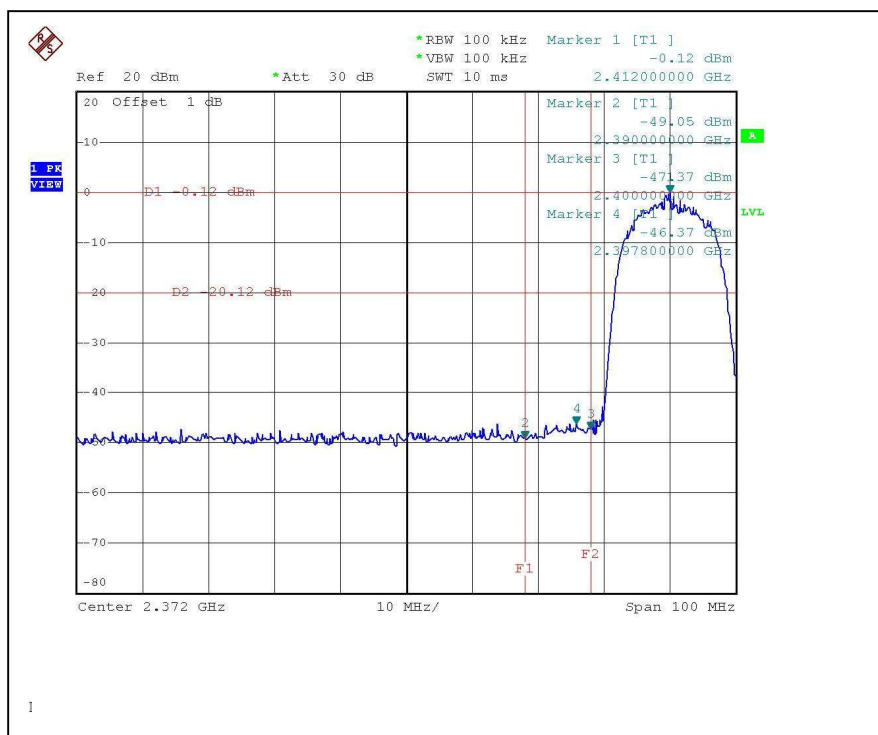


#### 4.6.6 TEST RESULTS (ANTENNA 2)

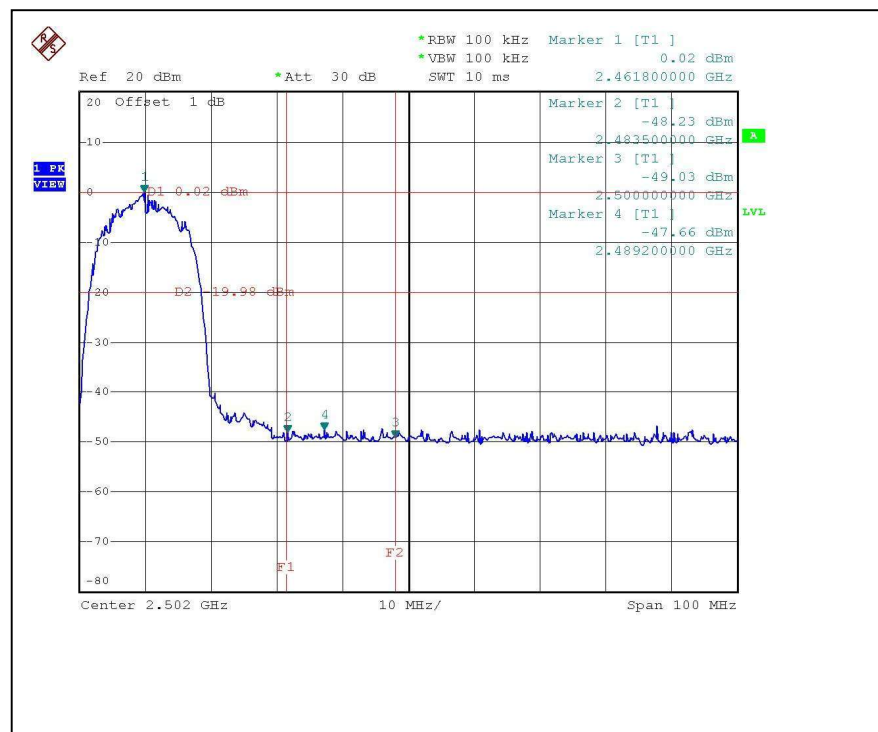
The spectrum plots are attached on the following 8 images. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

