 2483.5-2500 MHz. | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2390.00 | H | 24.09 | 15.50 | 32.57 | 56.66 | 48.07 | 74.00 | 54.00 | X |
| 2487.50 | H | 25.00 | 15.64 | 33.12 | 58.12 | 48.76 | 74.00 | 54.00 | X |

Remark :

- (1) Spectrum Setting :
 - QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 - 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 - AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (3) EUT Orthogonal Axes :
 - “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand

802.11b_CH01/CH11 (Restricted Bands Requirements, Horizontal)



| | | | |
|---------------|---|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH01/CH11(Vertical) | | |
| Note : | <p>The emission of the carrier radiated field strength is measured for CH01/CH11 (Peak and AV) as following:</p> <ol style="list-style-type: none"> 1. The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel (CH01). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was configured with the worst case antenna and setup to transmit at the highest channel (CH11). Then the field strength was measured at 2483.5-2500 MHz. | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2390.00 | V | 30.70 | 15.38 | 32.57 | 63.27 | 47.95 | 74.00 | 54.00 | X |
| 2483.50 | V | 29.86 | 15.52 | 33.10 | 62.96 | 48.62 | 74.00 | 54.00 | X |

Remark :

(1) Spectrum Setting :

QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.

1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

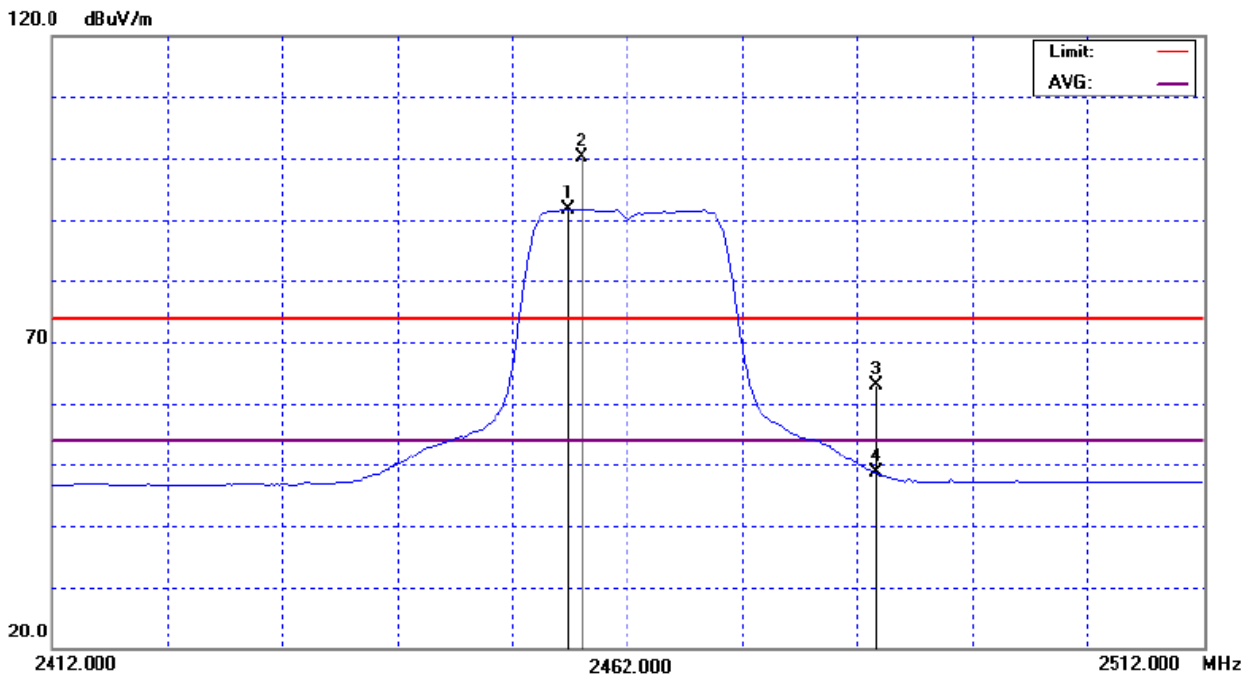
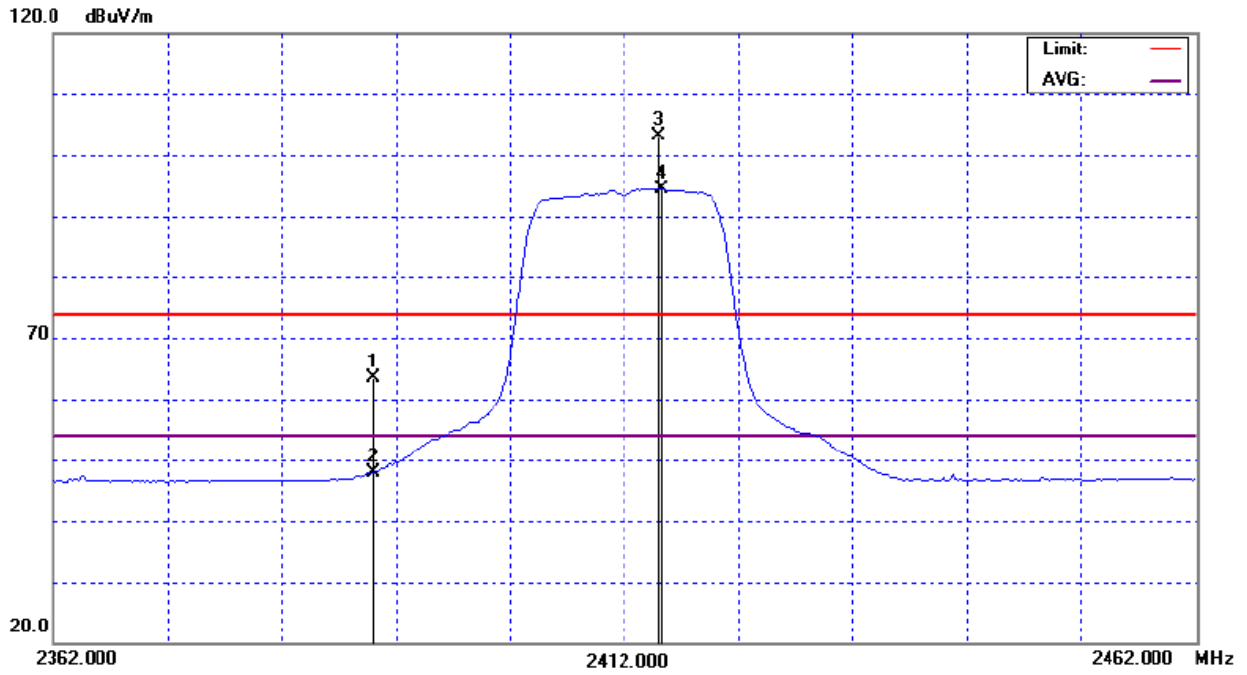
AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto

(2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦

(3) EUT Orthogonal Axes :

“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand

802.11g_CH01/CH11 (Restricted Bands Requirements, Vertical)



