



# FCC DOC TEST REPORT

## Declaration of Conformity

according to

**47 CFR, Part 2, Part 15, CISPR PUB. 22**

**and Canada ICES-003**

|            |  |
|------------|--|
| Applicant  | : DWnet Technology (Suzhou) Co., Ltd.                          |
| Address    | : 6F, No. 26, XinHai Street, Suzhou, JiangSu,<br>215021, China |
| Equipment  | : Wireless Access Point  |
| Model No.  | : AP52GA   |
| Trade Name | : DWnet  |

Laboratory accreditation



Testing Laboratory  
1332

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of **CerpPASS Technology Corp.** the test report shall not be reproduced except in full.



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# CERTIFICATE OF COMPLIANCE

## Declaration of Conformity

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**47 CFR, Part 2, Part 15, CISPR PUB. 22**

**and Canada ICES-003**

Applicant : DWnet Technology (Suzhou) Co., Ltd.  
Address : 6F, No. 26, XinHai Street, Suzhou, JiangSu,  
215021, China  
Equipment : Wireless Access Point  
Model No. : AP52GA

### I HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 – 2003** and the energy emitted by this equipment was **passed CISPR PUB. 22, FCC Part 15 and Canada ICES-003** in both radiated and conducted emission class B limits.

Testing was carried out on Jun. 16, 2009 at **CerpPASS Technology Corp.**

Signature

  
Anson Chou  
EMC/RF B.U. Vice General Manager



## 1. Test Configuration of Equipment under Test

### 1.1. Feature of Equipment under Test

|                                |  |
|--------------------------------|--|
| Hardware Specifications        |  |
| CPU                            | AR2312   |
| Radio-on-Chip                  | AR2112   |
| DRAM                           | 8 Mbytes   |
| Flash ROM                      | 2 Mbytes   |
| LAN port                       | 1 x Auto-MDIX RJ 45 for 10/100Mbps Ethernet  |
| Wireless Interface             | Embedded Atheros solution  |
|                                | Network Standard IEEE 802.11b (Wi-Fi™) and IEEE 802.11g compliance   |
|                                | OFDM; 802.11b: CCK (11 Mbps, 5.5 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps)   |
|                                | Operating Frequencies 2.412-2.497 GHz  |
|                                | Operating Channels 802.11g: 13 for North America, 13 for Europe (ETSI), 14 for Japan<br>802.11b: 11 for North America, 14 for Japan, 13 for Europe (ETSI)  |
| Operating temperature          | 0~55°C   |
| Storage temperature            | -20°C~70°C   |
| Power Adapter                  | - MU12-G120100-A1 \ 12V / 1A<br>- RHN-120100-1-3 \ 12V / 1A  |
| Dimensions                     | 141mm (W) x 100mm (D) x 27mm (H)   |
| Wireless Specifications        |  |
| Receive Sensitivity at 11Mbps  | min. -85dBm  |
| Receive Sensitivity at 5.5Mbps | min. -89dBm  |
| Receive Sensitivity at 2Mbps   | min. -90dBm  |
| Receive Sensitivity at 1Mbps   | min. -93dBm  |
| Maximum Receive Level          | min. -5dBm   |
| Transmit Power                 | 20 dBm   |
| Modulation                     | Direct Sequence Spread Spectrum BPSK / QPSK / CCK  |
| Throughput                     | Up to 19 Mbps  |
| Operating Range                | Indoors  |
|                                | <ul style="list-style-type: none"> <li>• 30 Meters (100ft.) @ 11Mbps</li> <li>• 50 Meters (165ft.) @ 5.5Mbps</li> <li>• 70 Meters (230ft.) @ 2Mbps</li> <li>• 91 Meters (300ft.) @ 1Mbps</li> <li>• 152 Meters (500ft.) @ 11Mbps</li> <li>• 270 Meters (885ft.) @ 5.5Mbps</li> <li>• 396 Meters (1300ft.) @ 2 Mbps</li> <li>• 457 Meters (1500ft.) @ 1 Mbps</li> </ul> |



**1.2. Test Manner**

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
- b. The complete test system included remote workstation, PC, Monitor, Mouse, Keyboard, Printer and EUT for EMI test. The remote workstation included Notebook.
- c. The result of conduction and radiation test as follow:  
 Test Mode 1: LINK LAN (100M) + Wireless, Adapter: MU12-G120100-A1  
 Test Mode 2: LINK LAN (100M) + Wireless, Adapter: RHN-120100-1-3
- d. An executive program, "Ping.exe" under WIN XP, which transmits and receives data to the remote workstation through Wireless.

**1.3. Description of Test System**

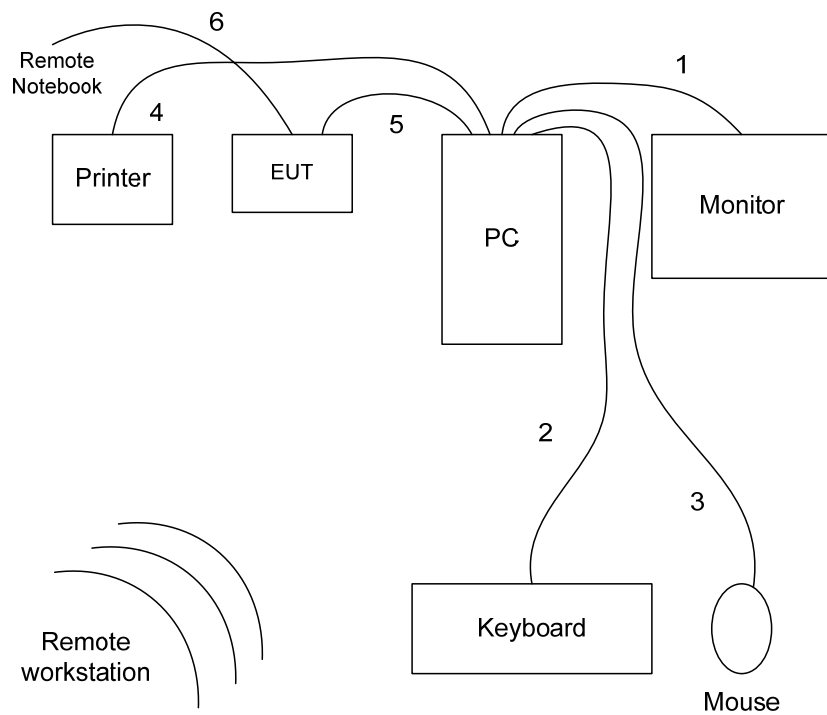
| Device             | Manufacturer | Model No.     | Description   |
|--------------------|--------------|---------------|---|
| PC                 | IBM          | IGV           | Power Cable, Unshielding 1.8 m  |
| Monitor            | ViewSonic    | G90fB         | Data Cable, VGA Shielding 1.35 m<br>Power Cable, Adapter Unshielding 1.8 m    |
| Keyboard           | IBM          | KB-0225       | Data Cable, PS2 Shielding 1.35 m  |
| Mouse              | IBM          | MO28VO        | Data Cable, USB Shielding 1.85 m  |
| Printer            | HP           | Desk Jet 400  | Data Cable, PRINT Unshielding 1.6 m<br>Power Cable, Adapter Unshielding 1.8 m |
| Remote workstation |              |               |   |
| Notebook           | TOSHIBA      | PSA50T-05M00C | Power Cable, Adapter Unshielding 1.8 m  |
| Notebook           | DELL         | PP10L         | Power Cable, Adapter Unshielding 1.8 m  |

Use Cable:

| Cable | Quantity | Description       |
|-------|----------|-------------------|
| RJ45  | 1        | Unshielding, 3.0m |
| RS232 | 1        | Unshielding, 1.5m |



### 1.4. Connection Diagram of Test System



1. The VGA cable is connected from PC to the Monitor.
  2. The PS/2 cable is connected from PC to the Keyboard.
  3. The USB cable is connected from PC to the Mouse.
  4. The Print cable is connected from PC to the Printer.
  5. The RS232 cable is connected from PC to the EUT.
  6. The RJ45 cable is connected from EUT to the remote workstation.
- \* The EUT keeps to transmit and receive data via Notebook by Wireless.



### 1.5. General Information of Test

|                                |   |
|--------------------------------|---|
| Test Site :                    | CerpPASS Technology Corp.<br>2F-11, No. 3, Yuan Qu St., (Nankang Software Park),<br>Taipei, Taiwan 115, R.O.C.  |
| Test Site Location (OATS1-SD): | No. 7-2, Moshihkeng, Fongtian Village, Shihding Township,<br>Taipei County, Taiwan, R.O.C.  |
| FCC Registration Number :      | TW1049, 982971  |
| IC Registration Number :       | 4934C-1   |
| VCCI Registration Number :     | T-338 for Telecommunication Test<br>C-2188 for Conducted emission test<br>R-1902 for Radiated emission test   |
| Test Voltage:                  | AC 120V / 60Hz  |
| Test in Compliance with:       | ANSI C63.4-2003<br>FCC Part 15 Subpart B<br>Canada ICES-003   |
| Frequency Range Investigated : | Conducted Emission Test: from 150kHz to 30 MHz<br>Radiated Emission Test: from 30 MHz to 6,000 MHz  |
| Test Distance :                | The test distance of radiated emission below 1GHz from antenna to EUT is 10 M.<br>The test distance of radiated emission above 1GHz from antenna to EUT is 3 M. |

### 1.6. Measurement Uncertainty

| Measurement Item   | Measurement Frequency | Polarization | Uncertainty |
|--------------------|-----------------------|--------------|-------------|
| Conducted Emission | 9 kHz ~ 30 MHz        | LINE/NEUTRAL | 2.71 dB     |
| Radiated Emission  | 30 MHz ~ 1GHz         | Vertical     | 3.89 dB     |
|                    |                       | Horizontal   | 3.59 dB     |







## 2. Test of Conducted Emission

### 2.1. Test Limit

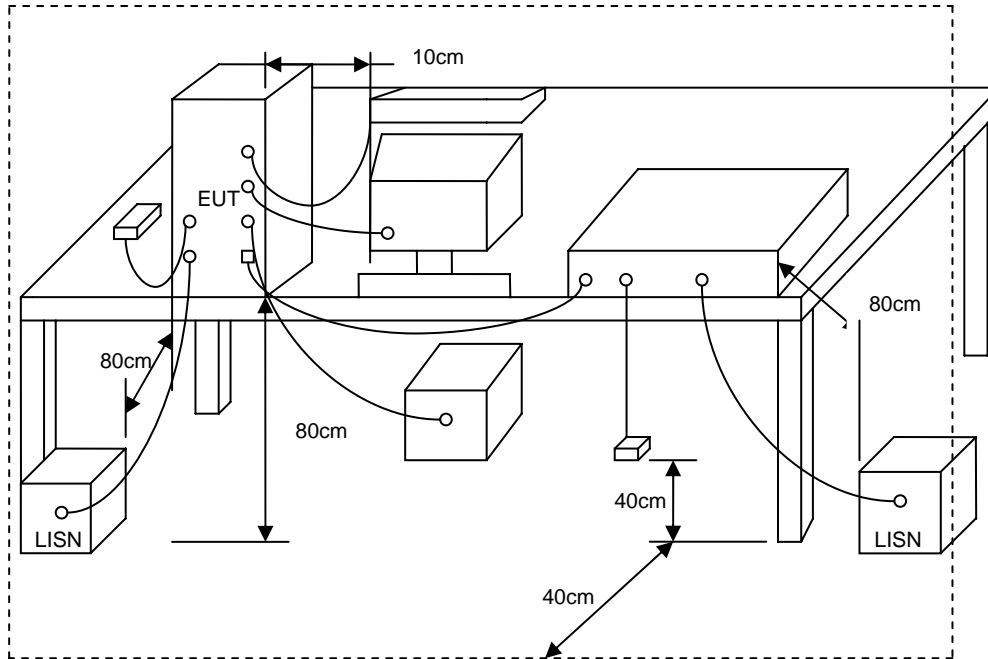
Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

| Frequency (MHz) | Quasi Peak (dB $\mu$ V) | Average (dB $\mu$ V) |
|-----------------|-------------------------|----------------------|
| 0.15 – 0.5      | 66-56*                  | 56-46*               |
| 0.5 – 5.0       | 56                      | 46                   |
| 5.0 – 30.0      | 60                      | 50                   |

