

# FCC TEST REPORT

according to

**47 CFR Part 15 Subpart B and IC RSS-210 Issue 6**

**Equipment** : **Wireless Access Point**  
**Trade Name** : **AMX**  
**Model No.** : **NXA-WAP250G**  
**FCC ID** : **CWU-WAP250G**  
**IC ID** : **5078A-WAP250G**  
**Filing Type** : **Declaration of Conformity**  
**Applicant** : **AMX Corporation**  
3000 Research Dr. Richardson, TX 75082

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by NVLAP or any agency of U.S. government.
- Report Version: Rev. 01

***SPORTON International Inc.***

*6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.*

---

***SPORTON International Inc.***

TEL : 886-2-2696-2468

FAX : 886-2-2696-2255

Report Version: Rev. 01

## Table of Contents

<b>History of this test report.....</b>	<b>ii</b>
<b>CERTIFICATE OF COMPLIANCE.....</b>	<b>1</b>
<b>1. General Description of Equipment under Test.....</b>	<b>2</b>
1.1 Applicant.....	2
1.2 Manufacturer .....	2
1.3 Basic Description of Equipment under Test .....	2
1.4 Feature of Equipment under Test .....	3
<b>2. Test Configuration of Equipment under Test.....</b>	<b>4</b>
2.1 Test Manner .....	4
2.2 Description of Test System .....	4
2.3 Connection Diagram of Test System .....	4
<b>3. Test Software .....</b>	<b>5</b>
<b>4. General Information of Test.....</b>	<b>6</b>
4.1 Test Facility .....	6
4.2 Test Voltage .....	6
4.3 Standard for Methods of Measurement.....	6
4.4 Test in Compliance with .....	6
4.5 Frequency Range Investigated .....	6
4.6 Test Distance .....	6
<b>5. Test of Conducted Powerline .....</b>	<b>7</b>
5.1 Major Measuring Instruments.....	7
5.2 Test Procedures.....	7
5.3 Typical Test Setup Layout of Conducted Powerline .....	8
5.4 Test Result of AC Powerline Conducted Emission .....	9
5.5 Photographs of Conducted Powerline Test Configuration .....	11
<b>6. Test of Radiated Emission.....</b>	<b>13</b>
6.1 Major Measuring Instruments.....	13
6.2 Test Procedures.....	14
6.3 Typical Test Setup Layout of Radiated Emission.....	15
6.4 Test Result of Radiated Emission .....	16
6.5 Photographs of Radiated Emission Test Configuration .....	28
<b>7. List of Measuring Equipment Used .....</b>	<b>29</b>
<b>8. Uncertainty of Evaluation .....</b>	<b>30</b>
<b>9. Certificate of NVLAP Accreditation .....</b>	<b>32</b>
<b>Appendix A. Photographs of EUT</b>	



## CERTIFICATE OF COMPLIANCE

according to

### 47 CFR Part 15 Subpart B and IC RSS-210 Issue 6

**Equipment** : Wireless Access Point  
**Trade Name** : AMX  
**Model No.** : NXA-WAP250G  
**FCC ID** : CWU-WAP250G  
**IC ID** : 5078A-WAP250G  
**Filing Type** : Declaration of Conformity  
**Applicant** : AMX Corporation  
3000 Research Dr. Richardson, TX 75082

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 FCC Part 15B and IC RSS-210 in both radiated and conducted emission class B limits. Testing was carried out on Jun. 20, 2006 at SPORTON International Inc. LAB.



Dr. Daniel Lee  
EMC/SAR Director

***SPORTON International Inc.***

*6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.*

---

***SPORTON International Inc.***

TEL : 886-2-2696-2468

FAX : 886-2-2696-2255

FCC ID : CWU-WAP250G

IC ID : 5078A-WAP250G

Page No. : 1 of 32

Report Issued Date : Jun. 29, 2006

Report Version : Rev. 01

## 1. General Description of Equipment under Test

### 1.1 Applicant

**AMX Corporation**  
3000 Research Dr. Richardson, TX 75082

### 1.2 Manufacturer

**Accton Technology Corporation**  
No. 1, Creation 3rd Rd., Science-base Industrial Park, Hsinchu 30077, Taiwan, R.O.C.

### 1.3 Basic Description of Equipment under Test

Equipment : Wireless Access Point  
Trade Name : AMX  
Model No. : NXA-WAP250G  
Power Supply Type : Switching  
AC Power Cord : Non-shielded, Wall-mount, 1.8 meter, 2 pin

**1.4 Feature of Equipment under Test**

Product Feature & Specification	
1. DUT Type :	Wireless Access Point
2. Trade Name :	AMX
3. Model No. :	NXA-WAP250G
4. Type of Modulation :	DSSS / OFDM
5. Tx Frequency :	2400-2483.5 MHz
6. Rx Frequency :	2400-2483.5 MHz
7. Number of Channels :	11
8. Carrier Frequency of Each Channel :	2412+(n-1)*5 MHz; n=1~11
9. Antenna Type :	Dipole Antenna
10. Antenna Gain:	2.32 dBi
11. Maximum Output Power to Antenna :	802.11b: 21.03 dBm 802.11g: 22.61 dBm
12. DUT Stage :	Production Unit

## 2. Test Configuration of Equipment under Test

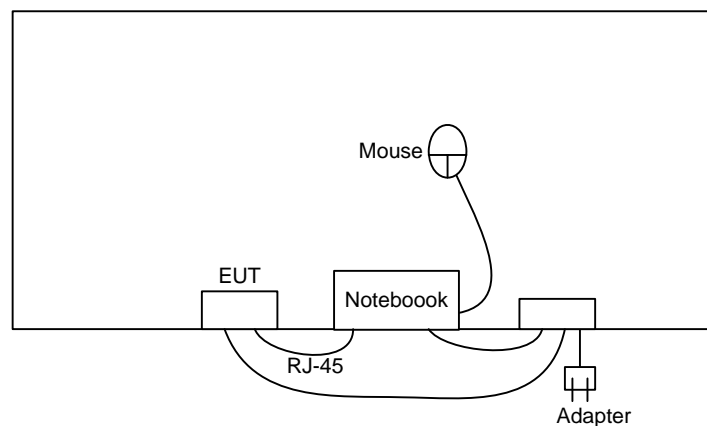
### 2.1 Test Manner

- a. The EUT has been setup pursuant to ANSI C63.4-2003 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.
- b. The complete test system refers to 2.2 for EMI test.
- c. The following test modes were tested for conduction test:  
Mode 1: 802.11g Rx\_CH06
- d. The following test modes were tested for radiation test:  
Mode 1: 802.11b Rx\_CH06  
Mode 2: 802.11g Rx\_CH06
- e. Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 13 GHz.

### 2.2 Description of Test System

Item	Asset	Model Name	Power Cord
1.	Notebook (DELL)	D400	N/A
2.	USB Mouse (Microsoft)	B75-00093	N/A
3.	RJ-45	N/A	Weave-shielded, 2.5m

### 2.3 Connection Diagram of Test System



### 3. Test Software

Programmed RF utility installed in notebook provides function for continuous receiving signal.



## 4. General Information of Test

### 4.1 Test Facility

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,  
Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.  
TEL : 886-3-327-3456  
FAX : 886-3-318-0055  
Test Site No. : CO01-HY, 03CH06-HY

### 4.2 Test Voltage

120V / 60Hz

### 4.3 Standard for Methods of Measurement

ANSI C63.4-2003

### 4.4 Test in Compliance with

FCC Part 15 Subpart B and IC RSS-210 Issue 6

### 4.5 Frequency Range Investigated

- a. Conduction: from 150 kHz to 30 MHz
- b. Radiation: from 30 MHz to 13000MHz

### 4.6 Test Distance

The test distance of radiated emission from antenna to EUT is 3m.