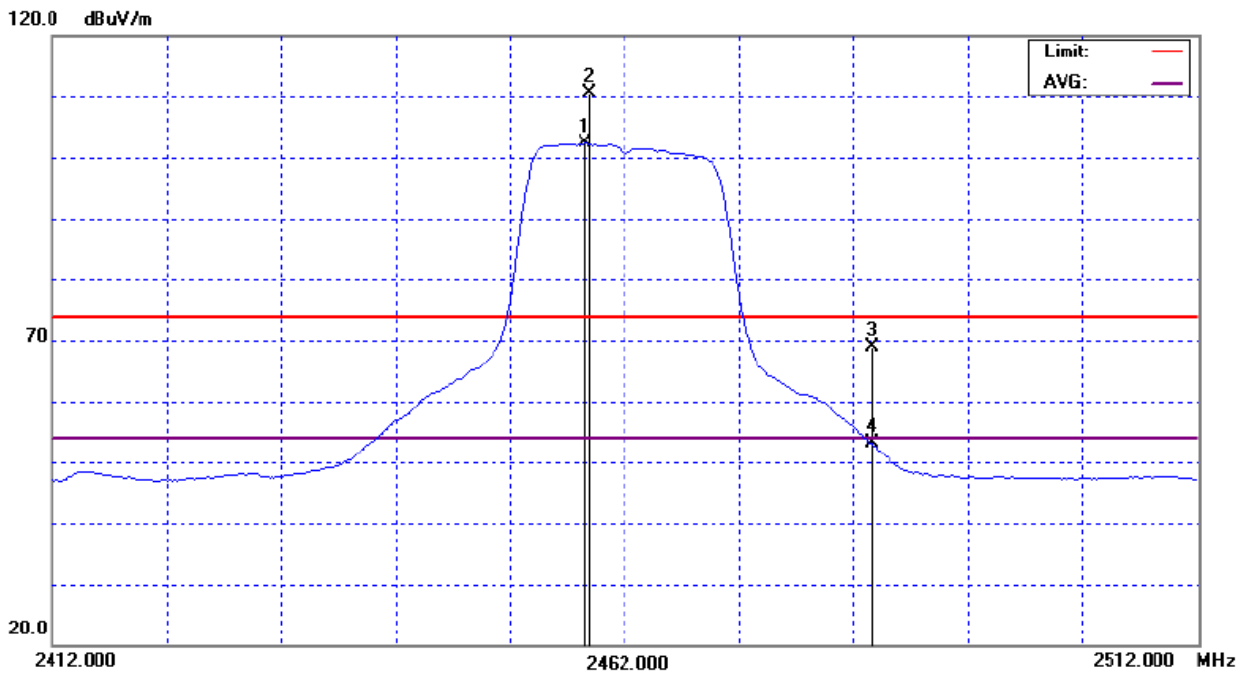
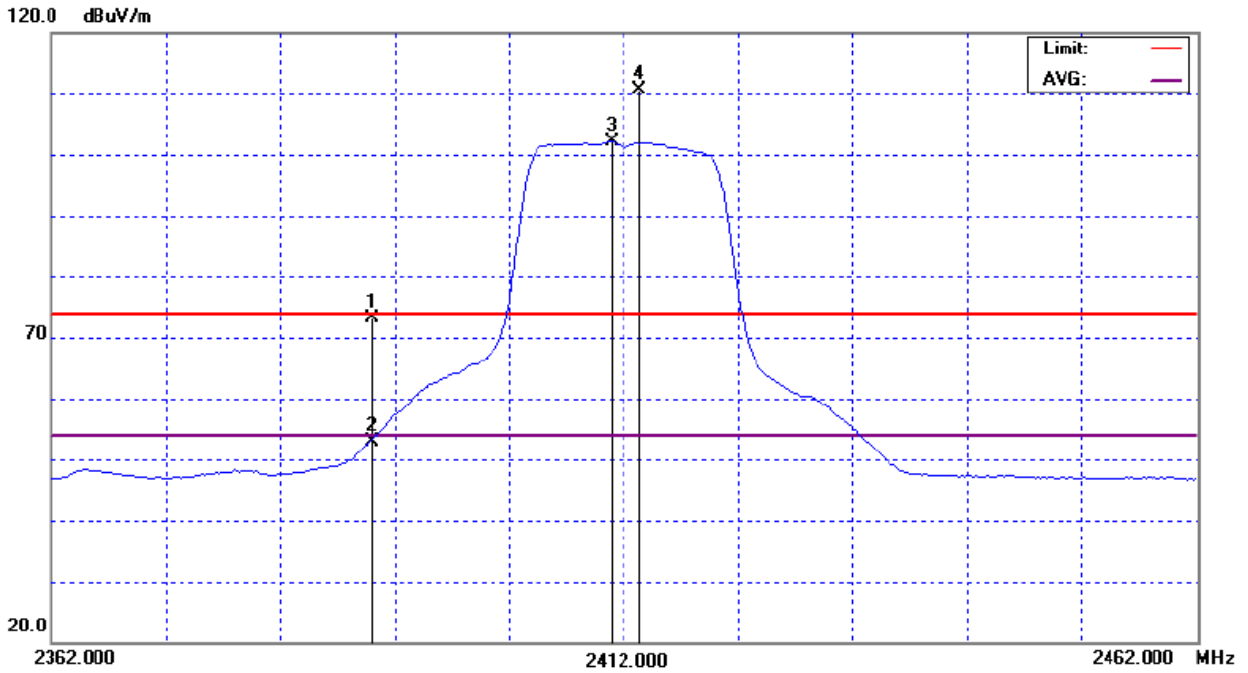
| | | | |
|---------------|---|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 30 °C | Relative Humidity : | 68% |
| Pressure : | 1008 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH01/CH11(Horizontal) | | |
| Note : | <p>The emission of the carrier radiated field strength is measured for CH01/CH11 (Peak and AV) as following:</p> <ol style="list-style-type: none"> 1. The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel (CH01). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was configured with the worst case antenna and setup to transmit at the highest channel (CH11). Then the field strength was measured at 2483.5-2500 MHz. | | |

| Freq. (MHz) | Ant.Pol. H/V | Reading | | Ant./CF CF(dB) | Act. | | Limit | | Note |
|----------------|-----------------|----------------|--------------|-------------------|------------------|----------------|------------------|----------------|------|
| | | Peak (dBuV) | AV (dBuV) | | Peak (dBuV/m) | AV (dBuV/m) | Peak (dBuV/m) | AV (dBuV/m) | |
| 2390.00 | H | 40.52 | 20.36 | 32.57 | 73.09 | 52.93 | 74.00 | 54.00 | X |
| 2483.50 | H | 35.87 | 19.95 | 33.10 | 68.97 | 53.05 | 74.00 | 54.00 | X |

Remark :

- (1) Spectrum Setting :
 - QP: 30MHz – 1000MHz: RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
 - 1GHz- 25GHz: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
 - AV: 1GHz- 25GHz: RBW= 1MHz, VBW= 10Hz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (3) EUT Orthogonal Axes :
 - “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand

802.11g_CH01/CH11 (Restricted Bands Requirements, Horizontal)



5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

| FCC Part15, Subpart C ; RSS-210 | | | |
|---------------------------------|------------------------------|-----------------------|--------|
| Test Item | Limit | Frequency Range (MHz) | Result |
| Bandwidth | >= 500KHz (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 | Aug. 16, 2008 |

