



# FCC TEST REPORT

**REPORT NO.:** RF910508R01

**MODEL NO.:** DWL-5000AP

WAP-A11j

AP-21

**RECEIVED:** May 8, 2002

**TESTED:** May 17 ~ June 18, 2002

**APPLICANT:** D-LINK CORPORATION

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**ISSUED BY:** Advance Data Technology Corporation

**LAB LOCATION:** 47 14th Lin, Chiapau Tsun, Linko, Taipei,  
Taiwan, R.O.C.

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0528  
ILAC MRA



Lab Code: 200102-0



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## 1 CERTIFICATION

**PRODUCT :** IEEE 802.11a WLAN Access Point  
**BRAND NAME :** D-Link  
**MODEL NO. :** DWL-5000AP  
WAP-A11j  
AP-21  
**APPLICANT :** D-Link Corporation  
**STANDARDS :** 47 CFR Part 15, Subpart E (Section 15.407),  
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from May 17, 2002 to June 18, 2002, The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

CHECKED BY : Emily Lu , DATE : June 25, 2002  
Emily Lu

APPROVED BY : Alan Lane , DATE : June 25, 2002  
Dr. Alan Lane, Manager



## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| <b>APPLIED STANDARD: 47 CFR Part 15, Subpart E</b> |   |               |   |
|--|---|---------------|---|
| <b>Standard Section</b>                            | <b>Test Type</b>  | <b>Result</b> | <b>REMARK</b>   |
| 15.407(b)(5)                                       | AC Power Conducted Emission   | PASS          | Meet the requirement of limit<br>Minimum passing margin is -2.28dBuV at 1.594MHz    |
| 15.407(b)(5)                                       | Electric Field Strength Spurious Emissions, 30 MHz – 40000 MHz (Transmitting) | PASS          | Meet the requirement of limit<br>Minimum passing margin is -2.10dBuV at 10641.00MHz |
| 15.407(a/1/2/3)                                    | Peak Transmit Power   | PASS          | Meet the requirement of limit   |
| 15.407(a)(6)                                       | Peak Power Excursion  | PASS          | Meet the requirement of limit   |
| 15.407(a/1/2/3)                                    | Peak Power Spectral Density   | PASS          | Meet the requirement of limit   |
| 15.407(b1/2/3)                                     | Effective Isotropic Radiated Power Spurious Emissions, 1 GHz – 40 GHz         | PASS          | Meet the requirement of limit<br>Minimum passing margin is -2.5dBm at 10357.92MHz   |
| 15.407(g)  | Frequency Stability   | PASS          | Meet the requirement of limit   |



### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                                   |   |
|-----------------------------------|---|
| <b>PRODUCT</b>                    | IEEE 802.11a WLAN Access Point                      |
| <b>MODEL NO.</b>                  | DWL-5000AP<br>WAP-A11j<br>AP-21                     |
| <b>POWER SUPPLY</b>               | 3.3VDC from power adapter                           |
| <b>MODULATION TYPE</b>            | OFDM  |
| <b>TRANSFER RATE</b>              | 6 to 54Mbps (Turbo mode: up to 108Mbps *see note 3) |
| <b>FREQUENCY RANGE</b>            | 5.15~5.85GHz  |
| <b>BAND WIDTH OF EACH CHANNEL</b> | 20MHz   |
| <b>NUMBER OF CHANNEL</b>          | 12  |
| <b>OUTPUT POWER</b>               | 19dBm   |
| <b>ANTENNA TYPE</b>               | Dipole Antenna                                      |
| <b>DATA CABLE</b>                 | NA  |
| <b>I/O PORTS</b>                  | RJ45 port   |
| <b>ASSOCIATED DEVICES</b>         | NA  |

**NOTE:**

1. The EUT was operated with power adapter as following:

|                       |                         |
|-----------------------|-------------------------|
| <b>BRAND :</b>        | LT.E                    |
| <b>MODEL :</b>        | SWP01211033             |
| <b>INPUT POWER :</b>  | 100-120V, 50-60Hz, 0.5A |
| <b>OUTPUT POWER :</b> | 3.3V, 2.6A              |

2. Three models are identical except for their outer appearance and colors.
3. This EUT is capable of providing data rates of up to 108Mbps in Turbo Mode depending upon reception quality.
4. For more detailed features description, please refer to the manufacturer's specifications or User's Manual.



### 3.2 DESCRIPTION OF TEST MODES

Twelve channels are provided to this EUT for Normal Mode.

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 1       | 5180 MHz  | 7       | 5300 MHz  |
| 2       | 5200 MHz  | 8       | 5320 MHz  |
| 3       | 5220 MHz  | 9       | 5745 MHz  |
| 4       | 5240 MHz  | 10      | 5765 MHz  |
| 5       | 5260 MHz  | 11      | 5785 MHz  |
| 6       | 5280 MHz  | 12      | 5805 MHz  |

Five channels are provided to this EUT for Turbo Mode.

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 1       | 5210 MHz  | 4       | 5760 MHz  |
| 2       | 5250 MHz  | 5       | 5800 MHz  |
| 3       | 5290 MHz  |         |           |

**NOTE:**

1. The EUT was transmitting at full power on the specified channel with a duty cycle of 99% (maximum allowed). The EUT was tested in both normal mode (channel bandwidth of approximately 30MHz) and turbo mode (channel bandwidth of approximately 60MHz).
2. "Normal Mode" allows data rates of up to 54Mbps. The device was, therefore, tested in Normal mode at the data rate that produced the highest output power for normal mode (6Mbps).
3. "Turbo Mode" allows data rates of up to 108Mbps. At data rates higher than 12Mbps the PA gain is reduced to improve signal fidelity. The device was, therefore, tested in turbo mode at the data rate that produced the highest output power for turbo mode (12Mbps).
4. Channel 1, 4, 5, 8, 9, 12 were chosen for final test of Normal Mode.
5. Channel 1, 3, 4, 5 were chosen for final test of Turbo Mode.

### 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an IEEE 802.11a WLAN Access Point. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC CFR 47 Part 15, Subpart E. (15.407)**

**ANSI C63.4 : 1992**

All tests have been performed and recorded as per the above standards.

**NOTE:** The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



### 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.

| NO. | PRODUCT               | BRAND  | MODEL NO.  | SERIAL NO.               | FCC ID           |
|-----|-----------------------|--------|------------|--------------------------|------------------|
| 1   | NOTEBOOK              | DELL   | PP01L      | TW-09C748-12800-190-B220 | FCC DOC APPROVED |
| 2   | FAST ETHERNET PC CARD | D-Link | DFE-680TXD | RE1A044413               | MQ4FE2K5MX       |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|---|
| 1   | NA  |
| 2   | NA  |

**NOTE:** All power cords of the above support units are non shielded (1.8m).





## 4 TEST TYPES AND RESULTS

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

| FREQUENCY (MHz) | Class B (dBuV) |         |
|-----------------|----------------|---------|
|                 | Quasi-peak     | Average |
| 0.45 – 30       | 48             | -       |

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 4.1.2 TEST INSTRUMENTS

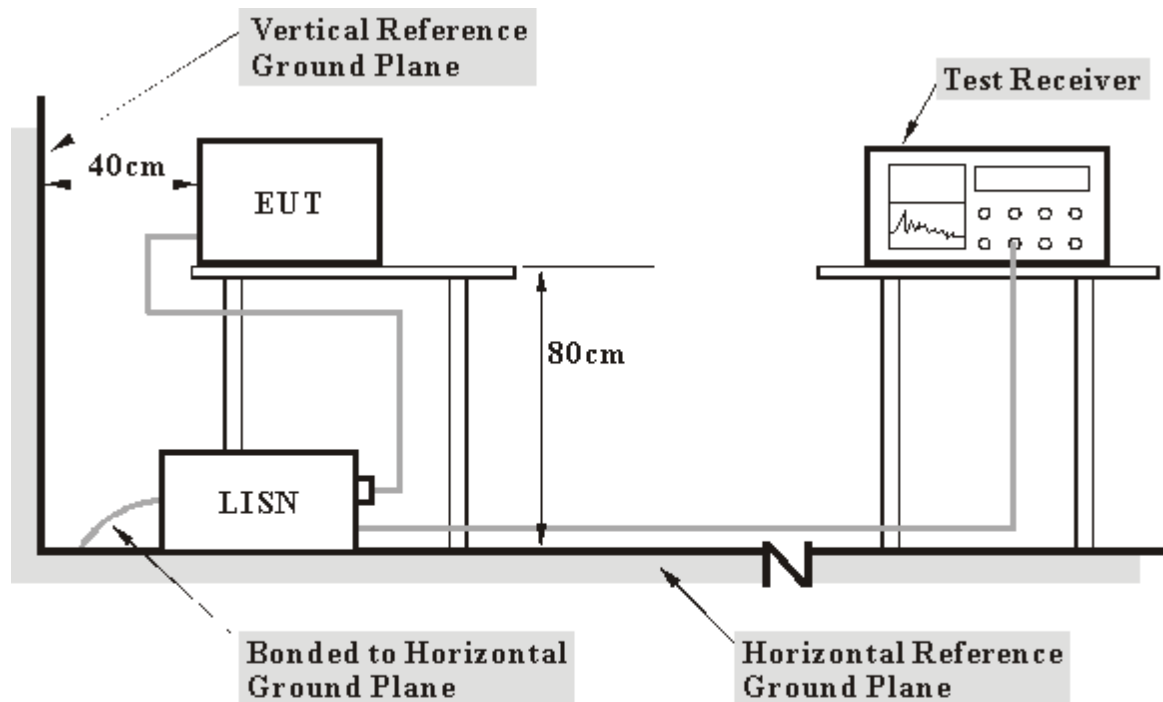
| DESCRIPTION & MANUFACTURER                         | MODEL NO. | SERIAL NO.   | CALIBRATED UNTIL |
|--|-----------|--------------|------------------|
| ROHDE & SCHWARZ Test Receiver                      | ESCS30    | 845552/004   | June 20, 2003    |
| ROHDE & SCHWARZ Artificial Mains Network (for EUT) | ESH2-Z5   | 828075/003   | July 19, 2002    |
| ROHDE & SCHWARZ 200-A Four-line V-Network          | ENV4200   | 830326/018   | Oct. 25, 2002    |
| * ROHDE & SCHWARZ 4-wire ISN                       | ENY41     | 838119/028   | Dec. 2, 2002     |
| * ROHDE & SCHWARZ 2-wire ISN                       | ENY22     | 837497/018   | Dec. 2, 2002     |
| EMCO-L.I.S.N. (for peripheral)                     | 3825/2    | 90031627     | July 19, 2002    |
| Software   | Cond-V2L  | NA           | NA               |
| RF cable (JYEBAO)                                  | 5D-FB     | Cable-C05.01 | July 19, 2002    |
| LYNICS Terminator (For EMCO LISN)                  | 0900510   | E1-01-305    | Feb. 20, 2003    |
| LYNICS Terminator (For EMCO LISN)                  | 0900510   | E1-01-306    | Feb. 20, 2003    |
| Shielded Room                                      | Site 5    | ADT-C05      | NA               |
| VCCI Site Registration No.                         | Site 5    | C-1093       | NA               |

- NOTE: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. “\*”: These equipment are used for conducted telecom port test only (if tested).

#### 4.1.3 TEST PROCEDURES

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 450 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

#### 4.1.4 TEST SETUP



- Note:**
- Support units were connected to second LISN.
  - Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.



#### 4.1.5 EUT OPERATING CONDITIONS

- a. Placed the EUT on the testing table..
- b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
- c. The communication partner run a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ 45 cable.
- d. The communication partner sent data to EUT by command "PIN".



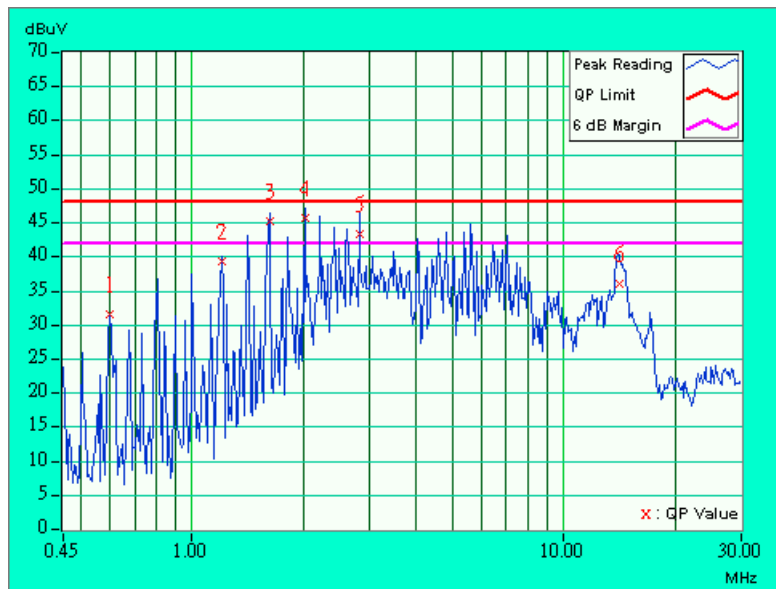
4.1.6 TEST RESULTS (TRANSMITTING)

|                                 |                                |                             |            |
|---------------------------------|--------------------------------|-----------------------------|------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP |
| <b>MODE</b>                     | Normal                         | <b>6dB BANDWIDTH</b>        | 9 kHz      |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz                  | <b>PHASE</b>                | Line (L)   |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1005 hPa     | <b>TESTED BY:</b> Bunny Yao |            |

| No | Freq.  | Corr. Factor | Reading Value [dB (uV)] |     | Emission Level [dB (uV)] |     | Limit [dB (uV)] |     | Margin (dB) |     |
|----|--------|--------------|-------------------------|-----|--------------------------|-----|-----------------|-----|-------------|-----|
|    | [MHz]  |              | Q.P.                    | AV. | Q.P.                     | AV. | Q.P.            | AV. | Q.P.        | AV. |
| 1  | 0.602  | 0.13         | 30.85                   | -   | 30.98                    | -   | 48.00           | -   | -17.02      | -   |
| 2  | 1.203  | 0.20         | 38.60                   | -   | 38.80                    | -   | 48.00           | -   | -9.20       | -   |
| 3  | 1.613  | 0.20         | 44.50                   | -   | 44.70                    | -   | 48.00           | -   | -3.30       | -   |
| 4  | 2.008  | 0.20         | 45.06                   | -   | 45.26                    | -   | 48.00           | -   | -2.74       | -   |
| 5  | 2.820  | 0.28         | 42.78                   | -   | 43.06                    | -   | 48.00           | -   | -4.94       | -   |
| 6  | 14.043 | 0.68         | 35.33                   | -   | 36.01                    | -   | 48.00           | -   | -11.99      | -   |

**NOTE:**

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



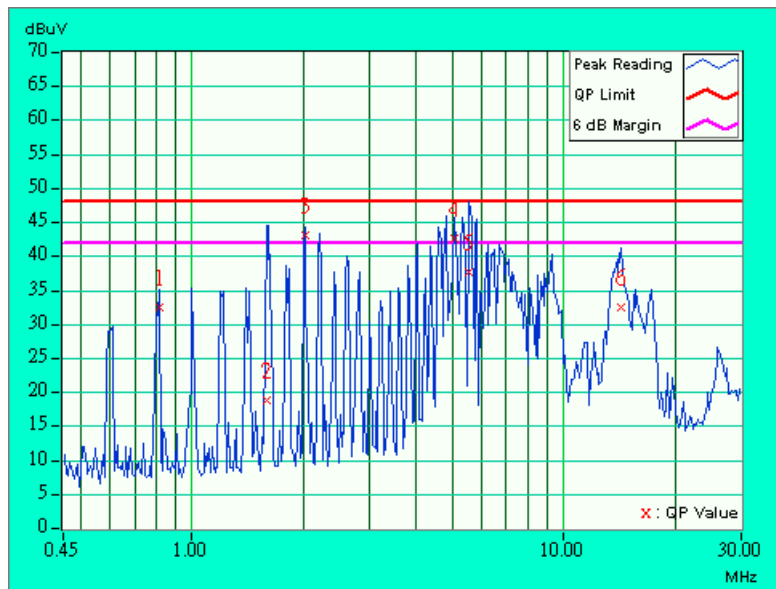


|                                 |                                |                             |             |
|---------------------------------|--------------------------------|-----------------------------|-------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP  |
| <b>MODE</b>                     | Normal                         | <b>6dB BANDWIDTH</b>        | 9 kHz       |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz                  | <b>PHASE</b>                | Neutral (N) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1005 hPa     | <b>TESTED BY:</b> Bunny Yao |             |

| No | Freq.  | Corr. Factor | Reading Value [dB (uV)] |     | Emission Level [dB (uV)] |     | Limit [dB (uV)] |     | Margin (dB) |     |
|----|--------|--------------|-------------------------|-----|--------------------------|-----|-----------------|-----|-------------|-----|
|    | [MHz]  | (dB)         | Q.P.                    | AV. | Q.P.                     | AV. | Q.P.            | AV. | Q.P.        | AV. |
| 1  | 0.813  | 0.17         | 31.93                   | -   | 32.10                    | -   | 48.00           | -   | -15.90      | -   |
| 2  | 1.582  | 0.20         | 18.31                   | -   | 18.51                    | -   | 48.00           | -   | -29.49      | -   |
| 3  | 2.020  | 0.20         | 42.54                   | -   | 42.74                    | -   | 48.00           | -   | -5.26       | -   |
| 4  | 5.059  | 0.32         | 42.13                   | -   | 42.45                    | -   | 48.00           | -   | -5.55       | -   |
| 5  | 5.574  | 0.33         | 37.27                   | -   | 37.60                    | -   | 48.00           | -   | -10.40      | -   |
| 6  | 14.285 | 0.49         | 32.15                   | -   | 32.64                    | -   | 48.00           | -   | -15.36      | -   |

**NOTE:**

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
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5. Emission Level = Reading Value + Correction Factor.