## 802.11b DSSS MODULATION:

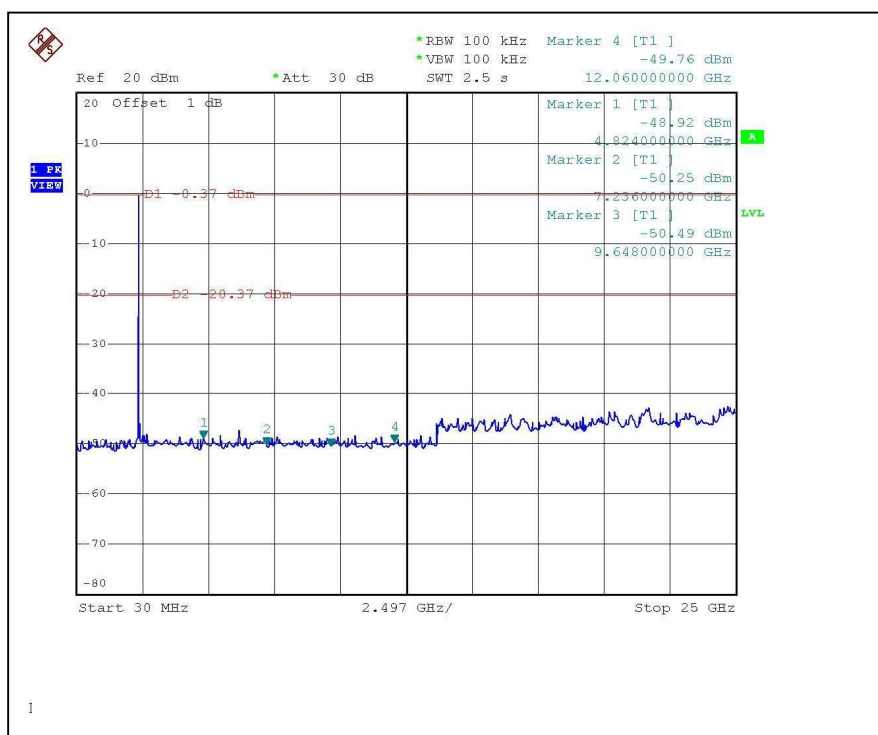
CH1



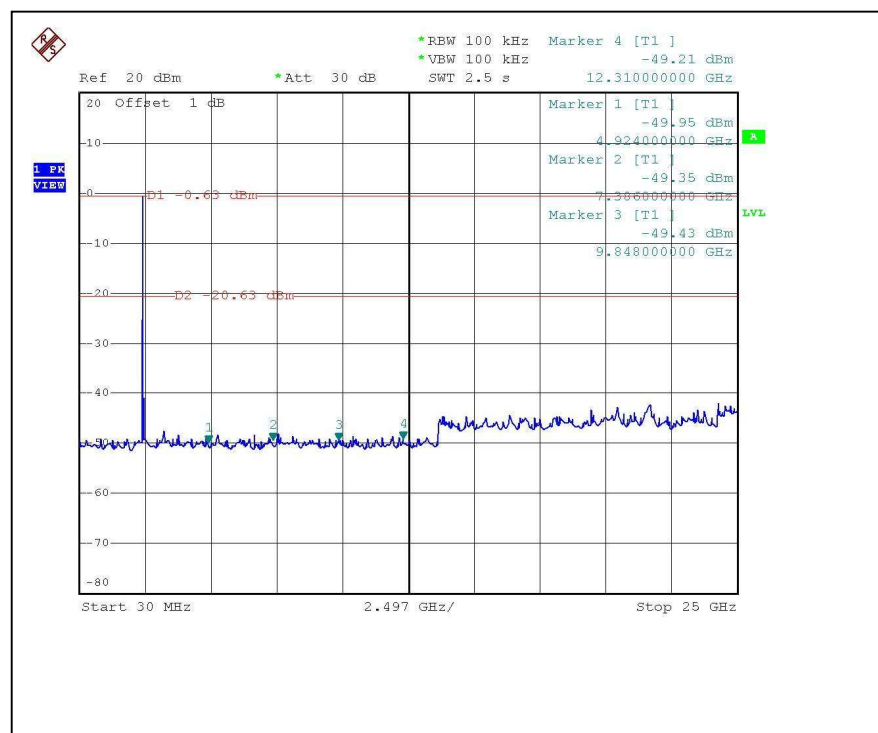
CH11



# CH1

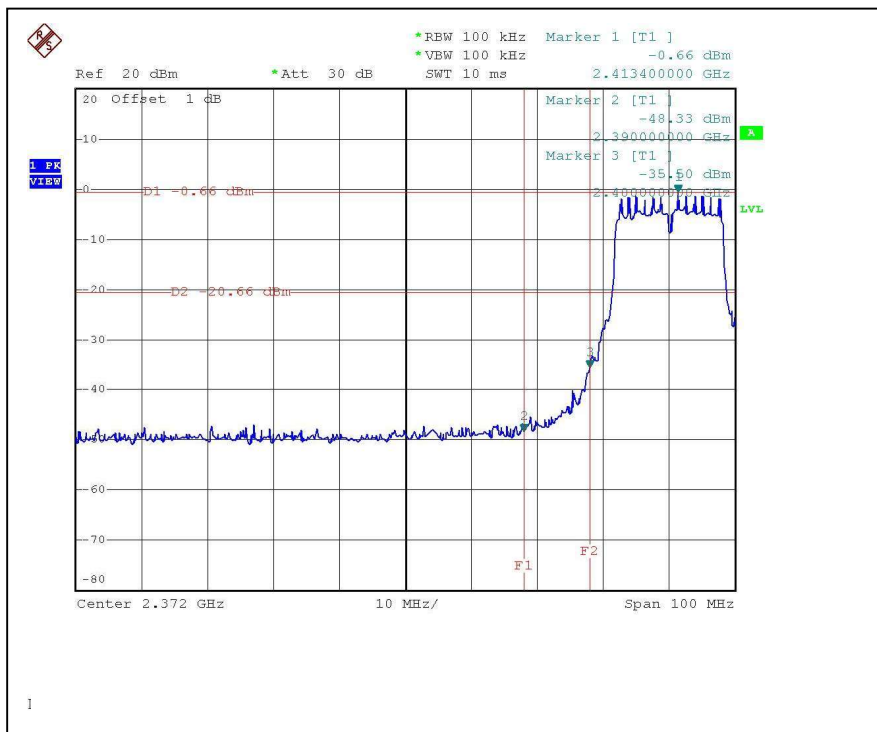


# CH11

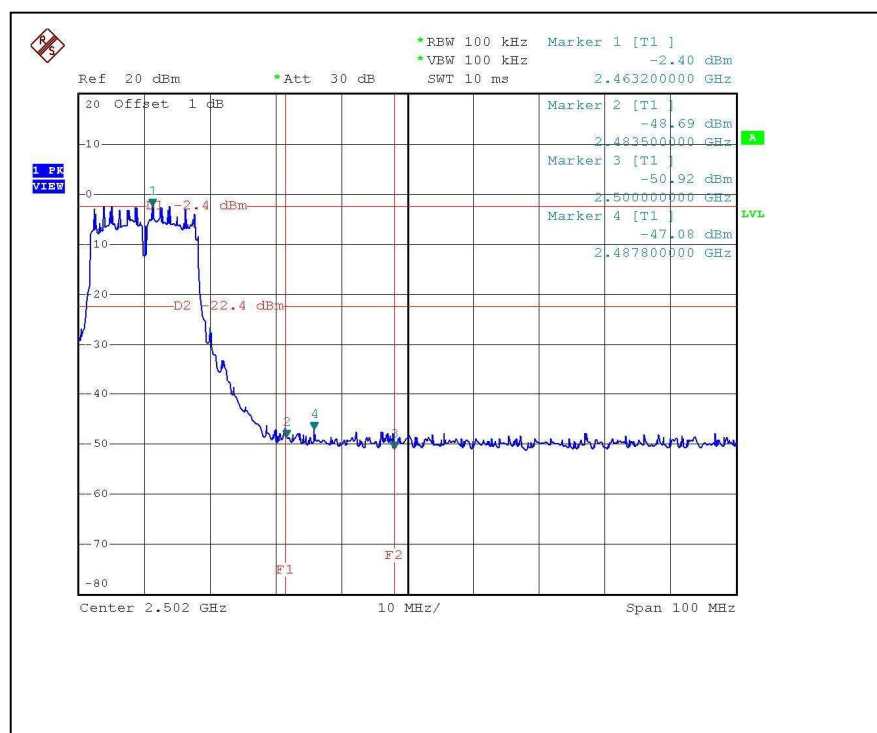