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

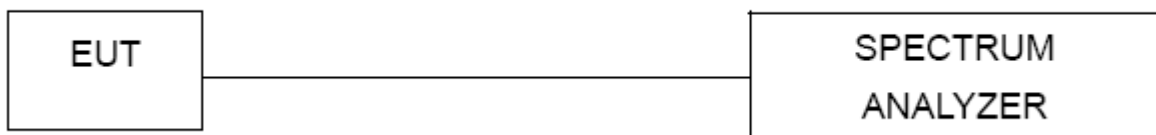
5.1.2 TEST PROCEDURE

- 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



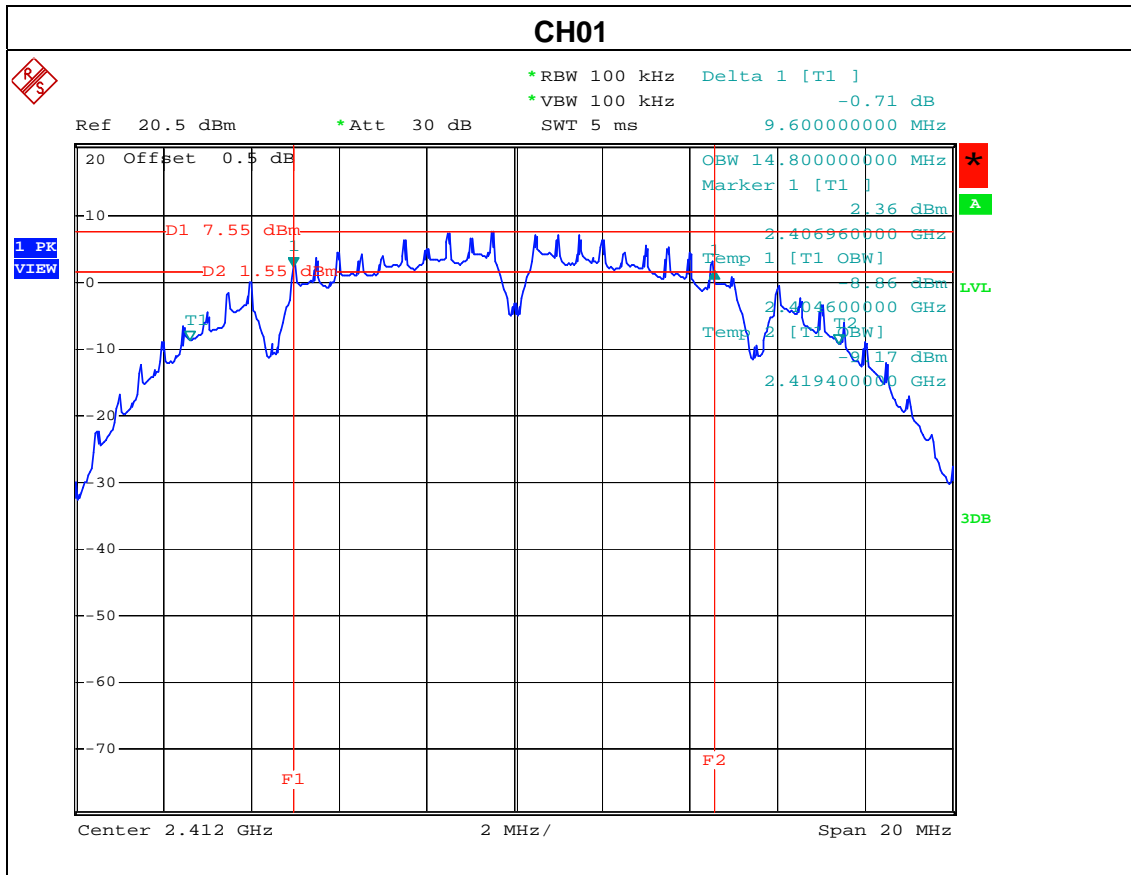
5.1.5 EUT OPERATION CONDITIONS

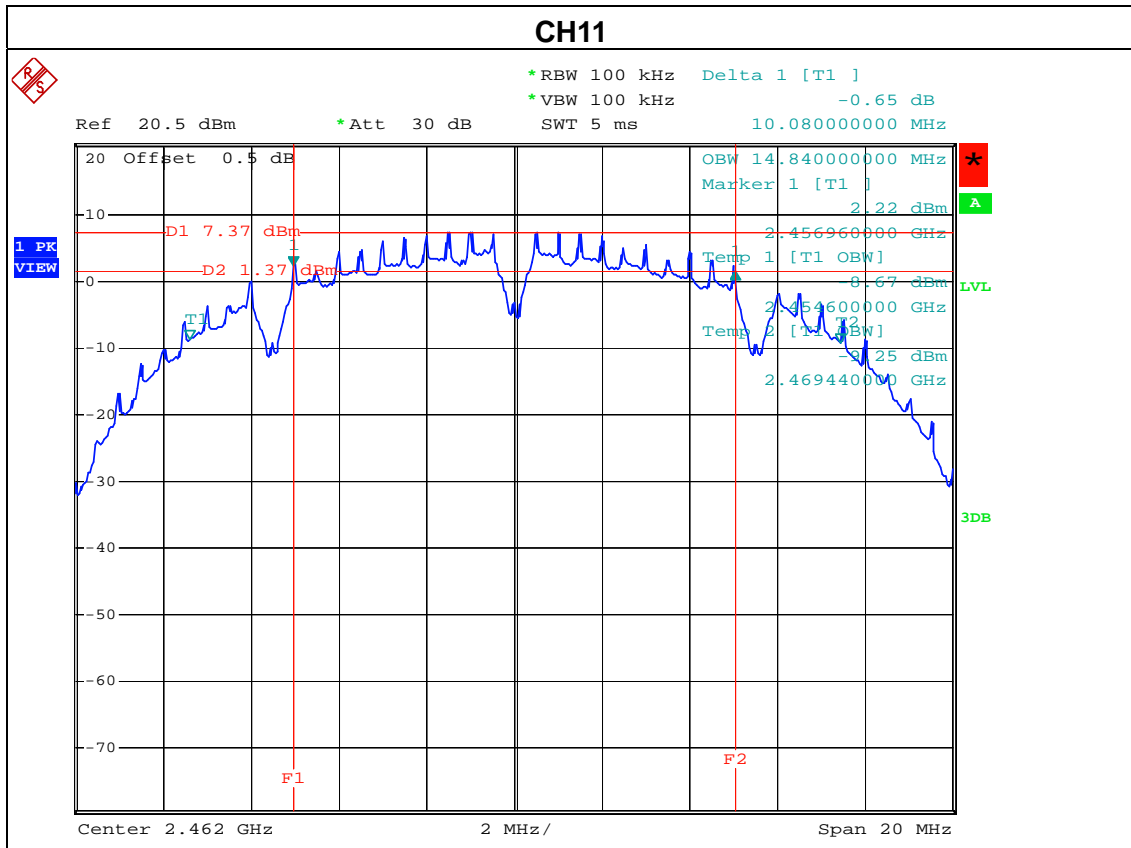
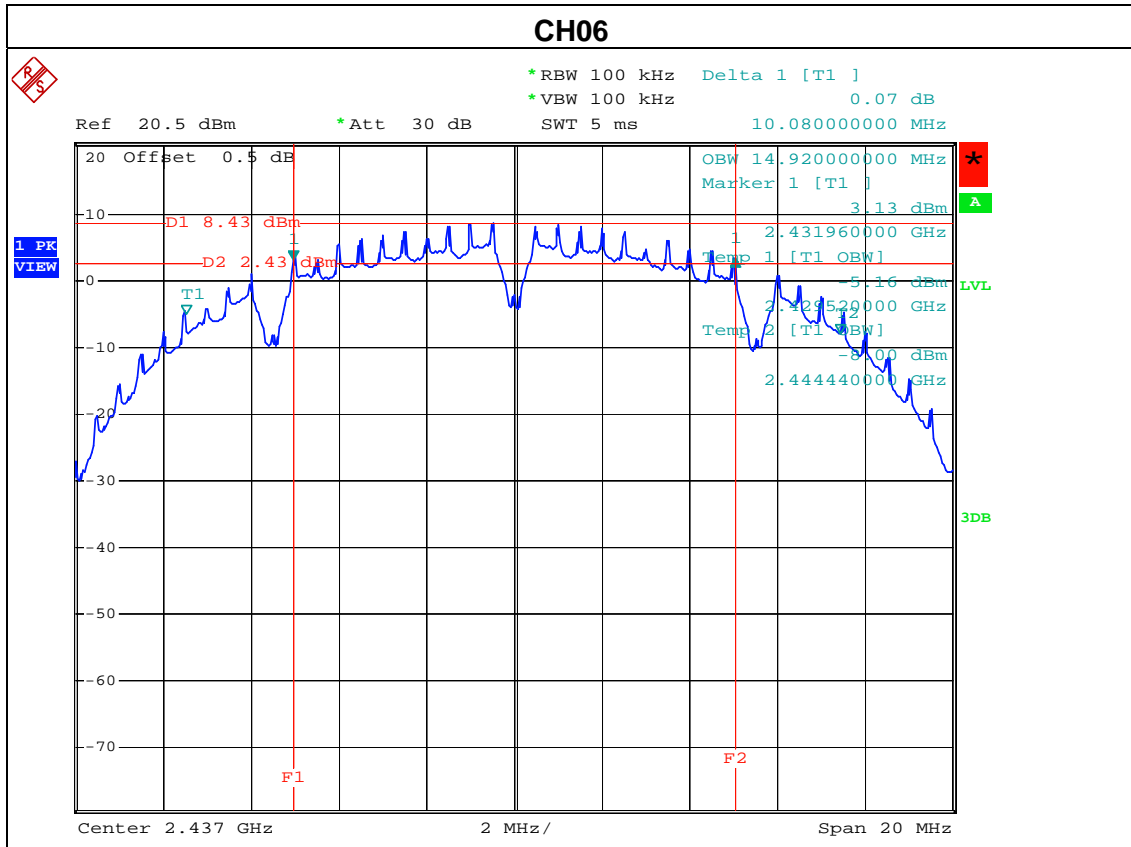
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.6 TEST RESULTS

| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55 % |
| Pressure : | 1004 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH01/CH06/CH11 | | |

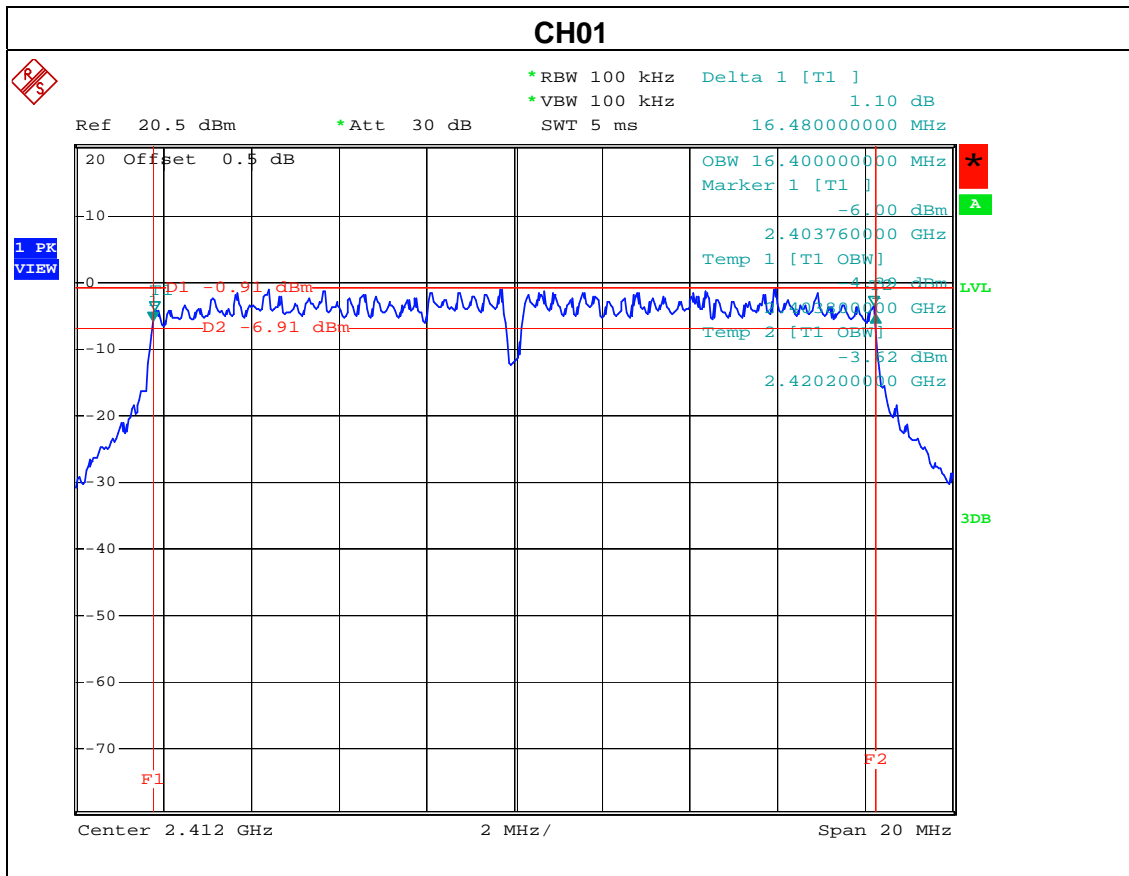
| Test Channel | Frequency (MHz) | Bandwidth (MHz) | LIMIT (MHz) |
|--------------|-----------------|-----------------|-------------|
| CH01 | 2412 | 9.60 | >=500KHz |
| CH06 | 2437 | 10.08 | >=500KHz |
| CH11 | 2462 | 10.08 | >=500KHz |