## 5. Test of Conducted Powerline

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz 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 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

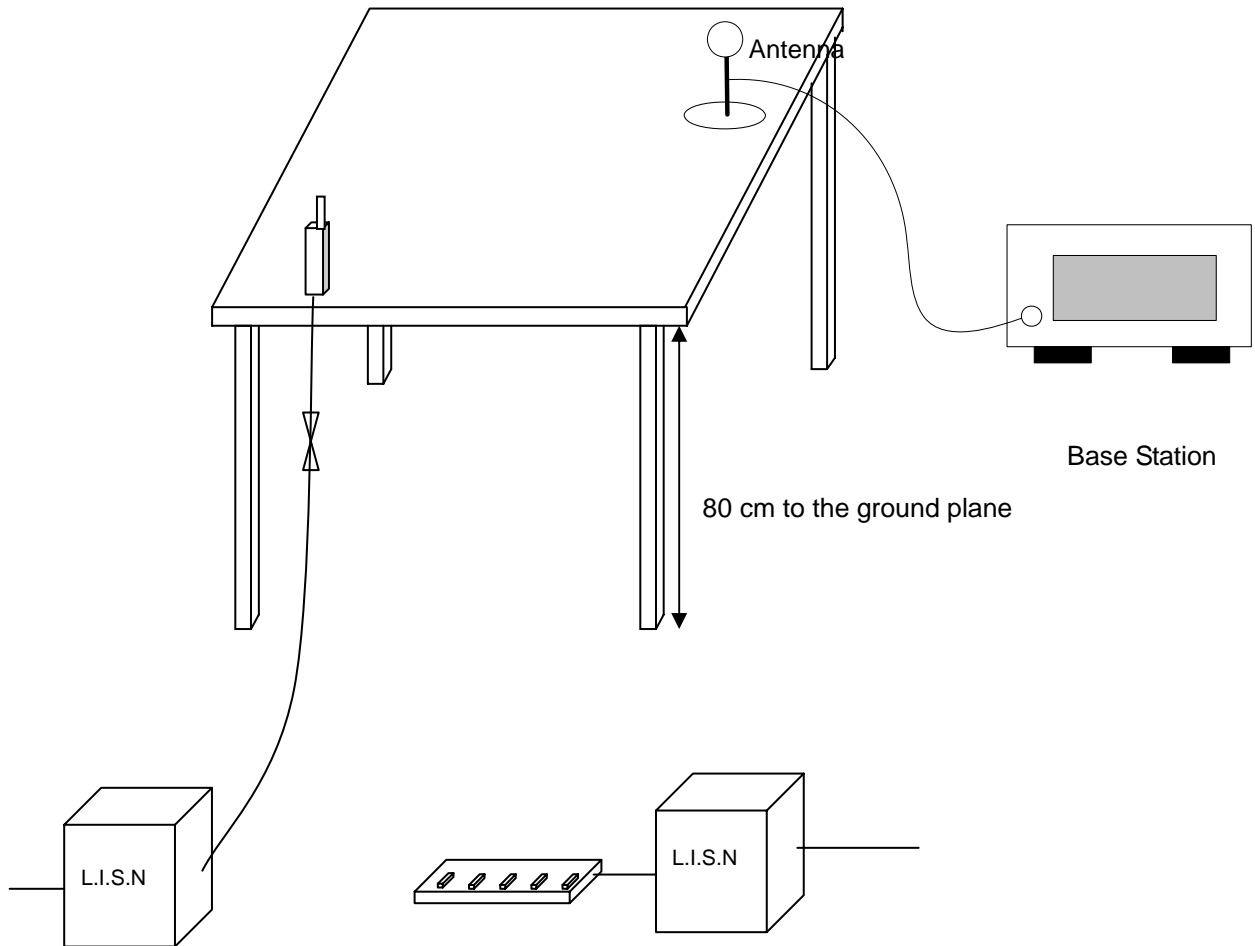
### 5.1 Major Measuring Instruments

As described in Chapter 7.

### 5.2 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 connect 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 microhenry 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.

**5.3 Typical Test Setup Layout of Conducted Powerline**

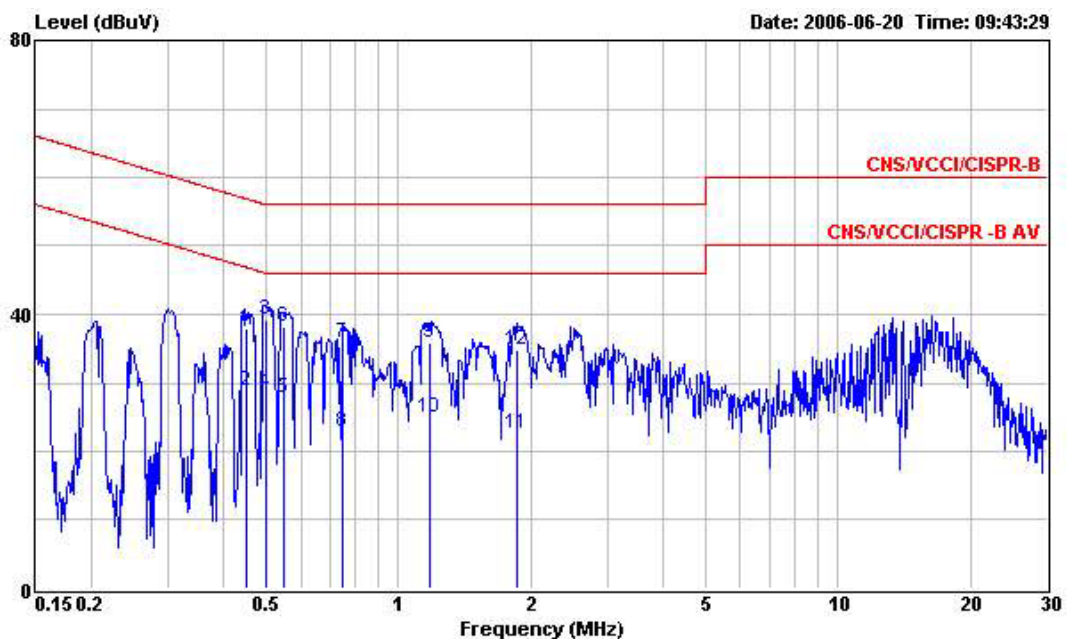


### 5.4 Test Result of AC Powerline Conducted Emission

#### 5.4.1 Test Mode: Mode 1

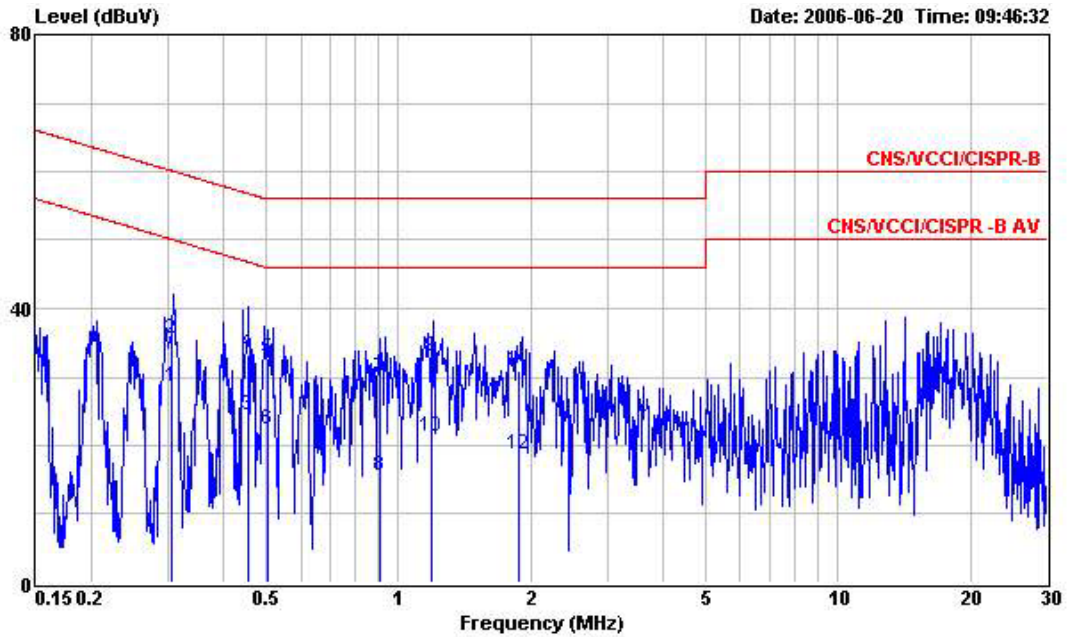
- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 21°C
- Relative Humidity: 63%
- Test Engineer: James
- All emissions not reported here are more than 10 dB below the prescribed limit.