## 802.11g OFDM MODULATION:

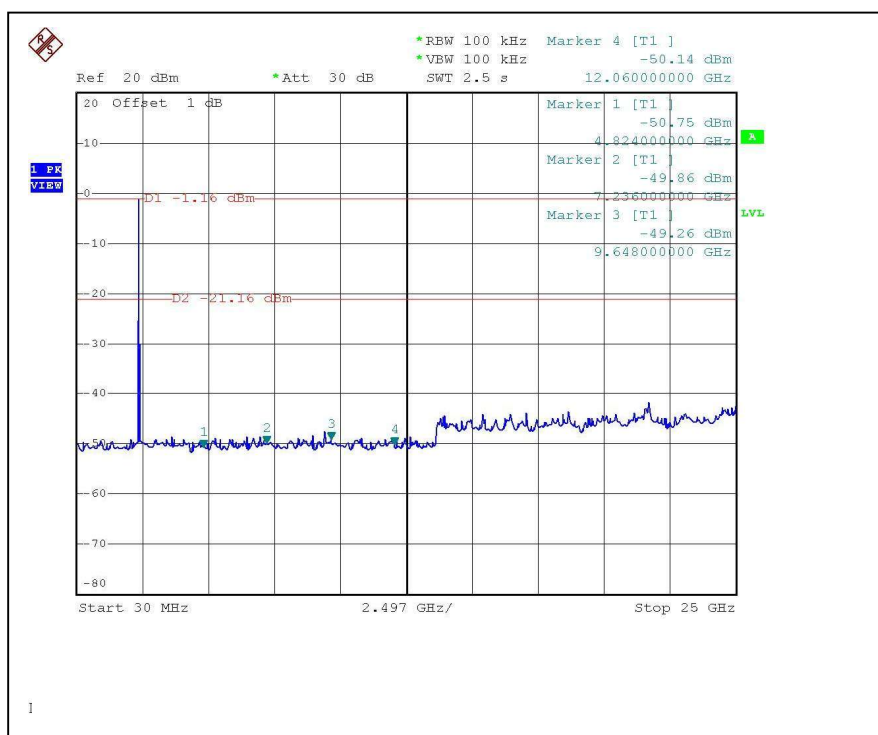
CH1



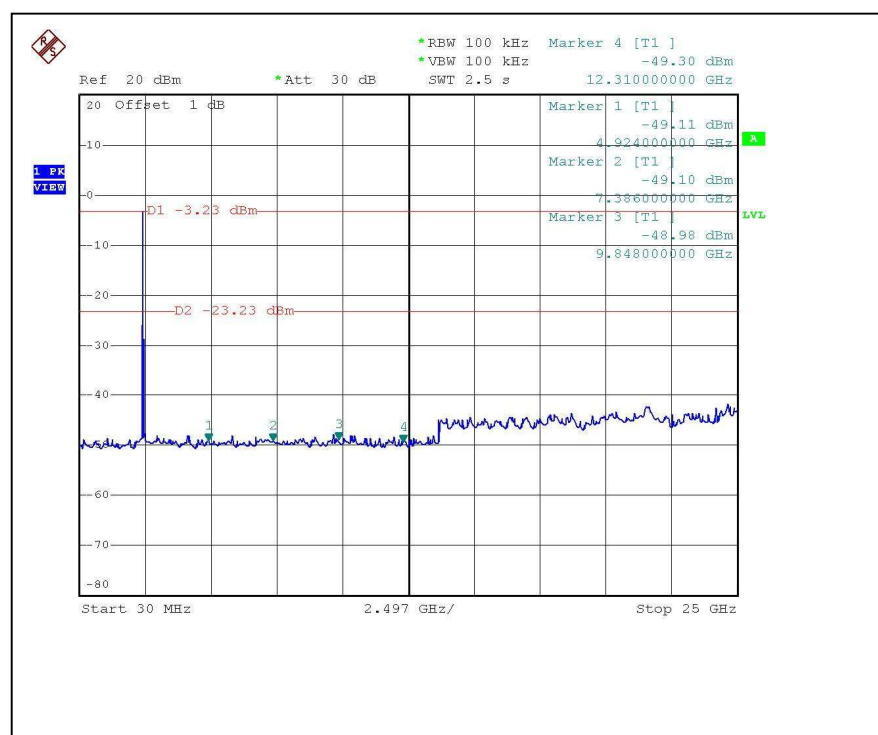
CH11



## CH1



## CH11

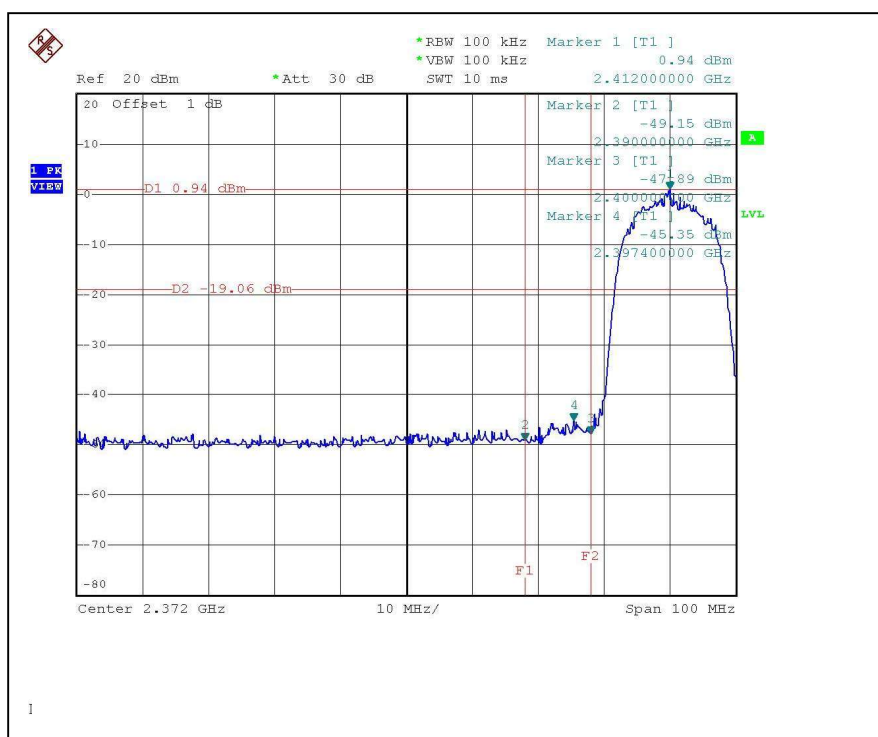