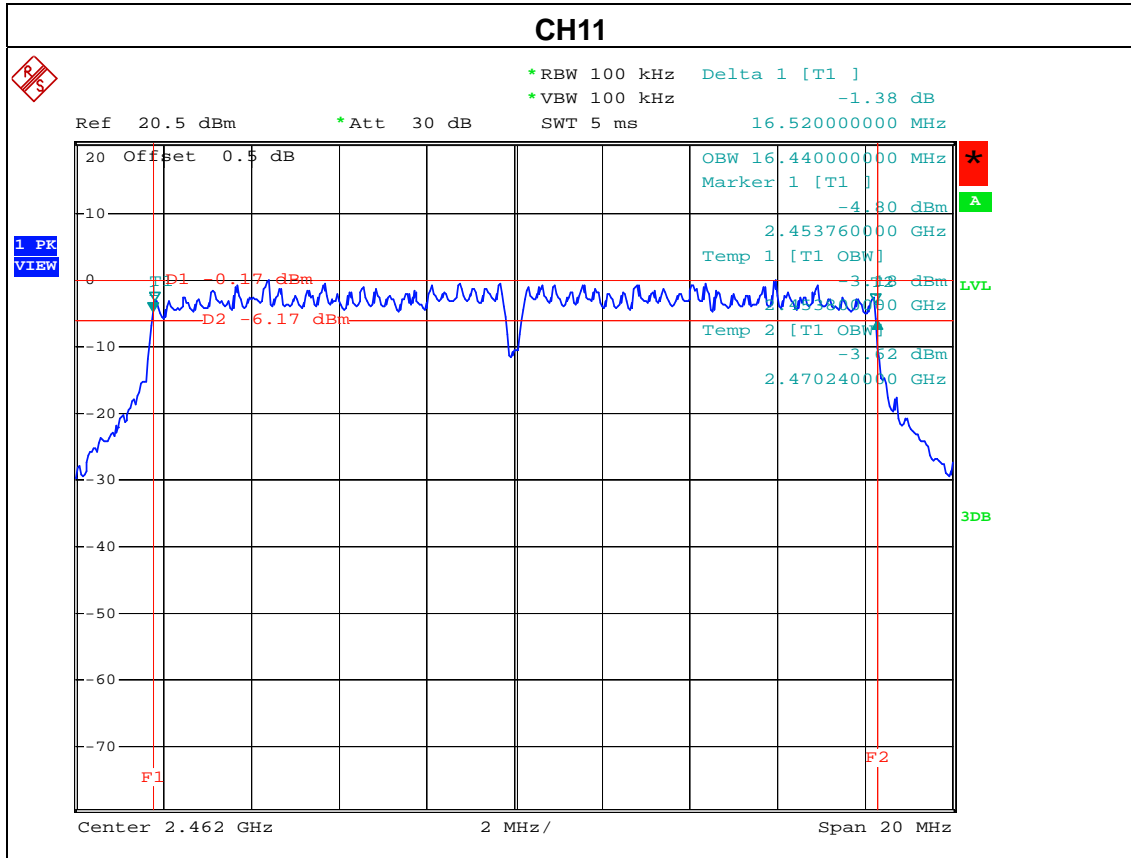
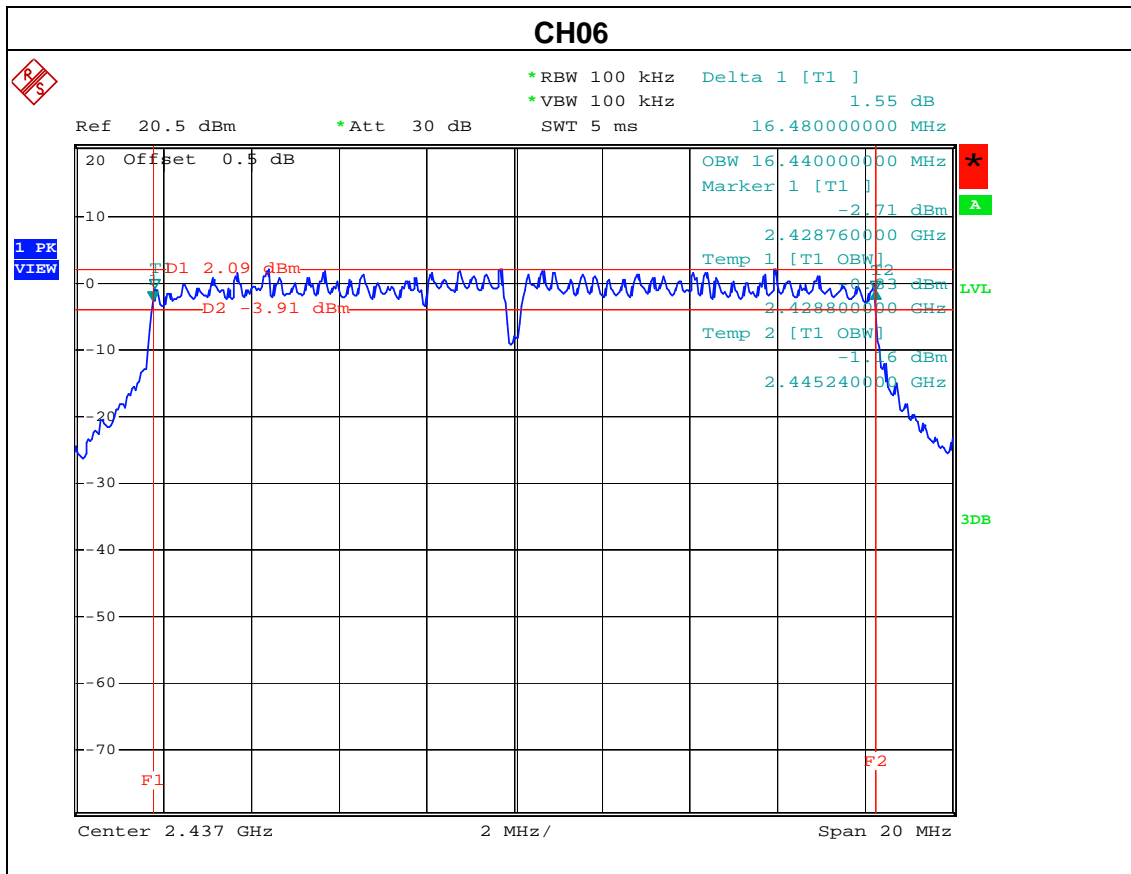




| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55 % |
| Pressure : | 1004 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH01/CH06/CH11 | | |

| Test Channel | Frequency (MHz) | Bandwidth (MHz) | LIMIT (MHz) |
|--------------|-----------------|-----------------|-------------|
| CH01 | 2412 | 16.48 | >=500KHz |
| CH06 | 2437 | 16.48 | >=500KHz |
| CH11 | 2462 | 16.52 | >=500KHz |





6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

| FCC Part15, Subpart C ; RSS-210 | | | |
|---------------------------------|-----------------|-----------------------|--------|
| Test Item | Limit | Frequency Range (MHz) | Result |
| 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 | 6K00004714 | Feb. 12, 2009 |
| 2 | Power Meter Sensor | Anritsu | MA2491A | 34138 | Feb. 12, 2009 |

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

6.1.2 TEST PROCEDURE

The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,

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 : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| 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) | LIMIT (W) |
|--------------|-----------------|-------------------------|-------------|-----------|
| CH01 | 2412 | 18.10 | 30 | 1 |
| CH06 | 2437 | 19.05 | 30 | 1 |
| CH11 | 2462 | 18.03 | 30 | 1 |

| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| 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) | LIMIT (W) |
|--------------|-----------------|-------------------------|-------------|-----------|
| CH01 | 2412 | 20.43 | 30 | 1 |
| CH06 | 2437 | 22.12 | 30 | 1 |
| CH11 | 2462 | 20.80 | 30 | 1 |

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

| FCC Part15, Subpart C ; RSS-210 | | | |
|-------------------------------------|--|-----------------------|--------|
| Test Item | Limit | Frequency Range (MHz) | Result |
| 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 | Aug. 16, 2008 |