The test that passed at the minimum margin was marked by a frame in the following data



Site : CO01-HY  
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE  
 EUT : WLAN Access Point  
 Power : 120V/60Hz  
 Model : FD661605  
 Memo : 11g R×CH06  
 Memo :  
 Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.450	38.03	-18.85	56.88	37.85	0.10	0.08	QP
2	0.450	28.71	-18.17	46.88	28.53	0.10	0.08	Average
3	0.502	39.10	-16.90	56.00	38.93	0.10	0.07	QP
4	0.502	28.53	-17.47	46.00	28.36	0.10	0.07	Average
5	0.550	27.79	-18.21	46.00	27.62	0.10	0.07	Average
6	0.550	38.21	-17.79	56.00	38.04	0.10	0.07	QP
7	0.748	35.81	-20.19	56.00	35.66	0.10	0.05	QP
8	0.748	22.81	-23.19	46.00	22.66	0.10	0.05	Average
9	1.183	35.96	-20.04	56.00	35.80	0.10	0.06	QP
10	1.183	24.90	-21.10	46.00	24.74	0.10	0.06	Average
11	1.860	22.66	-23.34	46.00	22.45	0.10	0.11	Average
12	1.860	34.68	-21.32	56.00	34.47	0.10	0.11	QP



```

Site       : CO01-HY
Condition  : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT       : WLAN Access Point
Power     : 120V/60Hz
Model     : FD661605
Memo      : 11g Rx CH06
Memo      :
Memo      :
    
```

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.304	28.45	-21.68	50.13	28.28	0.10	0.07	Average
2	0.304	35.54	-24.59	60.13	35.37	0.10	0.07	QP
3	0.455	24.38	-22.41	46.79	24.21	0.10	0.07	Average
4	0.455	33.49	-23.30	56.79	33.32	0.10	0.07	QP
5	0.507	32.75	-23.25	56.00	32.58	0.10	0.07	QP
6	0.507	22.40	-23.60	46.00	22.23	0.10	0.07	Average
7	0.912	29.78	-26.22	56.00	29.64	0.10	0.04	QP
8	0.912	15.56	-30.44	46.00	15.42	0.10	0.04	Average
9	1.193	32.97	-23.03	56.00	32.81	0.10	0.06	QP
10	1.193	21.38	-24.62	46.00	21.22	0.10	0.06	Average
11	1.879	30.86	-25.14	56.00	30.65	0.10	0.11	QP
12	1.879	18.70	-27.30	46.00	18.49	0.10	0.11	Average

### 5.5 Photographs of Conducted Powerline Test Configuration

Front View



Rear View



Side View



## 6. Test of Radiated Emission

Radiated emissions from 30 MHz to 13 GHz were measured with a bandwidth of 120 kHz and 1MHz according to the methods defines in ANSI C63.4-2003. The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

### 6.1 Major Measuring Instruments

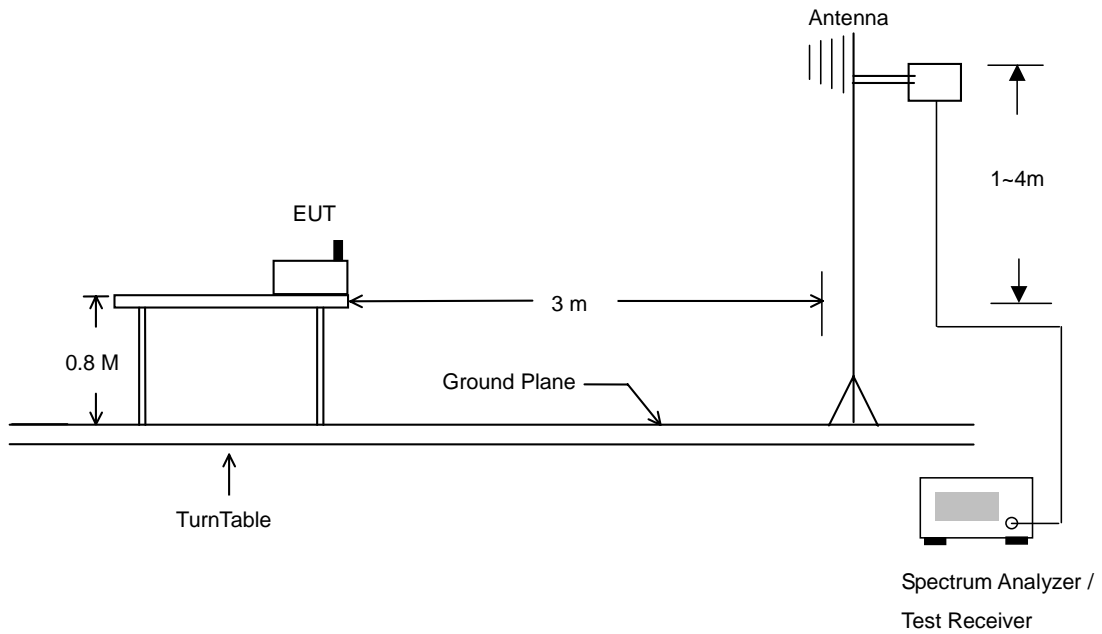
As described in Chapter 7.



## 6.2 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a Bi-Log antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both for horizontal polarization and vertical polarization of the antenna.
- e. 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 turntable (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.