#### 4.6.7 TEST RESULTS (ANTENNA 3)

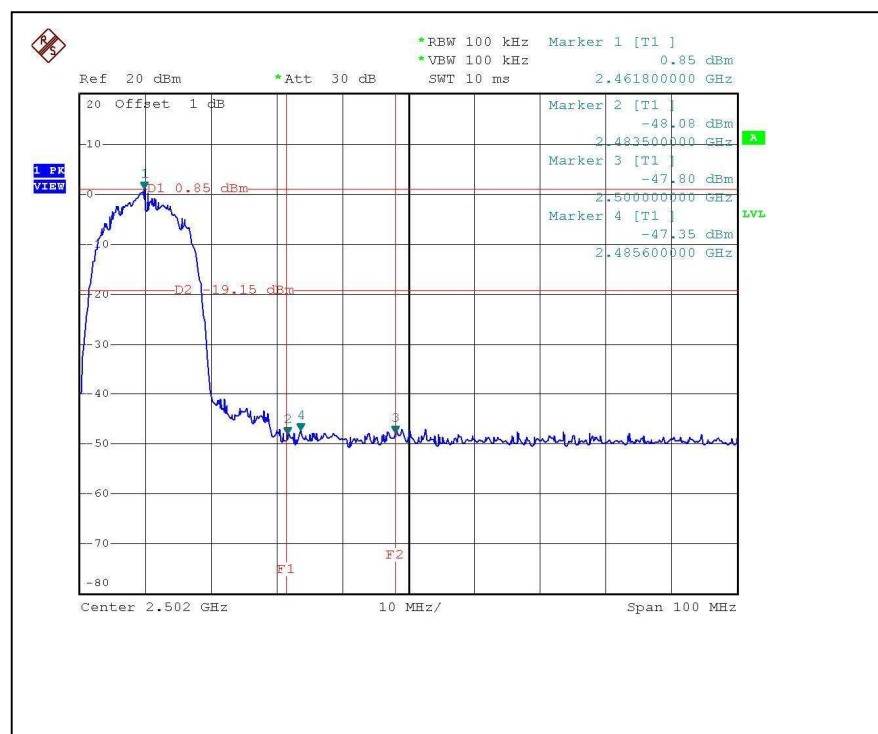
The spectrum plots are attached on the following 8 images. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