### 2.2. Test Procedures

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

### 2.3. Typical test Setup



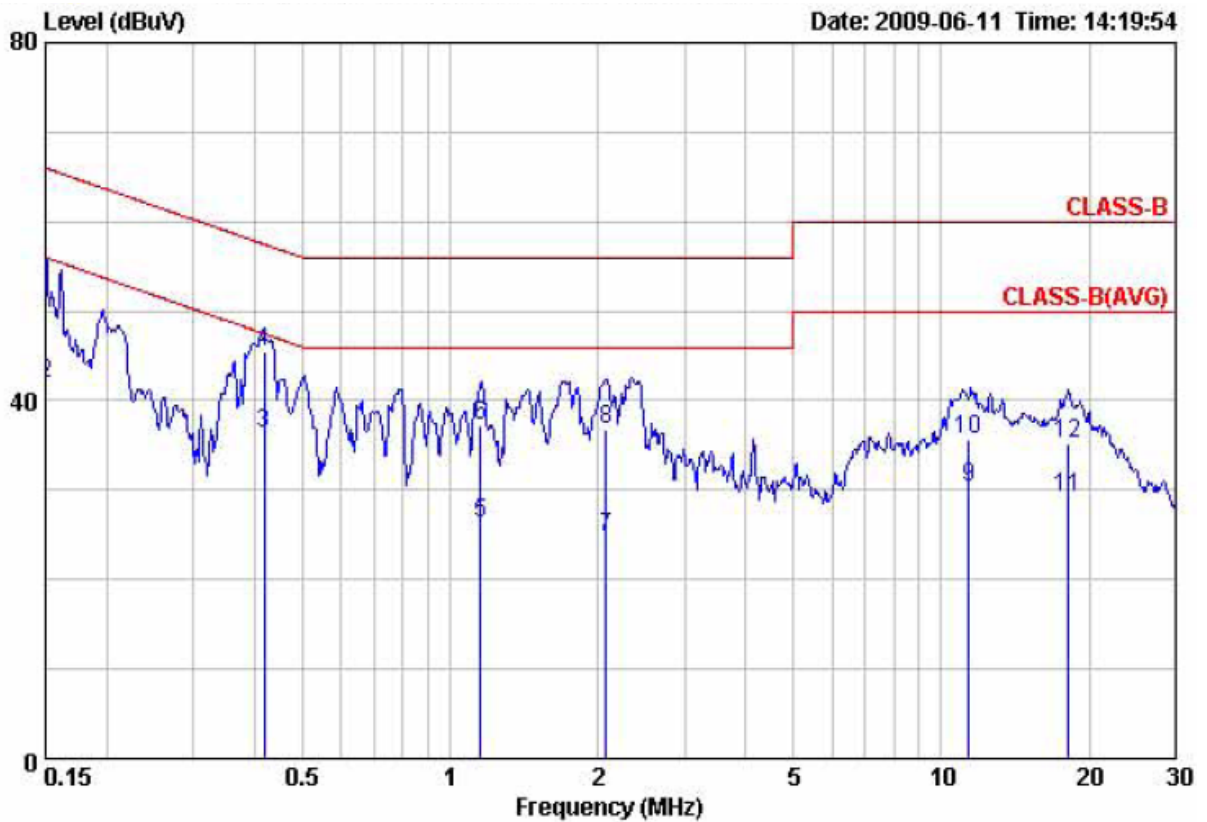
### 2.4. Measurement equipment

| Instrument   | Manufacturer | Model No. | Serial No. | Calibration Date | Valid Date |
|--------------|--------------|-----------|------------|------------------|------------|
| EMI Receiver | R&S          | ESCI      | 100443     | 2008/09/27       | 2009/09/26 |
| LISN         | MESS TEC     | NNB-2/16Z | 02/10191   | 2008/05/14       | 2009/06/02 |
| LISN         | ROLF HEINE   | NNB-2/16Z | 03/10058   | 2009/04/18       | 2010/04/17 |



2.5. Test Result and Data

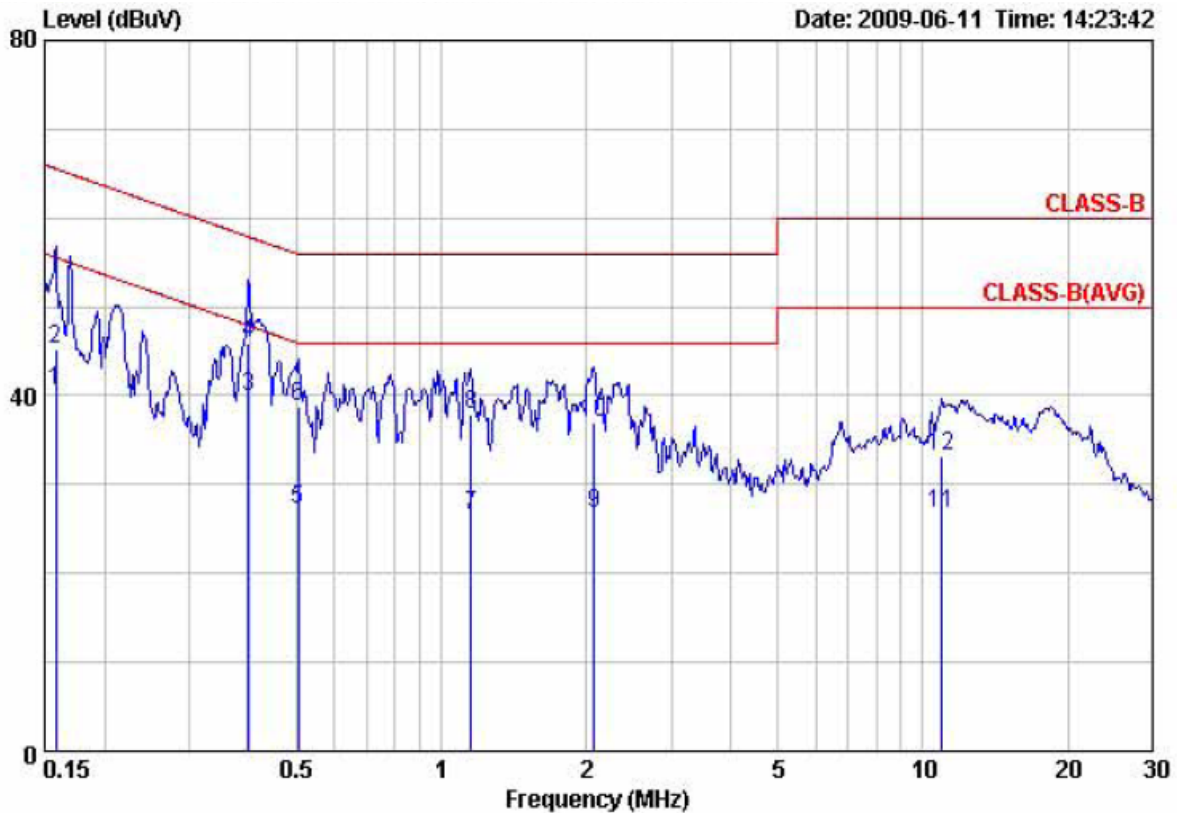
|             |                              |             |         |
|-------------|------------------------------|-------------|---------|
| Power       | : AC 120V                    | Pol/Phase   | : LINE  |
| Test Mode 1 | : LINK LAN (100M) + Wireless | Temperature | : 25 °C |
| Memo        | : Adapter: MU12-G120100-A1   | Humidity    | : 55 %  |



| Item | Freq<br>MHz | Read<br>Value<br>dBuV/m | Factor<br>dB | Result<br>dBuV | Limit<br>dBuV | Margin<br>dBuV | Remark  |
|------|-------------|-------------------------|--------------|----------------|---------------|----------------|---------|
| 1    | 0.150       | 35.223                  | 0.110        | 35.333         | 56.000        | -20.667        | Average |
| 2    | 0.150       | 41.826                  | 0.110        | 41.936         | 66.000        | -24.064        | QP      |
| 3    | 0.419       | 36.103                  | 0.113        | 36.216         | 47.466        | -11.250        | Average |
| 4    | 0.419       | 45.319                  | 0.113        | 45.432         | 57.466        | -12.034        | QP      |
| 5    | 1.154       | 26.077                  | 0.172        | 26.249         | 46.000        | -19.751        | Average |
| 6    | 1.154       | 37.113                  | 0.172        | 37.285         | 56.000        | -18.715        | QP      |
| 7    | 2.073       | 24.441                  | 0.225        | 24.666         | 46.000        | -21.334        | Average |
| 8    | 2.073       | 36.540                  | 0.225        | 36.765         | 56.000        | -19.235        | QP      |
| 9    | 11.400      | 29.864                  | 0.405        | 30.269         | 50.000        | -19.731        | Average |
| 10   | 11.400      | 35.351                  | 0.405        | 35.756         | 60.000        | -24.244        | QP      |
| 11   | 18.180      | 28.705                  | 0.453        | 29.158         | 50.000        | -20.842        | Average |
| 12   | 18.180      | 34.648                  | 0.453        | 35.101         | 60.000        | -24.899        | QP      |



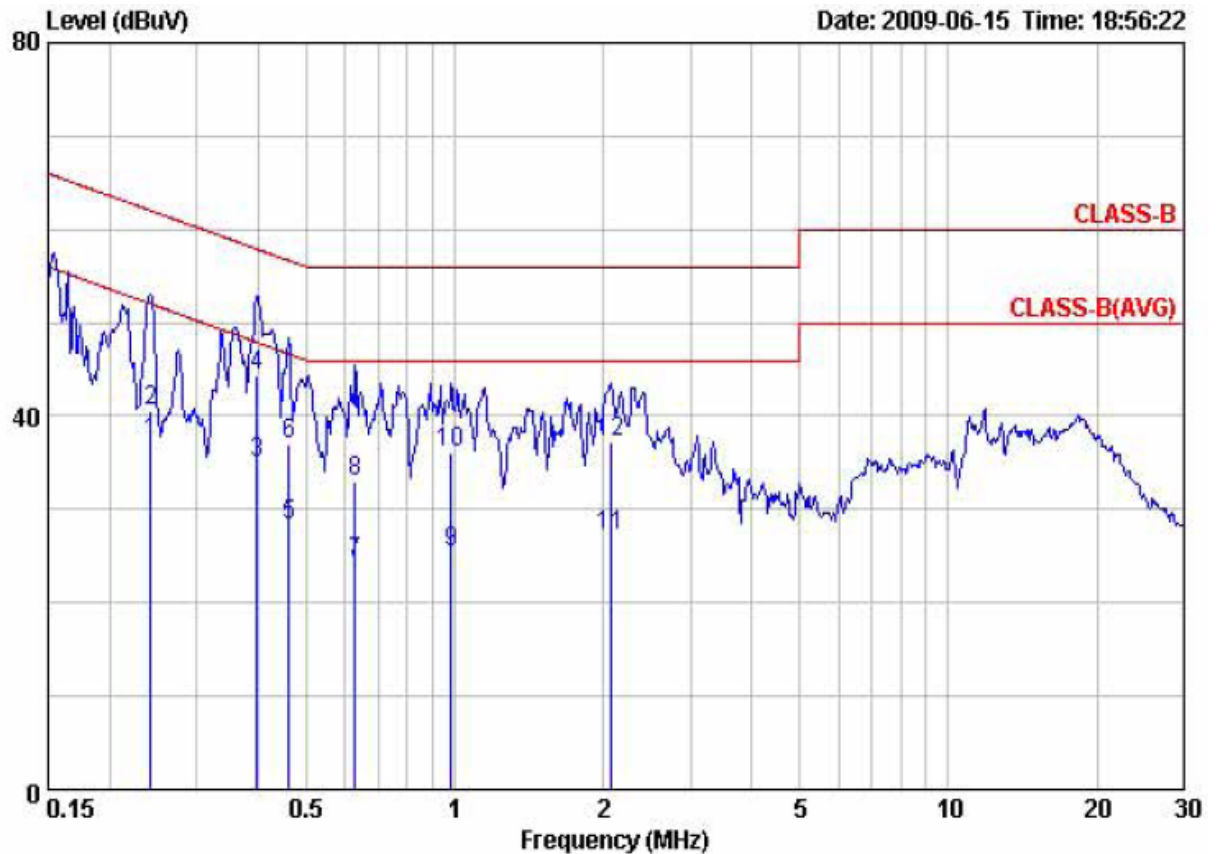
|             |                              |             |           |
|-------------|------------------------------|-------------|-----------|
| Power       | : AC 120V                    | Pol/Phase   | : NEUTRAL |
| Test Mode 1 | : LINK LAN (100M) + Wireless | Temperature | : 25 °C   |
| Memo        | : Adapter: MU12-G120100-A1   | Humidity    | : 55 %    |