### 6.3 Typical Test Setup Layout of Radiated Emission

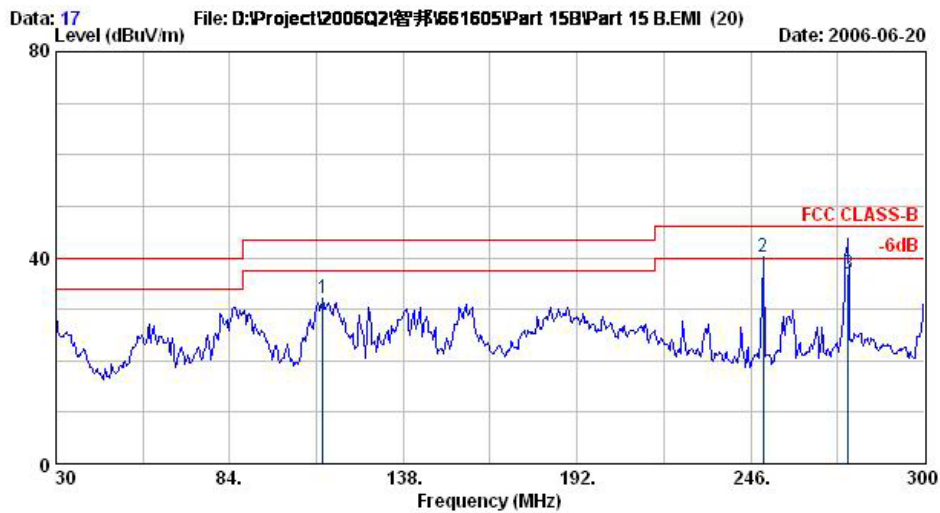


## 6.4 Test Result of Radiated Emission

### 6.4.1 Test Mode: Mode 1

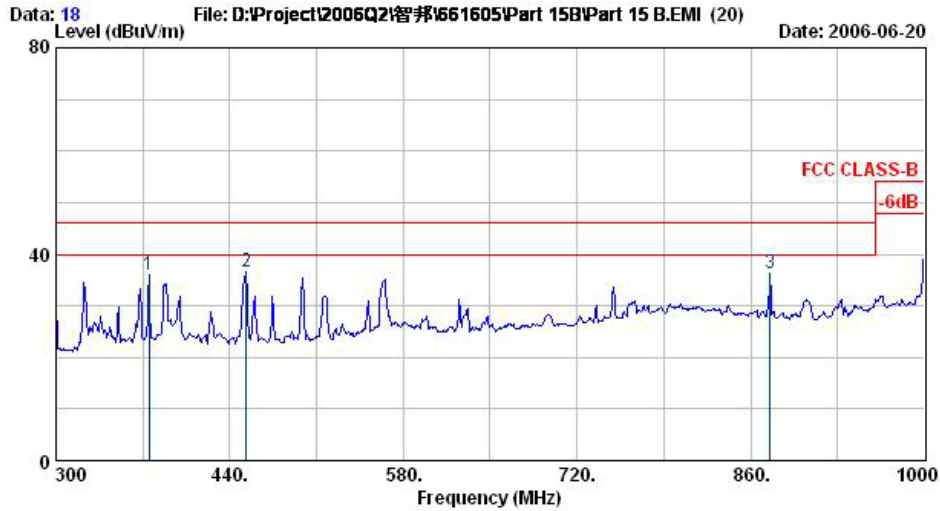
- Test Distance: 3m
- Temperature: 26°C
- Relative Humidity: 52%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Test Engineer: Andrew
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

The test that passed at the minimum margin was marked by a frame in the following data



Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11b Rx CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	112.89	32.10	-11.40	43.50	47.16	11.93	1.90	28.89	100	0	Peak
2 !	249.78	40.01	-5.99	46.00	54.30	11.73	2.96	28.98	100	0	Peak
3	276.24	37.02	-8.98	46.00	50.00	12.92	3.04	28.94	100	352	QP



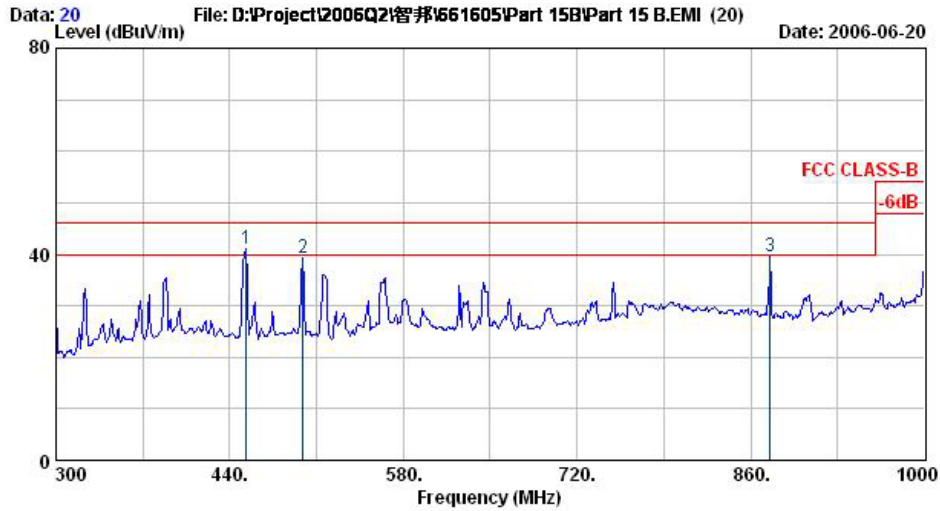
Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11b Rx CH06 2437MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	374.90	35.86	-10.14	46.00	46.10	15.16	3.67	29.07	100	0 Peak
2	453.30	36.56	-9.44	46.00	44.90	16.45	4.02	28.81	100	0 Peak
3	875.40	36.20	-9.80	46.00	39.04	20.42	5.65	28.91	100	0 Peak



Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11b Rx CH06 2437MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	32.43	36.71	-3.29	40.00	46.60	17.73	1.01	28.63	100	56 QP
2 @	58.89	36.72	-3.28	40.00	57.27	6.89	1.21	28.65	100	360 Peak
3	249.78	39.85	-6.15	46.00	54.14	11.73	2.96	28.98	100	360 Peak



Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11b Rx CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 !	453.30	41.03	-4.97	46.00	49.38	16.45	4.02	28.81	100	0	Peak
2	498.80	39.36	-6.64	46.00	46.91	17.10	4.18	28.82	100	0	Peak
3	875.40	39.42	-6.58	46.00	42.26	20.42	5.65	28.91	100	0	Peak

**6.4.2 Test Mode: Mode 2**

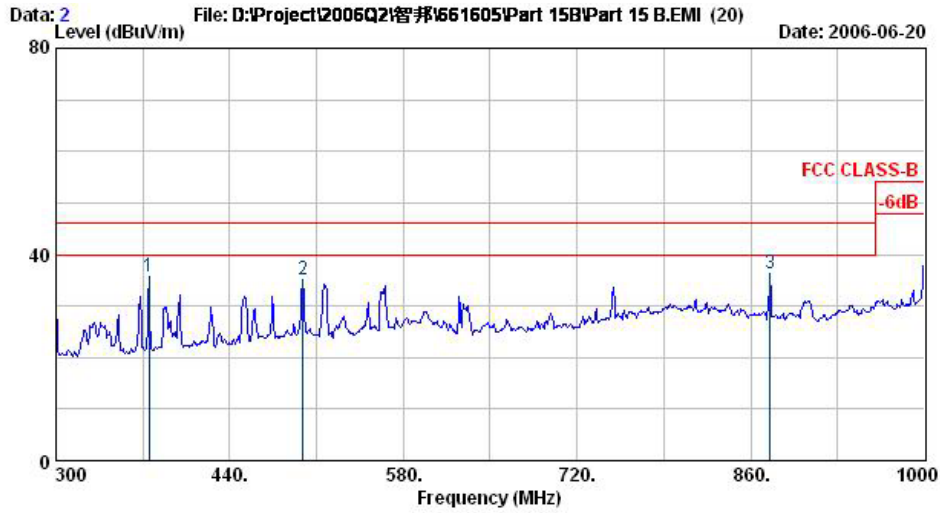
- Test Distance: 3m
- Temperature: 26°C
- Relative Humidity: 52%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Test Engineer: Andrew
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