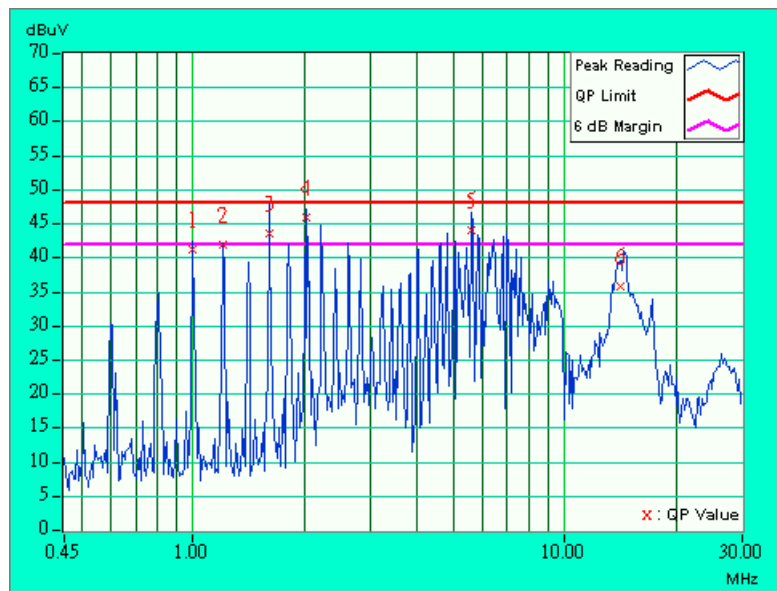


|                                 |                                |                             |            |
|---------------------------------|--------------------------------|-----------------------------|------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP |
| <b>MODE</b>                     | Turbo                          | <b>6dB BANDWIDTH</b>        | 9 kHz      |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz                  | <b>PHASE</b>                | Line (L)   |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1005 hPa     | <b>TESTED BY:</b> Bunny Yao |            |

| No | Freq.  | Corr. Factor | Reading Value [dB (uV)] |     | Emission Level [dB (uV)] |     | Limit [dB (uV)] |     | Margin (dB) |     |
|----|--------|--------------|-------------------------|-----|--------------------------|-----|-----------------|-----|-------------|-----|
|    | [MHz]  |              | Q.P.                    | AV. | Q.P.                     | AV. | Q.P.            | AV. | Q.P.        | AV. |
| 1  | 1.000  | 0.20         | 40.58                   | -   | 40.78                    | -   | 48.00           | -   | -7.22       | -   |
| 2  | 1.203  | 0.20         | 41.23                   | -   | 41.43                    | -   | 48.00           | -   | -6.57       | -   |
| 3  | 1.596  | 0.20         | 42.99                   | -   | 43.19                    | -   | 48.00           | -   | -4.81       | -   |
| 4  | 2.008  | 0.20         | 45.34                   | -   | 45.54                    | -   | 48.00           | -   | -2.46       | -   |
| 5  | 5.621  | 0.45         | 43.38                   | -   | 43.83                    | -   | 48.00           | -   | -4.17       | -   |
| 6  | 14.086 | 0.68         | 35.10                   | -   | 35.78                    | -   | 48.00           | -   | -12.22      | -   |

**NOTE:**

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



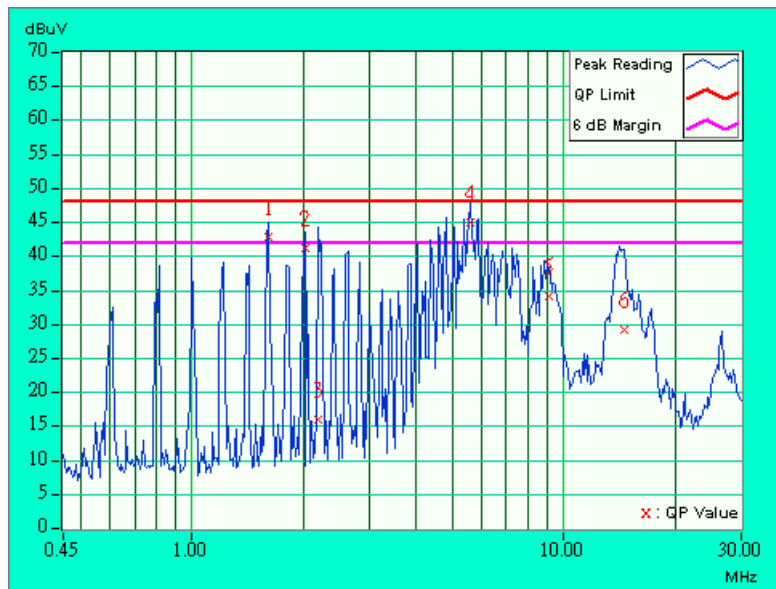


|                                 |                                |                             |             |
|---------------------------------|--------------------------------|-----------------------------|-------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP  |
| <b>MODE</b>                     | Turbo                          | <b>6dB BANDWIDTH</b>        | 9 kHz       |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz                  | <b>PHASE</b>                | Neutral (N) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1005 hPa     | <b>TESTED BY:</b> Bunny Yao |             |

| No | Freq.  | Corr. Factor | Reading Value [dB (uV)] |     | Emission Level [dB (uV)] |     | Limit [dB (uV)] |     | Margin (dB) |     |
|----|--------|--------------|-------------------------|-----|--------------------------|-----|-----------------|-----|-------------|-----|
|    | [MHz]  |              | Q.P.                    | AV. | Q.P.                     | AV. | Q.P.            | AV. | Q.P.        | AV. |
| 1  | 1.602  | 0.20         | 42.47                   | -   | 42.67                    | -   | 48.00           | -   | -5.33       | -   |
| 2  | 2.012  | 0.20         | 40.72                   | -   | 40.92                    | -   | 48.00           | -   | -7.08       | -   |
| 3  | 2.180  | 0.21         | 15.43                   | -   | 15.64                    | -   | 48.00           | -   | -32.36      | -   |
| 4  | 5.586  | 0.33         | 44.49                   | -   | 44.82                    | -   | 48.00           | -   | -3.18       | -   |
| 5  | 9.082  | 0.38         | 33.79                   | -   | 34.17                    | -   | 48.00           | -   | -13.83      | -   |
| 6  | 14.465 | 0.49         | 28.62                   | -   | 29.11                    | -   | 48.00           | -   | -18.89      | -   |

**NOTE:**

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.





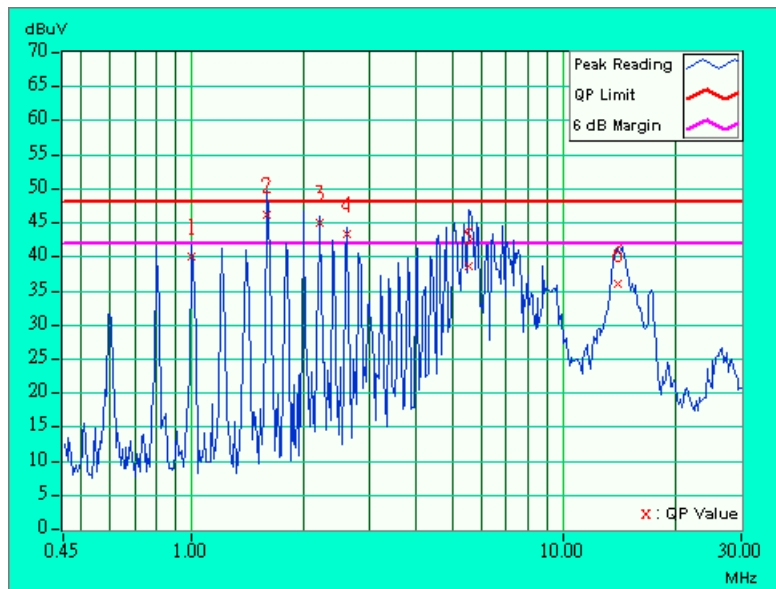
4.1.7 TEST RESULTS (RECEIVING)

|                                 |                                |                             |            |
|---------------------------------|--------------------------------|-----------------------------|------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP |
| <b>MODE</b>                     | Normal                         | <b>6dB BANDWIDTH</b>        | 9 kHz      |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz                  | <b>PHASE</b>                | Line (L)   |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1005 hPa     | <b>TESTED BY:</b> Bunny Yao |            |

| No | Freq.  | Corr. Factor | Reading Value [dB (uV)] |     | Emission Level [dB (uV)] |     | Limit [dB (uV)] |     | Margin (dB) |     |
|----|--------|--------------|-------------------------|-----|--------------------------|-----|-----------------|-----|-------------|-----|
|    | [MHz]  |              | Q.P.                    | AV. | Q.P.                     | AV. | Q.P.            | AV. | Q.P.        | AV. |
| 1  | 0.997  | 0.20         | 39.48                   | -   | 39.68                    | -   | 48.00           | -   | -8.32       | -   |
| 2  | 1.594  | 0.20         | 45.52                   | -   | 45.72                    | -   | 48.00           | -   | -2.28       | -   |
| 3  | 2.195  | 0.22         | 44.28                   | -   | 44.50                    | -   | 48.00           | -   | -3.50       | -   |
| 4  | 2.609  | 0.26         | 42.78                   | -   | 43.04                    | -   | 48.00           | -   | -4.96       | -   |
| 5  | 5.574  | 0.45         | 37.91                   | -   | 38.36                    | -   | 48.00           | -   | -9.64       | -   |
| 6  | 14.004 | 0.68         | 35.27                   | -   | 35.95                    | -   | 48.00           | -   | -12.05      | -   |

**NOTE:**

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.





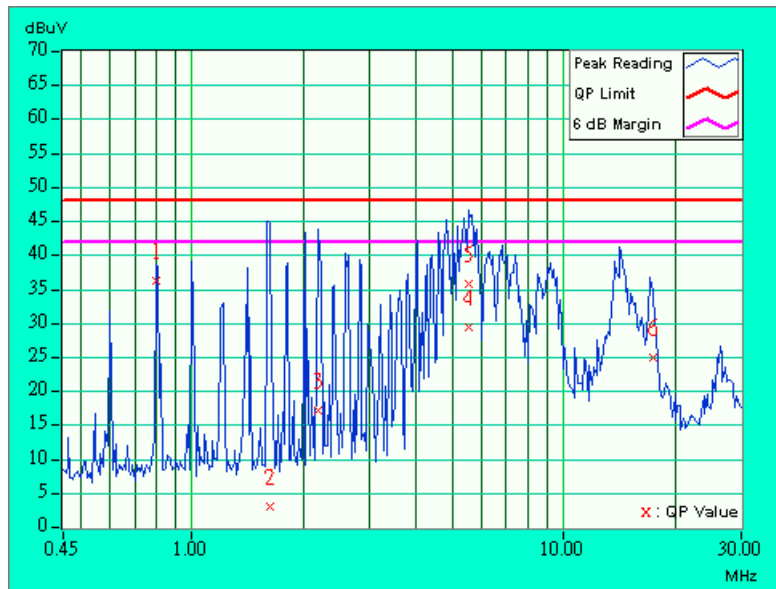


|                                 |                                |                             |             |
|---------------------------------|--------------------------------|-----------------------------|-------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP  |
| <b>MODE</b>                     | Normal                         | <b>6dB BANDWIDTH</b>        | 9 kHz       |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz                  | <b>PHASE</b>                | Neutral (N) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1005 hPa     | <b>TESTED BY:</b> Bunny Yao |             |

| No | Freq.  | Corr. Factor | Reading Value [dB (uV)] |     | Emission Level [dB (uV)] |     | Limit [dB (uV)] |     | Margin (dB) |     |
|----|--------|--------------|-------------------------|-----|--------------------------|-----|-----------------|-----|-------------|-----|
|    | [MHz]  | (dB)         | Q.P.                    | AV. | Q.P.                     | AV. | Q.P.            | AV. | Q.P.        | AV. |
| 1  | 0.802  | 0.17         | 35.76                   | -   | 35.93                    | -   | 48.00           | -   | -12.07      | -   |
| 2  | 1.617  | 0.20         | 2.49                    | -   | 2.69                     | -   | 48.00           | -   | -45.31      | -   |
| 3  | 2.172  | 0.21         | 16.64                   | -   | 16.85                    | -   | 48.00           | -   | -31.15      | -   |
| 4  | 5.563  | 0.33         | 28.91                   | -   | 29.24                    | -   | 48.00           | -   | -18.76      | -   |
| 5  | 5.563  | 0.33         | 35.29                   | -   | 35.62                    | -   | 48.00           | -   | -12.38      | -   |
| 6  | 17.348 | 0.64         | 24.32                   | -   | 24.96                    | -   | 48.00           | -   | -23.04      | -   |

**NOTE:**

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



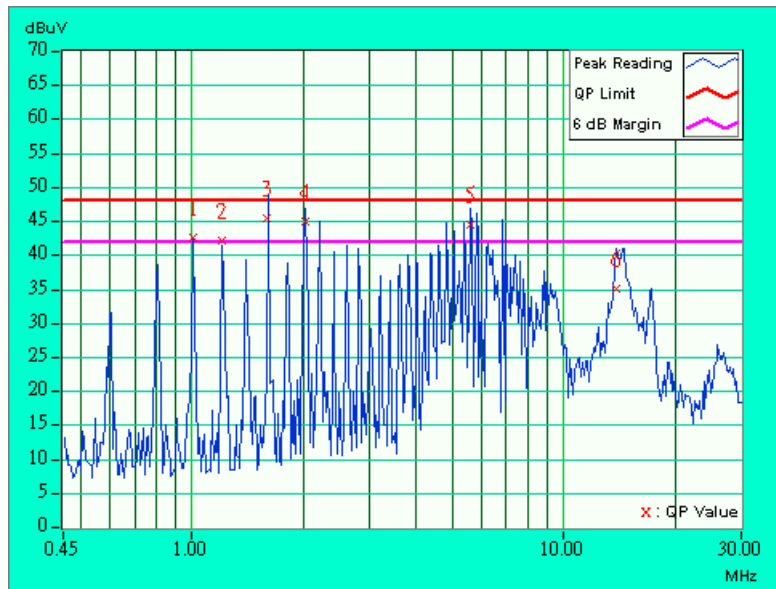


|                                 |                                |                             |            |
|---------------------------------|--------------------------------|-----------------------------|------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP |
| <b>MODE</b>                     | Turbo                          | <b>6dB BANDWIDTH</b>        | 9 kHz      |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz                  | <b>PHASE</b>                | Line (L)   |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1005 hPa     | <b>TESTED BY:</b> Bunny Yao |            |

| No | Freq.  | Corr. Factor | Reading Value [dB (uV)] |     | Emission Level [dB (uV)] |     | Limit [dB (uV)] |     | Margin (dB) |     |
|----|--------|--------------|-------------------------|-----|--------------------------|-----|-----------------|-----|-------------|-----|
|    | [MHz]  |              | Q.P.                    | AV. | Q.P.                     | AV. | Q.P.            | AV. | Q.P.        | AV. |
| 1  | 1.004  | 0.20         | 42.04                   | -   | 42.24                    | -   | 48.00           | -   | -5.76       | -   |
| 2  | 1.207  | 0.20         | 41.45                   | -   | 41.65                    | -   | 48.00           | -   | -6.35       | -   |
| 3  | 1.595  | 0.20         | 44.72                   | -   | 44.92                    | -   | 48.00           | -   | -3.08       | -   |
| 4  | 2.012  | 0.20         | 44.25                   | -   | 44.45                    | -   | 48.00           | -   | -3.55       | -   |
| 5  | 5.582  | 0.45         | 43.89                   | -   | 44.34                    | -   | 48.00           | -   | -3.66       | -   |
| 6  | 13.777 | 0.68         | 34.34                   | -   | 35.02                    | -   | 48.00           | -   | -12.98      | -   |

**NOTE:**

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



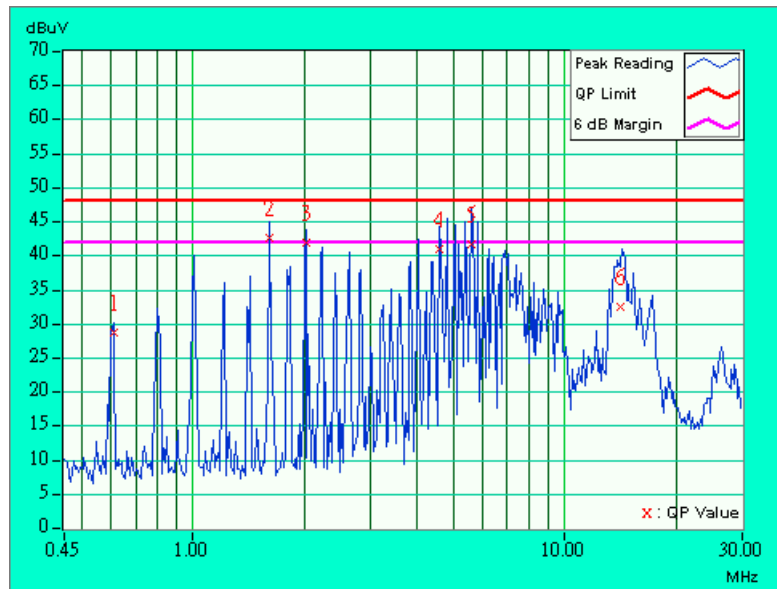


|                                 |                                |                             |             |
|---------------------------------|--------------------------------|-----------------------------|-------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP  |
| <b>MODE</b>                     | Turbo                          | <b>6dB BANDWIDTH</b>        | 9 kHz       |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz                  | <b>PHASE</b>                | Neutral (N) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1005 hPa     | <b>TESTED BY:</b> Bunny Yao |             |

| No | Freq.  | Corr. Factor | Reading Value [dB (Uv)] |     | Emission Level [dB (uV)] |     | Limit [dB (uV)] |     | Margin (dB) |     |
|----|--------|--------------|-------------------------|-----|--------------------------|-----|-----------------|-----|-------------|-----|
|    | [MHz]  |              | Q.P.                    | AV. | Q.P.                     | AV. | Q.P.            | AV. | Q.P.        | AV. |
| 1  | 0.610  | 0.14         | 28.25                   | -   | 28.39                    | -   | 48.00           | -   | -19.61      | -   |
| 2  | 1.602  | 0.20         | 42.23                   | -   | 42.43                    | -   | 48.00           | -   | -5.57       | -   |
| 3  | 2.016  | 0.20         | 41.36                   | -   | 41.56                    | -   | 48.00           | -   | -6.44       | -   |
| 4  | 4.590  | 0.31         | 40.63                   | -   | 40.94                    | -   | 48.00           | -   | -7.06       | -   |
| 5  | 5.578  | 0.33         | 41.18                   | -   | 41.51                    | -   | 48.00           | -   | -6.49       | -   |
| 6  | 14.082 | 0.48         | 32.14                   | -   | 32.62                    | -   | 48.00           | -   | -15.38      | -   |

**NOTE:**

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.





## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

| Frequencies<br>(MHz) | Field Strength of Fundamental |        |
|----------------------|-------------------------------|--------|
|                      | uV/m                          | dBuV/m |
| 30-88                | 100                           | 40.0   |
| 88-216               | 150                           | 43.5   |
| 216-960              | 200                           | 46.0   |
| Above 960            | 500                           | 54.0   |

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



#### 4.2.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER         | MODEL NO.            | SERIAL NO.               | CALIBRATED UNTIL |
|------------------------------------|----------------------|--------------------------|------------------|
| * HP Spectrum Analyzer             | 8590L                | 3544A01176               | May 13, 2003     |
| * HP Preamplifier                  | 8447D                | 2944A08485               | Oct. 30, 2002    |
| * HP Preamplifier                  | 8449B                | 3008A01201               | Dec. 06, 2002    |
| * HP Preamplifier                  | 8449B                | 3008A01292               | Aug. 21, 2002    |
| * ROHDE & SCHWARZ TEST RECEIVER    | ESMI                 | 839013/007<br>839379/002 | Jan. 27, 2003    |
| SCHWARZBECK Tunable Dipole Antenna | VHA 9103<br>UHA 9105 | E101051<br>E101055       | Nov. 23, 2002    |
| * CHASE BILOG Antenna              | CBL6112A             | 2221                     | Aug. 2, 2002     |
| * SCHWARZBECK Horn Antenna         | BBHA9120-D1          | D130                     | July 6, 2002     |
| * EMCO Horn Antenna                | 3115                 | 9312-4192                | April 9, 2003    |
| * EMCO Turn Table                  | 1060                 | 1115                     | NA               |
| * SHOSHIN Tower                    | AP-4701              | A6Y005                   | NA               |
| * Software                         | AS61D4               | NA                       | NA               |
| * ANRITSU RF Switches              | MP59B                | M35046                   | Aug. 2, 2002     |
| * TIMES RF cable                   | LMR-600              | CABLE-ST5-01             | Aug. 2, 2002     |
| Open Field Test Site               | Site 5               | ADT-R05                  | July 28, 2002    |
| VCCI Site Registration No.         | Site 5               | R-1039                   | NA               |

**NOTE:** 1. The measurement uncertainty is less than +/- 3.0dB, which is calculated as per the NAMAS document NIS81.

2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

3. "\*" = These equipment are used for the final measurement.

4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.



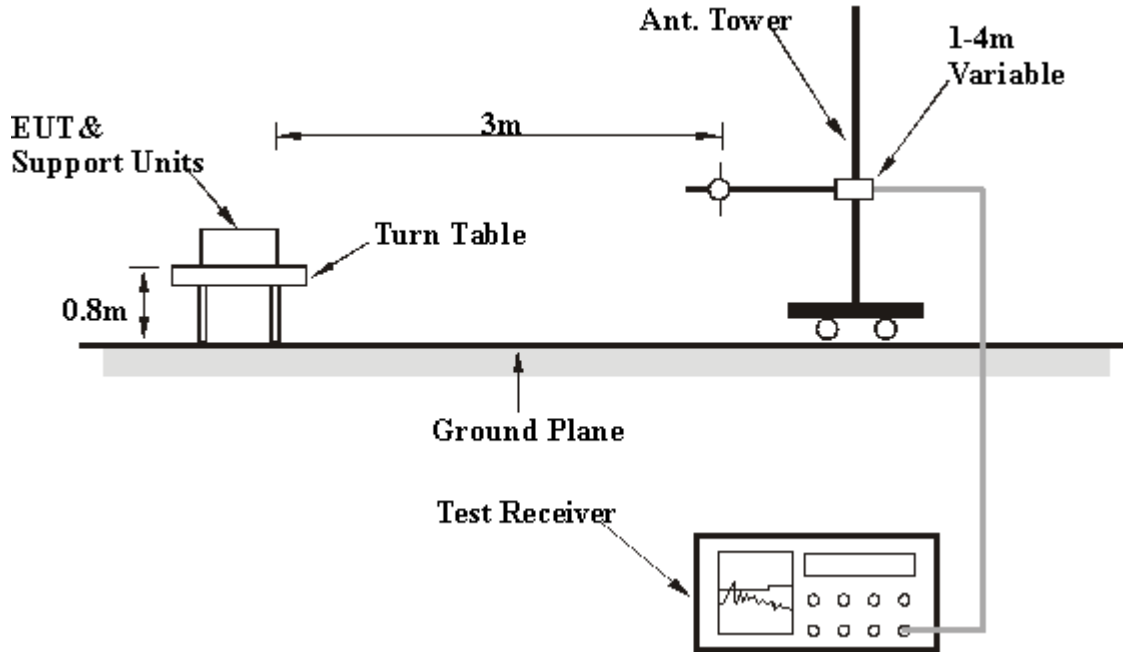
#### 4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.