| Item | Freq<br>MHz | Read<br>Value<br>dBuV/m | Factor<br>dB | Result<br>dBuV | Limit<br>dBuV | Margin<br>dBuV | Remark  |
|------|-------------|-------------------------|--------------|----------------|---------------|----------------|---------|
| 1    | 0.158       | 40.314                  | 0.139        | 40.453         | 55.560        | -15.107        | Average |
| 2    | 0.158       | 45.086                  | 0.139        | 45.225         | 65.560        | -20.335        | QP      |
| 3    | 0.398       | 39.642                  | 0.140        | 39.782         | 47.903        | -8.121         | Average |
| 4    | 0.398       | 45.773                  | 0.140        | 45.913         | 57.903        | -11.990        | QP      |
| 5    | 0.505       | 27.092                  | 0.150        | 27.242         | 46.000        | -18.758        | Average |
| 6    | 0.505       | 38.733                  | 0.150        | 38.883         | 56.000        | -17.117        | QP      |
| 7    | 1.153       | 26.395                  | 0.188        | 26.583         | 46.000        | -19.417        | Average |
| 8    | 1.153       | 37.712                  | 0.188        | 37.900         | 56.000        | -18.100        | QP      |
| 9    | 2.075       | 26.531                  | 0.224        | 26.755         | 46.000        | -19.245        | Average |
| 10   | 2.075       | 36.792                  | 0.224        | 37.016         | 56.000        | -18.984        | QP      |
| 11   | 10.963      | 26.411                  | 0.434        | 26.845         | 50.000        | -23.155        | Average |
| 12   | 10.963      | 32.716                  | 0.434        | 33.150         | 60.000        | -26.850        | QP      |



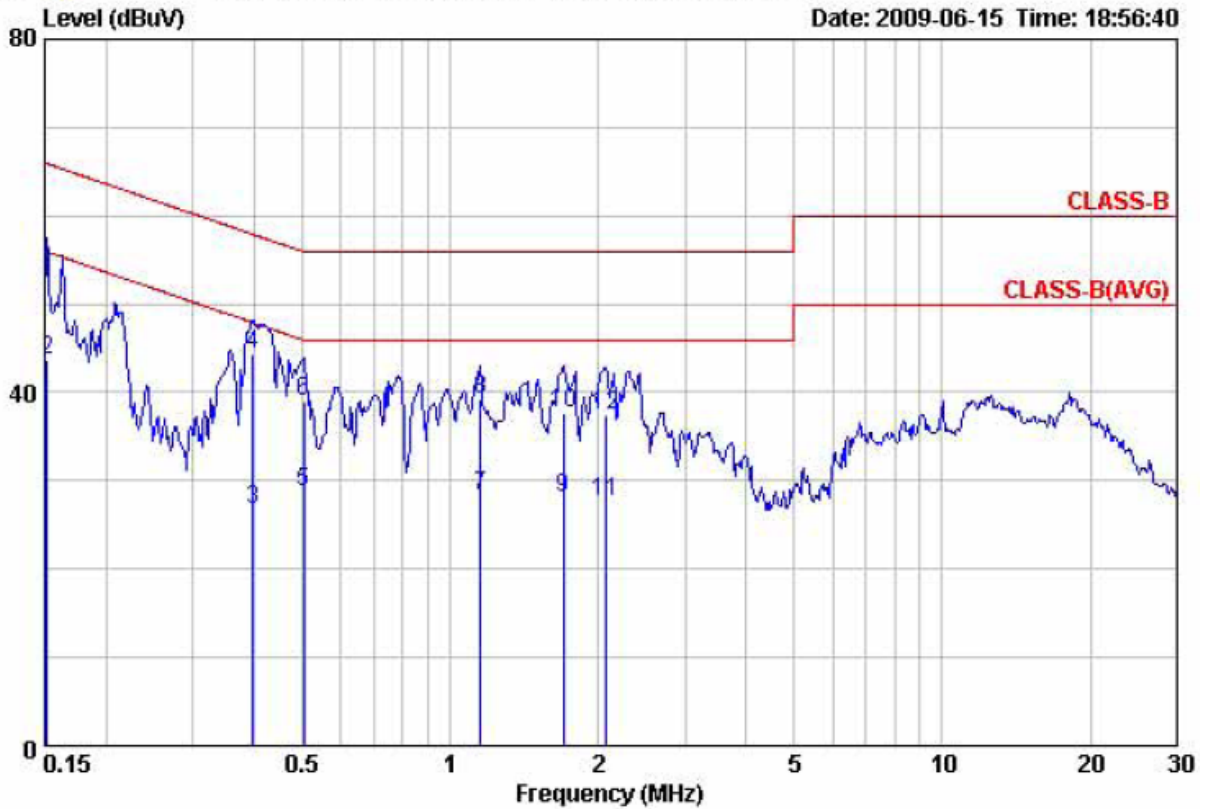
|             |                              |             |         |
|-------------|------------------------------|-------------|---------|
| Power       | : AC 120V                    | Pol/Phase   | : LINE  |
| Test Mode 2 | : LINK LAN (100M) + Wireless | Temperature | : 25 °C |
| Memo        | : Adapter: RHN-120100-1-3    | Humidity    | : 55 %  |



| Item | Freq<br>MHz | Read<br>Value<br>dBuV/m | Factor<br>dB | Result<br>dBuV | Limit<br>dBuV | Margin<br>dBuV | Remark  |
|------|-------------|-------------------------|--------------|----------------|---------------|----------------|---------|
| 1    | 0.242       | 37.121                  | 0.113        | 37.234         | 52.039        | -14.805        | Average |
| 2    | 0.242       | 40.502                  | 0.113        | 40.615         | 62.039        | -21.424        | QP      |
| 3    | 0.398       | 34.895                  | 0.110        | 35.005         | 47.903        | -12.898        | Average |
| 4    | 0.398       | 44.312                  | 0.110        | 44.422         | 57.903        | -13.481        | QP      |
| 5    | 0.461       | 28.282                  | 0.118        | 28.400         | 46.671        | -18.271        | Average |
| 6    | 0.461       | 36.980                  | 0.118        | 37.098         | 56.671        | -19.573        | QP      |
| 7    | 0.627       | 24.239                  | 0.135        | 24.374         | 46.000        | -21.626        | Average |
| 8    | 0.627       | 32.908                  | 0.135        | 33.043         | 56.000        | -22.957        | QP      |
| 9    | 0.984       | 25.333                  | 0.159        | 25.492         | 46.000        | -20.508        | Average |
| 10   | 0.984       | 35.846                  | 0.159        | 36.005         | 56.000        | -19.995        | QP      |
| 11   | 2.070       | 26.861                  | 0.225        | 27.086         | 46.000        | -18.914        | Average |
| 12   | 2.070       | 36.944                  | 0.225        | 37.169         | 56.000        | -18.831        | QP      |



|             |                              |             |           |
|-------------|------------------------------|-------------|-----------|
| Power       | : AC 120V                    | Pol/Phase   | : NEUTRAL |
| Test Mode 2 | : LINK LAN (100M) + Wireless | Temperature | : 25 °C   |
| Memo        | : Adapter: RHN-120100-1-3    | Humidity    | : 55 %    |



| Item | Freq<br>MHz | Read<br>Value<br>dBuV/m | Factor<br>dB | Result<br>dBuV | Limit<br>dBuV | Margin<br>dBuV | Remark  |
|------|-------------|-------------------------|--------------|----------------|---------------|----------------|---------|
| 1    | 0.152       | 33.403                  | 0.140        | 33.543         | 55.906        | -22.363        | Average |
| 2    | 0.152       | 43.616                  | 0.140        | 43.756         | 65.906        | -22.150        | QP      |
| 3    | 0.398       | 26.662                  | 0.140        | 26.802         | 47.903        | -21.101        | Average |
| 4    | 0.398       | 44.249                  | 0.140        | 44.389         | 57.903        | -13.514        | QP      |
| 5    | 0.505       | 28.577                  | 0.150        | 28.727         | 46.000        | -17.273        | Average |
| 6    | 0.505       | 38.804                  | 0.150        | 38.954         | 56.000        | -17.046        | QP      |
| 7    | 1.153       | 28.083                  | 0.188        | 28.271         | 46.000        | -17.729        | Average |
| 8    | 1.153       | 39.042                  | 0.188        | 39.230         | 56.000        | -16.770        | QP      |
| 9    | 1.698       | 27.946                  | 0.210        | 28.156         | 46.000        | -17.844        | Average |
| 10   | 1.698       | 37.352                  | 0.210        | 37.562         | 56.000        | -18.438        | QP      |
| 11   | 2.073       | 27.502                  | 0.224        | 27.726         | 46.000        | -18.274        | Average |
| 12   | 2.073       | 37.192                  | 0.224        | 37.416         | 56.000        | -18.584        | QP      |

Test engineer: Tom

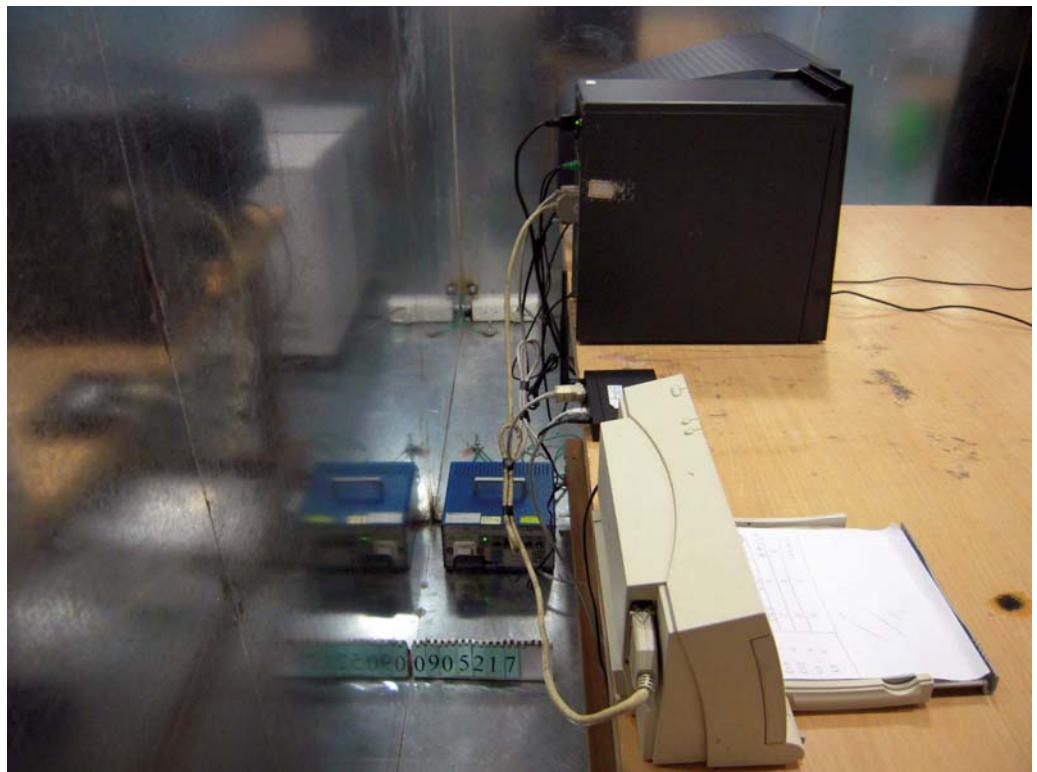


## 2.1. Test Photographs

Front View



Rear View





### 3. Test of Radiated Emission

#### 3.1. Test Limit

Radiated emissions from 30 MHz to 6,000 MHz were measured with a bandwidth of 120 kHz according to the methods defines in ANSI C63.4-2003. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 3.2. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions. For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

| Frequency (MHz) | Distance Meters | Radiated ( $\mu$ V / M) | Radiated (dB $\mu$ V/ M) |
|-----------------|-----------------|-------------------------|--------------------------|
| 30-88           | 3               | 100                     | 40.0                     |
| 88-216          | 3               | 150                     | 43.5                     |
| 216-960         | 3               | 200                     | 46.0                     |
| Above 960       | 3               | 500                     | 54.0                     |