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



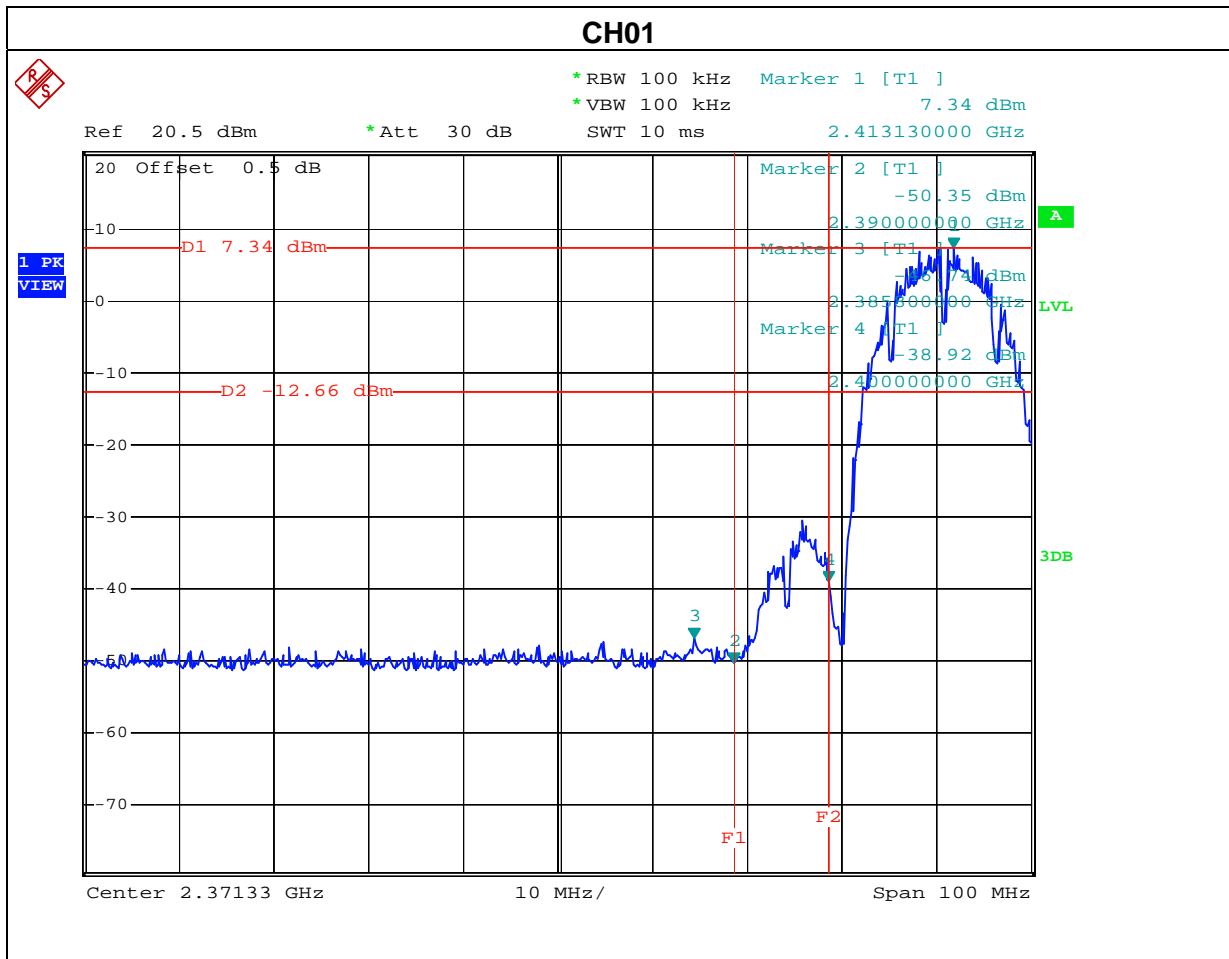
7.1.5 EUT OPERATION CONDITIONS

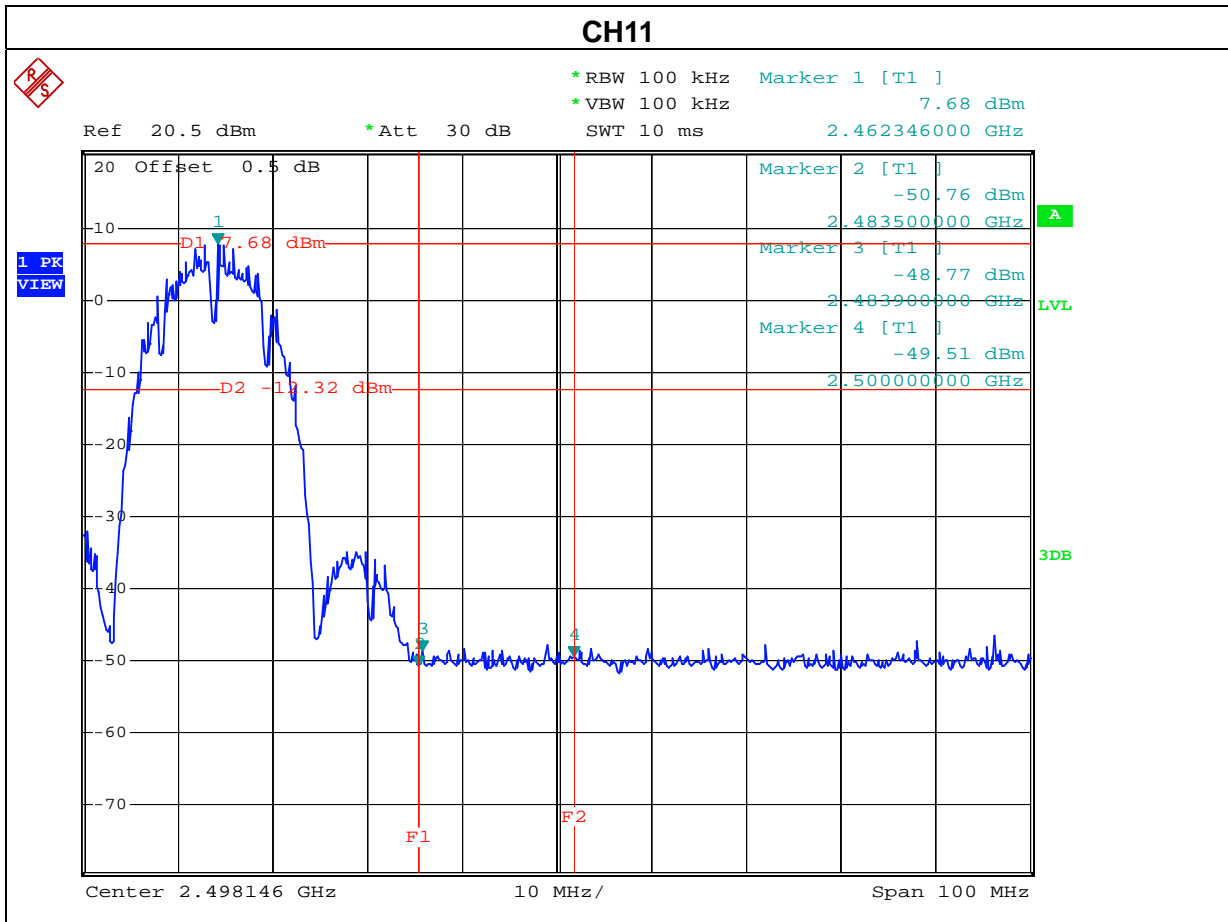
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.6 TEST RESULTS

| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55 % |
| Pressure : | 1004 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH01/CH11 | | |

| | | | |
|---|------------|--|------------|
| Channel of Worst Data: CH1,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) |
| 2385.8 | -46.74 | 2483.9 | -48.77 |
| 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. | | | |



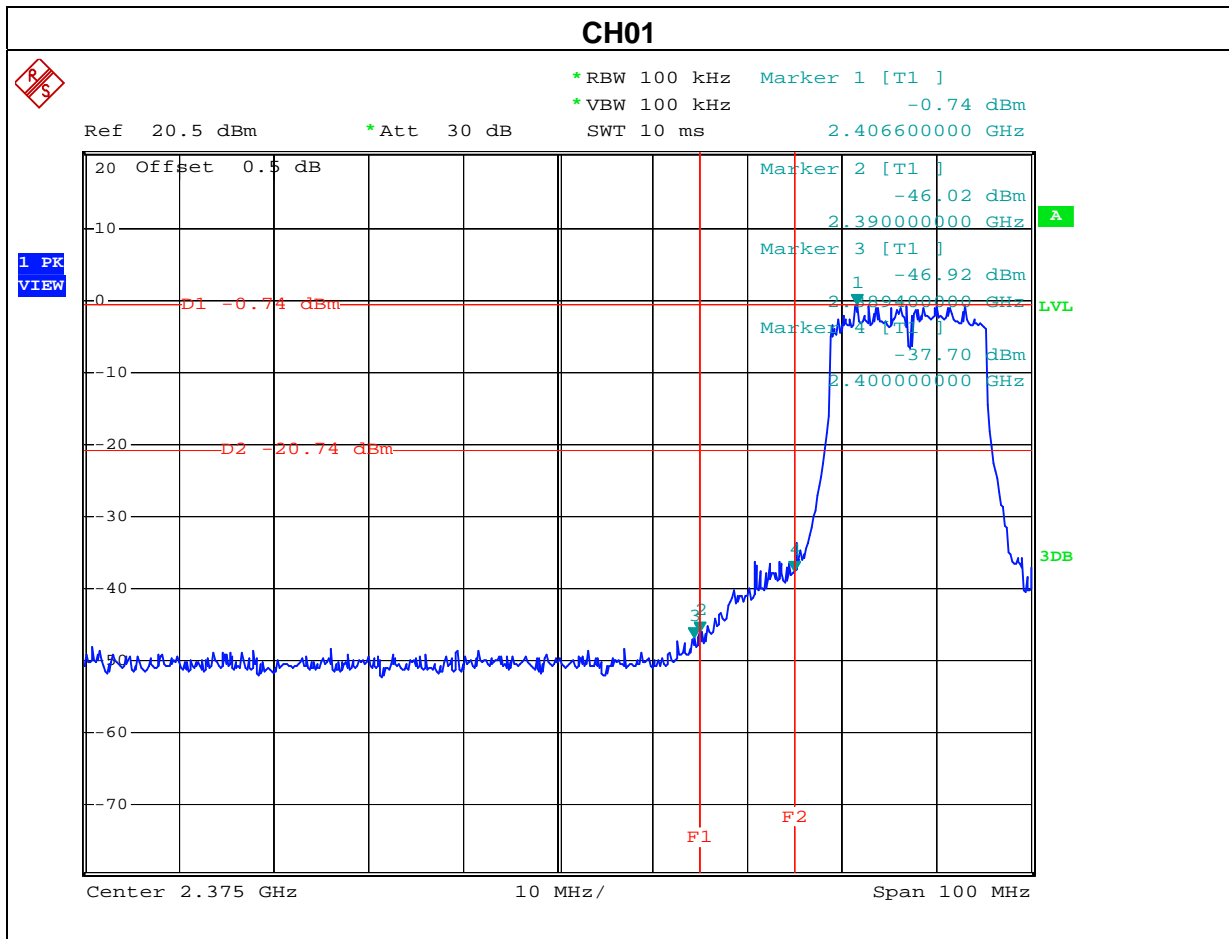


| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55 % |
| Pressure : | 1004 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH01/CH11 | | |

| Channel of Worst Data: CH1,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) |
| 2390.0 | -46.02 | 2483.5 | -45.57 |