#### 4.2.4 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

#### 4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5.



## 4.2.6 TEST RESULTS (TRANSMITTING)

|                                 |                                |                             |               |
|---------------------------------|--------------------------------|-----------------------------|---------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP    |
| <b>FREQUENCY RANGE</b>          | 30-1000 MHz                    | <b>DETECTOR FUNCTION</b>    | Quasi-Peak    |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |               |

| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |             |                         |                |             |                    |                      |                  |                     |                   |                      |                        |
|--|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| No.  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
| 1  | 125.00      | 22.1 QP                 | 43.50          | -21.40      | 2.42H              | 216                  | 38.16            | 11.47               | 1.23              | 28.71                | 16.01                  |
| 2  | 150.00      | 24.3 QP                 | 43.50          | -19.20      | 2.42H              | 19                   | 41.40            | 10.30               | 1.31              | 28.71                | 17.10                  |
| 3  | 200.00      | 30.4 QP                 | 43.50          | -13.10      | 1.48H              | 155                  | 48.73            | 8.98                | 1.40              | 28.71                | 18.33                  |
| 4  | 225.00      | 23.0 QP                 | 46.00          | -23.00      | 1.41H              | 340                  | 39.75            | 10.41               | 1.56              | 28.71                | 16.75                  |
| 5  | 250.00      | 27.3 QP                 | 46.00          | -18.70      | 1.12H              | 27                   | 42.26            | 12.02               | 1.73              | 28.71                | 14.97                  |
| 6  | 320.00      | 32.6 QP                 | 46.00          | -13.40      | 1.00H              | 182                  | 45.71            | 13.62               | 1.98              | 28.71                | 13.10                  |
| 7  | 325.00      | 22.8 QP                 | 46.00          | -23.20      | 1.00H              | 152                  | 35.78            | 13.72               | 2.00              | 28.71                | 12.98                  |
| 8  | 352.00      | 28.1 QP                 | 46.00          | -17.90      | 1.00H              | 19                   | 40.38            | 14.31               | 2.12              | 28.71                | 12.29                  |
| 9  | 375.00      | 22.3 QP                 | 46.00          | -23.70      | 1.61H              | 117                  | 33.74            | 15.13               | 2.14              | 28.71                | 11.44                  |
| 10   | 384.00      | 21.3 QP                 | 46.00          | -24.70      | 1.00H              | 5                    | 32.36            | 15.50               | 2.15              | 28.71                | 11.06                  |
| 11   | 500.00      | 28.4 QP                 | 46.00          | -17.60      | 1.58H              | 125                  | 37.36            | 17.26               | 2.49              | 28.71                | 8.97                   |
| 12   | 625.00      | 27.7 QP                 | 46.00          | -18.30      | 1.36H              | 276                  | 34.56            | 18.91               | 2.94              | 28.71                | 6.87                   |
| 13   | 750.00      | 24.3 QP                 | 46.00          | -21.70      | 1.24H              | 39                   | 29.49            | 20.18               | 3.34              | 28.71                | 5.20                   |
| 14   | 875.00      | 30.3 QP                 | 46.00          | -15.70      | 1.00H              | 123                  | 34.74            | 20.63               | 3.63              | 28.71                | 4.45                   |

**NOTE:**

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.





|                                 |                                |                             |               |
|---------------------------------|--------------------------------|-----------------------------|---------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP    |
| <b>FREQUENCY RANGE</b>          | 30-1000 MHz                    | <b>DETECTOR FUNCTION</b>    | Quasi-Peak    |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1050 hPa     | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |               |

| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |             |                         |                |             |                    |                      |                  |                     |                   |                      |                        |
|--|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| No.  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
| 1  | 125.00      | 35.0 QP                 | 43.50          | -8.50       | 1.00V              | 15                   | 51.01            | 11.47               | 1.23              | 28.71                | 16.01                  |
| 2  | 150.00      | 33.0 QP                 | 43.50          | -10.50      | 1.07V              | 6                    | 50.10            | 10.30               | 1.31              | 28.71                | 17.10                  |
| 3  | 200.00      | 28.8 QP                 | 43.50          | -14.70      | 2.03V              | 14                   | 47.13            | 8.98                | 1.40              | 28.71                | 18.33                  |
| 4  | 250.00      | 26.7 QP                 | 46.00          | -19.30      | 1.35V              | 5                    | 41.66            | 12.02               | 1.73              | 28.71                | 14.96                  |
| 5  | 300.00      | 21.0 QP                 | 46.00          | -25.00      | 1.34V              | 172                  | 34.65            | 13.18               | 1.88              | 28.71                | 13.65                  |
| 6  | 320.00      | 26.4 QP                 | 46.00          | -19.60      | 1.23V              | 5                    | 39.50            | 13.62               | 1.98              | 28.71                | 13.10                  |
| 7  | 352.00      | 24.8 QP                 | 46.00          | -21.20      | 1.53V              | 19                   | 37.08            | 14.31               | 2.12              | 28.71                | 12.28                  |
| 8  | 375.00      | 23.8 QP                 | 46.00          | -22.20      | 1.34V              | 316                  | 35.24            | 15.13               | 2.14              | 28.71                | 11.44                  |
| 9  | 500.00      | 27.9 QP                 | 46.00          | -18.10      | 1.27V              | 5                    | 36.86            | 17.26               | 2.49              | 28.71                | 8.96                   |
| 10   | 875.00      | 29.7 QP                 | 46.00          | -16.30      | 1.09V              | 16                   | 34.18            | 20.63               | 3.63              | 28.71                | 4.45                   |

**NOTE:**

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 1                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60Hz             |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5180.00     | 93.7 PK                 | -              | -           | 1.46H              | 46                   | 45.75            | 31.76               | 8.01              | 0.00                 | -39.78                 |
| *2  | 5180.00     | 85.5 AV                 | -              | -           | 1.46H              | 46                   | 53.95            | 31.76               | 8.01              | 0.00                 | -39.78                 |
| 3   | 10360.00    | 50.9 AV                 | 54.00          | -3.10       | 1.21H              | 5                    | 34.80            | 38.86               | 11.92             | 34.65                | -16.12                 |
| 4   | 10360.00    | 58.8 PK                 | 74.00          | -15.20      | 1.21H              | 5                    | 42.70            | 38.86               | 11.92             | 34.65                | -16.12                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5180.00     | 102.0 PK                | -              | -           | 0.99V              | 203                  | 62.22            | 31.76               | 8.01              | 0.00                 | -39.78                 |
| *2  | 5180.00     | 93.2 AV                 | -              | -           | 0.99V              | 203                  | 53.42            | 31.76               | 8.01              | 0.00                 | -39.78                 |
| 3   | 10360.00    | 51.4 AV                 | 54.00          | -2.60       | 1.00V              | 21                   | 35.25            | 38.86               | 11.92             | 34.65                | -16.12                 |
| 4   | 10360.00    | 56.9 PK                 | 74.00          | -17.10      | 1.00V              | 356                  | 40.80            | 38.86               | 11.92             | 34.65                | -16.12                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 4                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5240.00     | 94.7 PK                 | -              | -           | 1.28H              | 51                   | 54.60            | 31.85               | 8.22              | 0.00                 | -40.06                 |
| *2  | 5240.00     | 86.8 PK                 | -              | -           | 1.28H              | 51                   | 46.70            | 31.85               | 8.22              | 0.00                 | -40.06                 |
| 3   | 10480.00    | 51.0 AV                 | 54.00          | -3.00       | 1.26H              | 156                  | 33.70            | 39.06               | 12.73             | 34.52                | -17.27                 |
| 4   | 10480.00    | 60.7 PK                 | 74.00          | -13.30      | 1.26H              | 56                   | 43.40            | 39.06               | 12.73             | 34.52                | -17.27                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5240.00     | 102.9 PK                | -              | -           | 1.27V              | 66                   | 62.87            | 31.85               | 8.22              | 0.00                 | -40.06                 |
| *2  | 5240.00     | 94.9 PK                 | -              | -           | 1.27V              | 66                   | 54.82            | 31.85               | 8.22              | 0.00                 | -40.06                 |
| 3   | 10480.00    | 51.5 AV                 | 54.00          | -2.50       | 1.14V              | 5                    | 34.20            | 39.06               | 12.73             | 34.52                | -17.27                 |
| 4   | 10480.00    | 60.8 PK                 | 74.00          | -13.20      | 1.14V              | 5                    | 43.50            | 39.06               | 12.73             | 34.52                | -17.27                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 5                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5260.00     | 95.3 PK                 | -              | -           | 1.36H              | 47                   | 55.20            | 31.85               | 8.22              | 0.00                 | -40.06                 |
| *2  | 5260.00     | 87.3 AV                 | -              | -           | 1.36H              | 47                   | 47.20            | 31.85               | 8.22              | 0.00                 | -40.06                 |
| 3   | 10520.00    | 51.3 AV                 | 54.00          | -2.70       | 1.24H              | 295                  | 33.70            | 39.13               | 12.92             | 34.48                | -17.56                 |
| 4   | 10520.00    | 61.4 PK                 | 74.00          | -12.60      | 1.24H              | 340                  | 43.80            | 39.13               | 12.92             | 34.48                | -17.56                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5260.00     | 103.3 PK                | -              | -           | 1.21V              | 169                  | 63.20            | 31.85               | 8.22              | 0.00                 | -40.06                 |
| *2  | 5260.00     | 94.7 AV                 | -              | -           | 1.21V              | 169                  | 54.60            | 31.85               | 8.22              | 0.00                 | -40.06                 |
| 3   | 10520.00    | 51.6 AV                 | 54.00          | -2.40       | 1.27V              | 99                   | 34.00            | 39.13               | 12.92             | 34.48                | -17.56                 |
| 4   | 10520.00    | 61.7 PK                 | 74.00          | -12.30      | 1.27V              | 189                  | 44.10            | 39.13               | 12.92             | 34.48                | -17.56                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 8                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5320.00     | 95.1 PK                 | -              | -           | 1.49H              | 43                   | 54.98            | 31.93               | 8.16              | 0.00                 | -40.10                 |
| *2  | 5320.00     | 86.7 PK                 | -              | -           | 1.49H              | 43                   | 46.56            | 31.93               | 8.16              | 0.00                 | -40.10                 |
| 3   | 10641.00    | 51.8 AV                 | 54.00          | -2.20       | 1.34H              | 28                   | 34.10            | 39.31               | 12.77             | 34.38                | -17.69                 |
| 4   | 10641.00    | 60.4 PK                 | 74.00          | -13.60      | 1.34H              | 28                   | 42.70            | 39.31               | 12.77             | 34.38                | -17.69.                |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5320.00     | 104.4 PK                | -              | -           | 1.17V              | 166                  | 64.26            | 31.93               | 8.16              | 0.00                 | -40.10                 |
| *2  | 5320.00     | 95.4 PK                 | -              | -           | 1.17V              | 166                  | 55.29            | 31.93               | 8.16              | 0.00                 | -40.10                 |
| 3   | 10641.00    | 51.9 AV                 | 54.00          | -2.10       | 1.37V              | 365                  | 34.20            | 39.31               | 12.77             | 34.38                | -17.69                 |
| 4   | 10641.00    | 60.7 PK                 | 74.00          | -13.3       | 1.37V              | 365                  | 43.00            | 39.31               | 12.77             | 34.38                | -17.69.                |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 9                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5745.00     | 97.0 PK                 | -              | -           | 1.72H              | 33                   | 56.49            | 32.26               | 8.22              | 0.00                 | -40.48                 |
| *2  | 5745.00     | 88.3 AV                 | -              | -           | 1.72H              | 33                   | 47.80            | 32.26               | 8.22              | 0.00                 | -40.48                 |
| 3   | 11490.00    | 60.7 PK                 | 74.00          | -13.30      | 1.23H              | 343                  | 43.20            | 39.80               | 11.90             | 34.20                | -17.50                 |
| 4   | 11490.00    | 51.7 AV                 | 54.00          | -2.30       | 1.23H              | 343                  | 34.20            | 39.80               | 11.90             | 34.20                | -17.50                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5745.00     | 104.8 PK                | -              | -           | 1.48V              | 366                  | 64.33            | 32.26               | 8.22              | 0.00                 | -40.48                 |
| *2  | 5745.00     | 97.3 AV                 | -              | -           | 1.48V              | 349                  | 56.80            | 32.26               | 8.22              | 0.00                 | -40.48                 |
| 3   | 11490.00    | 51.8 AV                 | 54.00          | -2.20       | 1.39V              | 163                  | 34.30            | 39.80               | 11.90             | 34.20                | -17.50                 |
| 4   | 11490.00    | 60.6 PK                 | 74.00          | -13.40      | 1.39V              | 289                  | 43.10            | 39.80               | 11.90             | 34.20                | -17.50                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 12                       |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5805.00     | 96.5 PK                 | -              | -           | 1.68H              | 95                   | 55.84            | 32.28               | 8.35              | 0.00                 | -40.63                 |
| *2  | 5805.00     | 86.5 AV                 | -              | -           | 1.68H              | 36                   | 45.90            | 32.28               | 8.35              | 0.00                 | -40.63                 |
| 3   | 11610.00    | 61.8 PK                 | 74.00          | -12.20      | 1.20H              | 81                   | 44.40            | 39.62               | 12.02             | 34.30                | -17.35                 |
| 4   | 11610.00    | 51.0 AV                 | 54.00          | -3.00       | 1.20H              | 120                  | 33.60            | 39.62               | 12.02             | 34.30                | -17.35                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5805.00     | 102.9 PK                | -              | -           | 1.63V              | 287                  | 62.30            | 32.28               | 8.35              | 0.00                 | -40.63                 |
| *2  | 5805.00     | 94.4 AV                 | -              | -           | 1.63V              | 366                  | 53.80            | 32.28               | 8.35              | 0.00                 | -40.63                 |
| 3   | 11610.00    | 60.9 PK                 | 74.00          | -13.10      | 1.18V              | 36                   | 43.50            | 39.62               | 12.02             | 34.30                | -17.35                 |
| 4   | 11610.00    | 51.4 AV                 | 54.00          | -2.60       | 1.18V              | 36                   | 34.00            | 39.62               | 12.02             | 34.30                | -17.35                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Turbo Mode                     | <b>CHANNEL</b>              | 1                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5210.00     | 93.40 PK                | -              | -           | 1.38H              | 16                   | 53.40            | 31.81               | 8.15              | 0.00                 | -39.96                 |
| *2  | 5210.00     | 83.80 AV                | -              | -           | 1.38H              | 16                   | 43.89            | 31.81               | 8.15              | 0.00                 | -39.96                 |
| 3   | 10420.00    | 59.70 PK                | 74.00          | -14.70      | 1.32H              | 104                  | 42.93            | 39.00               | 12.34             | 34.56                | -16.77                 |
| 4   | 10420.00    | 51.30 AV                | 54.00          | -2.70       | 1.32H              | 104                  | 34.53            | 39.00               | 12.34             | 34.56                | -16.77                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5210.00     | 101.10 PK               | -              | -           | 1.28V              | 192                  | 61.10            | 31.81               | 8.15              | 0.00                 | -39.96                 |
| *2  | 5210.00     | 92.40 AV                | -              | -           | 1.28V              | 192                  | 52.40            | 31.81               | 8.15              | 0.00                 | -39.96                 |
| 3   | 10420.00    | 51.00 AV                | 54.00          | -3.00       | 1.08V              | 56                   | 34.23            | 39.00               | 12.34             | 34.56                | -16.77                 |
| 4   | 10420.00    | 59.30 PK                | 74.00          | -14.70      | 1.08V              | 56                   | 42.53            | 39.00               | 12.34             | 34.56                | -16.77                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency





|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Turbo Mode                     | <b>CHANNEL</b>              | 3                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5290.00     | 92.90 PK                | -              | -           | 1.37H              | 36                   | 52.77            | 31.89               | 8.28              | 0.00                 | -40.17                 |
| *2  | 5290.00     | 83.90 AV                | -              | -           | 1.37H              | 36                   | 43.73            | 31.89               | 8.28              | 0.00                 | -40.17                 |
| 3   | 10580.00    | 51.30 AV                | 54.00          | -2.70       | 1.20H              | 96                   | 33.70            | 39.19               | 12.86             | 34.45                | -17.60                 |
| 4   | 10580.00    | 61.00 PK                | 74.00          | -13.00      | 1.20H              | 96                   | 43.40            | 39.19               | 12.86             | 34.45                | -17.60                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5290.00     | 100.70 PK               | -              | -           | 1.37V              | 36                   | 60.50            | 31.89               | 8.28              | 0.00                 | -40.17                 |
| *2  | 5290.00     | 92.00 AV                | -              | -           | 1.37V              | 36                   | 51.78            | 31.89               | 8.28              | 0.00                 | -40.17                 |
| 3   | 10580.00    | 60.30 PK                | 74.00          | -13.70      | 1.64V              | 182                  | 42.70            | 39.19               | 12.86             | 34.45                | -17.60                 |
| 4   | 10580.00    | 51.60 AV                | 54.00          | -2.40       | 1.64V              | 182                  | 34.00            | 39.19               | 12.86             | 34.45                | -17.60                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Turbo Mode                     | <b>CHANNEL</b>              | 4                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5760.00     | 88.60 PK                | -              | -           | 1.07H              | 2                    | 48.12            | 32.26               | 8.22              | 0.00                 | -40.48                 |
| *2  | 5760.00     | 80.50 AV                | -              | -           | 1.07H              | 2                    | 40.02            | 32.26               | 8.22              | 0.00                 | -40.48                 |
| 3   | 11520.00    | 51.20 AV                | 54.00          | -2.80       | 1.34H              | 194                  | 33.75            | 39.74               | 11.94             | 34.23                | -17.45                 |
| 4   | 11520.00    | 60.00 PK                | 74.00          | -14.00      | 1.34H              | 194                  | 42.55            | 39.74               | 11.94             | 34.23                | -17.45                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5760.00     | 99.60 PK                | -              | -           | 1.09V              | 161                  | 59.12            | 32.26               | 8.22              | 0.00                 | -40.48                 |
| *2  | 5760.00     | 91.70 AV                | -              | -           | 1.09V              | 161                  | 51.22            | 32.26               | 8.22              | 0.00                 | -40.48                 |
| 3   | 11520.00    | 60.30 PK                | 74.00          | -13.70      | 1.45V              | 69                   | 42.85            | 39.74               | 11.94             | 34.23                | -17.45                 |
| 4   | 11520.00    | 51.70 AV                | 54.00          | -2.30       | 1.45V              | 69                   | 34.25            | 39.74               | 11.94             | 34.23                | -17.45                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Turbo Mode                     | <b>CHANNEL</b>              | 5                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5800.00     | 88.40 PK                | -              | -           | 1.19H              | 353                  | 47.77            | 32.28               | 8.35              | 0.00                 | -40.63                 |
| *2  | 5800.00     | 80.00 AV                | -              | -           | 1.19H              | 353                  | 39.37            | 32.28               | 8.35              | 0.00                 | -40.63                 |
| 3   | 11600.00    | 60.90 PK                | 74.0           | -13.10      | 1.66H              | 269                  | 43.51            | 39.68               | 11.97             | 34.27                | -17.39                 |
| 4   | 11600.00    | 51.10 AV                | 54.0           | -2.90       | 1.66H              | 269                  | 33.71            | 39.68               | 11.97             | 34.27                | -17.39                 |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| *1  | 5800.00     | 95.70 PK                | -              | -           | 1.16V              | 42                   | 55.07            | 32.28               | 8.35              | 0.00                 | -40.63                 |
| *2  | 5800.00     | 86.30 PK                | -              | -           | 1.16V              | 42                   | 45.67            | 32.28               | 8.35              | 0.00                 | -40.63                 |
| 3   | 11600.00    | 50.80 AV                | 54.0           | -3.20       | 1.44V              | 176                  | 33.41            | 39.68               | 11.97             | 34.27                | -17.39                 |
| 4   | 11600.00    | 59.90 PK                | 74.0           | -14.10      | 1.44V              | 176                  | 42.51            | 39.68               | 11.97             | 34.27                | -17.39                 |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency



## 4.2.7 TEST RESULTS(RECEIVING)

|                                 |                                |                             |               |
|---------------------------------|--------------------------------|-----------------------------|---------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP    |
| <b>FREQUENCY RANGE</b>          | 30-1000 MHz                    | <b>DETECTOR FUNCTION</b>    | Quasi-Peak    |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |               |

| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |             |                         |                |             |                    |                      |                  |                     |                   |                      |                        |
|--|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| No.  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
| 1  | 125.00      | 24.7 QP                 | 43.50          | -18.80      | 1.75H              | 341                  | 40.71            | 11.47               | 1.23              | 28.71                | 16.01                  |
| 2  | 150.00      | 24.7 QP                 | 43.50          | -18.80      | 1.75H              | 167                  | 41.80            | 10.30               | 1.31              | 28.71                | 17.10                  |
| 3  | 200.00      | 32.9 QP                 | 43.50          | -10.60      | 1.60H              | 19                   | 51.23            | 8.98                | 1.40              | 28.71                | 18.33                  |
| 4  | 225.00      | 18.3 QP                 | 46.00          | -27.70      | 1.29H              | 135                  | 35.05            | 10.41               | 1.56              | 28.71                | 16.75                  |
| 5  | 250.00      | 29.7 QP                 | 46.00          | -16.30      | 1.57H              | 19                   | 44.66            | 12.02               | 1.73              | 28.71                | 14.97                  |
| 6  | 275.00      | 21.9 QP                 | 46.00          | -24.10      | 1.13H              | 139                  | 36.23            | 12.59               | 1.79              | 28.71                | 14.33                  |
| 7  | 300.00      | 23.2 QP                 | 46.00          | -22.80      | 1.22H              | 64                   | 36.85            | 13.18               | 1.88              | 28.71                | 13.65                  |
| 8  | 320.00      | 30.4 QP                 | 46.00          | -15.60      | 1.35H              | 230                  | 43.50            | 13.62               | 1.98              | 28.71                | 13.10                  |
| 9  | 325.00      | 23.0 QP                 | 46.00          | -23.00      | 1.00H              | 136                  | 35.98            | 13.72               | 2.00              | 28.71                | 12.98                  |
| 10   | 350.00      | 20.1 QP                 | 46.00          | -25.90      | 1.06H              | 19                   | 32.48            | 14.21               | 2.12              | 28.71                | 12.39                  |
| 11   | 352.00      | 28.8 QP                 | 46.00          | -17.20      | 1.31H              | 184                  | 41.08            | 14.31               | 2.12              | 28.71                | 12.28                  |
| 12   | 375.00      | 23.4 QP                 | 46.00          | -22.60      | 1.06H              | 239                  | 34.81            | 15.13               | 2.14              | 28.71                | 11.44                  |
| 13   | 384.00      | 19.7 QP                 | 46.00          | -26.30      | 1.07H              | 115                  | 30.76            | 15.50               | 2.15              | 28.71                | 11.06                  |
| 14   | 500.00      | 29.2 QP                 | 46.00          | -16.80      | 1.56H              | 5                    | 38.16            | 17.26               | 2.49              | 28.71                | 8.97                   |
| 15   | 625.00      | 27.4 QP                 | 46.00          | -18.60      | 1.53H              | 97                   | 34.26            | 18.91               | 2.94              | 28.71                | 6.87                   |
| 16   | 750.00      | 23.1 QP                 | 46.00          | -22.90      | 1.38H              | 251                  | 28.29            | 20.18               | 3.34              | 28.71                | 5.20                   |
| 17   | 800.00      | 25.4 QP                 | 46.00          | -20.60      | 1.10H              | 124                  | 30.05            | 20.69               | 3.38              | 28.71                | 4.66                   |
| 18   | 875.00      | 28.3 QP                 | 46.00          | -17.70      | 1.00H              | 20                   | 32.74            | 20.63               | 3.63              | 28.71                | 4.45                   |

**NOTE:**

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |               |
|---------------------------------|--------------------------------|-----------------------------|---------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP    |
| <b>FREQUENCY RANGE</b>          | 30-1000 MHz                    | <b>DETECTOR FUNCTION</b>    | Quasi-Peak    |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH, 1050 hPa     | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |               |

| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |             |                         |                |             |                    |                      |                  |                     |                   |                      |                        |
|--|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| No.  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
| 1  | 125.00      | 21.8 QP                 | 43.50          | -21.70      | 1.38V              | 98                   | 37.81            | 11.47               | 1.23              | 28.71                | 16.01                  |
| 2  | 150.00      | 31.6 QP                 | 43.50          | -11.90      | 1.27V              | 19                   | 48.70            | 10.30               | 1.31              | 28.71                | 17.10                  |
| 3  | 200.00      | 29.3 QP                 | 43.50          | -14.20      | 1.38V              | 95                   | 47.63            | 8.98                | 1.40              | 28.71                | 18.33                  |
| 4  | 200.00      | 32.9 QP                 | 43.50          | -10.60      | 1.38V              | 181                  | 51.20            | 8.98                | 1.40              | 28.71                | 18.33                  |
| 5  | 225.00      | 20.3 QP                 | 46.00          | -25.70      | 1.12V              | 254                  | 37.05            | 10.41               | 1.56              | 28.71                | 16.75                  |
| 6  | 250.00      | 27.5 QP                 | 46.00          | -18.50      | 1.07V              | 86                   | 42.46            | 12.02               | 1.73              | 28.71                | 14.97                  |
| 7  | 275.00      | 20.0 QP                 | 46.00          | -26.00      | 1.17V              | 172                  | 34.34            | 12.59               | 1.79              | 28.71                | 14.33                  |
| 8  | 300.00      | 22.2 QP                 | 46.00          | -23.80      | 1.10V              | 80                   | 35.85            | 13.18               | 1.88              | 28.71                | 13.65                  |
| 9  | 320.00      | 23.0 QP                 | 46.00          | -23.00      | 1.33V              | 38                   | 36.10            | 13.62               | 1.98              | 28.71                | 13.10                  |
| 10   | 352.00      | 27.8 QP                 | 46.00          | -18.20      | 1.38V              | 296                  | 40.08            | 14.31               | 2.12              | 28.71                | 12.28                  |
| 11   | 375.00      | 21.9 QP                 | 46.00          | -24.10      | 1.03V              | 112                  | 33.34            | 15.13               | 2.14              | 28.71                | 11.44                  |
| 12   | 500.00      | 29.4 QP                 | 46.00          | -16.60      | 1.00V              | 20                   | 38.36            | 17.26               | 2.49              | 28.71                | 8.96                   |
| 13   | 625.00      | 29.1 QP                 | 46.00          | -16.90      | 1.05V              | 123                  | 35.99            | 18.91               | 2.94              | 28.71                | 6.86                   |
| 14   | 875.00      | 28.8 QP                 | 46.00          | -17.20      | 1.49V              | 48                   | 33.24            | 20.63               | 3.63              | 28.71                | 4.45                   |

**NOTE:**

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 1                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4144.00     | 44.6 PK                 | 74.00          | -29.40      | 1.32H              | 286                  | 42.10            | 30.32               | 6.70              | 34.56                | -2.46                  |
| 2   | 4144.00     | 33.7 AV                 | 54.00          | -20.30      | 1.32H              | 221                  | 31.20            | 30.32               | 6.70              | 34.56                | -2.46                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4144.00     | 33.0 AV                 | 54.00          | -21.00      | 1.22V              | 353                  | 30.50            | 30.32               | 6.70              | 34.56                | -2.46                  |
| 2   | 4144.00     | 43.8 PK                 | 74.00          | -30.20      | 1.23V              | 366                  | 41.30            | 30.32               | 6.70              | 34.56                | -2.46                  |

**NOTE:**

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 4                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4192.00     | 34.9 AV                 | 54.00          | -19.10      | 1.40H              | 253                  | 32.40            | 30.41               | 6.68              | 34.58                | -2.51                  |
| 2   | 4192.00     | 46.0 PK                 | 74.00          | -28.00      | 1.40H              | 198                  | 43.50            | 30.41               | 6.68              | 34.58                | -2.51                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4192.00     | 33.7 AV                 | 54.00          | -20.30      | 1.21V              | 125                  | 31.20            | 30.41               | 6.68              | 34.58                | -2.51                  |
| 2   | 4192.00     | 44.8 PK                 | 74.00          | -29.20      | 1.21V              | 200                  | 42.30            | 30.41               | 6.68              | 34.58                | -2.51                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 5                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4208.00     | 35.4 AV                 | 54.00          | -18.60      | 1.00H              | 366                  | 32.90            | 30.41               | 6.68              | 34.58                | -2.51                  |
| 2   | 4208.00     | 45.0 PK                 | 74.00          | -29.00      | 1.00H              | 366                  | 42.46            | 30.41               | 6.68              | 34.58                | -2.51                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4208.00     | 46.3 PK                 | 74.00          | -27.70      | 1.05V              | 366                  | 43.80            | 30.41               | 6.68              | 34.58                | -2.51                  |
| 2   | 4208.00     | 36.4 AV                 | 54.00          | -17.60      | 1.05V              | 366                  | 33.90            | 30.41               | 6.68              | 34.58                | -2.51                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.





|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 8                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4256.00     | 36.5 AV                 | 54.00          | -17.50      | 1.27H              | 292                  | 33.80            | 30.60               | 6.75              | 34.61                | -2.74                  |
| 2   | 4256.00     | 47.4 PK                 | 74.00          | -26.60      | 1.27H              | 242                  | 44.70            | 30.60               | 6.75              | 34.61                | -2.74                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4256.00     | 46.8 PK                 | 74.00          | -27.20      | 1.39V              | 324                  | 44.10            | 30.60               | 6.75              | 34.61                | -2.74                  |
| 2   | 4256.00     | 35.5 AV                 | 54.00          | -18.50      | 1.39V              | 324                  | 32.80            | 30.60               | 6.75              | 34.61                | -2.74                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 9                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4546.00     | 47.2 PK                 | 74.00          | -26.80      | 1.69H              | 132                  | 43.20            | 31.13               | 7.54              | 34.69                | -3.97                  |
| 2   | 4546.00     | 38.4 AV                 | 54.00          | -15.60      | 1.69H              | 36                   | 34.40            | 31.13               | 7.54              | 34.69                | -3.97                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4546.00     | 36.9 AV                 | 54.00          | -17.10      | 1.18V              | 16.                  | 32.90            | 31.13               | 7.54              | 34.69                | -3.97                  |
| 2   | 4546.00     | 47.8 PK                 | 74.00          | -26.20      | 1.18V              | 193                  | 43.80            | 31.13               | 7.54              | 34.69                | -3.97                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Normal Mode                    | <b>CHANNEL</b>              | 12                       |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4644.00     | 47.8 PK                 | 74.00          | -26.20      | 1.68H              | 147                  | 43.70            | 31.26               | 7.54              | 34.67                | -4.12                  |
| 2   | 4644.00     | 38.0 AV                 | 54.00          | -16.00      | 1.68H              | 213                  | 33.90            | 31.26               | 7.54              | 34.67                | -4.12                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4644.00     | 37.2 AV                 | 54.00          | -16.80      | 1.14V              | 259                  | 33.10            | 31.26               | 7.54              | 34.67                | -4.12                  |
| 2   | 4644.00     | 48.3 PK                 | 74.00          | -25.70      | 1.14V              | 197                  | 44.20            | 31.26               | 7.54              | 34.67                | -4.12                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Turbo Mode                     | <b>CHANNEL</b>              | 1                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4168.00     | 38.9 AV                 | 54.00          | -15.10      | 1.67H              | 320                  | 36.39            | 30.41               | 6.68              | 34.58                | -2.51                  |
| 2   | 4168.00     | 47.5 PK                 | 74.00          | -26.50      | 1.67H              | 320                  | 44.99            | 30.41               | 6.68              | 34.58                | -2.51                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4168.00     | 46.6 PK                 | 74.00          | -27.40      | 1.22V              | 170                  | 44.09            | 30.41               | 6.68              | 34.58                | -2.51                  |
| 2   | 4168.00     | 37.5 AV                 | 54.00          | -16.50      | 1.22V              | 170                  | 34.99            | 30.41               | 6.68              | 34.58                | -2.51                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Turbo Mode                     | <b>CHANNEL</b>              | 3                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4232.00     | 38.2 AV                 | 54.00          | -15.80      | 1.64H              | 312                  | 35.58            | 30.51               | 6.70              | 34.59                | -2.62                  |
| 2   | 4232.00     | 47.9 PK                 | 74.00          | -6.10       | 1.64H              | 312                  | 45.28            | 30.51               | 6.70              | 34.59                | -2.62                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4232.00     | 39.8 AV                 | 54.00          | -14.20      | 1.12V              | 113                  | 37.18            | 30.51               | 6.70              | 34.59                | -2.62                  |
| 2   | 4232.00     | 48.6 PK                 | 74.00          | -25.40      | 1.12V              | 113                  | 45.98            | 30.51               | 6.70              | 34.59                | -2.62                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Turbo Mode                     | <b>CHANNEL</b>              | 4                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4608.00     | 46.5 PK                 | 74.00          | -27.50      | 1.74H              | 330                  | 42.33            | 31.21               | 7.64              | 34.68                | -4.17                  |
| 2   | 4608.00     | 36.9 AV                 | 54.00          | -17.10      | 1.74H              | 330                  | 32.73            | 31.21               | 7.64              | 34.68                | -4.17                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4608.00     | 37.7 AV                 | 54.00          | -16.30      | 1.06V              | 217                  | 33.53            | 31.21               | 7.64              | 34.68                | -4.17                  |
| 2   | 4608.00     | 48.5 PK                 | 74.00          | -25.50      | 1.06V              | 217                  | 44.33            | 31.21               | 7.64              | 34.68                | -4.17                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



|                                 |                                |                             |                          |
|---------------------------------|--------------------------------|-----------------------------|--------------------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP               |
| <b>MODE</b>                     | Turbo Mode                     | <b>CHANNEL</b>              | 5                        |
| <b>FREQUENCY RANGE</b>          | Above 1000 MHz                 | <b>DETECTOR FUNCTION</b>    | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 30 deg. C, 70%RH,<br>1050 hPa  | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz            |
| <b>TESTED BY</b>                | Bunny Yao                      |                             |                          |

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4640.00     | 36.0 AV                 | 54.00          | -18.00      | 1.73H              | 141                  | 31.88            | 31.26               | 7.54              | 34.67                | -4.12                  |
| 2   | 4640.00     | 46.2 PK                 | 74.00          | -7.80       | 1.73H              | 141                  | 42.08            | 31.26               | 7.54              | 34.67                | -4.12                  |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Antenna Factor (dB) | Cable Factor (dB) | Pre-Amp. Factor (dB) | Correction Factor (dB) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|---------------------|-------------------|----------------------|------------------------|
| 1   | 4640.00     | 46.3 PK                 | 74.00          | -27.70      | 1.12V              | 33                   | 42.18            | 31.26               | 7.54              | 34.67                | -4.12                  |
| 2   | 4640.00     | 35.7 AV                 | 54.00          | -18.30      | 1.12V              | 33                   | 31.58            | 31.26               | 7.54              | 34.67                | -4.12                  |

#### NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss  
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



### 4.3 PEAK TRANSMIT POWER MEASUREMENT

#### 4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

| Frequency Band    | Limit   |
|-------------------|---|
| 5.15 – 5.25 GHz   | The lesser of 50mW (17dBm) or 4dBm + 10logB   |
| 5.25 – 5.35 GHz   | The lesser of 250mW (24dBm) or 11dBm + 10logB |
| 5.725 – 5.825 GHz | The lesser of 1W (30dBm) or 17dBm + 10logB    |

Note: Where B is the 26 dB emission bandwidth in MHz.

#### 4.3.2 TEST INSTRUMENTS

| Description & Manufacturer                               | Model No. | Serial No. | Calibrated Until |
|--|-----------|------------|------------------|
| ROHDE&SCHWARZ<br>SINGLE CHANNEL POWER METER              | NRVS      | 100026     | Mar. 21, 2003    |
| ROHDE&SCHWARZ<br>PEAK POWER METER CHANNEL<br>POWER METER | NRV-Z32   | 100013     | Mar. 21, 2003    |

**NOTE:**

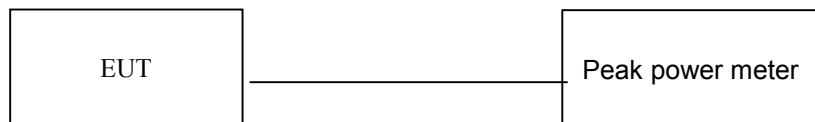
- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



### 4.3.3 TEST PROCEDURE

The transmitter output was connected to the peak power sensor.

### 4.3.4 TEST SETUP



### 4.3.5 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



## 4.3.6 TEST RESULTS

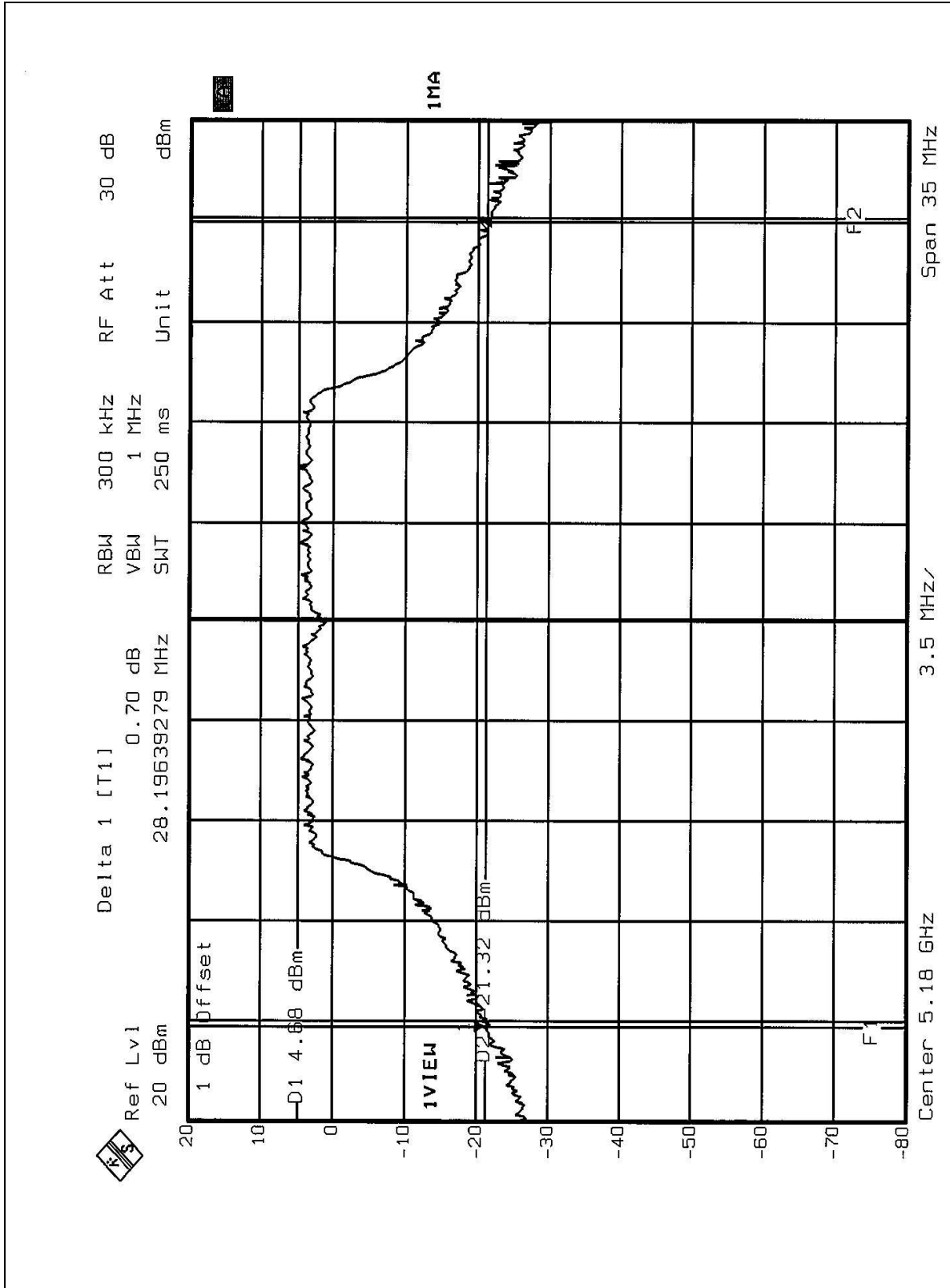
|                                 |                                |                             |               |
|---------------------------------|--------------------------------|-----------------------------|---------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP    |
| <b>MODE</b>                     | Normal                         | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 26 deg. C, 52%RH,<br>1005 hPa  | <b>TESTED BY</b>            | Steven Lu     |

| <b>CHANNEL</b> | <b>CHANNEL FREQUENCY (MHz)</b> | <b>PEAK POWER OUTPUT (dBm)</b> | <b>PEAK POWER LIMIT (dBm)</b> | <b>26dBc Occupied Bandwidth (MHz)</b> | <b>PASS/FAIL</b> |
|----------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------------|------------------|
| 1              | 5180                           | 16.22                          | 17.00                         | 28.196                                | PASS             |
| 4              | 5240                           | 16.24                          | 17.00                         | 27.985                                | PASS             |
| 5              | 5260                           | 19.04                          | 24.00                         | 29.178                                | PASS             |
| 8              | 5320                           | 16.46                          | 24.00                         | 28.757                                | PASS             |
| 9              | 5745                           | 19.23                          | 30.00                         | 29.599                                | PASS             |
| 12             | 5805                           | 19.11                          | 30.00                         | 31.583                                | PASS             |