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

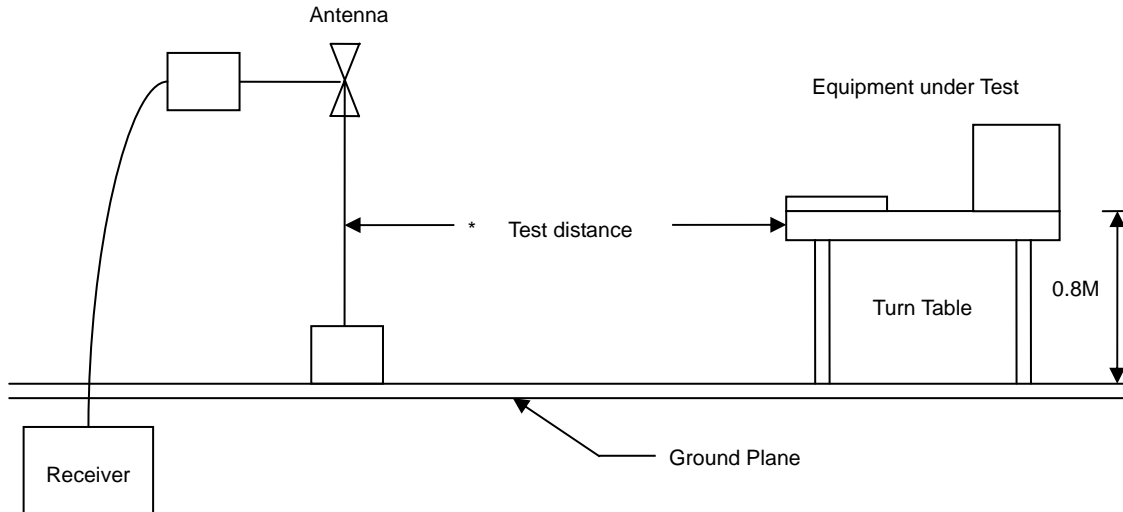
| Frequency (MHz) | Distance Meters | Radiated (dB $\mu$ V/ M) |
|-----------------|-----------------|--------------------------|
| 30-230          | 10              | 30                       |
| 230-1000        | 10              | 37                       |

#### 3.2. Test Procedures

- The EUT was placed on a Rota table top 0.8 meter above ground.
- The EUT was set 3/10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 6 dB margin will be repeated one by one using the quasi-peak method and reported.



### 3.3. Typical test Setup



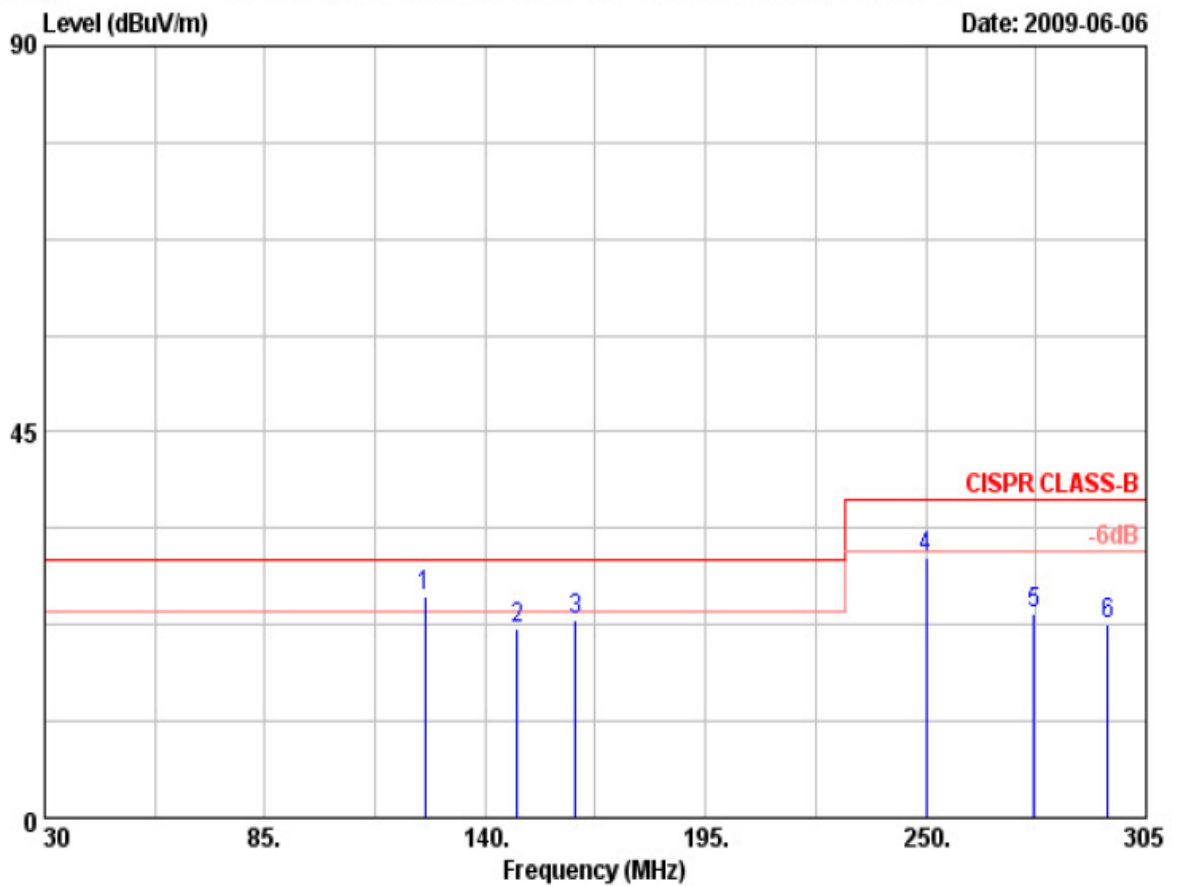
### 3.4. Measurement equipment

| Instrument        | Manufacturer | Model No. | Serial No. | Calibration Date | Valid Date |
|-------------------|--------------|-----------|------------|------------------|------------|
| Bilog Antenna     | Schaffner    | CBL6112B  | 2840       | 2009/05/14       | 2010/05/13 |
| Signal Generator  | HP           | 8648B     | 3629U00612 | 2008/10/08       | 2009/10/07 |
| Amplifier         | Agilent      | 8447D     | 2944A10593 | 2009/05/21       | 2010/05/20 |
| EMI Receiver      | HP           | 8546A     | 3807A00454 | 2008/08/07       | 2009/08/06 |
| Spectrum Analyzer | R&S          | FSP40     | 100047     | 2009/03/26       | 2010/03/25 |
| Horn Antenna      | EMCO         | 3115      | 31589      | 2009/05/04       | 2010/05/03 |
| Preamplifier      | Agilent      | 8449B     | 3008A01954 | 2009/02/27       | 2010/02/26 |



### 3.5. Test Result and Data

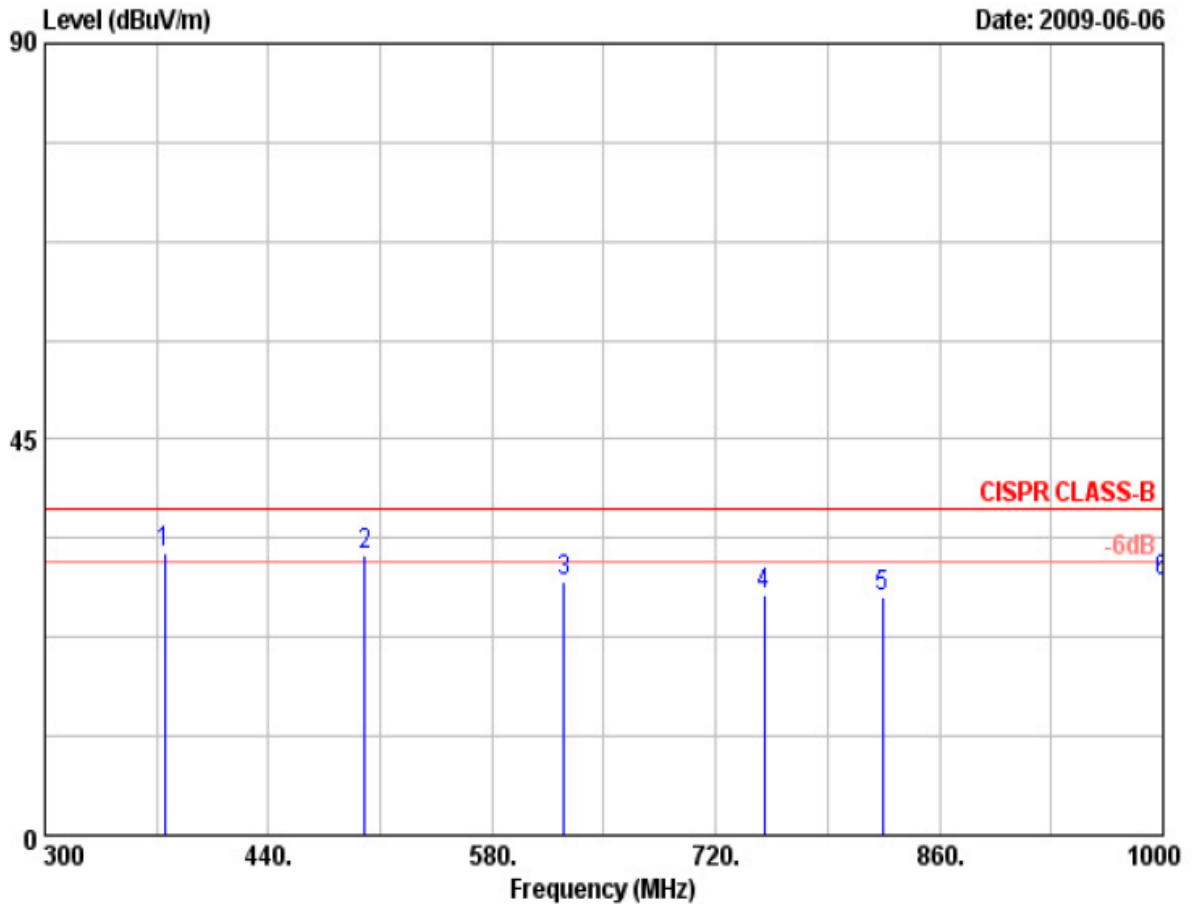
|             |                              |             |            |
|-------------|------------------------------|-------------|------------|
| Power       | : AC 120V                    | Pol/Phase   | : VERTICAL |
| Test Mode 1 | : LINK LAN (100M) + Wireless | Temperature | : 28 °C    |
| Memo        | : Adapter: MU12-G120100-A1   | Humidity    | : 60 %     |



| Item | Freq    | Read Value | Factor  | Result | Limit  | Margin  | Remark | Ant Pos | Tab Pos |
|------|---------|------------|---------|--------|--------|---------|--------|---------|---------|
|      | MHz     | dBuV/m     | dB      | dBuV/m | dBuV/m | dB      |        | cm      | Deg     |
| 1    | 125.000 | 39.800     | -13.928 | 25.872 | 30.000 | -4.128  | QP     | 100     | 360     |
| 2    | 148.000 | 35.784     | -13.784 | 22.000 | 30.000 | -8.000  | Peak   | 100     | 360     |
| 3    | 162.550 | 34.630     | -11.668 | 22.962 | 30.000 | -7.038  | Peak   | 100     | 360     |
| 4    | 250.000 | 44.468     | -14.135 | 30.333 | 37.000 | -6.667  | QP     | 100     | 360     |
| 5    | 276.950 | 36.040     | -12.247 | 23.793 | 37.000 | -13.207 | Peak   | 100     | 360     |
| 6    | 295.375 | 34.060     | -11.407 | 22.653 | 37.000 | -14.347 | Peak   | 100     | 360     |