**The test that passed at the minimum margin was marked by a frame in the following data**



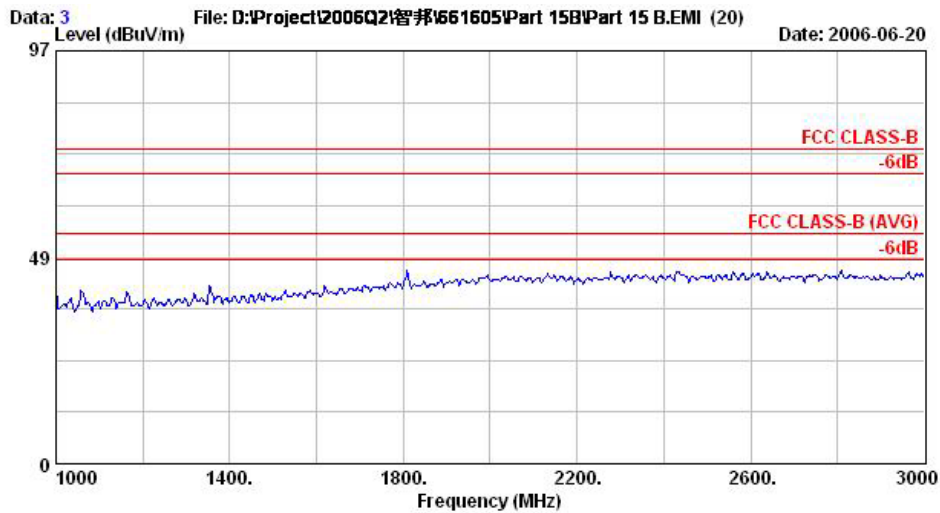
Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	85.08	36.51	-3.49	40.00	55.59	8.06	1.63	28.77	120	256	Peak
2	249.78	38.78	-7.22	46.00	53.07	11.73	2.96	28.98	400	0	Peak
3	276.24	37.17	-8.83	46.00	50.15	12.92	3.04	28.94	400	0	Peak

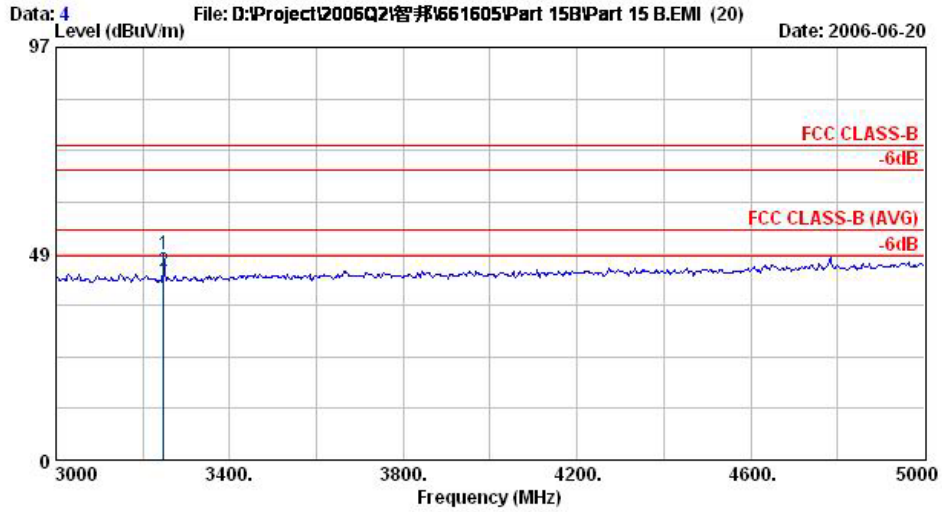


Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	374.90	35.61	-10.39	46.00	45.85	15.16	3.67 29.07	100	0	Peak
2	498.80	35.18	-10.82	46.00	42.72	17.10	4.18 28.82	100	0	Peak
3	875.40	36.33	-9.67	46.00	39.17	20.42	5.65 28.91	100	0	Peak

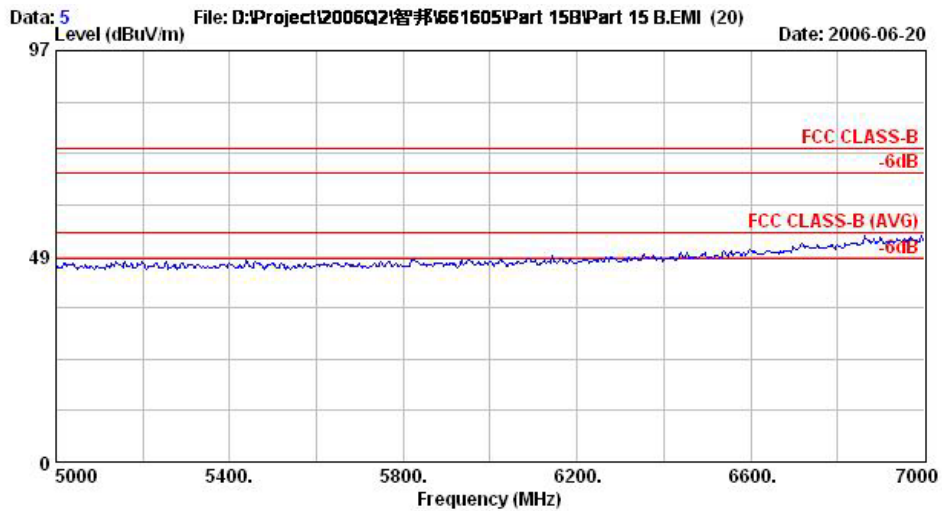


Site : 03CH06-HY  
 Condition : HF-ANT-060410 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz



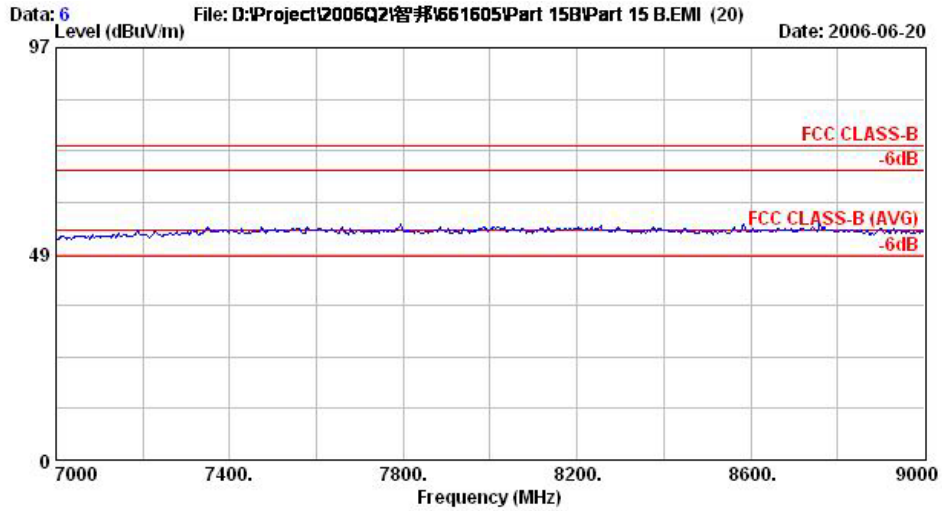
Site : 03CH06-HY  
 Condition : HF-ANT-060410 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	3248.00	48.31	-25.69	74.00	49.09	29.74	5.05	35.57	100	0	Peak
2	3248.00	44.50	-9.50	54.00	45.28	29.74	5.05	35.57	100	50	Average

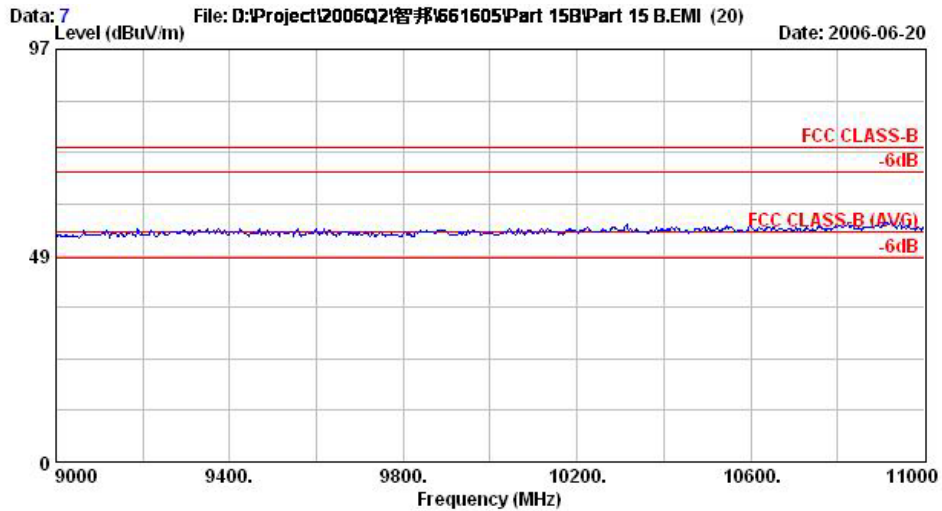


Site : 03CH06-HY  
 Condition : HF-ANT-060410 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz

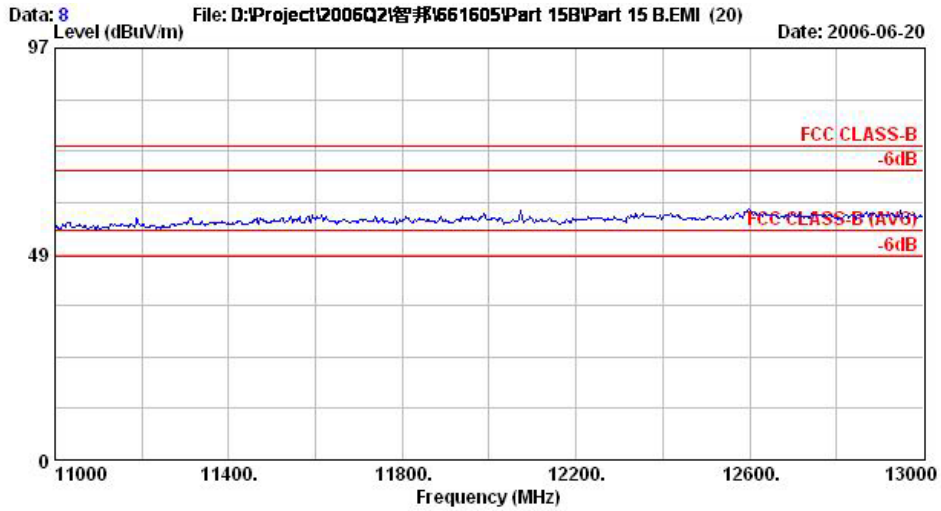




Site : 03CH06-HY  
 Condition : HF-ANT-060410 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz



Site : 03CH06-HY  
 Condition : HF-ANT-060410 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz

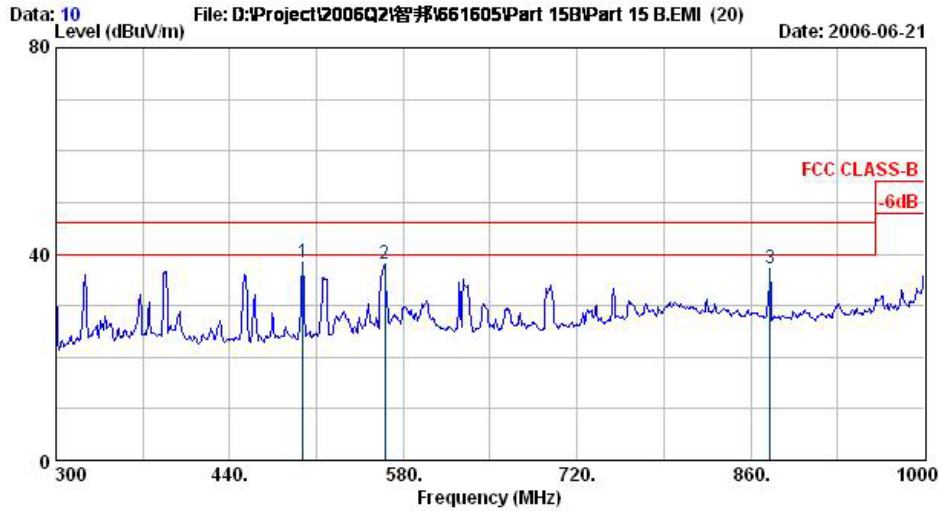


Site : 03CH06-HY  
 Condition : HF-ANT-060410 HORIZONTAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx: CH06 2437MHz



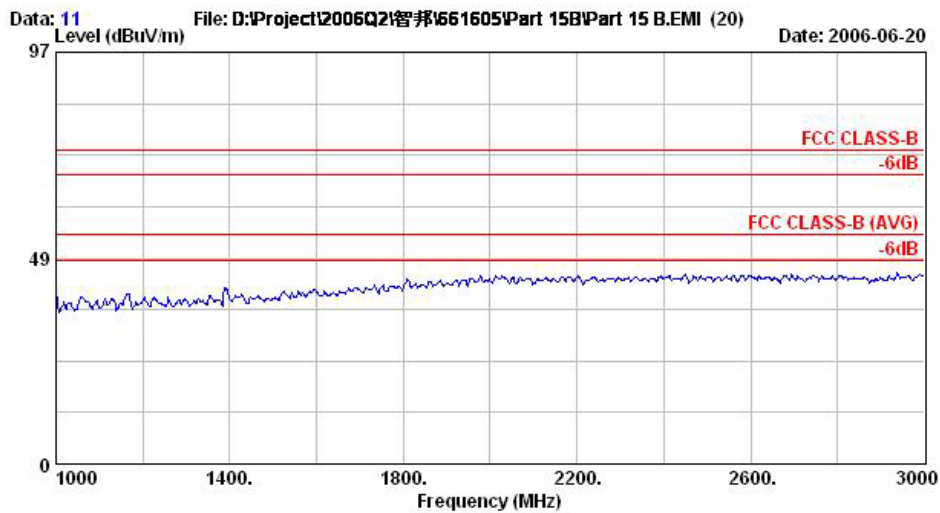
Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx: CH06 2437MHz

	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	32.43	37.51	-2.49	40.00	47.40	17.73	1.01	28.63	100	41 QP
2 @	58.89	36.70	-3.30	40.00	57.24	6.89	1.21	28.65	400	0 Peak
3	249.78	39.24	-6.76	46.00	53.53	11.73	2.96	28.98	400	0 Peak

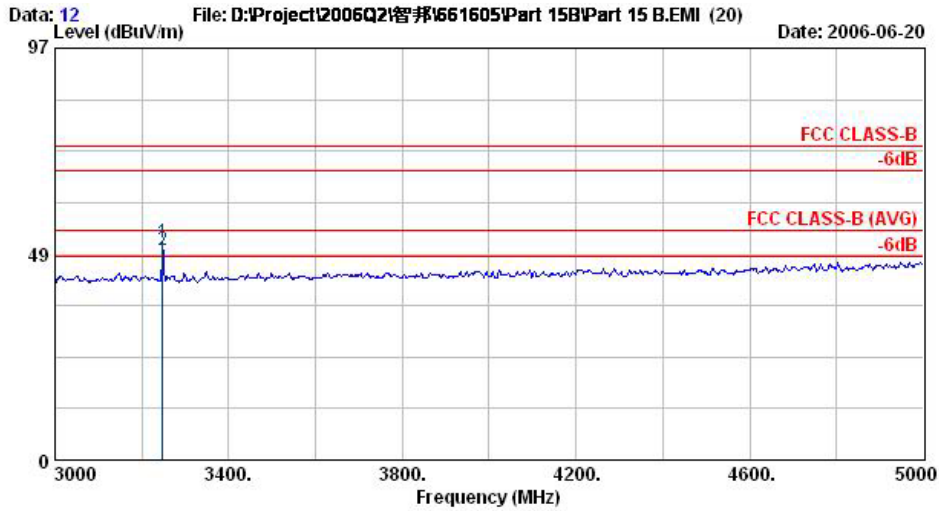


Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	498.80	38.23	-7.77	46.00	45.77	17.10	4.18	28.82	200	0 Peak
2	565.30	37.93	-8.07	46.00	44.01	18.46	4.45	29.00	200	0 Peak
3	875.40	37.18	-8.82	46.00	40.02	20.42	5.65	28.91	200	0 Peak