**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to next 6 pages.

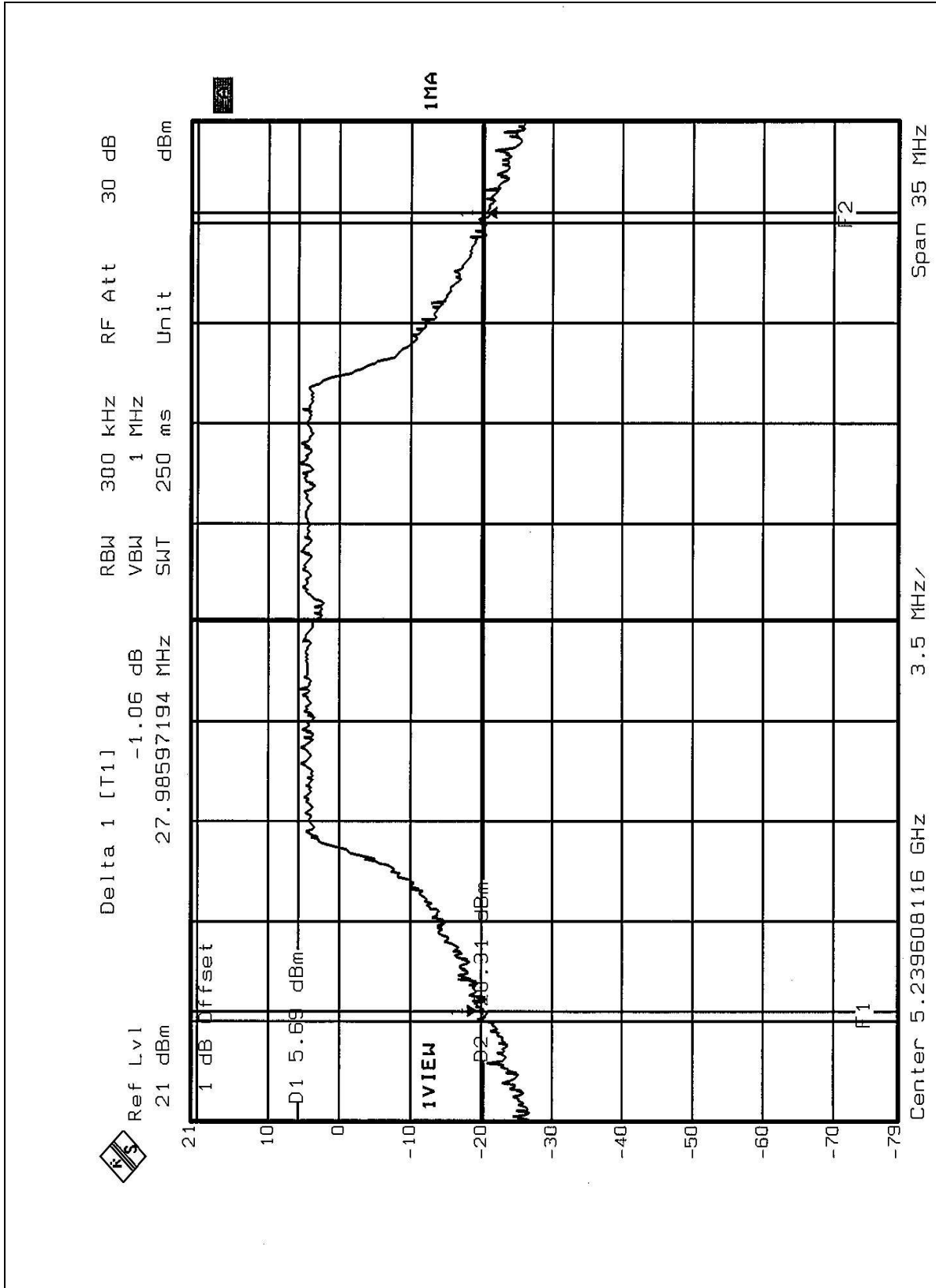


CHANNEL 1



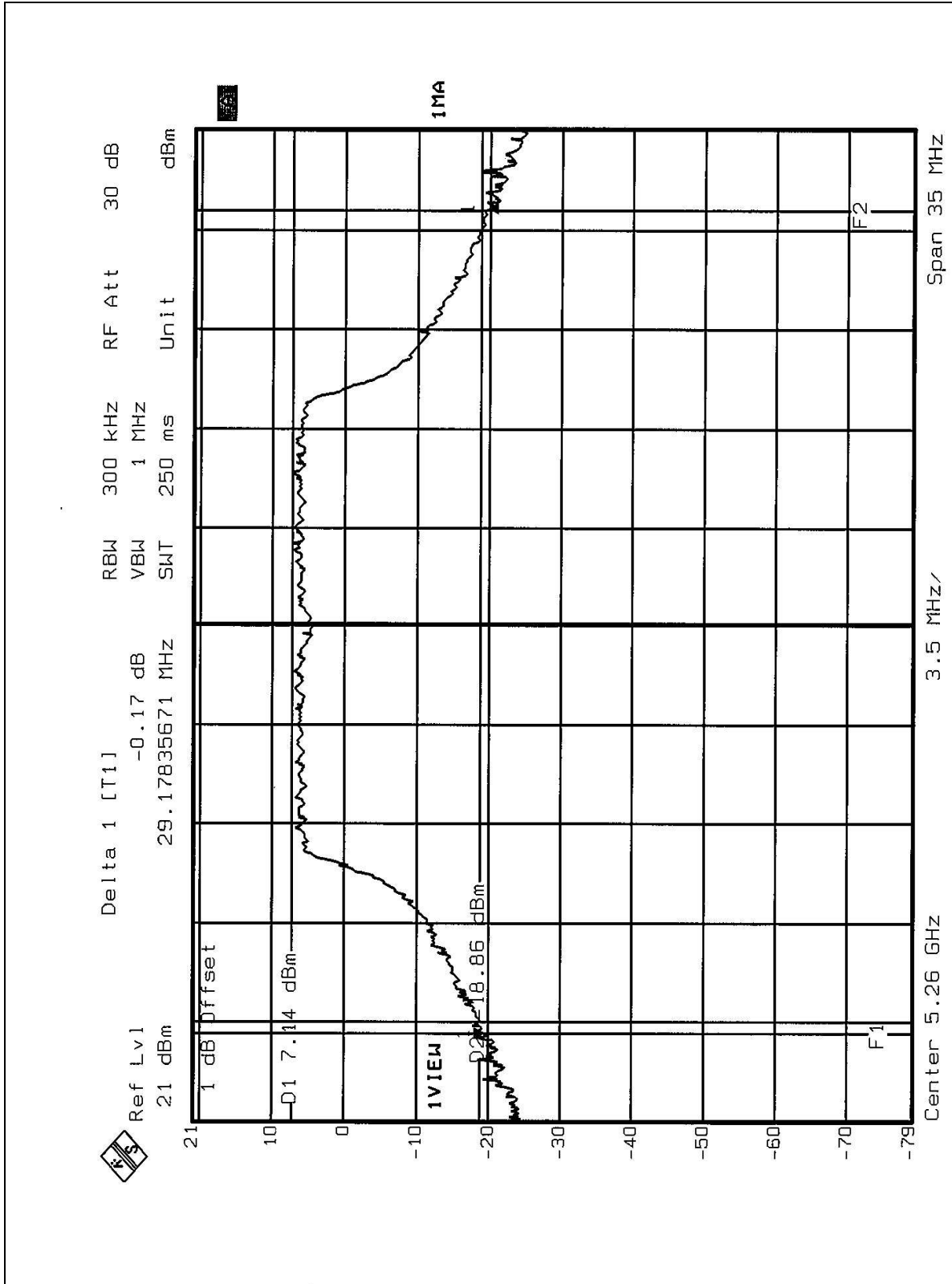


CHANNEL 4



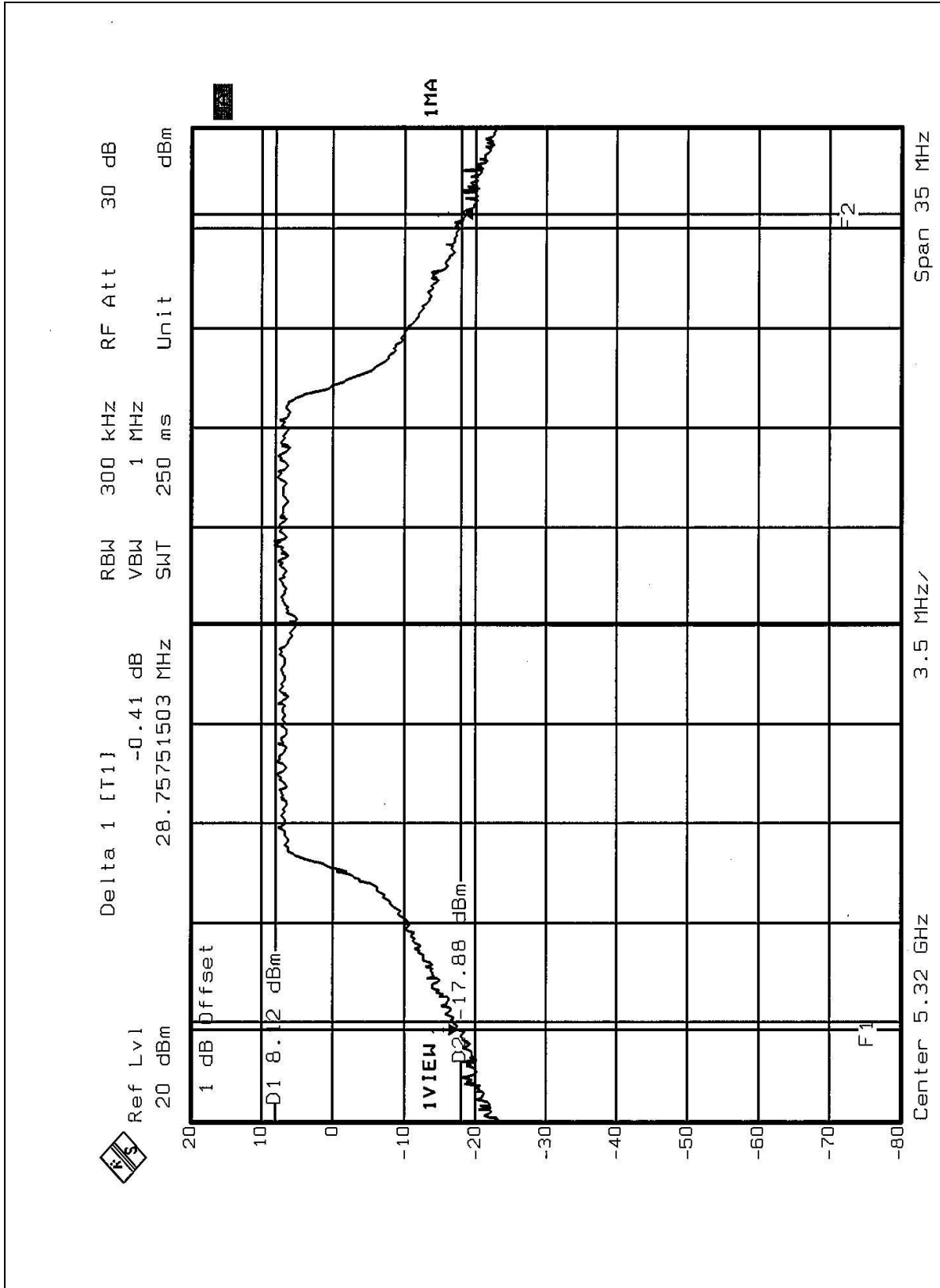


CHANNEL 5



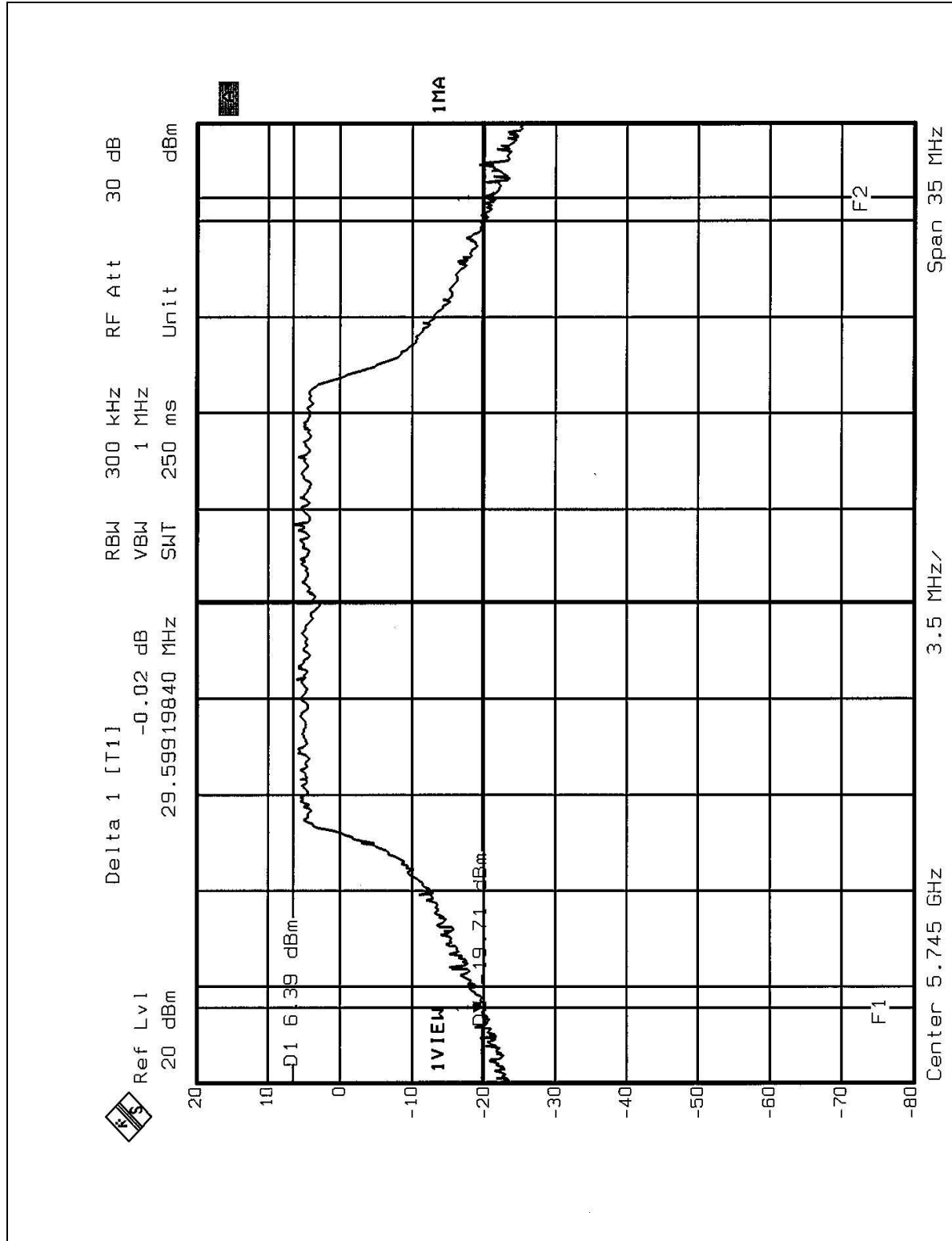


CHANNEL 8



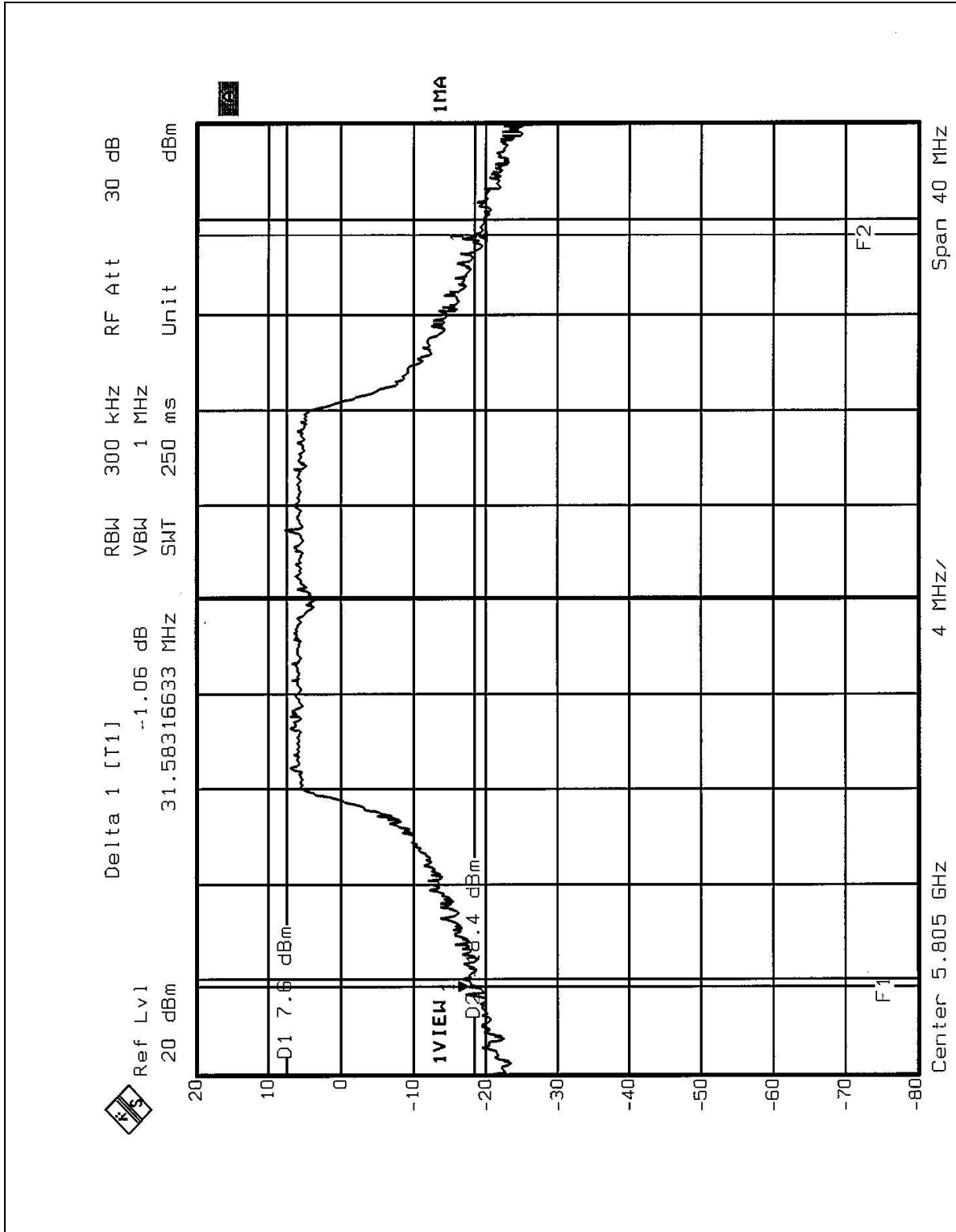


CHANNEL 9





CHANNEL 12







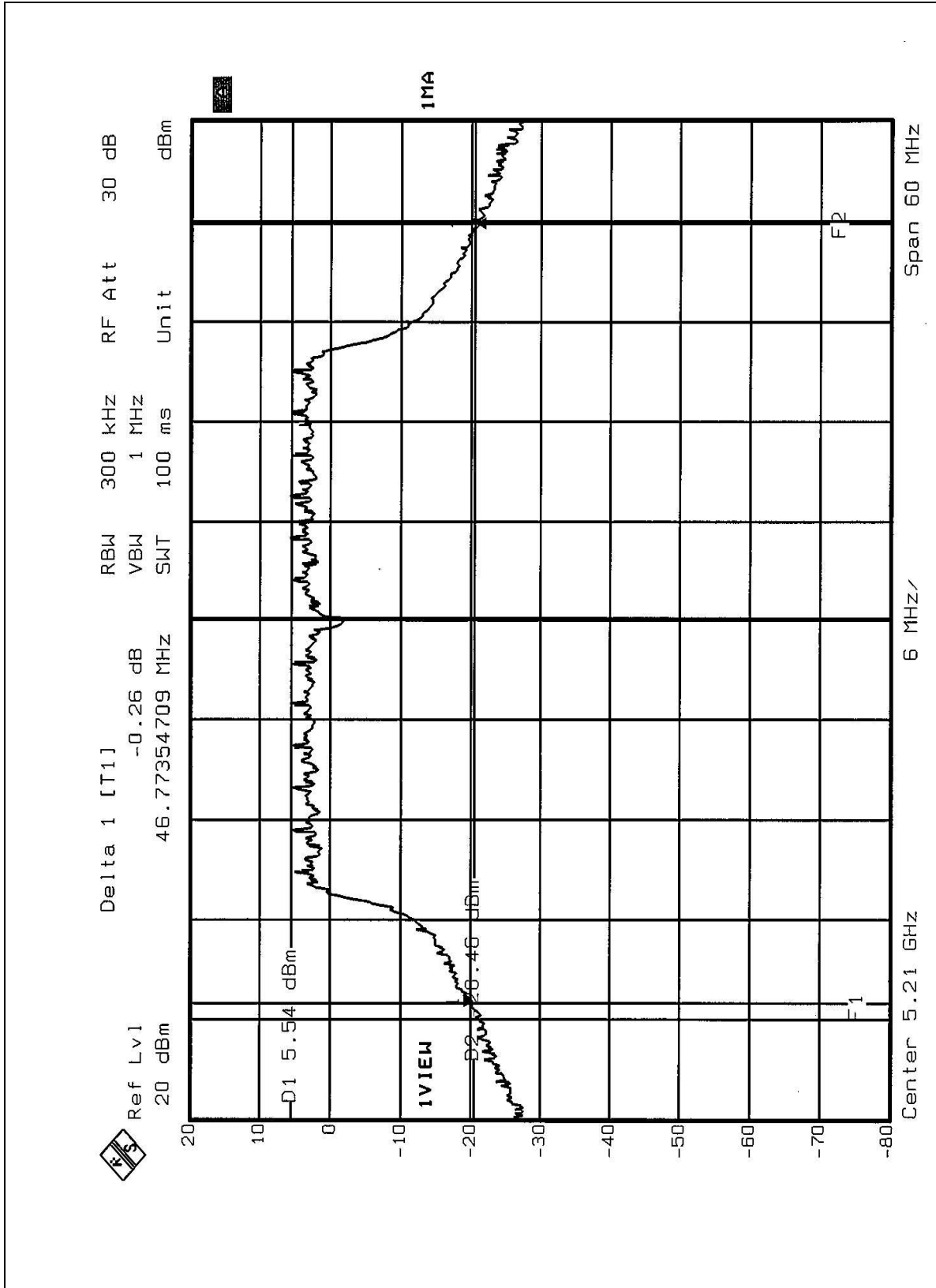
|                                 |                                |                             |               |
|---------------------------------|--------------------------------|-----------------------------|---------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP    |
| <b>MODE</b>                     | Turbo                          | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 26 deg. C, 52%RH, 1005 hPa     | <b>TESTED BY</b>            | Steven Lu     |