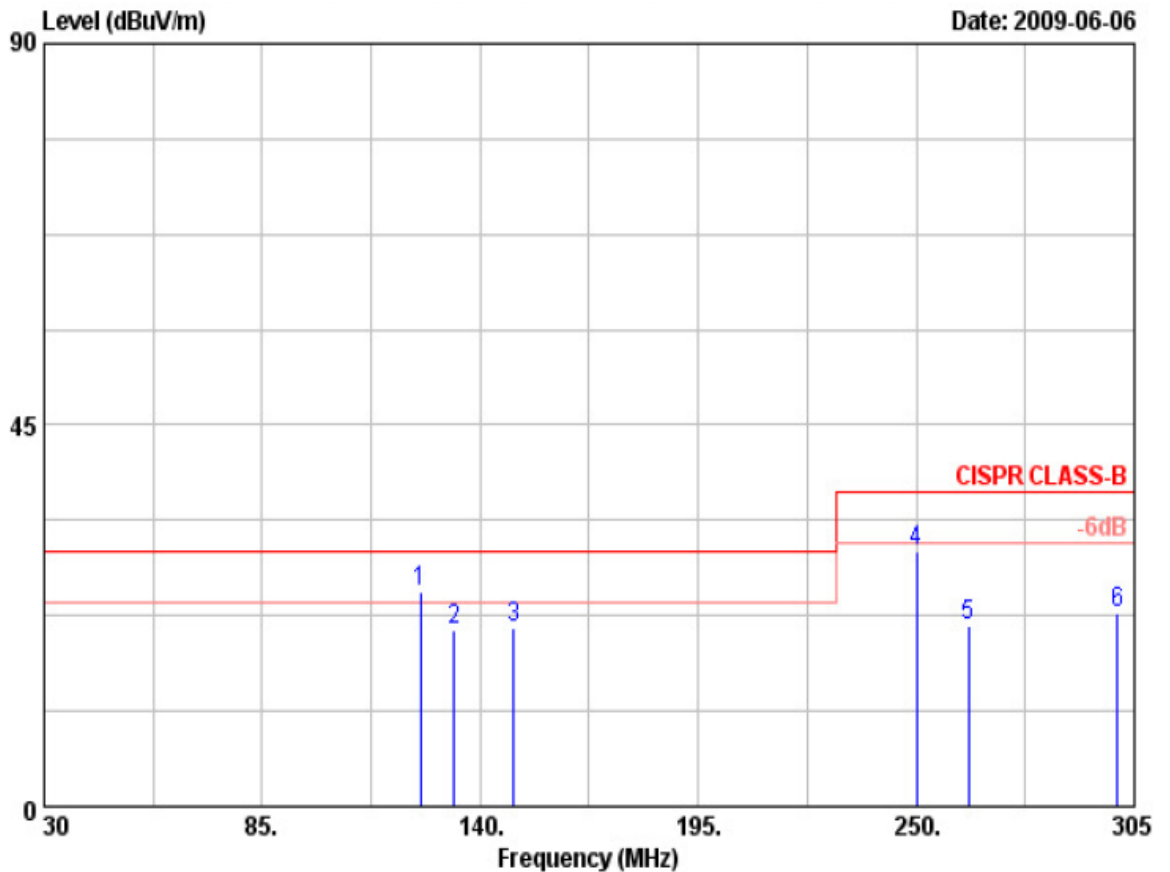
|             |                              |             |            |
|-------------|------------------------------|-------------|------------|
| Power       | : AC 120V                    | Pol/Phase   | : VERTICAL |
| Test Mode 1 | : LINK LAN (100M) + Wireless | Temperature | : 28 °C    |
| Memo        | : Adapter: MU12-G120100-A1   | Humidity    | : 60 %     |



| Item | Freq     | Read Value | Factor | Result | Limit  | Margin | Remark | Ant Pos | Tab Pos |
|------|----------|------------|--------|--------|--------|--------|--------|---------|---------|
|      | MHz      | dBuV/m     | dB     | dBuV/m | dBuV/m | dB     |        | cm      | Deg     |
| 1    | 375.000  | 40.579     | -8.468 | 32.111 | 37.000 | -4.889 | QP     | 100     | 360     |
| 2    | 500.000  | 38.477     | -6.700 | 31.777 | 37.000 | -5.223 | QP     | 100     | 360     |
| 3    | 625.000  | 33.803     | -4.915 | 28.888 | 37.000 | -8.112 | Peak   | 100     | 360     |
| 4    | 750.100  | 29.905     | -2.683 | 27.222 | 37.000 | -9.778 | QP     | 100     | 360     |
| 5    | 824.300  | 27.961     | -0.761 | 27.200 | 37.000 | -9.800 | Peak   | 100     | 360     |
| 6    | 1000.000 | 25.508     | 3.380  | 28.888 | 37.000 | -8.112 | Peak   | 100     | 360     |



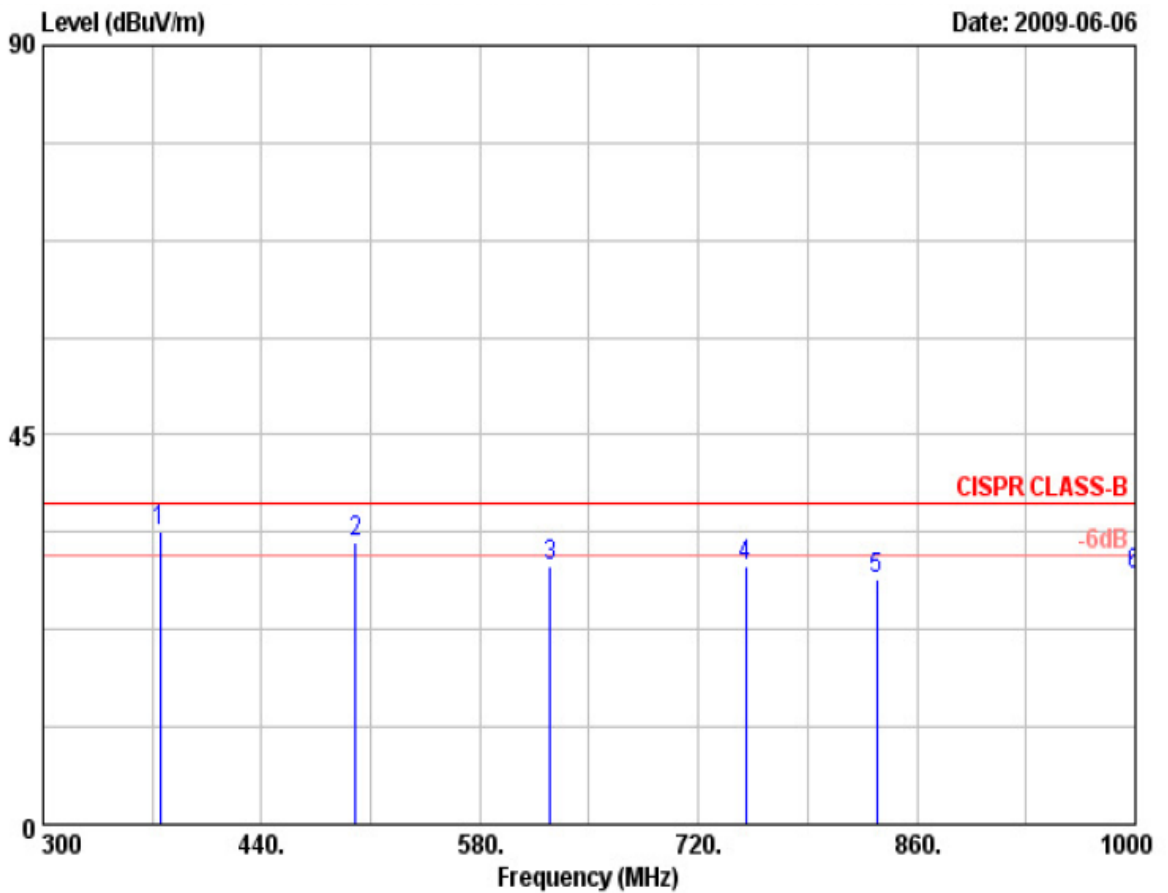
|             |                              |             |              |
|-------------|------------------------------|-------------|--------------|
| Power       | : AC 120V                    | Pol/Phase   | : HORIZONTAL |
| Test Mode 1 | : LINK LAN (100M) + Wireless | Temperature | : 28 °C      |
| Memo        | : Adapter: MU12-G120100-A1   | Humidity    | : 60 %       |



| Item | Freq    | Read Value | Factor  | Result | Limit  | Margin  | Remark | Ant Pos | Tab Pos |
|------|---------|------------|---------|--------|--------|---------|--------|---------|---------|
|      | MHz     | dBuV/m     | dB      | dBuV/m | dBuV/m | dB      |        | cm      | Deg     |
| 1    | 125.000 | 39.261     | -13.928 | 25.333 | 30.000 | -4.667  | QP     | 400     | 0       |
| 2    | 133.500 | 34.938     | -14.049 | 20.889 | 30.000 | -9.111  | Peak   | 400     | 0       |
| 3    | 148.500 | 34.759     | -13.759 | 21.000 | 30.000 | -9.000  | Peak   | 400     | 0       |
| 4    | 250.000 | 44.135     | -14.135 | 30.000 | 37.000 | -7.000  | QP     | 400     | 0       |
| 5    | 263.200 | 34.390     | -13.168 | 21.222 | 37.000 | -15.778 | Peak   | 400     | 0       |
| 6    | 300.875 | 33.860     | -11.156 | 22.704 | 37.000 | -14.296 | Peak   | 400     | 0       |



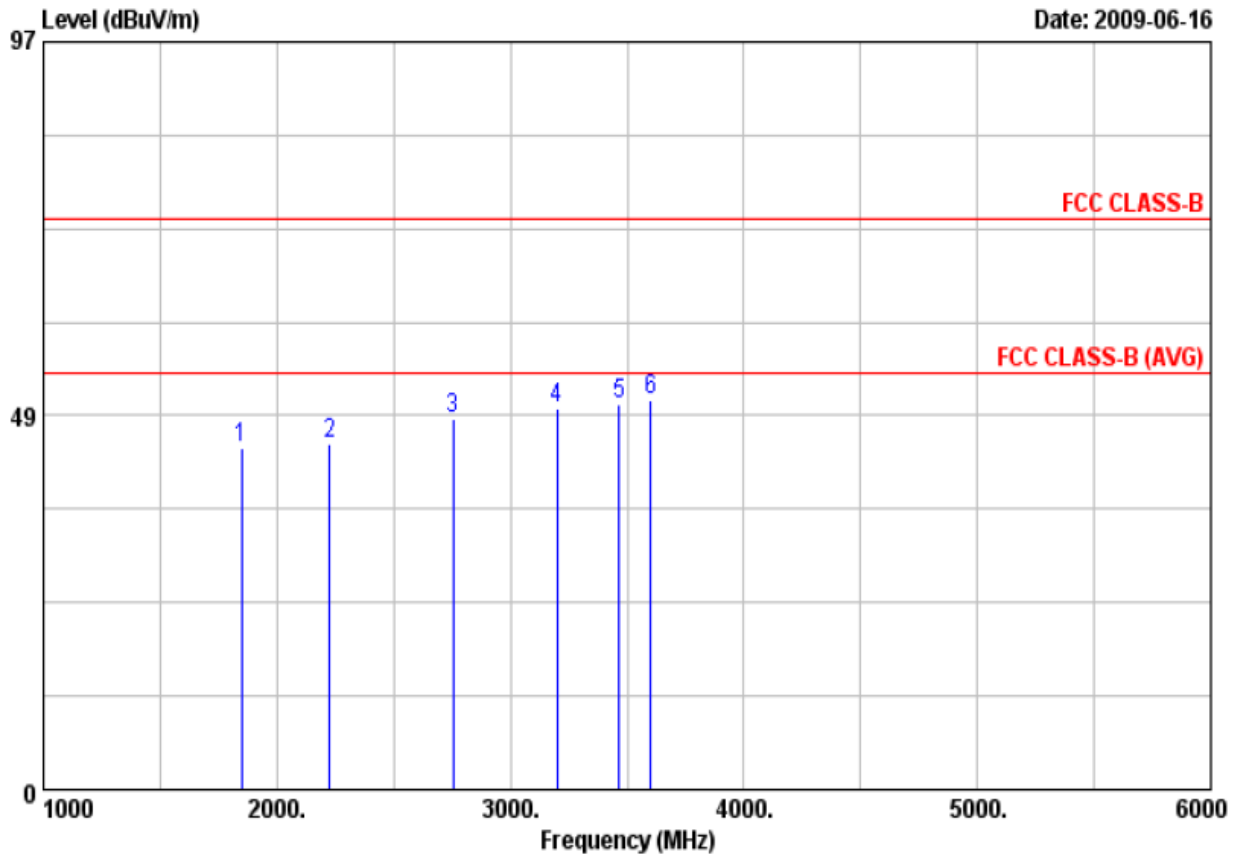
|             |                              |             |              |
|-------------|------------------------------|-------------|--------------|
| Power       | : AC 120V                    | Pol/Phase   | : HORIZONTAL |
| Test Mode 1 | : LINK LAN (100M) + Wireless | Temperature | : 28 °C      |
| Memo        | : Adapter: MU12-G120100-A1   | Humidity    | : 60 %       |



| Item | Freq<br>MHz | Read<br>Value<br>dBuV/m | Factor<br>dB | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Remark | Ant<br>Pos<br>cm | Tab<br>Pos<br>Deg |
|------|-------------|-------------------------|--------------|------------------|-----------------|--------------|--------|------------------|-------------------|
| 1    | 375.000     | 42.246                  | -8.468       | 33.778           | 37.000          | -3.222       | QP     | 100              | 0                 |
| 2    | 500.000     | 39.367                  | -6.700       | 32.667           | 37.000          | -4.333       | QP     | 100              | 0                 |
| 3    | 625.000     | 34.803                  | -4.915       | 29.888           | 37.000          | -7.112       | QP     | 100              | 0                 |
| 4    | 750.000     | 32.462                  | -2.685       | 29.777           | 37.000          | -7.223       | QP     | 100              | 0                 |
| 5    | 834.100     | 28.736                  | -0.441       | 28.295           | 37.000          | -8.705       | Peak   | 100              | 0                 |
| 6    | 1000.000    | 25.398                  | 3.380        | 28.778           | 37.000          | -8.222       | Peak   | 100              | 0                 |