## 802.11b DSSS MODULATION:

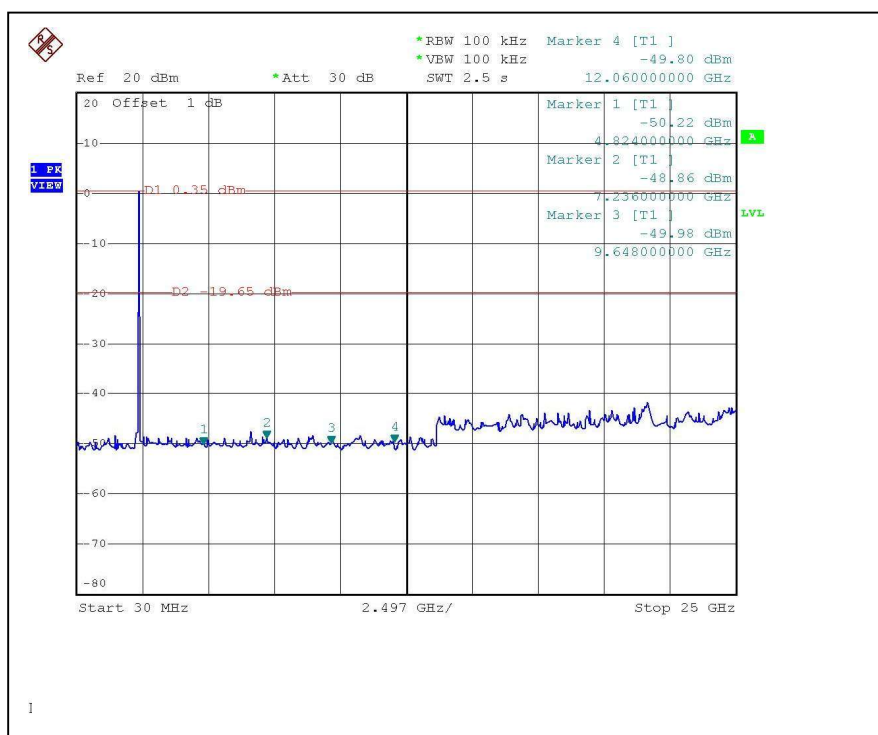
CH1



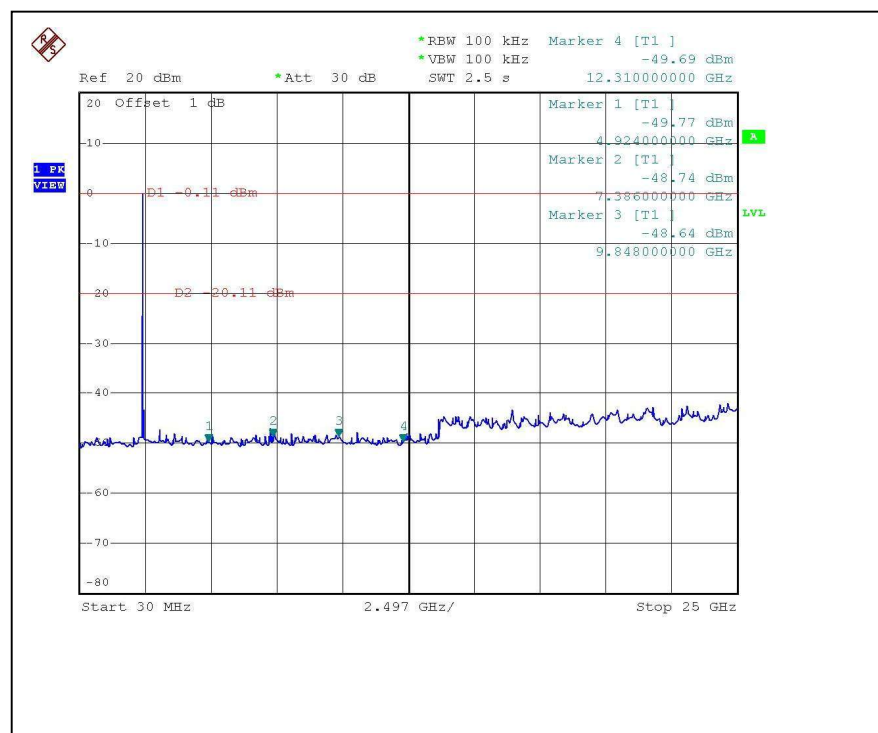
CH11



# CH1



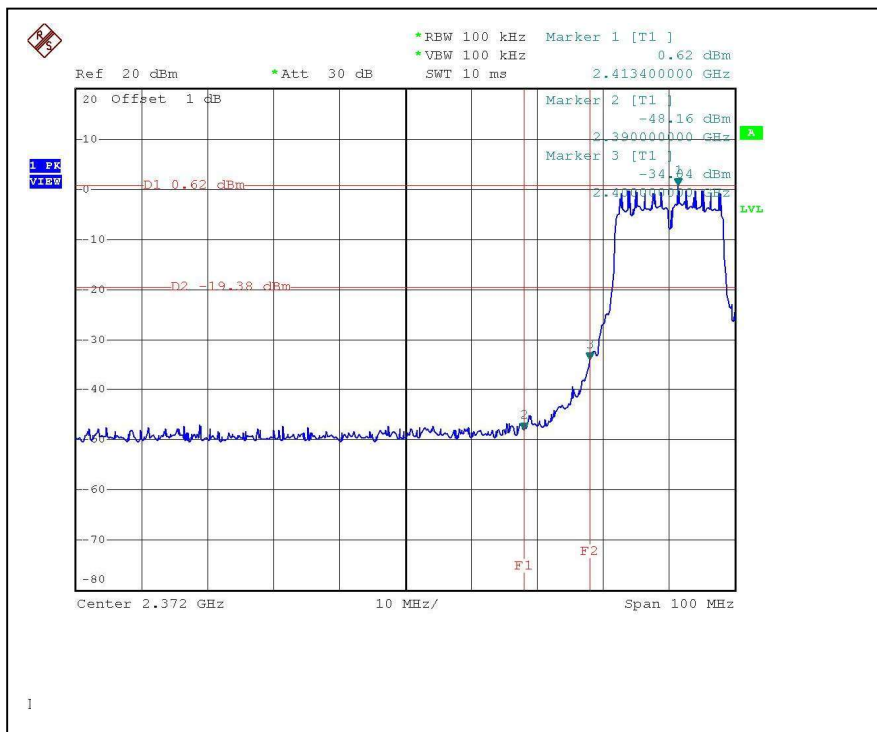