| <b>CHANNEL</b> | <b>CHANNEL FREQUENCY (MHz)</b> | <b>PEAK POWER OUTPUT (dBm)</b> | <b>PEAK POWER LIMIT (dBm)</b> | <b>26dBc Occupied Bandwidth (MHz)</b> | <b>PASS/FAIL</b> |
|----------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------------|------------------|
| 1              | 5210                           | 16.81                          | 17.00                         | 46.7735                               | PASS             |
| 2              | 5250                           | 16.72                          | 17.00                         | 49.7796                               | PASS             |
| 3              | 5290                           | 16.84                          | 24.00                         | 49.4188                               | PASS             |
| 4              | 5760                           | 14.96                          | 30.00                         | 49.8998                               | PASS             |
| 5              | 5800                           | 10.87                          | 30.00                         | 48.0962                               | PASS             |

**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to next 5 pages.

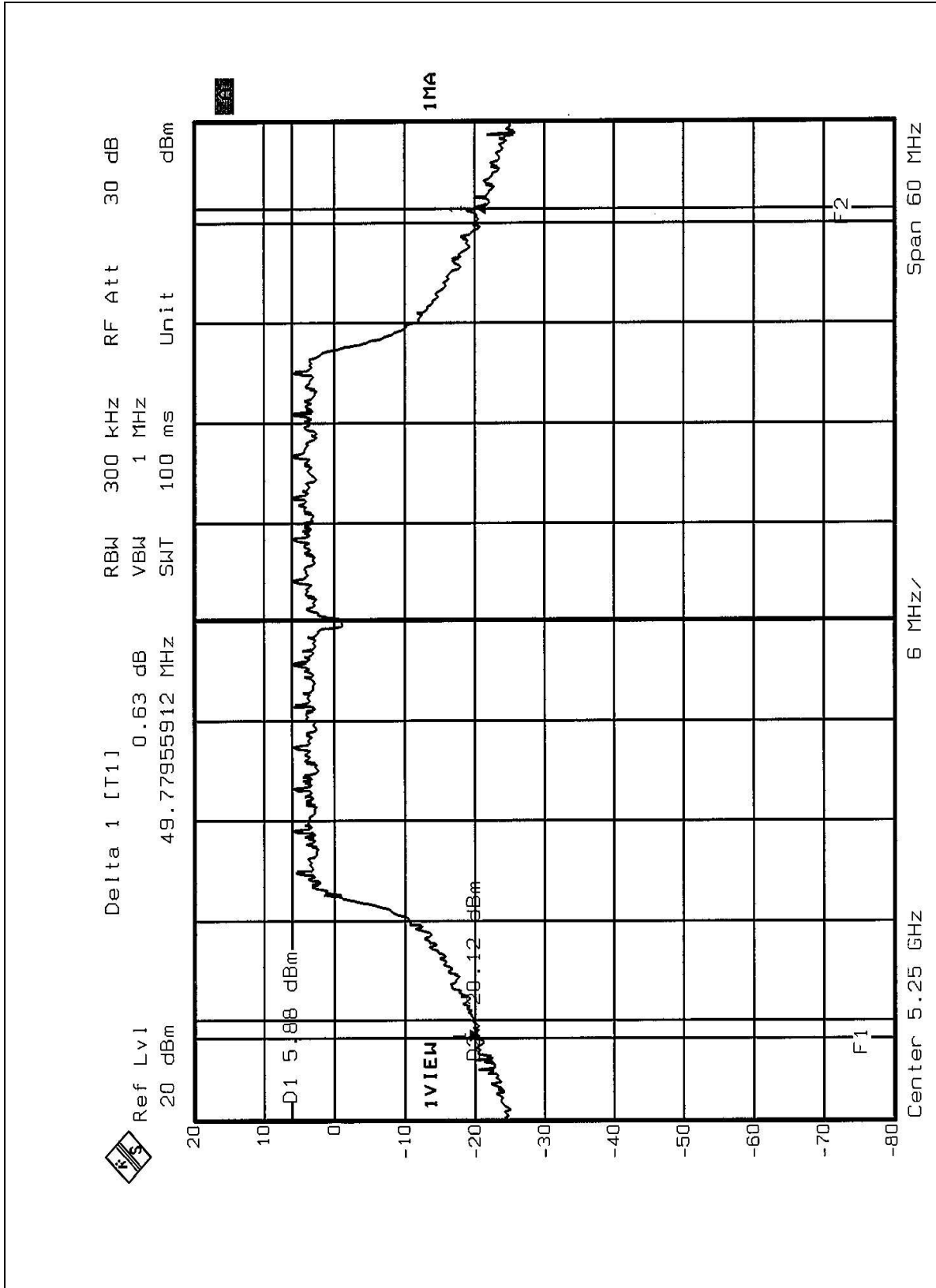


CHANNEL 1



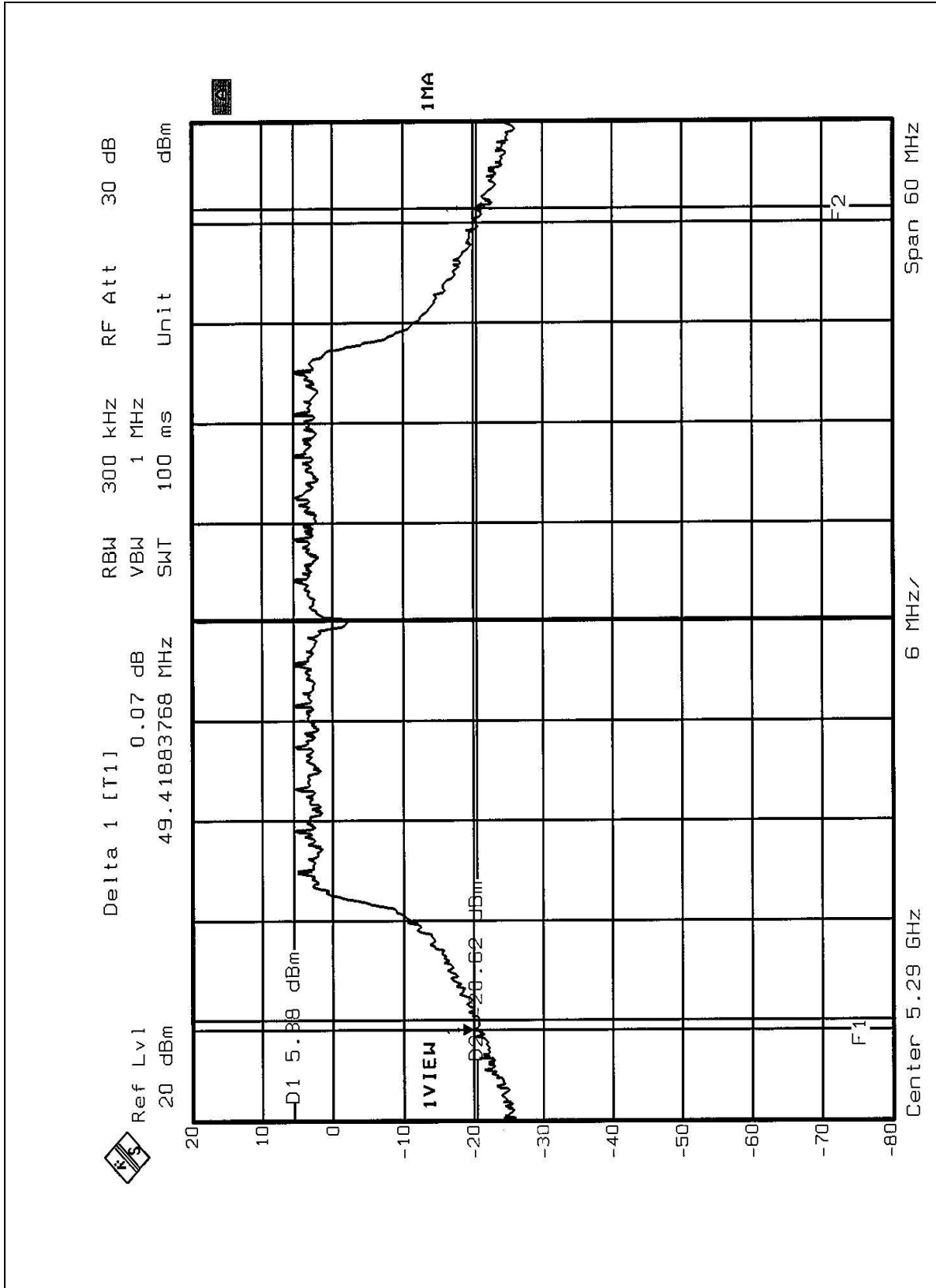


CHANNEL 2



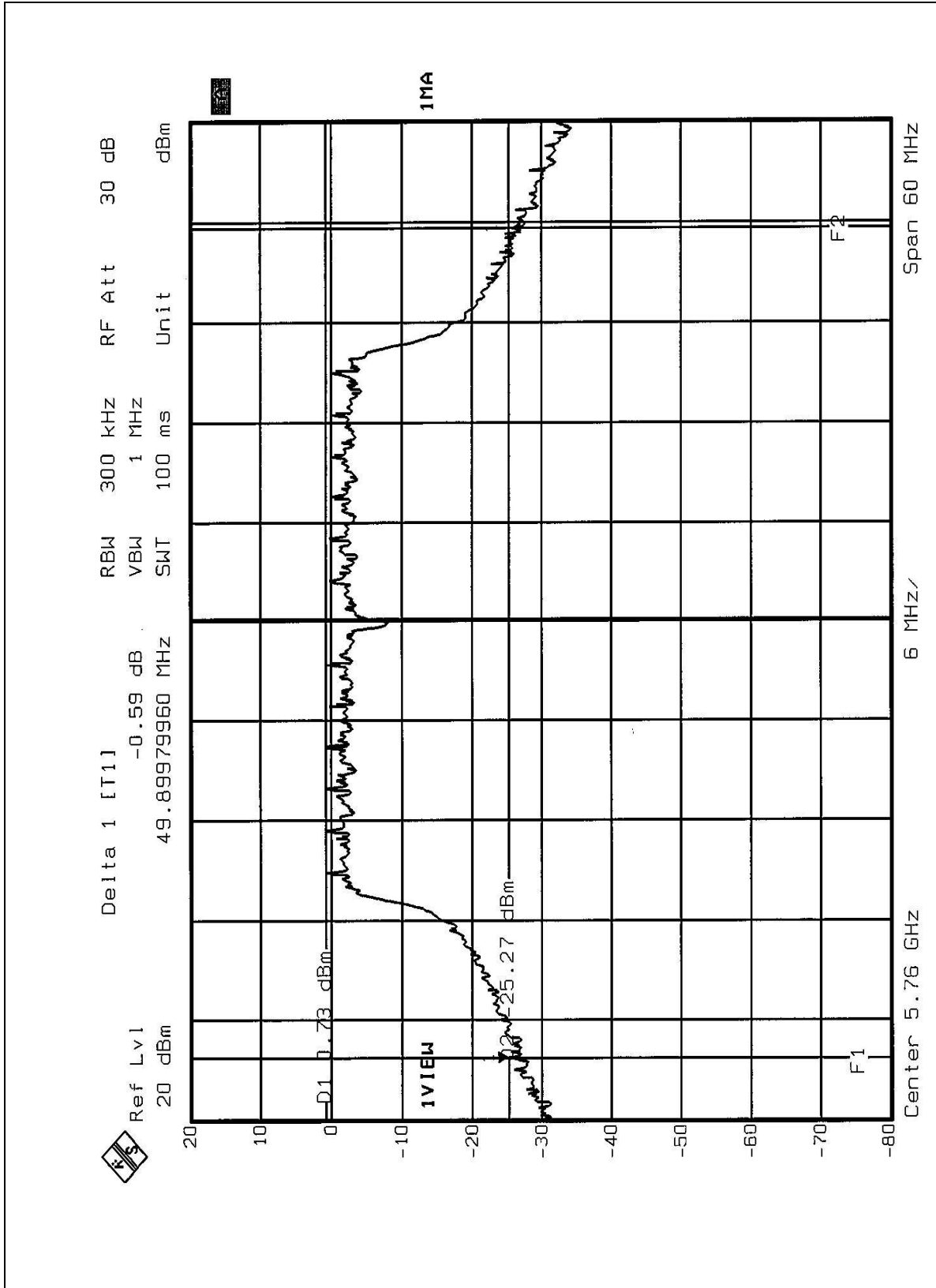


CHANNEL 3



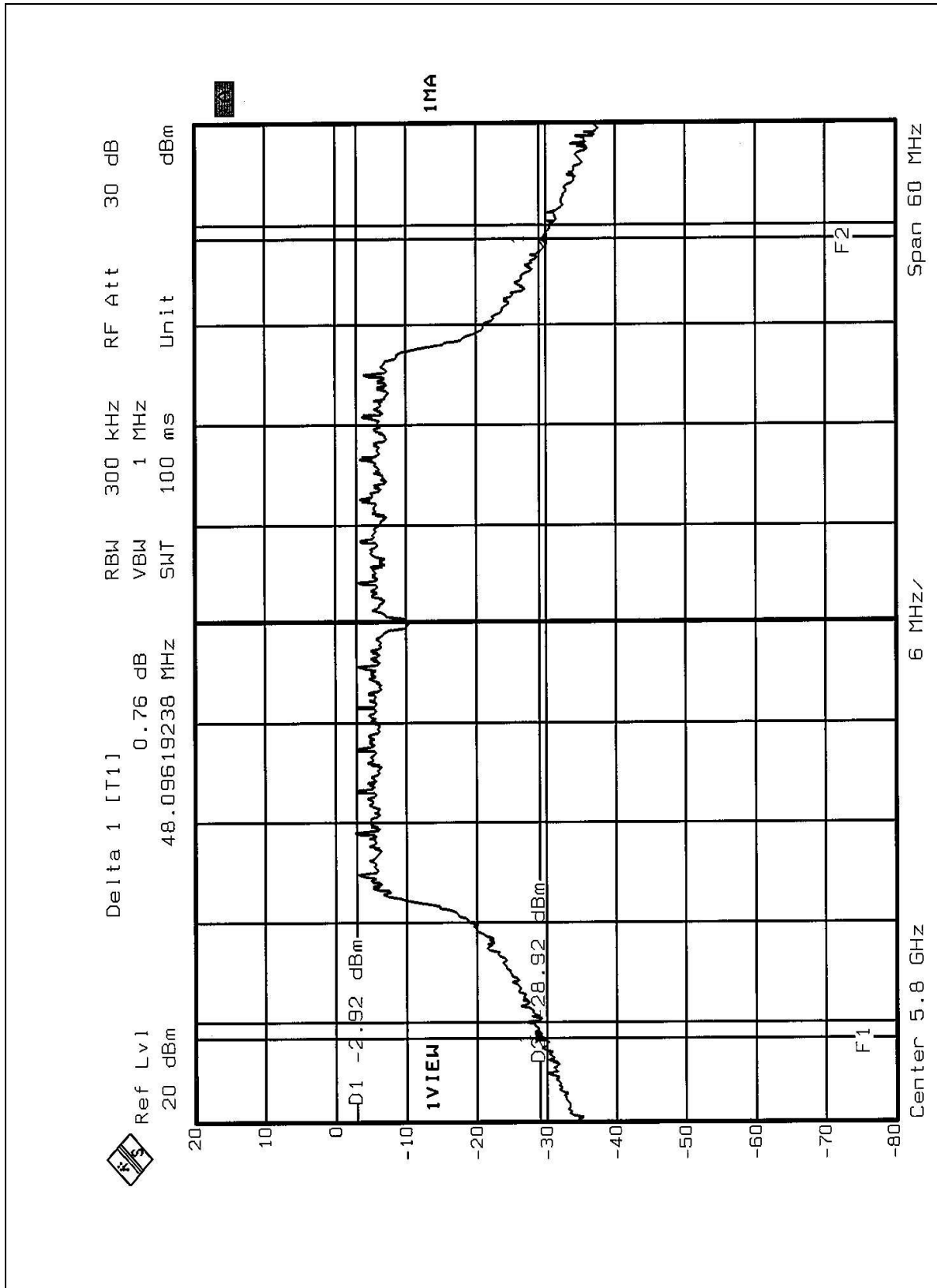


CHANNEL 4





CHANNEL 5





#### 4.4 PEAK POWER EXCURSION MEASUREMENT

##### 4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

| Frequency Band    | Limit |
|-------------------|-------|
| 5.15 – 5.25 GHz   | 13dB  |
| 5.25 – 5.35 GHz   | 13dB  |
| 5.725 – 5.825 GHz | 13dB  |

##### 4.4.2 TEST INSTRUMENTS

| Description & Manufacturer         | Model No. | Serial No. | Calibrated Until |
|------------------------------------|-----------|------------|------------------|
| ROHDE&SCHWARZ<br>SPECTRUM ANALYZER | FSEK30    | 100049     | July 17, 2002    |

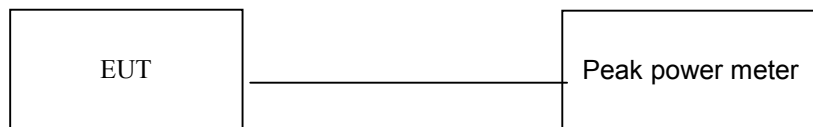
**NOTE:**

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

#### 4.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 and 2 with proper resolution bandwidth setting.
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