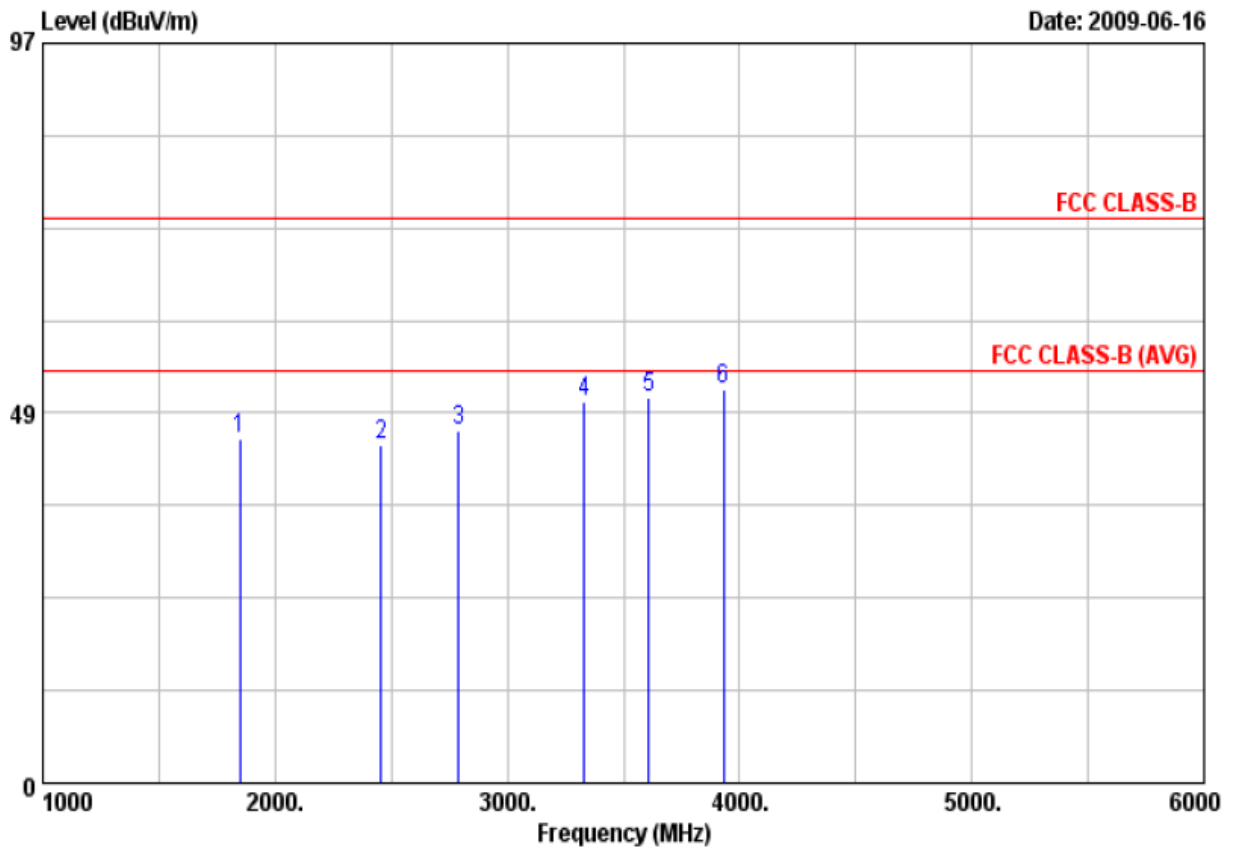
|             |                              |             |            |
|-------------|------------------------------|-------------|------------|
| Power       | : AC 120V                    | Pol/Phase   | : VERTICAL |
| Test Mode 1 | : LINK LAN (100M) + Wireless | Temperature | : 25 °C    |
| Memo        | : Adapter: MU12-G120100-A1   | Humidity    | : 69 %     |



| Item | Freq     | Read Value | Factor | Result | Limit  | Margin  | Remark | Ant Pos | Tab Pos |
|------|----------|------------|--------|--------|--------|---------|--------|---------|---------|
|      | MHz      | dBuV/m     | dB     | dBuV/m | dBuV/m | dB      |        | cm      | Deg     |
| 1    | 1850.000 | 17.796     | 26.490 | 44.286 | 74.000 | -29.714 | Peak   | 100     | 0       |
| 2    | 2225.000 | 17.333     | 27.585 | 44.918 | 74.000 | -29.082 | Peak   | 100     | 0       |
| 3    | 2755.000 | 18.812     | 29.218 | 48.030 | 74.000 | -25.970 | Peak   | 100     | 0       |
| 4    | 3200.000 | 18.961     | 30.500 | 49.461 | 74.000 | -24.539 | Peak   | 100     | 0       |
| 5    | 3465.000 | 18.869     | 31.030 | 49.899 | 74.000 | -24.101 | Peak   | 100     | 0       |
| 6    | 3600.000 | 19.138     | 31.380 | 50.518 | 74.000 | -23.482 | Peak   | 100     | 0       |



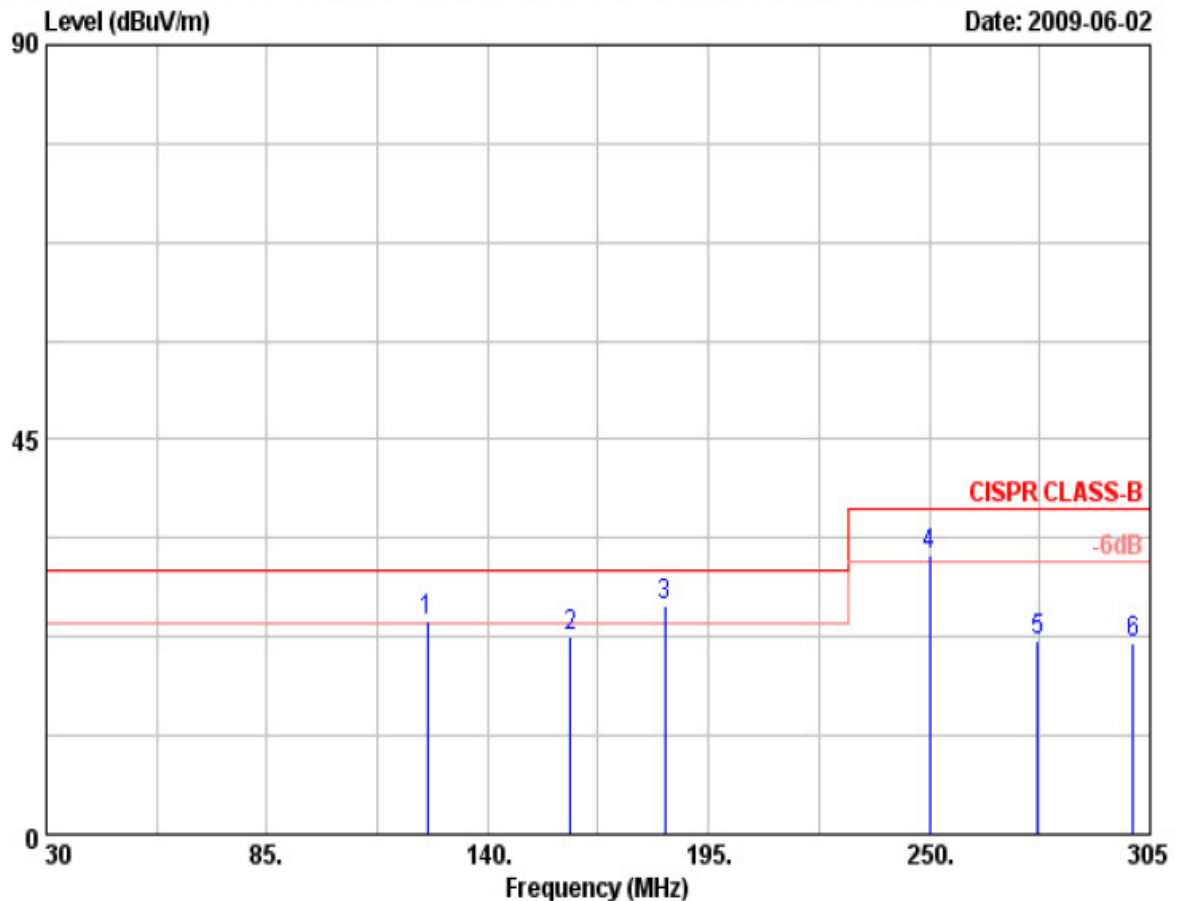
|             |                              |             |              |
|-------------|------------------------------|-------------|--------------|
| Power       | : AC 120V                    | Pol/Phase   | : HORIZONTAL |
| Test Mode 1 | : LINK LAN (100M) + Wireless | Temperature | : 25 °C      |
| Memo        | : Adapter: MU12-G120100-A1   | Humidity    | : 69 %       |



| Item | Freq     | Read Value | Factor | Result | Limit  | Margin  | Remark | Ant Pos | Tab Pos |
|------|----------|------------|--------|--------|--------|---------|--------|---------|---------|
|      | MHz      | dBuV/m     | dB     | dBuV/m | dBuV/m | dB      |        | cm      | Deg     |
| 1    | 1850.000 | 18.576     | 26.490 | 45.066 | 74.000 | -28.934 | Peak   | 200     | 360     |
| 2    | 2455.000 | 16.253     | 28.183 | 44.436 | 74.000 | -29.564 | Peak   | 200     | 360     |
| 3    | 2790.000 | 16.943     | 29.344 | 46.287 | 74.000 | -27.713 | Peak   | 200     | 360     |
| 4    | 3330.000 | 19.314     | 30.760 | 50.074 | 74.000 | -23.926 | Peak   | 200     | 360     |
| 5    | 3610.000 | 19.201     | 31.408 | 50.609 | 74.000 | -23.391 | Peak   | 200     | 360     |
| 6    | 3930.000 | 19.425     | 32.304 | 51.729 | 74.000 | -22.271 | Peak   | 200     | 360     |



|             |                              |             |            |
|-------------|------------------------------|-------------|------------|
| Power       | : AC 120V                    | Pol/Phase   | : VERTICAL |
| Test Mode 2 | : LINK LAN (100M) + Wireless | Temperature | : 28 °C    |
| Memo        | : Adapter: RHN-120100-1-3    | Humidity    | : 60 %     |