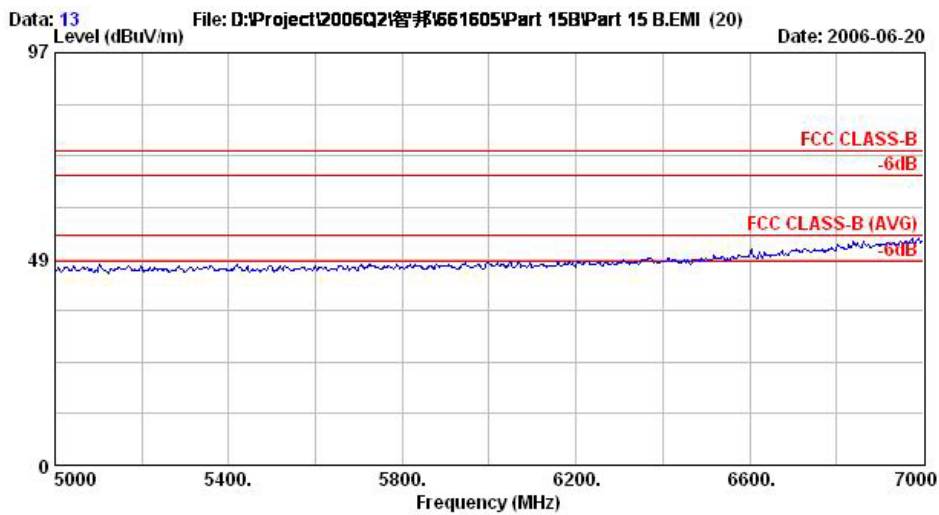


Site : 03CH06-HY  
 Condition : HF-ANT-060410 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx CH06 2437MHz

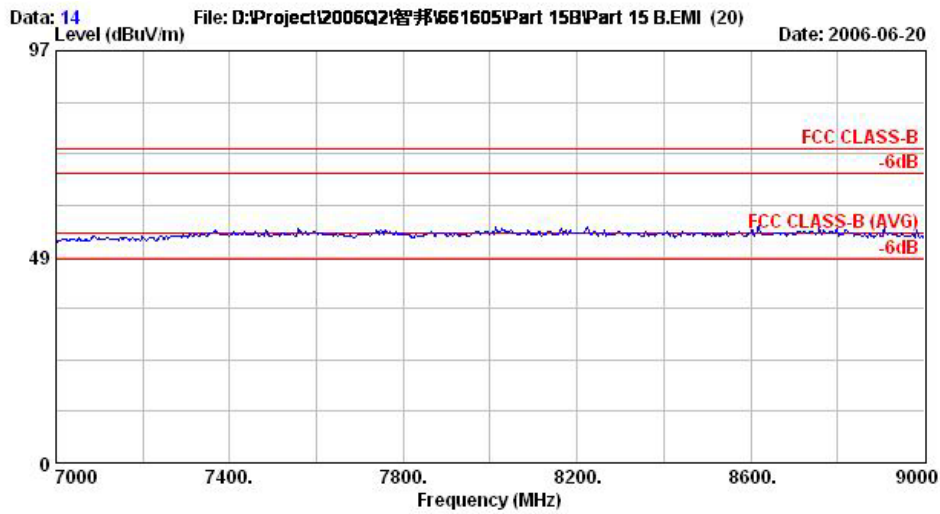


Site : 03CH06-HY  
 Condition : HF-ANT-060410 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx: CH06 2437MHz

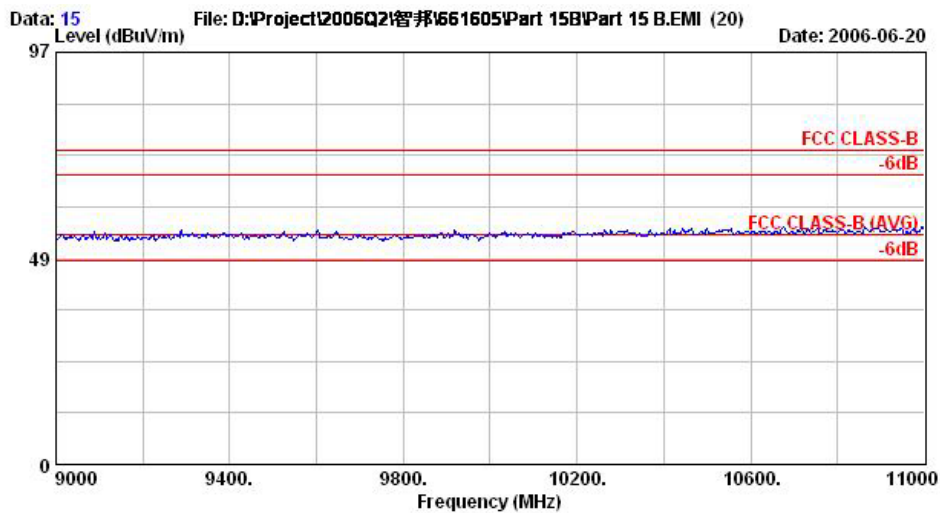
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	3248.00	51.28	-22.72	74.00	52.06	29.74	5.05	35.57	100	0 Peak
2	3248.00	49.54	-4.46	54.00	50.32	29.74	5.05	35.57	100	236 Average



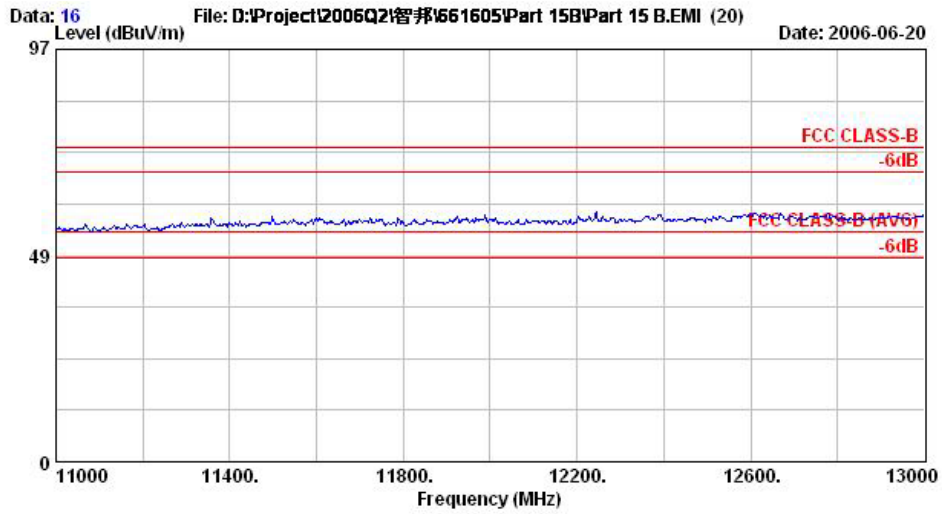
Site : 03CH06-HY  
 Condition : HF-ANT-060410 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx: CH06 2437MHz



Site : 03CH06-HY  
 Condition : HF-ANT-060410 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx: CH06 2437MHz