#### 4.4.4 TEST SETUP



#### 4.4.5 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.





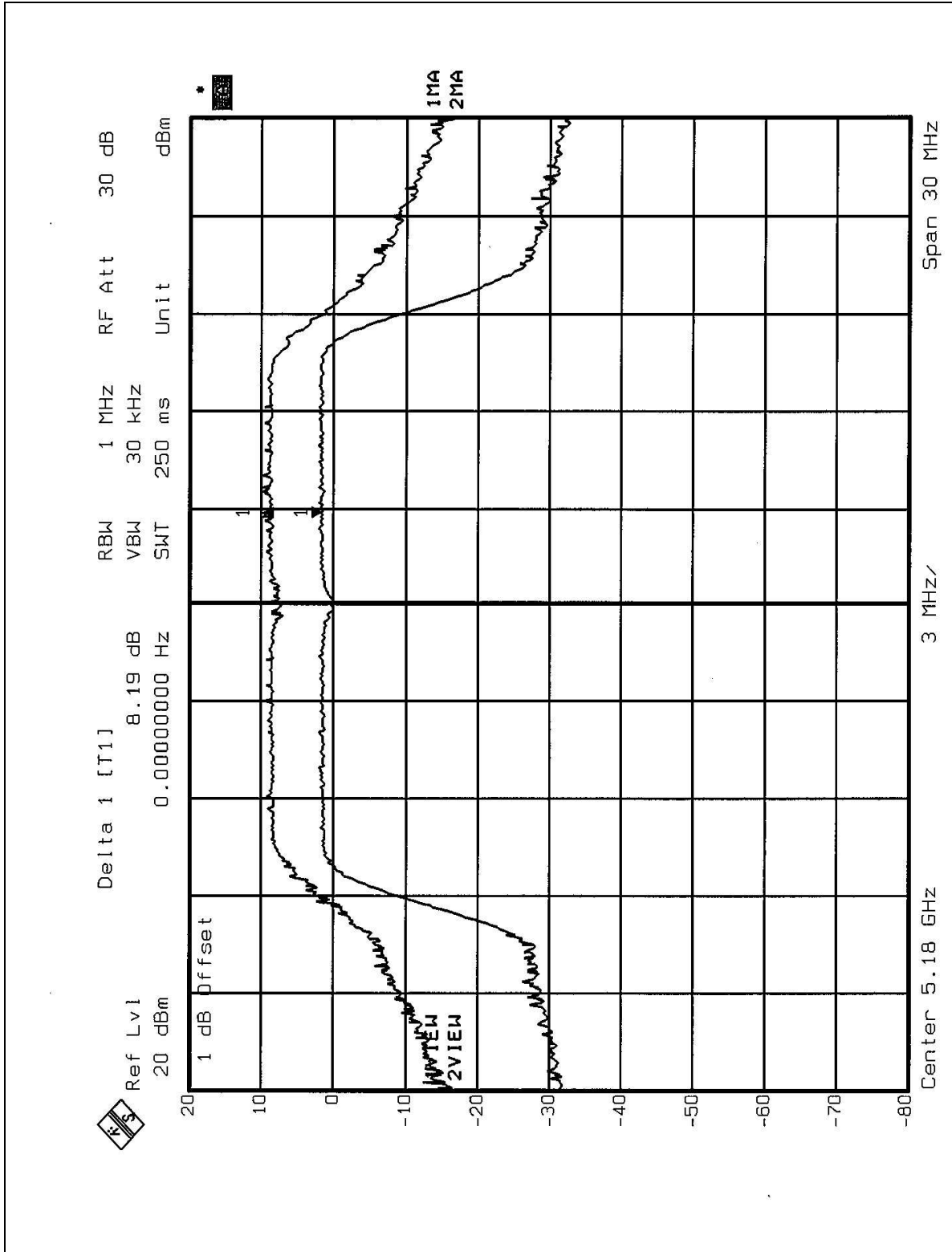
## 4.4.6 TEST RESULTS

|                                 |                                |                             |               |
|---------------------------------|--------------------------------|-----------------------------|---------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP    |
| <b>MODE</b>                     | Normal                         | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 27 deg. C, 52%RH,<br>1005 hPa  | <b>TESTED BY</b>            | Steven Lu     |

| <b>CHANNEL</b> | <b>CHANNEL FREQUENCY (MHz)</b> | <b>PEAK POWER EXCURSION (dB)</b> | <b>PEAK to AVERAGE EXCURSION LIMIT (dB)</b> | <b>PASS/FAIL</b> |
|----------------|--------------------------------|----------------------------------|---|------------------|
| 1              | 5180                           | 8.19                             | 13  | PASS             |
| 4              | 5240                           | 8.68                             | 13  | PASS             |
| 5              | 5260                           | 8.36                             | 13  | PASS             |
| 8              | 5320                           | 8.30                             | 13  | PASS             |
| 9              | 5745                           | 8.68                             | 13  | PASS             |
| 12             | 5805                           | 8.46                             | 13  | PASS             |

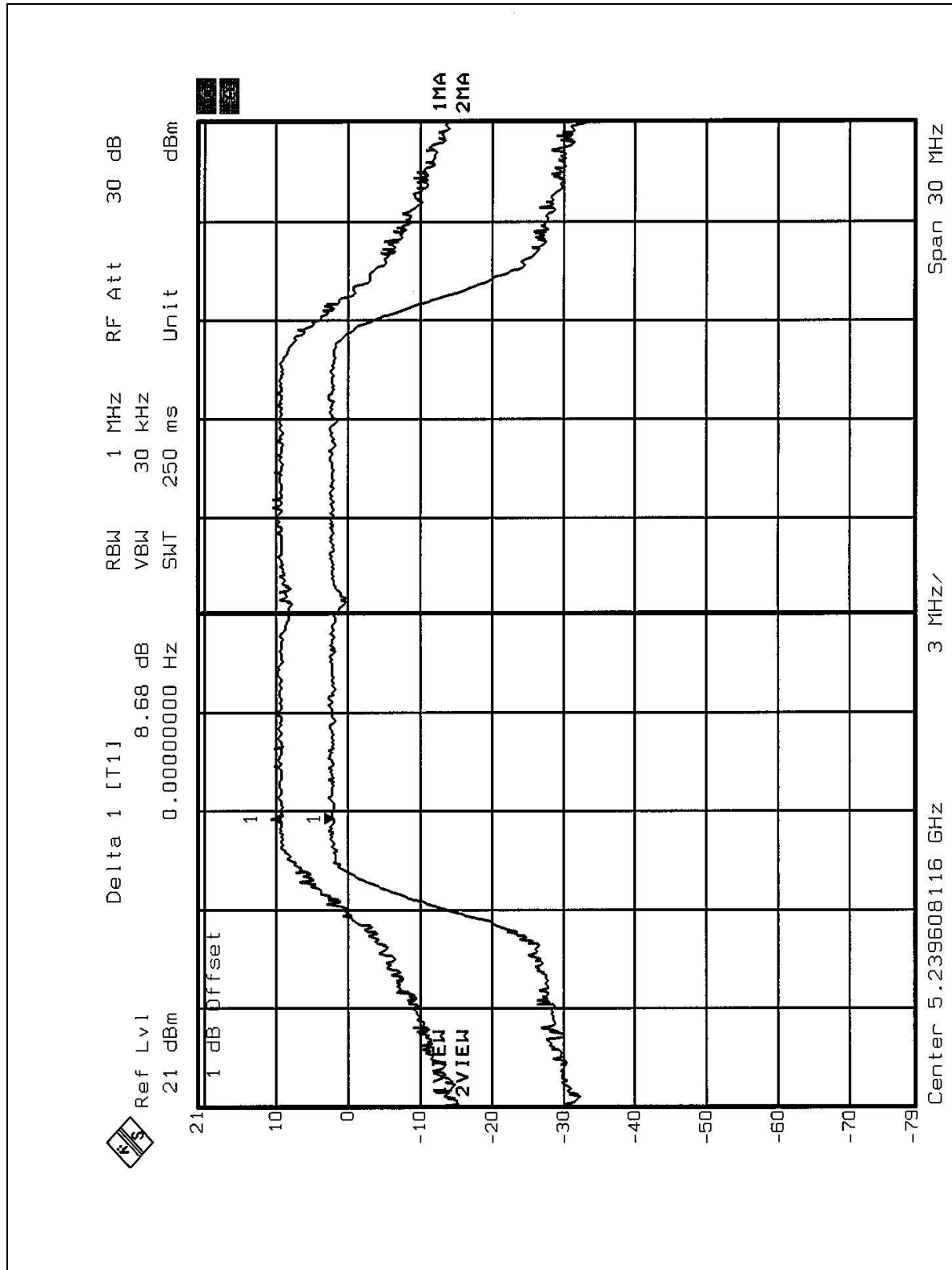


CHANNEL 1



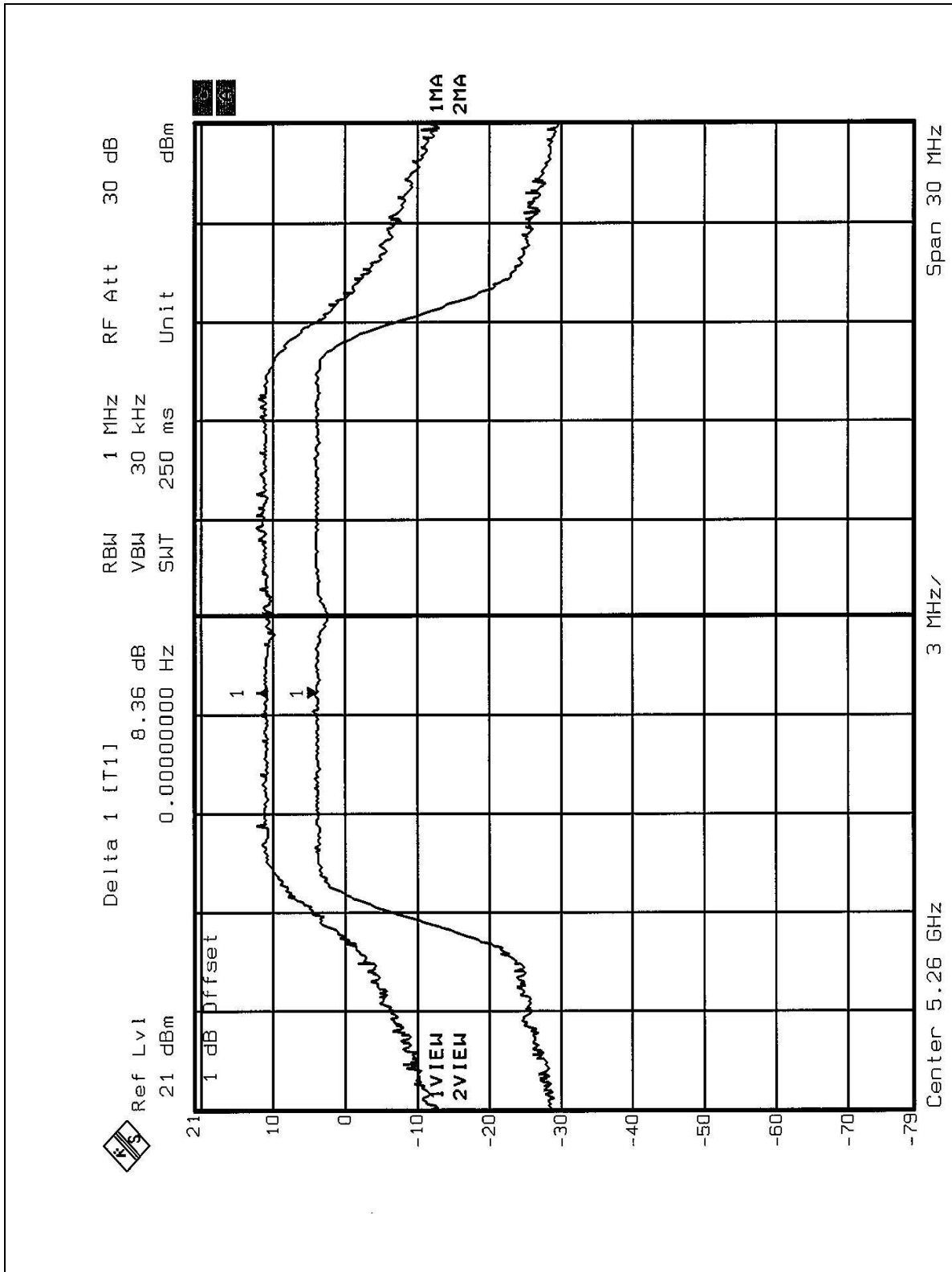


CHANNEL 4





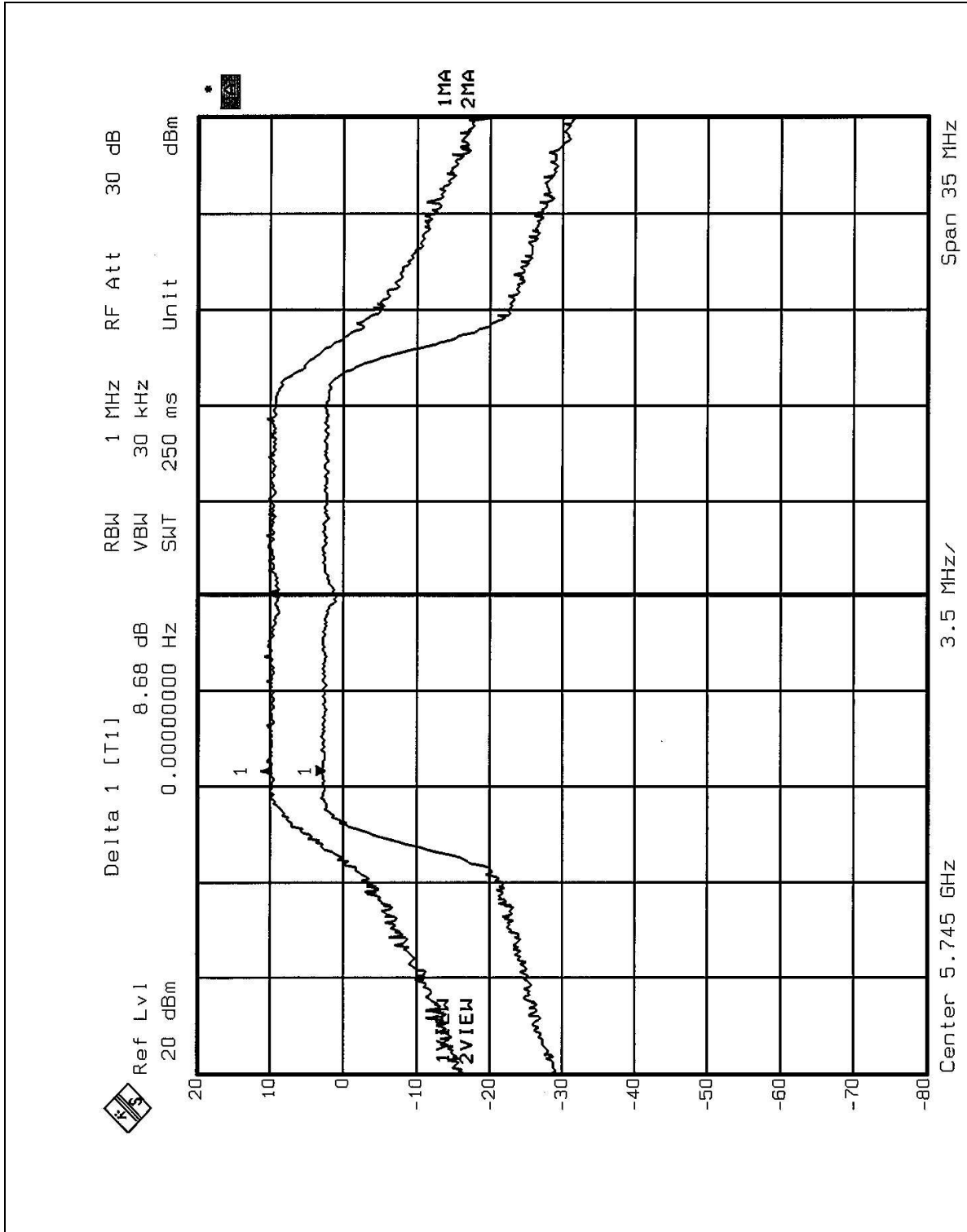
CHANNEL 5





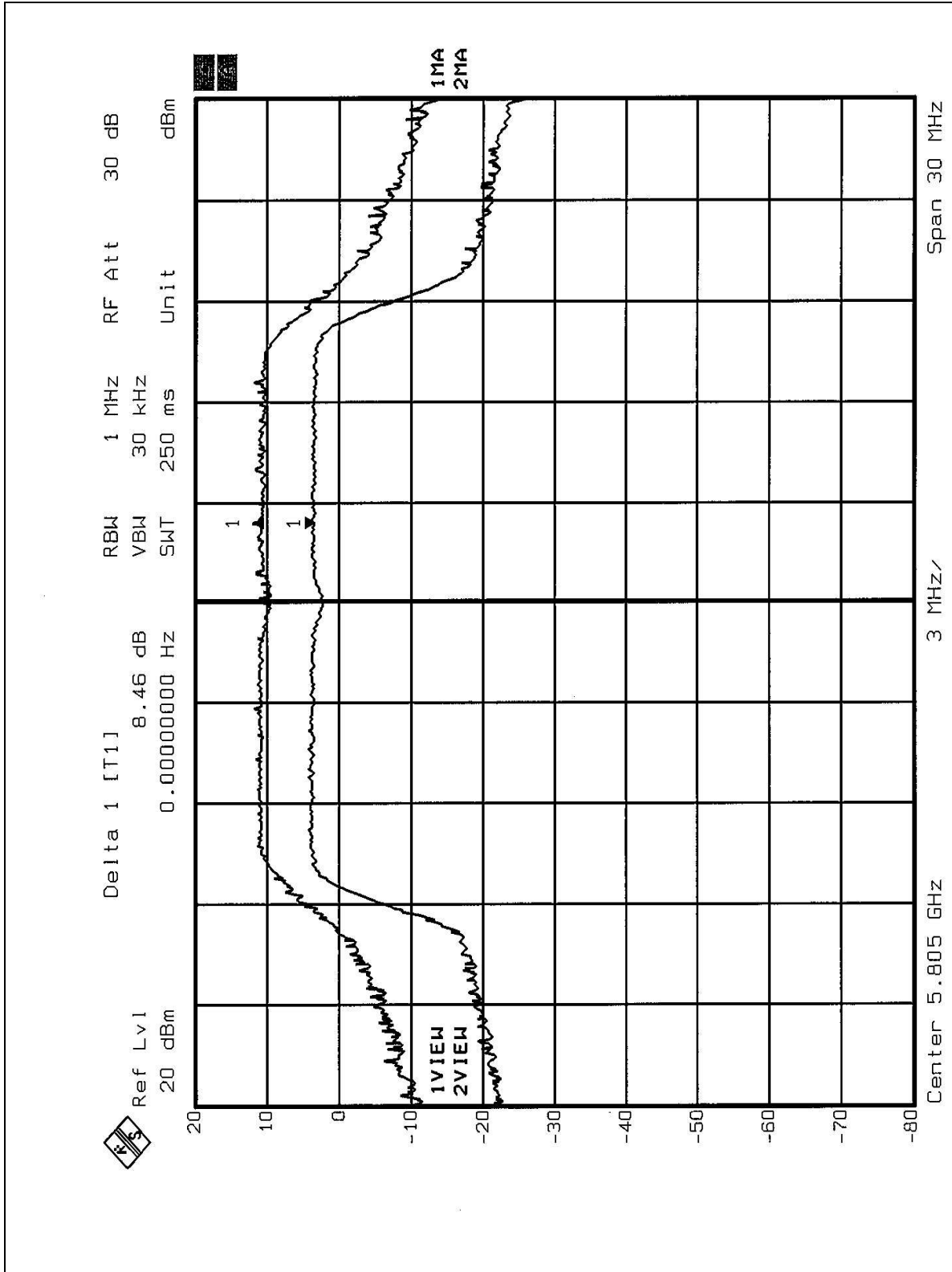


CHANNEL 9





CHANNEL 12





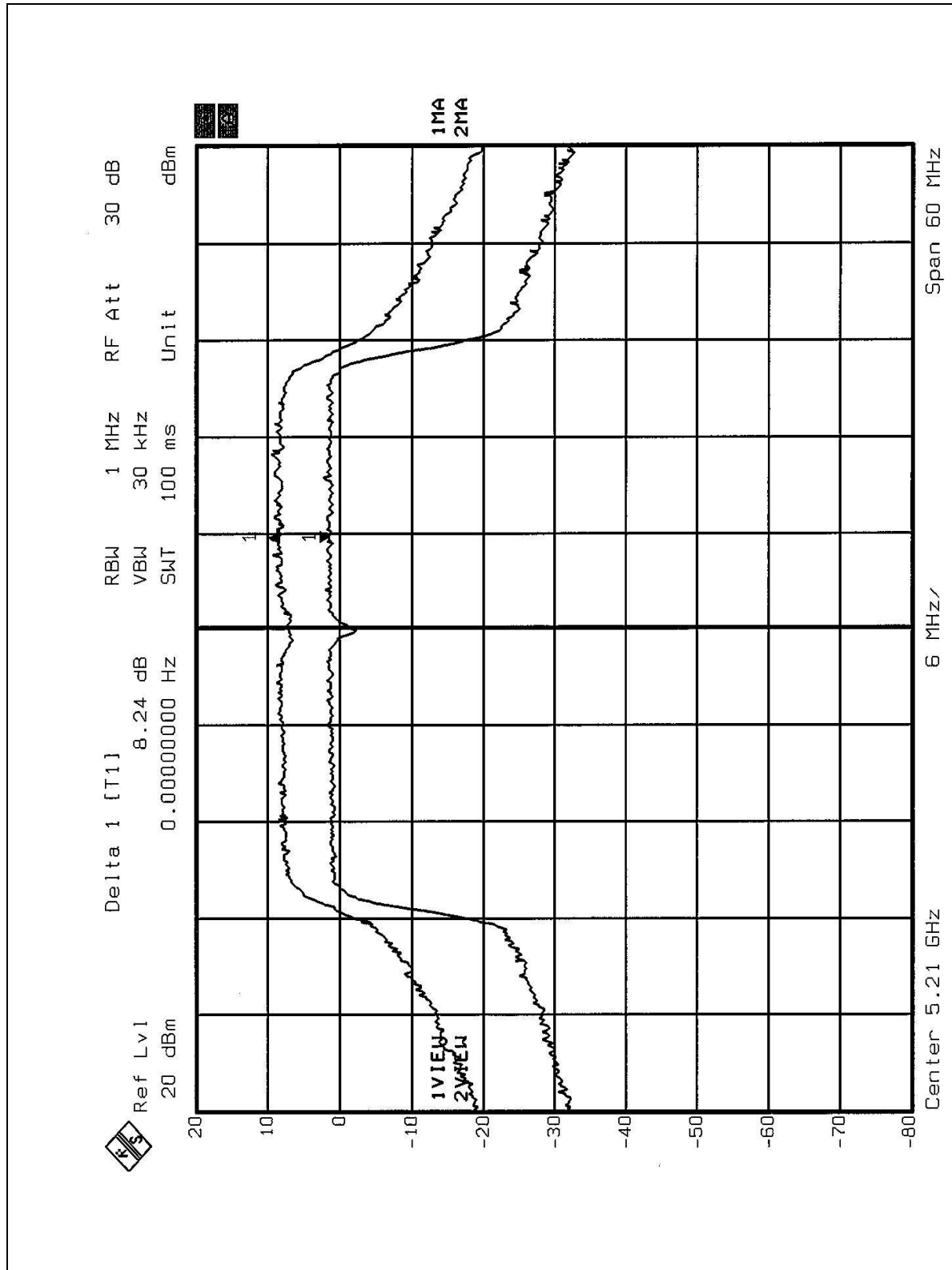
|                                 |                                |                             |               |
|---------------------------------|--------------------------------|-----------------------------|---------------|
| <b>EUT</b>                      | IEEE 802.11a WLAN Access Point | <b>MODEL</b>                | DWL-5000AP    |
| <b>MODE</b>                     | Turbo                          | <b>INPUT POWER (SYSTEM)</b> | 120Vac, 60 Hz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 26 deg. C, 52%RH,<br>1005 hPa  | <b>TESTED BY</b>            | Steven Lu     |