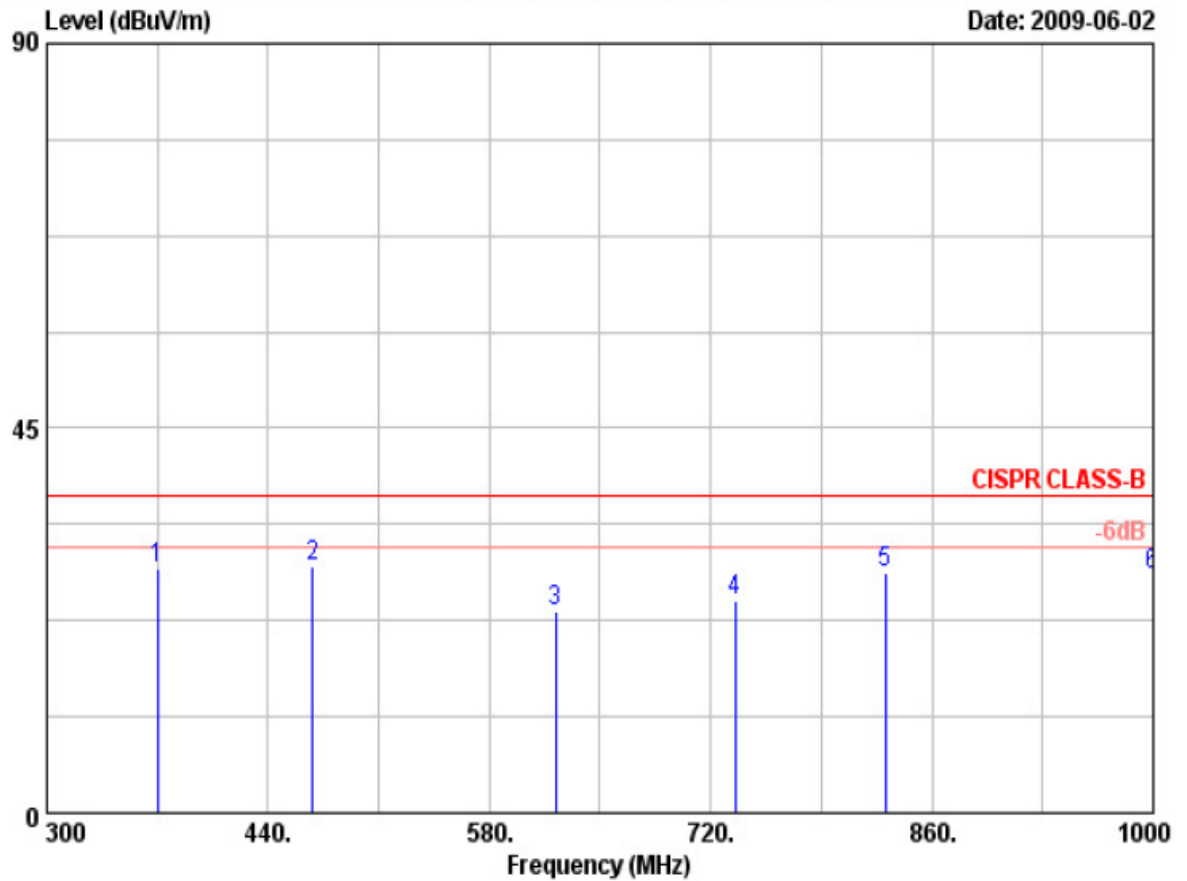


| Item | Freq<br>MHz | Read<br>Value<br>dBuV/m | Factor<br>dB | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Remark | Ant<br>Pos<br>cm | Tab<br>Pos<br>Deg |
|------|-------------|-------------------------|--------------|------------------|-----------------|--------------|--------|------------------|-------------------|
| 1    | 125.000     | 38.300                  | -13.928      | 24.372           | 30.000          | -5.628       | QP     | 100              | 360               |
| 2    | 160.625     | 34.280                  | -11.647      | 22.633           | 30.000          | -7.367       | Peak   | 100              | 360               |
| 3    | 184.000     | 39.300                  | -13.110      | 26.190           | 30.000          | -3.810       | QP     | 100              | 360               |
| 4    | 250.000     | 45.912                  | -14.135      | 31.777           | 37.000          | -5.223       | QP     | 100              | 360               |
| 5    | 276.950     | 34.310                  | -12.247      | 22.063           | 37.000          | -14.937      | Peak   | 100              | 360               |
| 6    | 300.875     | 32.880                  | -11.156      | 21.724           | 37.000          | -15.276      | Peak   | 100              | 360               |





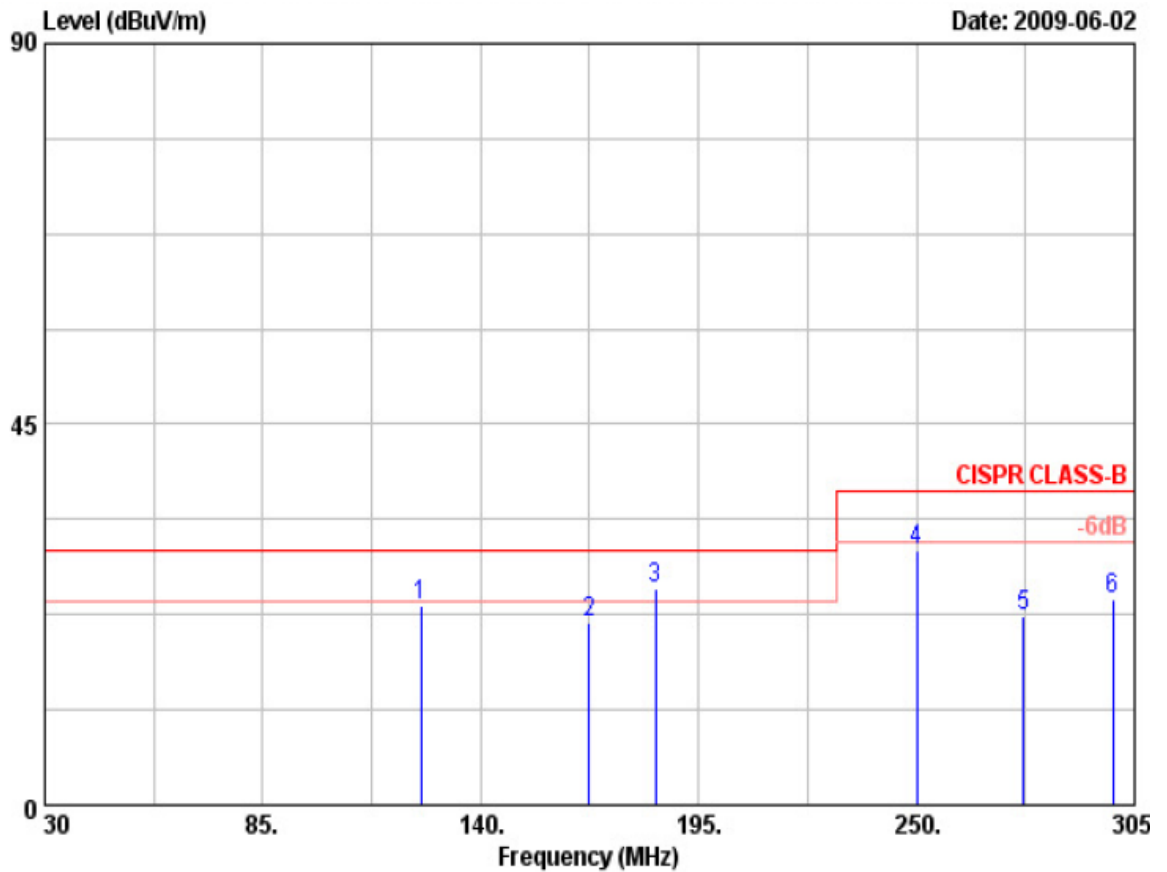
|             |                              |             |            |
|-------------|------------------------------|-------------|------------|
| Power       | : AC 120V                    | Pol/Phase   | : VERTICAL |
| Test Mode 2 | : LINK LAN (100M) + Wireless | Temperature | : 28 °C    |
| Memo        | : Adapter: RHN-120100-1-3    | Humidity    | : 60 %     |



| Item | Freq     | Read Value | Factor | Result | Limit  | Margin  | Remark | Ant Pos | Tab Pos |
|------|----------|------------|--------|--------|--------|---------|--------|---------|---------|
|      | MHz      | dBuV/m     | dB     | dBuV/m | dBuV/m | dB      |        | cm      | Deg     |
| 1    | 370.000  | 37.310     | -8.629 | 28.681 | 37.000 | -8.319  | QP     | 100     | 0       |
| 2    | 468.000  | 35.750     | -6.879 | 28.871 | 37.000 | -8.129  | Peak   | 100     | 0       |
| 3    | 622.000  | 28.470     | -4.959 | 23.511 | 37.000 | -13.489 | Peak   | 100     | 0       |
| 4    | 735.400  | 27.841     | -3.134 | 24.707 | 37.000 | -12.293 | Peak   | 100     | 0       |
| 5    | 830.600  | 28.619     | -0.555 | 28.064 | 37.000 | -8.936  | Peak   | 100     | 0       |
| 6    | 1000.000 | 24.540     | 3.380  | 27.920 | 37.000 | -9.080  | Peak   | 100     | 0       |



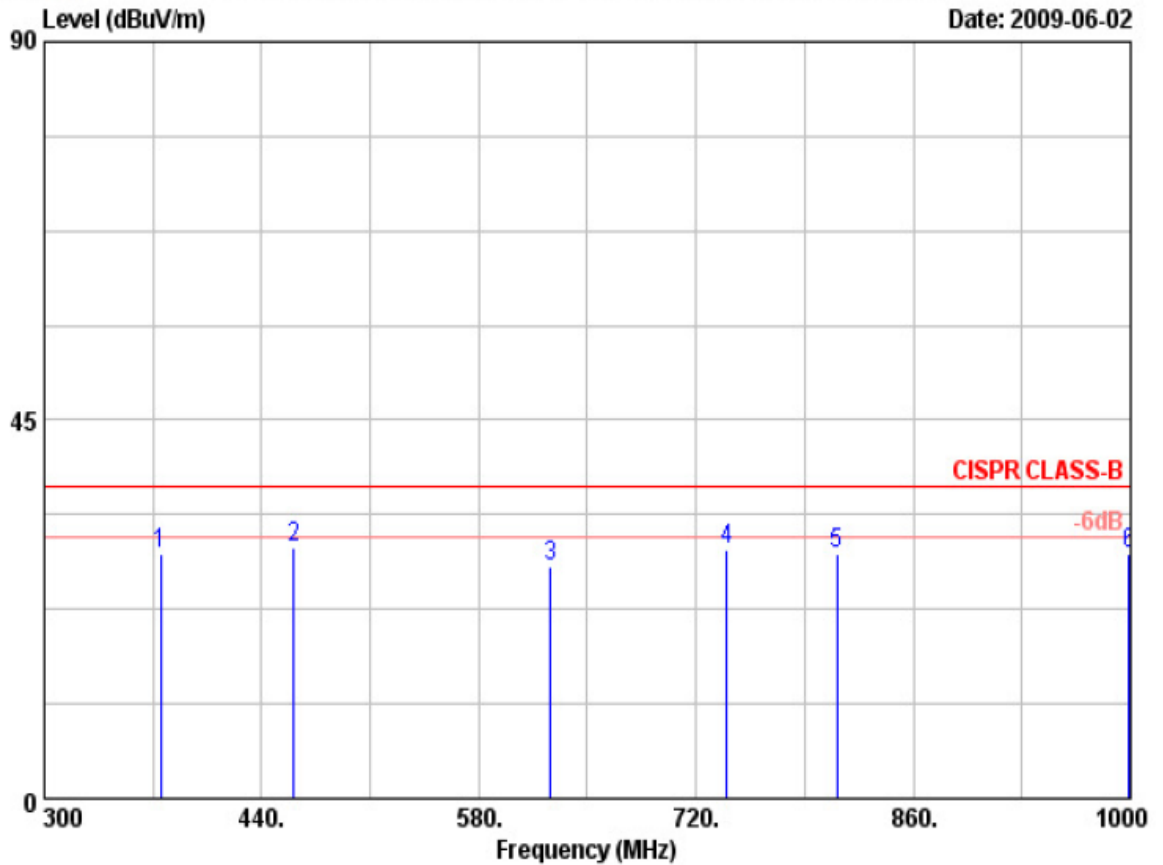
|             |                              |             |              |
|-------------|------------------------------|-------------|--------------|
| Power       | : AC 120V                    | Pol/Phase   | : HORIZONTAL |
| Test Mode 2 | : LINK LAN (100M) + Wireless | Temperature | : 28 °C      |
| Memo        | : Adapter: RHN-120100-1-3    | Humidity    | : 60 %       |



| Item | Freq<br>MHz | Read<br>Value<br>dBuV/m | Factor<br>dB | Result<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Remark | Ant<br>Pos<br>cm | Tab<br>Pos<br>Deg |
|------|-------------|-------------------------|--------------|------------------|-----------------|--------------|--------|------------------|-------------------|
| 1    | 125.000     | 37.501                  | -13.928      | 23.573           | 30.000          | -6.427       | QP     | 400              | 0                 |
| 2    | 167.500     | 33.160                  | -11.721      | 21.439           | 30.000          | -8.561       | Peak   | 400              | 0                 |
| 3    | 184.000     | 38.700                  | -13.110      | 25.590           | 30.000          | -4.410       | QP     | 400              | 0                 |
| 4    | 250.040     | 44.200                  | -14.132      | 30.068           | 37.000          | -6.932       | QP     | 400              | 0                 |
| 5    | 276.950     | 34.590                  | -12.247      | 22.343           | 37.000          | -14.657      | Peak   | 400              | 0                 |
| 6    | 299.500     | 35.481                  | -11.214      | 24.267           | 37.000          | -12.733      | Peak   | 400              | 0                 |