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, Subpart C ; RSS-210 | | | |
|---------------------------------|---------------------|-----------------------|--------|
| Test Item | Limit | Frequency Range (MHz) | Result |
| 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 | Aug. 16, 2008 |

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



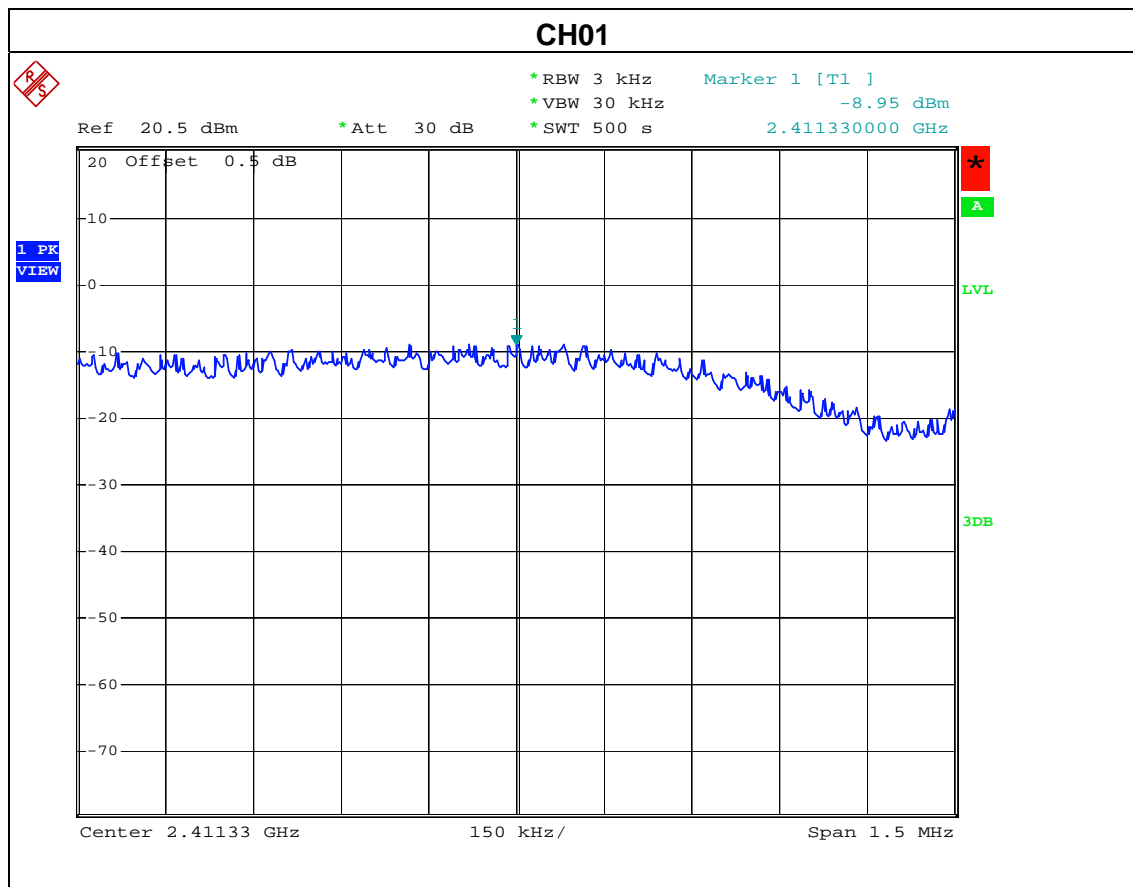
8.1.5 EUT OPERATION CONDITIONS

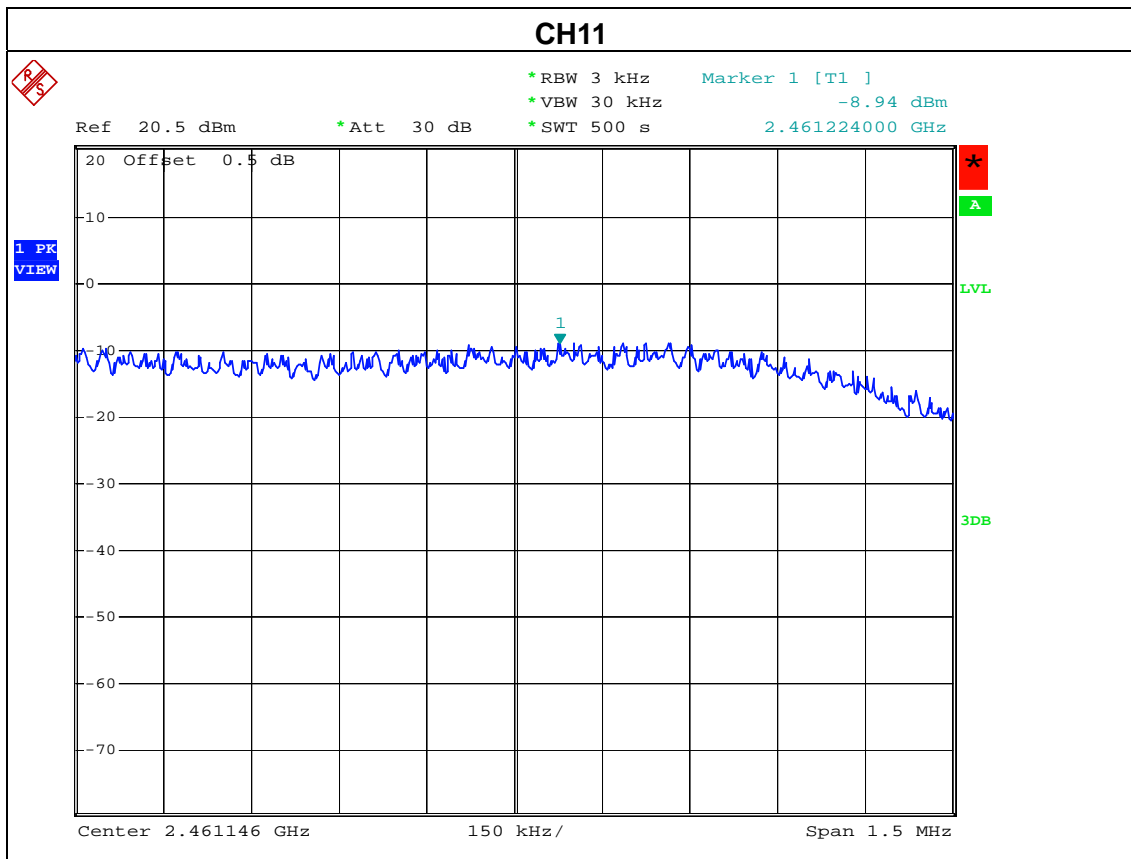
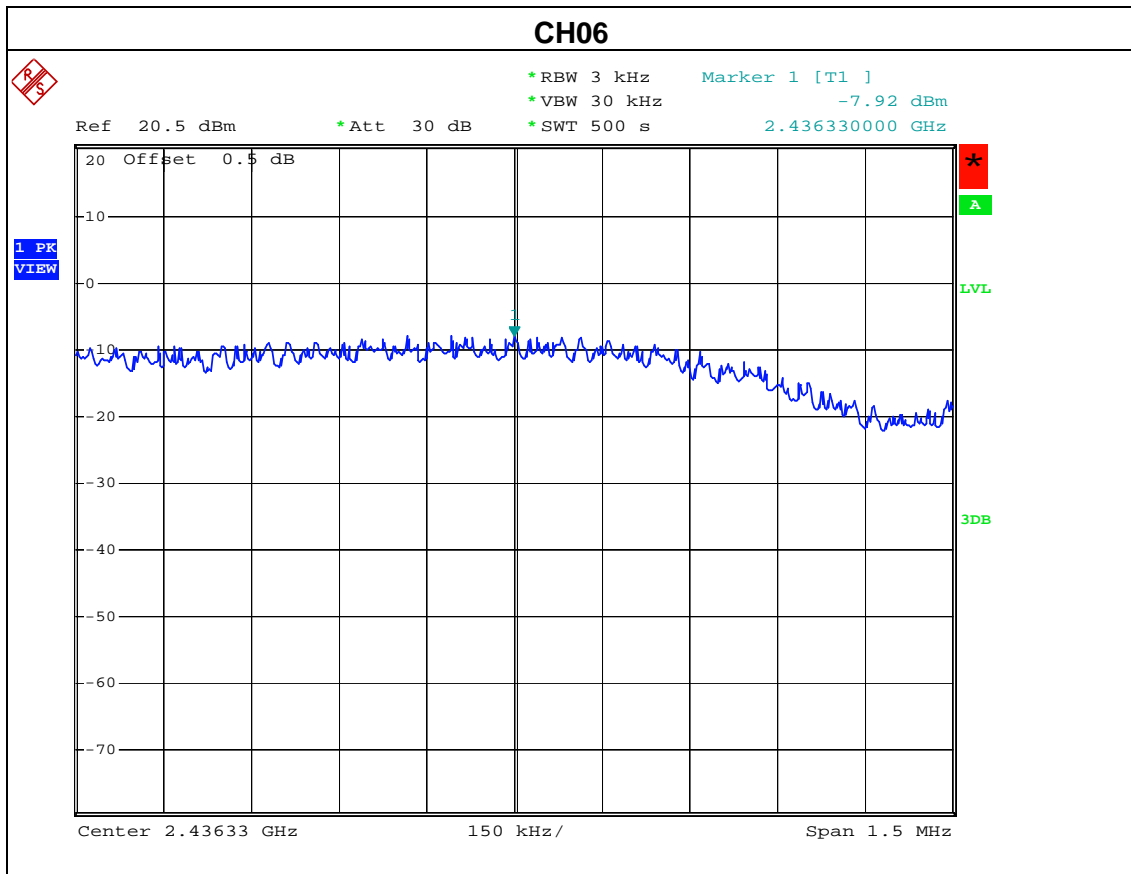
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.6 TEST RESULTS

| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55 % |
| Pressure : | 1004 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | 802.11b_CH01/CH06/CH11 | | |