| <b>CHANNEL</b> | <b>CHANNEL FREQUENCY (MHz)</b> | <b>PEAK POWER EXCURSION (dBm)</b> | <b>PEAK to AVERAGE EXCURSION LIMIT (dB)</b> | <b>PASS/FAIL</b> |
|----------------|--------------------------------|-----------------------------------|---|------------------|
| 1              | 5210                           | 8.24                              | 13  | PASS             |
| 2              | 5250                           | 7.42                              | 13  | PASS             |
| 3              | 5290                           | 8.26                              | 13  | PASS             |
| 4              | 5760                           | 8.17                              | 13  | PASS             |
| 5              | 5800                           | 7.93                              | 13  | PASS             |



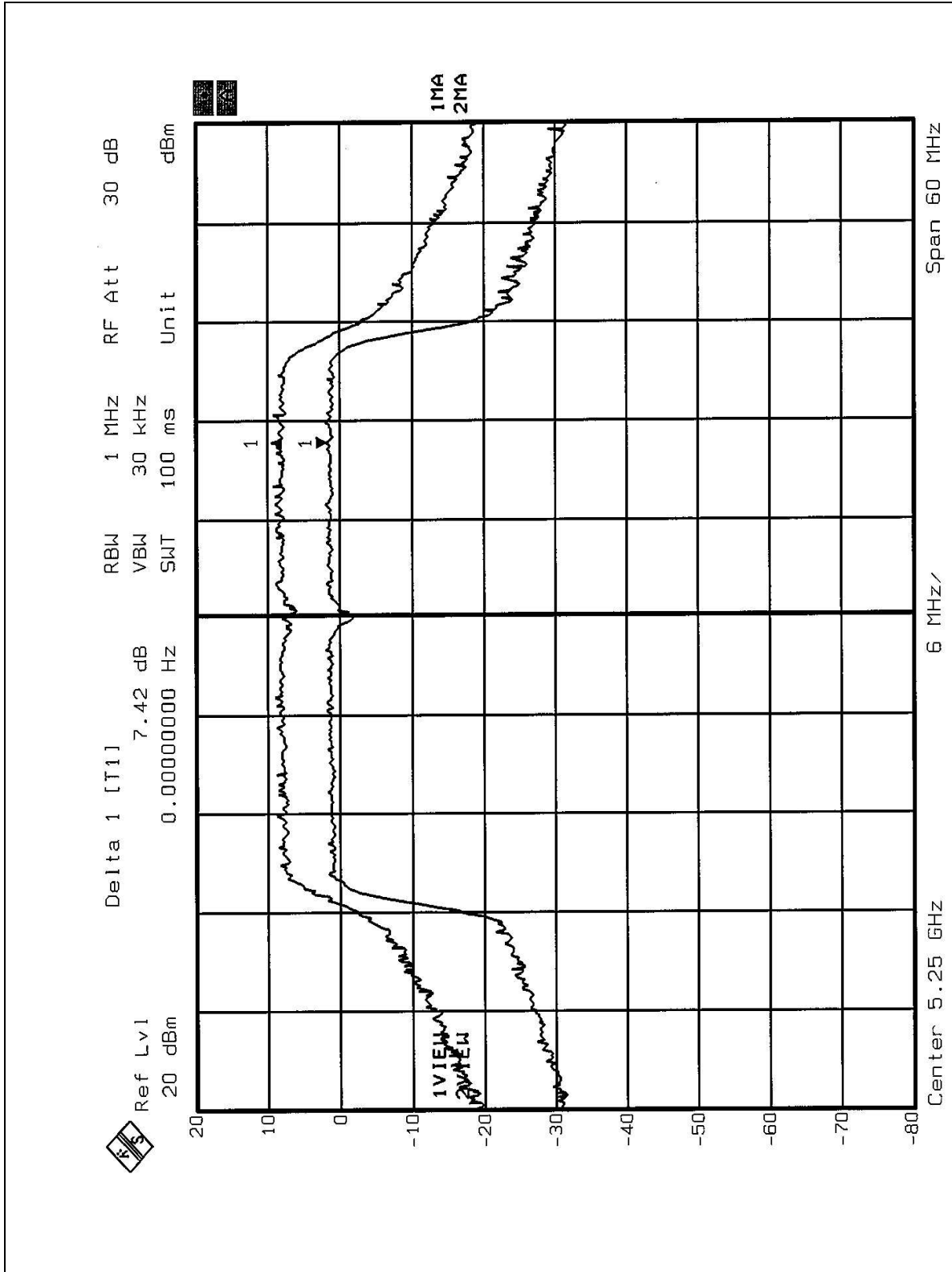


CHANNEL 1



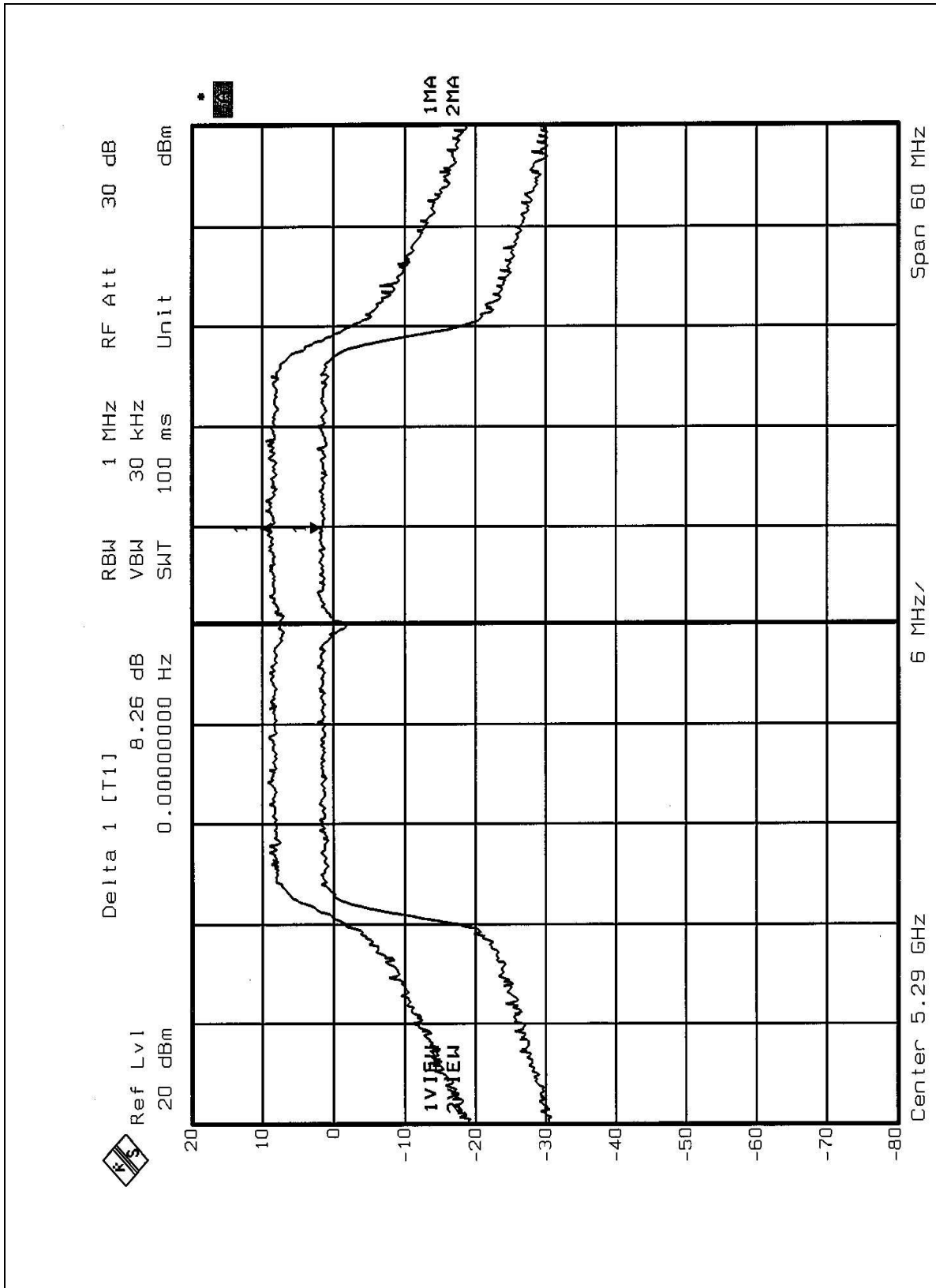


CHANNEL 2



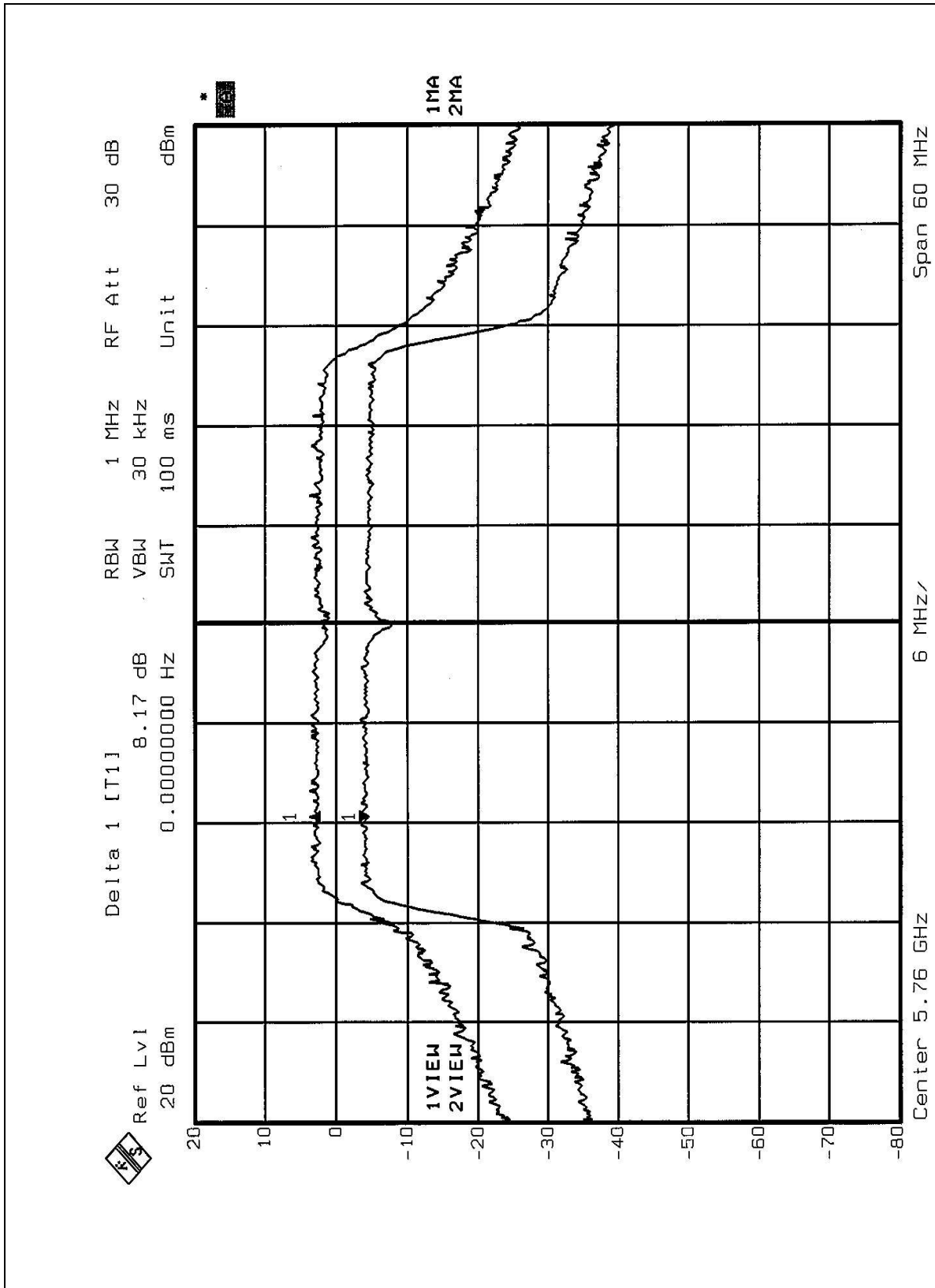


CHANNEL 3



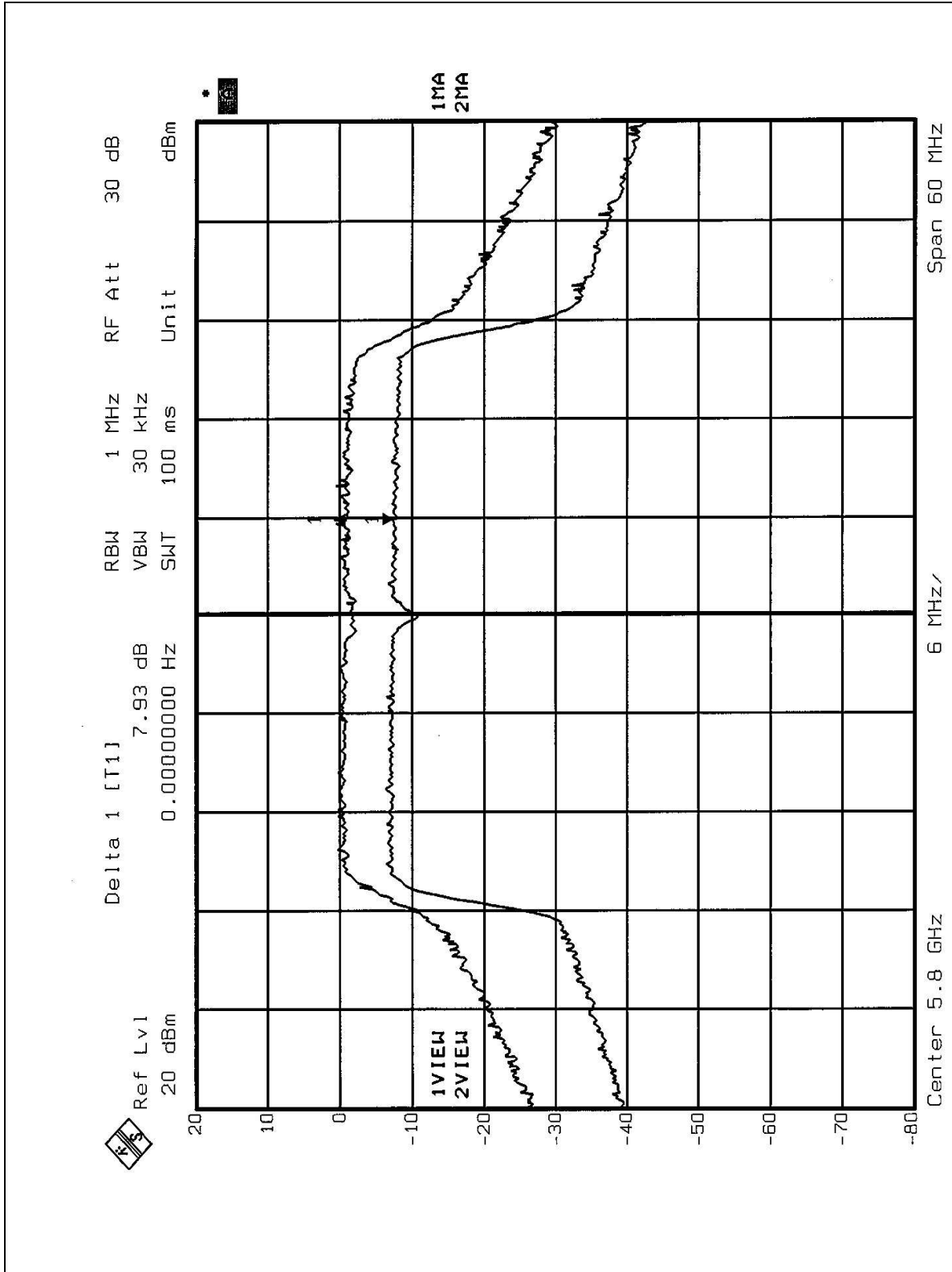


CHANNEL 4





CHANNEL 5





## 4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

### 4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

| Frequency Band    | Limit |
|-------------------|-------|
| 5.15 – 5.25 GHz   | 4dBm  |
| 5.25 – 5.35 GHz   | 11dBm |
| 5.725 – 5.825 GHz | 17dBm |

### 4.5.2 TEST INSTRUMENTS

| Description & Manufacturer         | Model No. | Serial No. | Calibrated Until |
|------------------------------------|-----------|------------|------------------|
| ROHDE&SCHWARZ<br>SPECTRUM ANALYZER | FSEK30    | 100049     | July 17, 2002    |

**NOTE:**

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

#### 4.5.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD can be found.

#### 4.5.4 TEST SETUP



#### 4.5.5 EUT OPERATING CONDITIONS

Same as 4.3.5



## 4.5.6 TEST RESULTS

|                                     |                                   |                                 |               |
|-------------------------------------|-----------------------------------|---------------------------------|---------------|
| <b>EUT</b>                          | IEEE 802.11a WLAN<br>Access Point | <b>MODEL</b>                    | DWL-5000AP    |
| <b>MODE</b>                         | Normal                            | <b>INPUT POWER<br/>(SYSTEM)</b> | 120Vac, 60 Hz |
| <b>ENVIRONMENTAL<br/>CONDITIONS</b> | 26 deg. C, 52%RH,<br>1005 hPa     | <b>TESTED BY</b>                | Steven Lu     |

| <b>CHANNEL<br/>NUMBER</b> | <b>CHANNEL<br/>FREQUENCY<br/>(MHz )</b> | <b>RF POWER LEVEL IN<br/>1 MHz BW<br/>(dBm)</b> | <b>MAXIMUM<br/>LIMIT<br/>(dBm)</b> | <b>PASS/FAIL</b> |
|---------------------------|---|---|------------------------------------|------------------|
| 1                         | 5180                                    | -1.94   | 4                                  | PASS             |
| 4                         | 5240                                    | -1.31   | 4                                  | PASS             |
| 5                         | 5260                                    | 2.31  | 11                                 | PASS             |
| 8                         | 5320                                    | 0.01  | 11                                 | PASS             |
| 9                         | 5745                                    | 1.47  | 17                                 | PASS             |
| 12                        | 5805                                    | 3.39  | 17                                 | PASS             |