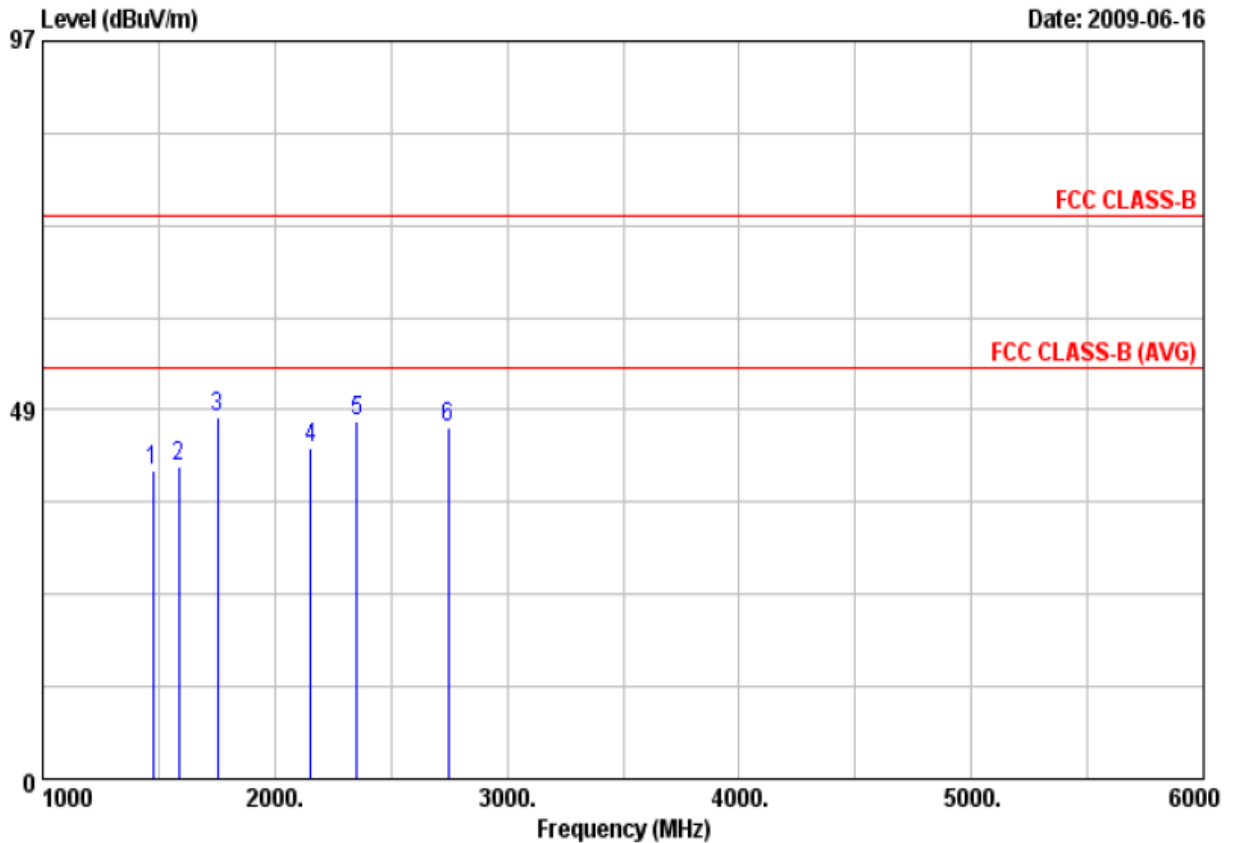
|             |                              |             |              |
|-------------|------------------------------|-------------|--------------|
| Power       | : AC 120V                    | Pol/Phase   | : HORIZONTAL |
| Test Mode 2 | : LINK LAN (100M) + Wireless | Temperature | : 28 °C      |
| Memo        | : Adapter: RHN-120100-1-3    | Humidity    | : 60 %       |



| Item | Freq    | Read Value | Factor | Result | Limit  | Margin | Remark | Ant Pos | Tab Pos |
|------|---------|------------|--------|--------|--------|--------|--------|---------|---------|
|      | MHz     | dBuV/m     | dB     | dBuV/m | dBuV/m | dB     |        | cm      | Deg     |
| 1    | 375.000 | 37.510     | -8.468 | 29.042 | 37.000 | -7.958 | QP     | 100     | 0       |
| 2    | 461.000 | 36.779     | -6.918 | 29.861 | 37.000 | -7.139 | QP     | 100     | 0       |
| 3    | 626.200 | 32.397     | -4.898 | 27.499 | 37.000 | -9.501 | Peak   | 100     | 0       |
| 4    | 739.600 | 32.650     | -3.004 | 29.646 | 37.000 | -7.354 | Peak   | 100     | 0       |
| 5    | 811.000 | 30.311     | -1.193 | 29.118 | 37.000 | -7.882 | Peak   | 100     | 0       |
| 6    | 999.300 | 25.585     | 3.372  | 28.957 | 37.000 | -8.043 | Peak   | 100     | 0       |



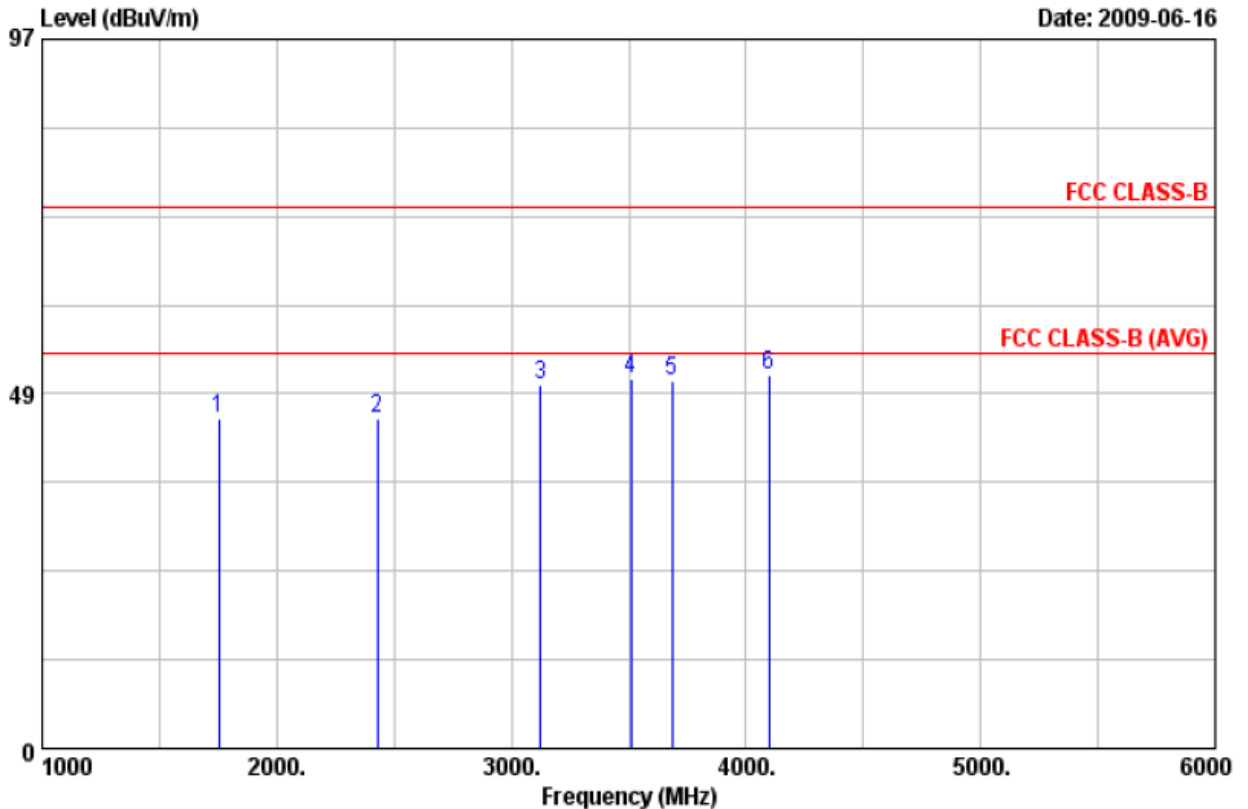
|             |                              |             |            |
|-------------|------------------------------|-------------|------------|
| Power       | : AC 120V                    | Pol/Phase   | : VERTICAL |
| Test Mode 2 | : LINK LAN (100M) + Wireless | Temperature | : 25 °C    |
| Memo        | : Adapter: RHN-120100-1-3    | Humidity    | : 69 %     |



| Item | Freq     | Read Value | Factor | Result | Limit  | Margin  | Remark | Ant Pos | Tab Pos |
|------|----------|------------|--------|--------|--------|---------|--------|---------|---------|
|      | MHz      | dBuV/m     | dB     | dBuV/m | dBuV/m | dB      |        | cm      | Deg     |
| 1    | 1475.000 | 15.160     | 25.235 | 40.395 | 74.000 | -33.605 | Peak   | 100     | 0       |
| 2    | 1585.000 | 15.613     | 25.589 | 41.202 | 74.000 | -32.798 | Peak   | 100     | 0       |
| 3    | 1755.000 | 21.480     | 26.167 | 47.647 | 74.000 | -26.353 | Peak   | 100     | 0       |
| 4    | 2155.000 | 15.971     | 27.403 | 43.374 | 74.000 | -30.626 | Peak   | 100     | 0       |
| 5    | 2355.000 | 19.168     | 27.923 | 47.091 | 74.000 | -26.909 | Peak   | 100     | 0       |
| 6    | 2745.000 | 17.035     | 29.182 | 46.217 | 74.000 | -27.783 | Peak   | 100     | 0       |



|             |                              |             |              |
|-------------|------------------------------|-------------|--------------|
| Power       | : AC 120V                    | Pol/Phase   | : HORIZONTAL |
| Test Mode 2 | : LINK LAN (100M) + Wireless | Temperature | : 25 °C      |
| Memo        | : Adapter: RHN-120100-1-3    | Humidity    | : 69 %       |



| Item | Freq     | Read Value | Factor | Result | Limit  | Margin  | Remark | Ant Pos | Tab Pos |
|------|----------|------------|--------|--------|--------|---------|--------|---------|---------|
|      | MHz      | dBuV/m     | dB     | dBuV/m | dBuV/m | dB      |        | cm      | Deg     |
| 1    | 1755.000 | 18.934     | 26.167 | 45.101 | 74.000 | -28.899 | Peak   | 200     | 360     |
| 2    | 2430.000 | 17.053     | 28.118 | 45.171 | 74.000 | -28.829 | Peak   | 200     | 360     |
| 3    | 3125.000 | 19.248     | 30.350 | 49.598 | 74.000 | -24.402 | Peak   | 200     | 360     |
| 4    | 3510.000 | 19.324     | 31.128 | 50.452 | 74.000 | -23.548 | Peak   | 200     | 360     |
| 5    | 3685.000 | 18.623     | 31.618 | 50.241 | 74.000 | -23.759 | Peak   | 200     | 360     |
| 6    | 4100.000 | 18.505     | 32.460 | 50.965 | 74.000 | -23.035 | Peak   | 200     | 360     |

Test engineer: Ray



### 3.6. Test Photographs

Front View



Rear View





Appendix A. Photographs of EUT