# CH11



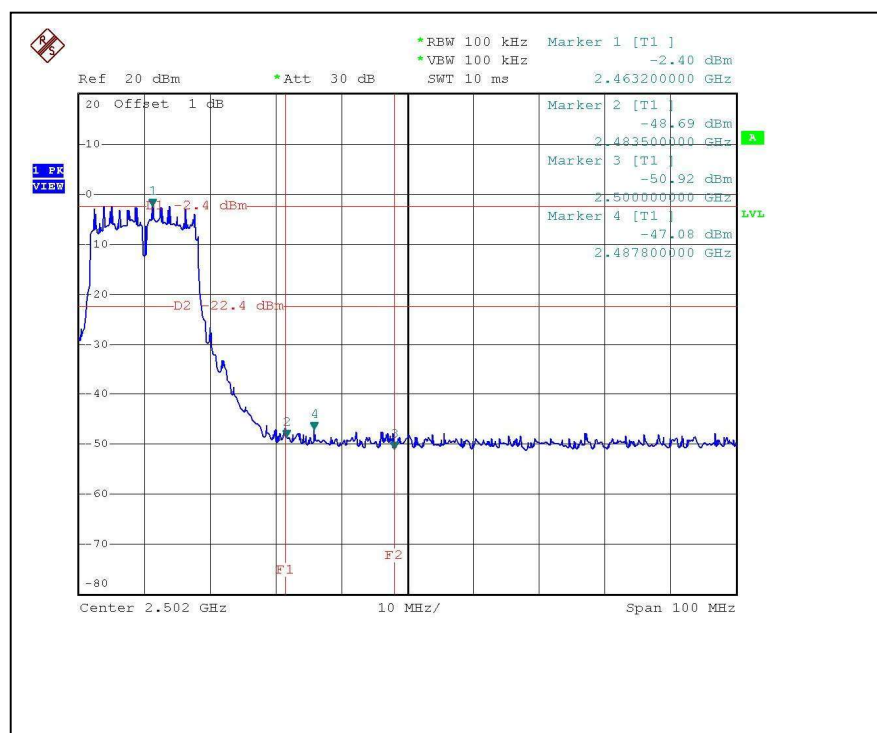


## 802.11g OFDM MODULATION:

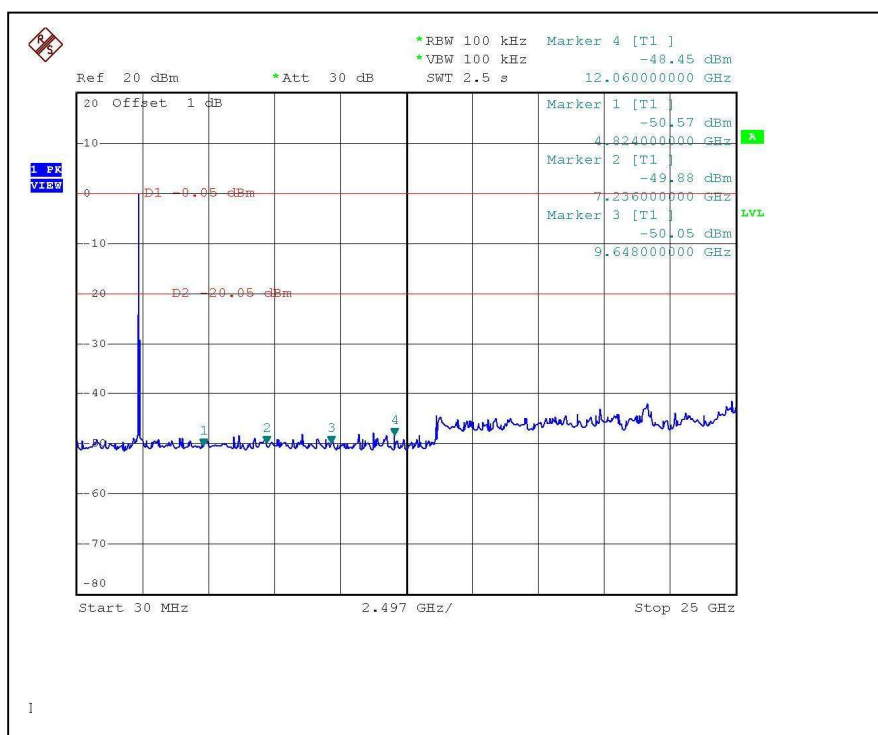
CH1



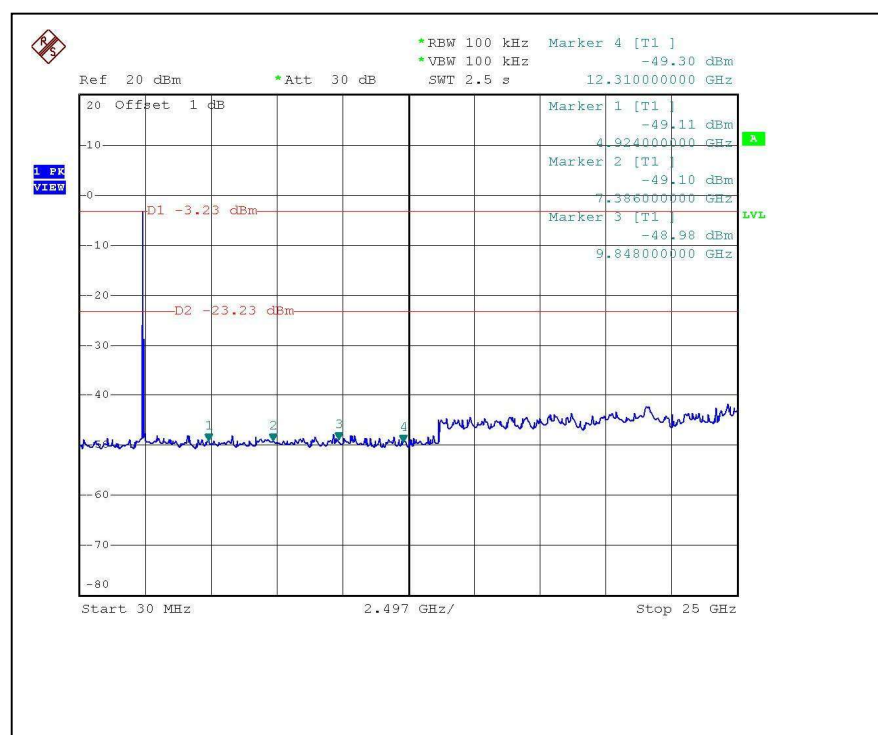
CH11



# CH1



# CH11

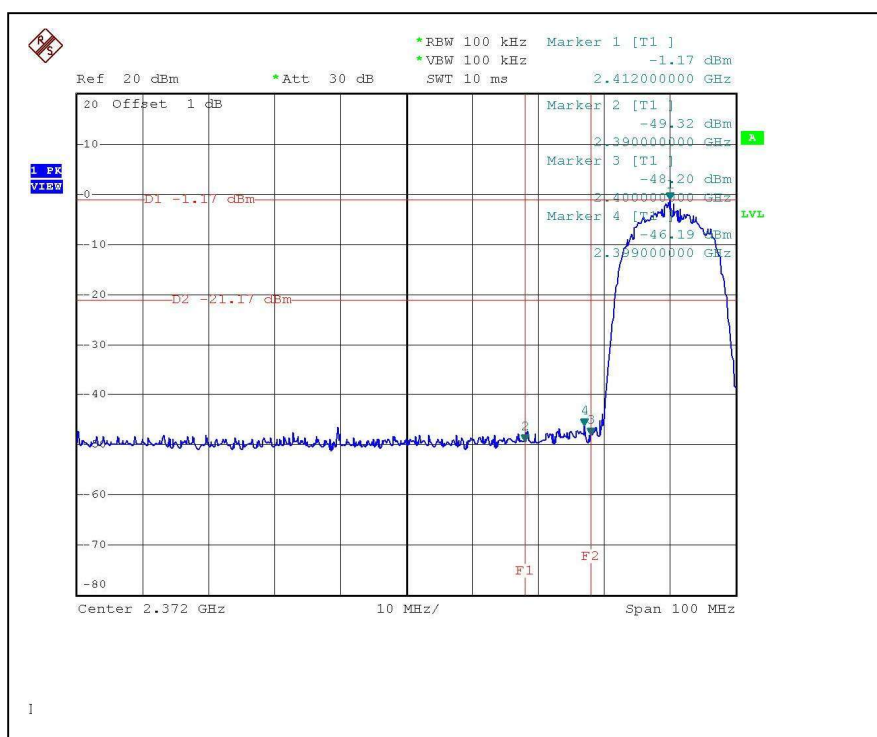