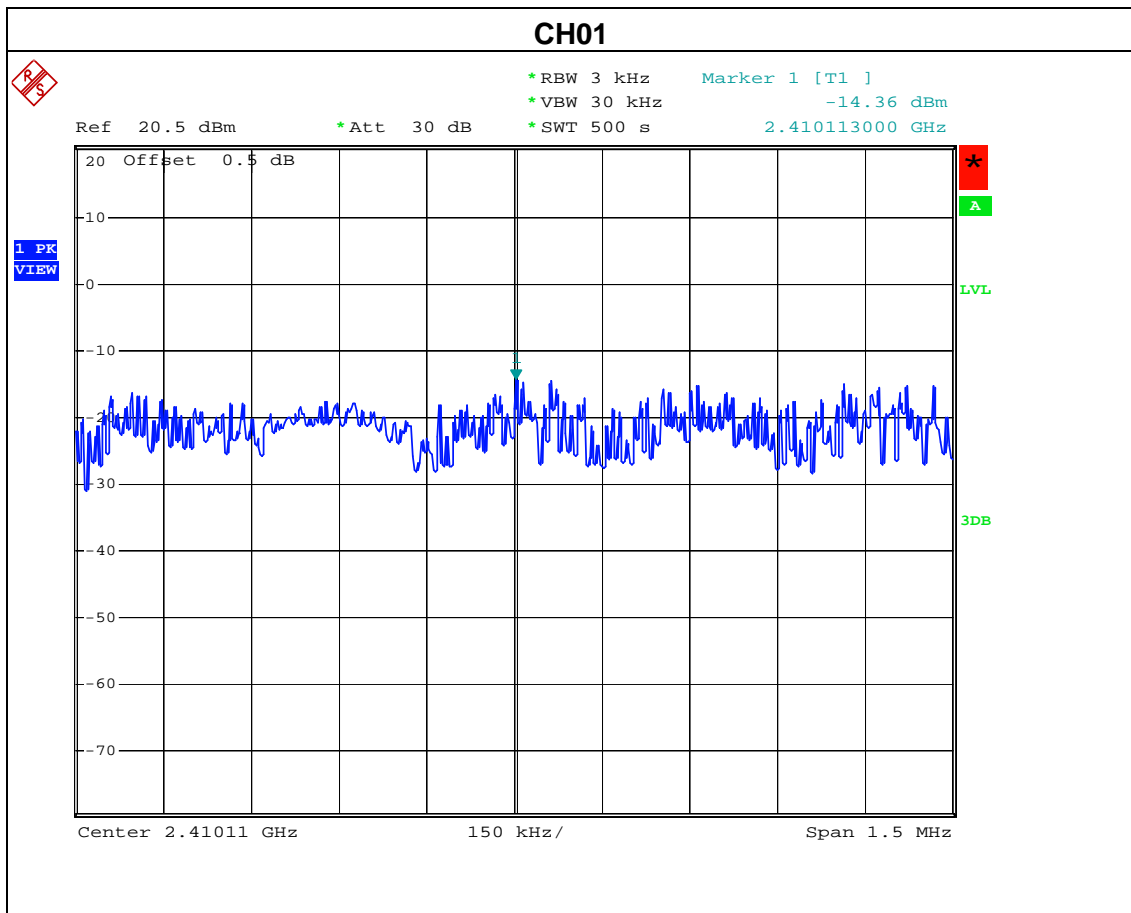
| Test Channel | Frequency (MHz) | Peak Output Power (dBm) | LIMIT (dBm) |
|--------------|-----------------|-------------------------|-------------|
| CH01 | 2412 | -8.95 | 8 |
| CH06 | 2437 | -7.92 | 8 |
| CH11 | 2462 | -8.94 | 8 |

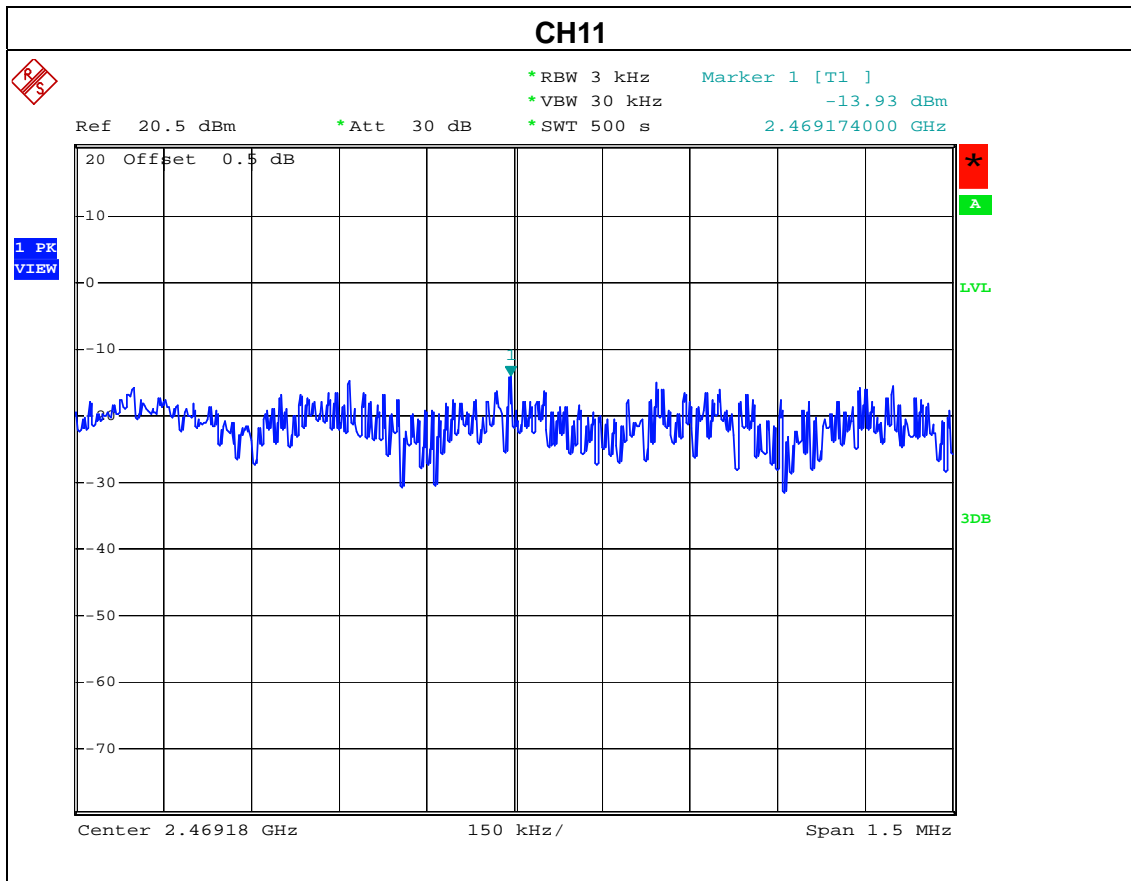
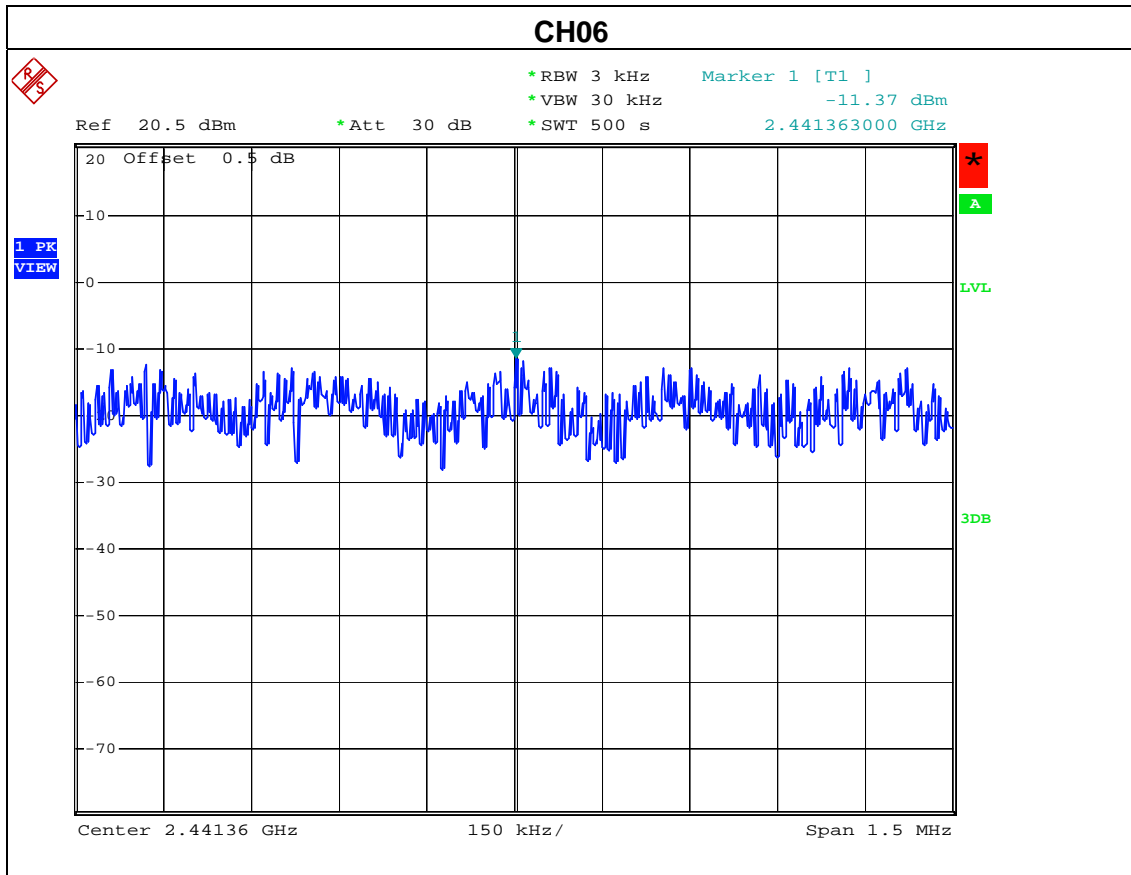




| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55 % |
| Pressure : | 1004 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | 802.11g_CH01/CH06/CH11 | | |

| Test Channel | Frequency (MHz) | Peak Output Power (dBm) | LIMIT (dBm) |
|--------------|-----------------|-------------------------|-------------|
| CH01 | 2412 | -14.36 | 8 |
| CH06 | 2437 | -11.37 | 8 |
| CH11 | 2462 | -13.93 | 8 |





9. RF EXPOSURE TEST

9.1 APPLIED PROCEDURES / LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm ²) | Averaging Time E ² , H ² or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|---|
| 0.3-3.0 | 614 | 1.63 | (100)* | 6 |
| 3.0-30 | 1842 / f | 4.89 / f | (900 / f)* | 6 |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 |
| 300-1500 | | | F/300 | 6 |
| 1500-100,000 | | | 5 | 6 |

(B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm ²) | Averaging Time E ² , H ² or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|---|
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180/f)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | | | F/1500 | 30 |
| 1500-100,000 | | | 1.0 | 30 |

Note: f = frequency in MHz ; *Plane-wave equivalent power density

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 | Aug. 16, 2008 |

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

9.1.2 MPE CALCULATION METHOD

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

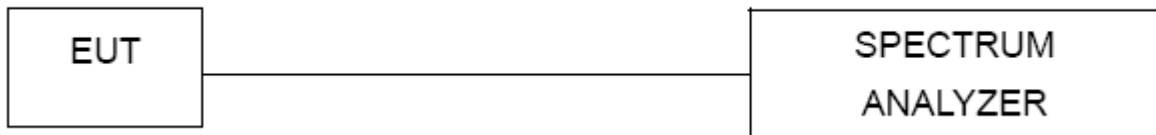
$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

9.1.3 DEVIATION FROM STANDARD

No deviation.

9.1.4 TEST SETUP



9.1.5 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.

9.1.6 TEST RESULTS

| | | | |
|---------------|---------------------------------|---------------------|--------------|
| EUT : | IEEE 801.11 b/g WLAN USB Module | Model No. : | US106 |
| Temperature : | 27 °C | Relative Humidity : | 55 % |
| Pressure : | 1004 hPa | Test Power : | AC 120V/60Hz |
| Test Mode : | 802.11b&g_CH01/CH06/CH11 | | |

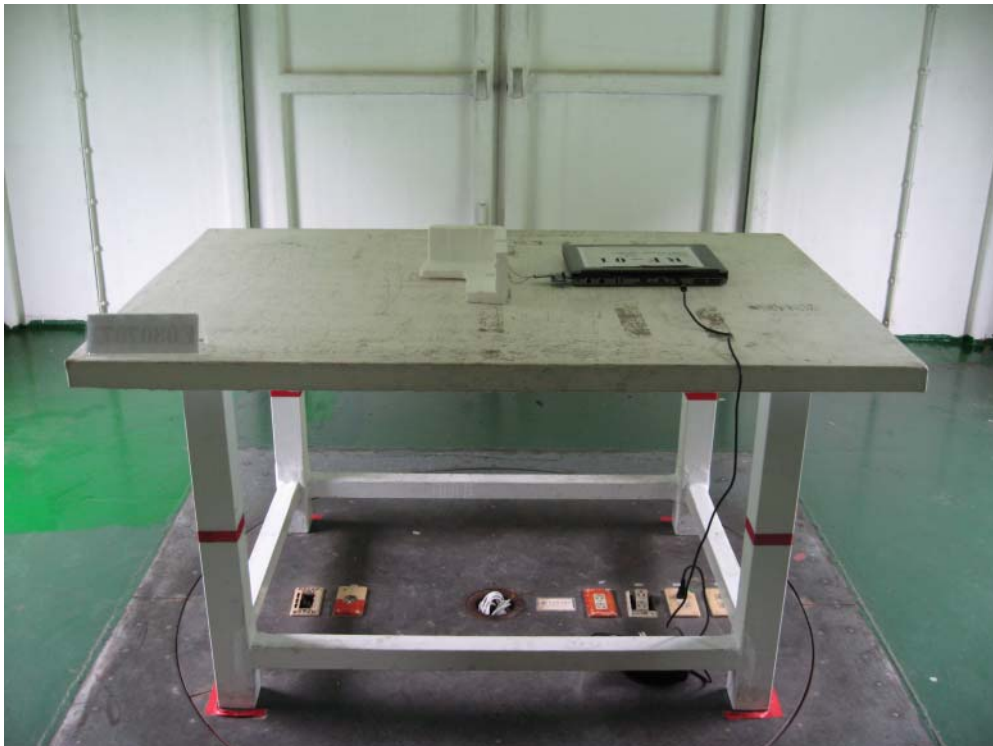
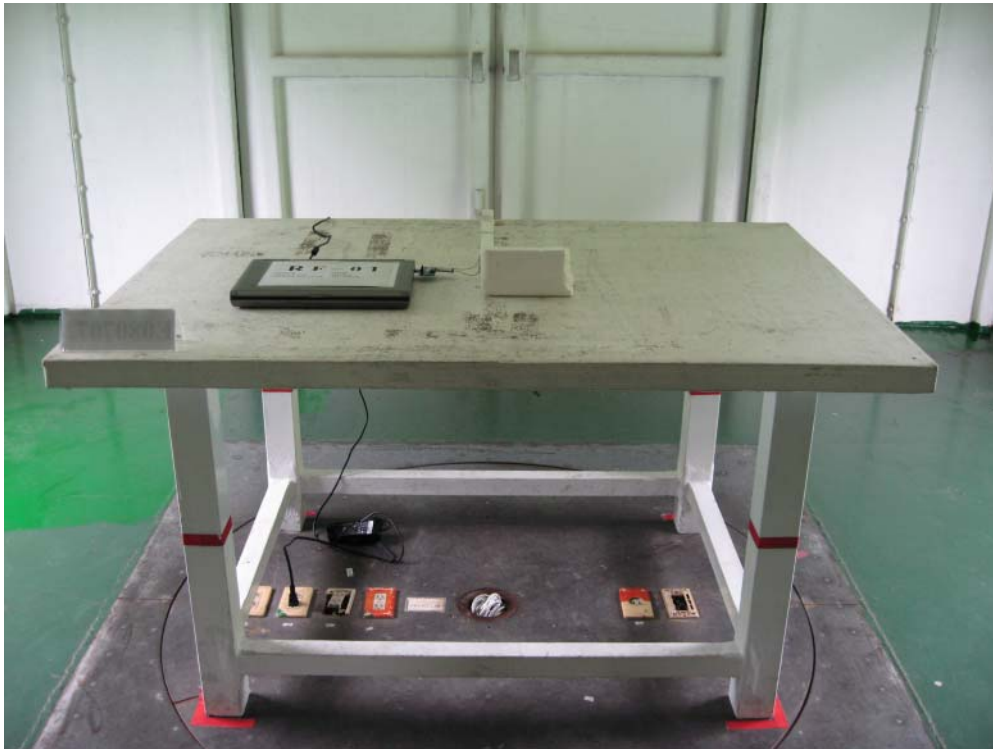
| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm ²) | Limit of Power Density (S) (mW/cm ²) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|---|--|-------------|
| 2.13 | 1.6331 | 22.1200 | 162.9296 | 0.052960 | 1 | Complies |

10. EUT TEST PHOTO

Conducted Measurement Photos



Radiated Measurement Photos



Test Photos