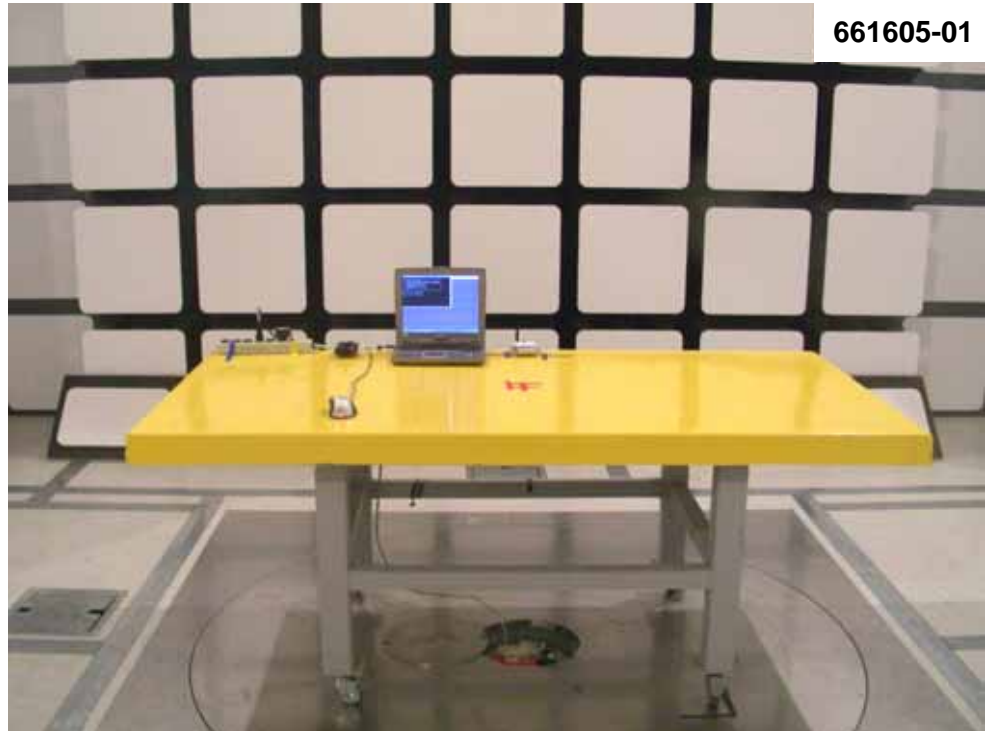
Site : 03CH06-HY  
 Condition : HF-ANT-060410 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rx: CH06 2437MHz



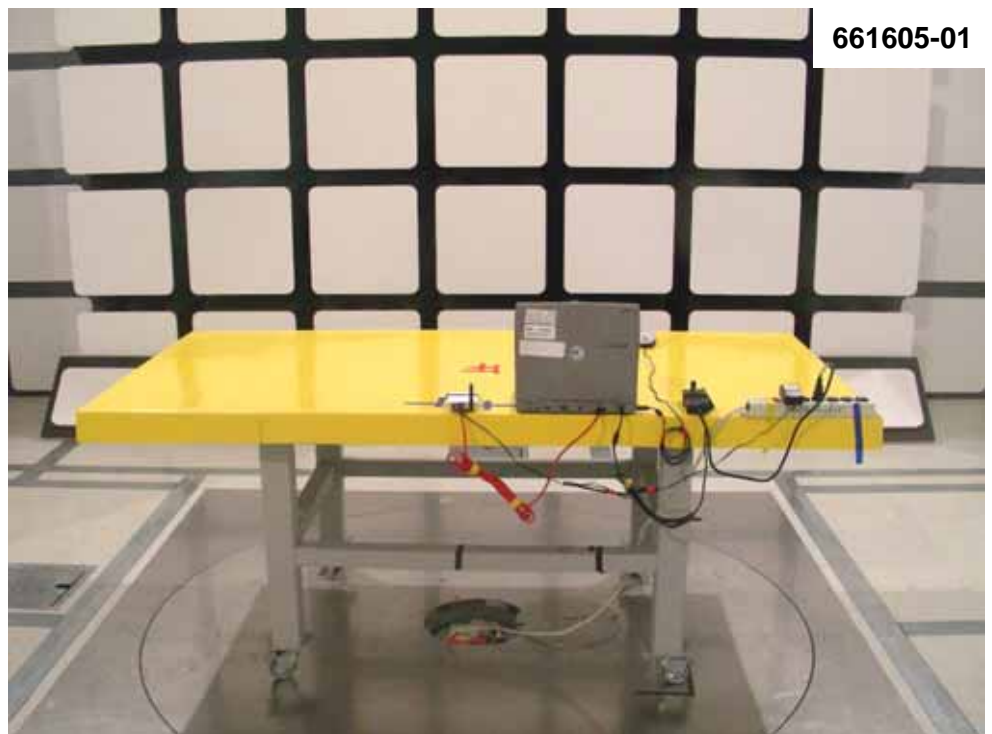
Site : 03CH06-HY  
 Condition : HF-ANT-060410 VERTICAL  
 EUT : WLAN Access Point  
 Power : 120Vac/60Hz  
 Model : FD 661605  
 Memo : 11g Rxt CH06 2437MHz

### 6.5 Photographs of Radiated Emission Test Configuration

FRONT VIEW



REAR VIEW



## 7. List of Measuring Equipment Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz – 2.75GHz	Oct. 19, 2005	Oct. 19, 2006	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 29, 2006	Mar. 29, 2007	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Apr. 19, 2006	Apr. 19, 2007	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9kHz – 30MHz	Dec. 22, 2005	Dec. 22, 2006	Conduction (CO01-HY)
Spectrum analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Jul. 25, 2005	Jul. 24, 2006	Radiation (03CH06-HY)
Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jun. 28, 2005	Jun. 27, 2006	Radiation (03CH06-HY)
Controller	CT	SC100	N/A	N/A	N/A	N/A	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 22, 2004	Nov. 22, 2006	Radiation (03CH06-HY)
Horn Antenna	Com-Power	AH118	071025	1G-18G	Feb. 1, 2005	Feb. 1, 2007	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jul. 21, 2005	Jul. 20, 2006	Radiation (03CH06-HY)
Amplifier	MITEQ	AMF-6F	997165	26G - 40G	Jul. 21, 2005	Jul. 20, 2006	Radiation (03CH06-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH06-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation (03CH06-HY)



## 8. Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of $x_i$		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
<b>combined standard uncertainty Uc(y)</b>	<b>1.13</b>		
<b>Measuring uncertainty for a level of confidence of 95% U=2Uc(y)</b>	<b>2.26</b>		

### Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of $x_i$		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
<b>combined standard uncertainty Uc(y)</b>	<b>1.27</b>		
<b>Measuring uncertainty for a level of confidence of 95% U=2Uc(y)</b>	<b>2.54</b>		

**Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)**

Contribution	Uncertainty of $x_i$		$u(x_i)$	$C_i$	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
<b>Combined standard uncertainty <math>U_c(y)</math></b>	<b>2.36</b>				
<b>Measuring uncertainty for a level of confidence of 95% <math>U = 2U_c(y)</math></b>	<b>4.72</b>				

## 9. Certificate of NVLAP Accreditation

United States Department of Commerce  
National Institute of Standards and Technology



### Certificate of Accreditation to ISO/IEC 17025:1999

NVLAP LAB CODE: 200079-0

**Sporton International, Inc. Hwa Ya EMC Laboratory**

Tao Yuan Hsien 333

TAIWAN

*is recognized by the National Voluntary Laboratory Accreditation Program for conformance with criteria set forth in NIST Handbook 150:2001 and all requirements of ISO/IEC 17025:1999.*

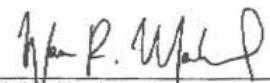
*Accreditation is granted for specific services, listed on the Scope of Accreditation, for:*

**ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS**

2006-01-01 through 2006-12-31

*Effective dates*



  
*For the National Institute of Standards and Technology*