#### 4.6.8 TEST RESULTS (ANTENNA 4)

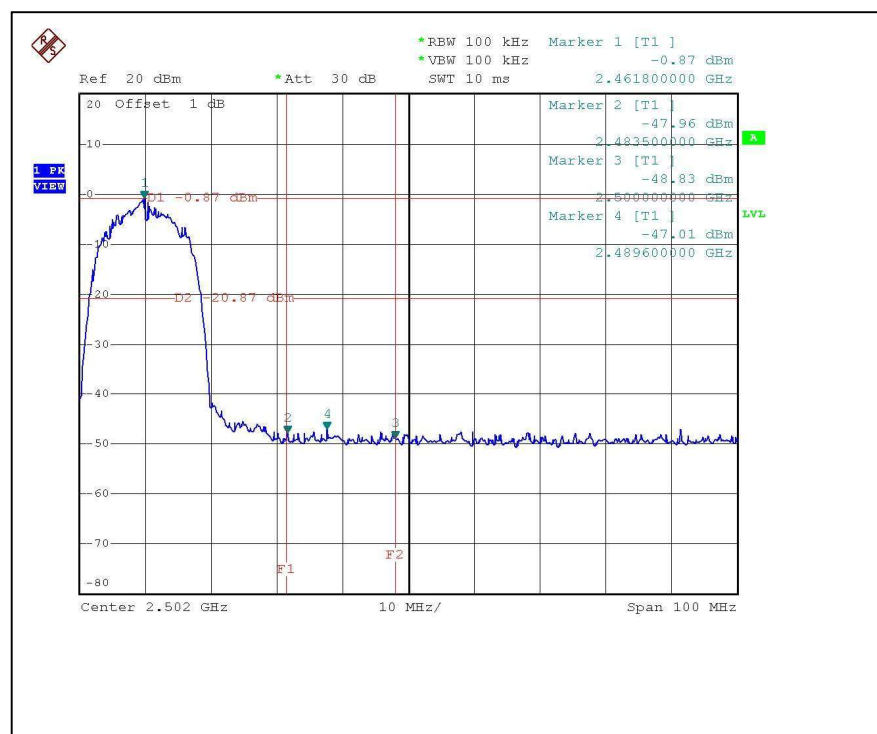
The spectrum plots are attached on the following 8 images. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

## 802.11b DSSS MODULATION:

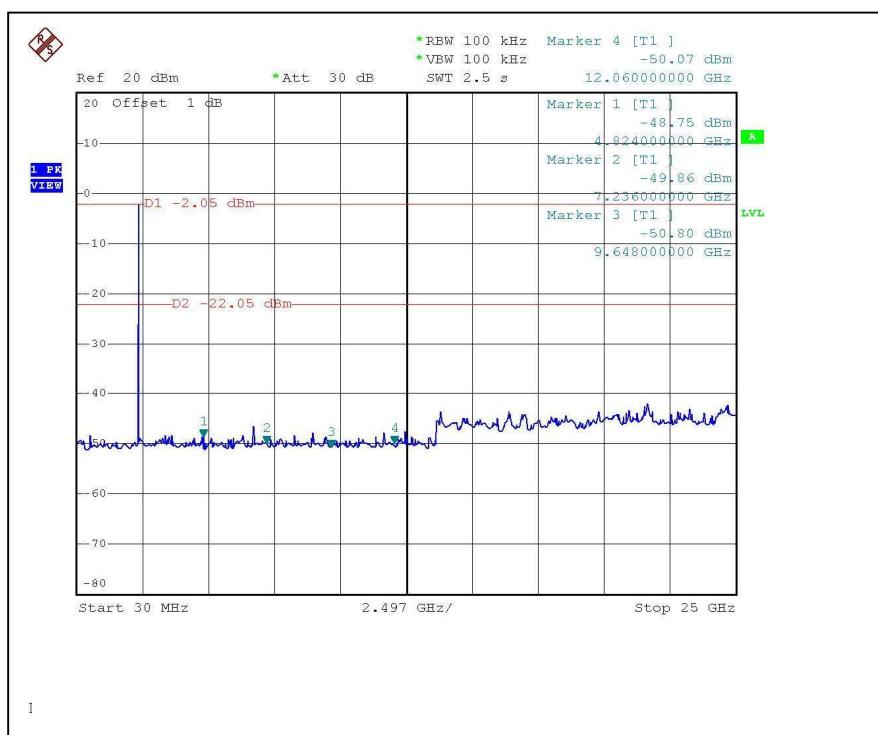
CH1



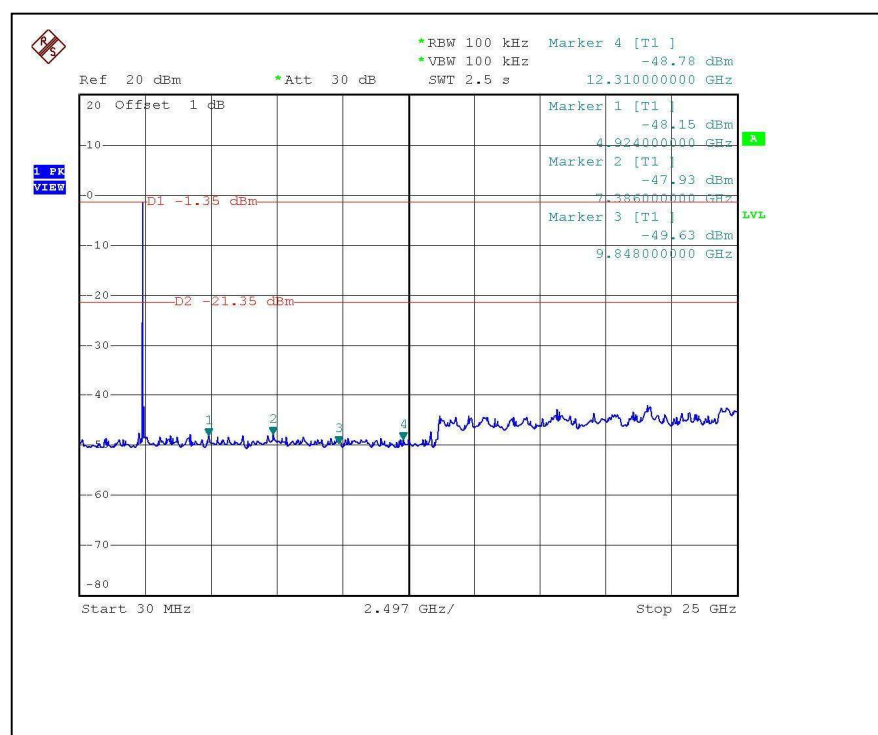
CH11



# CH1

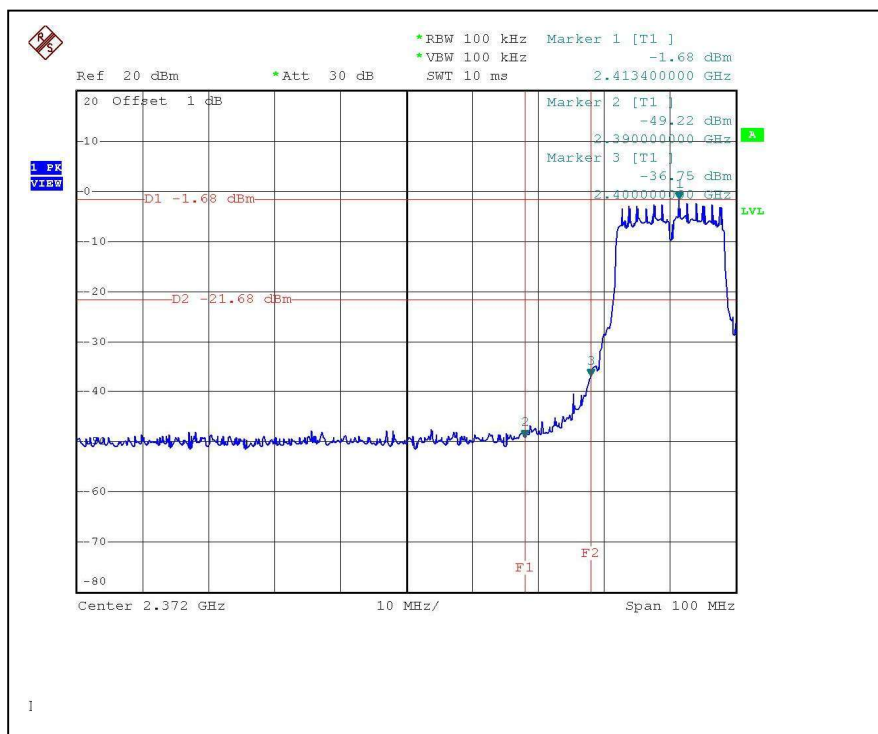


# CH11

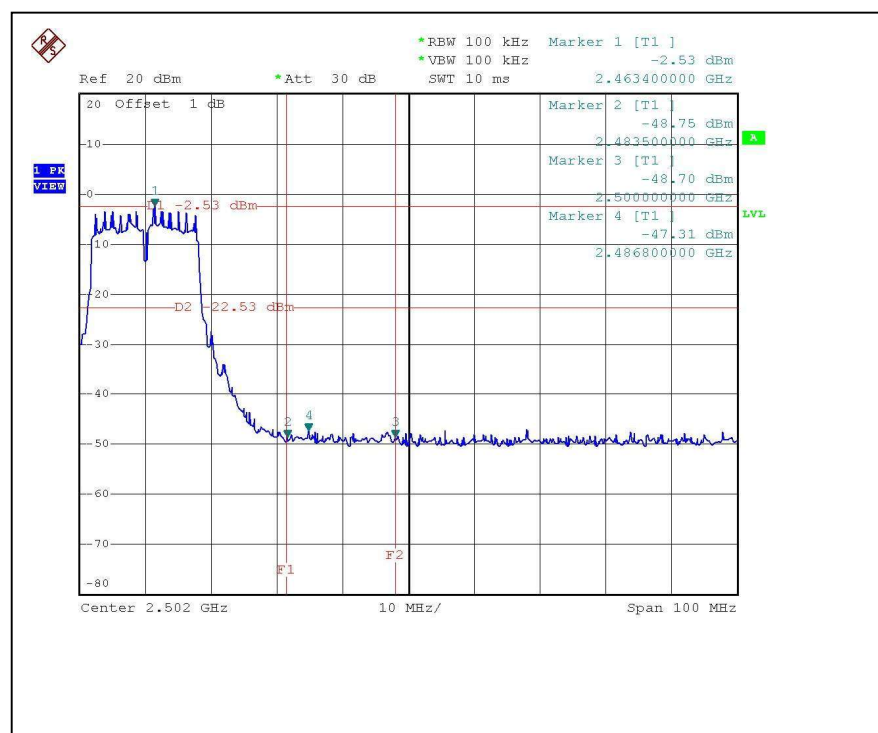


## 802.11g OFDM MODULATION:

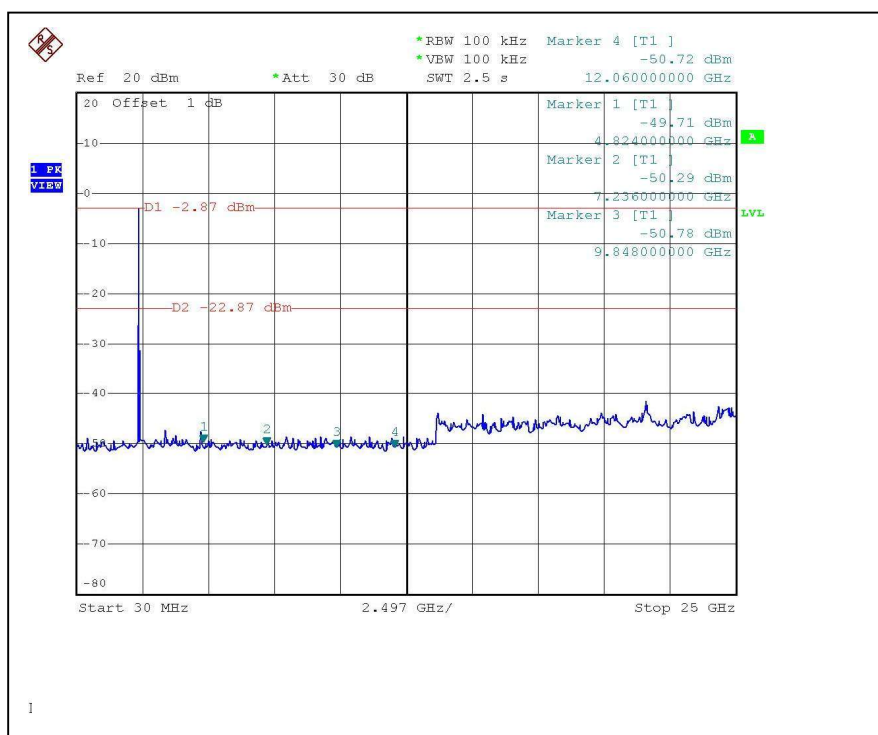
CH1



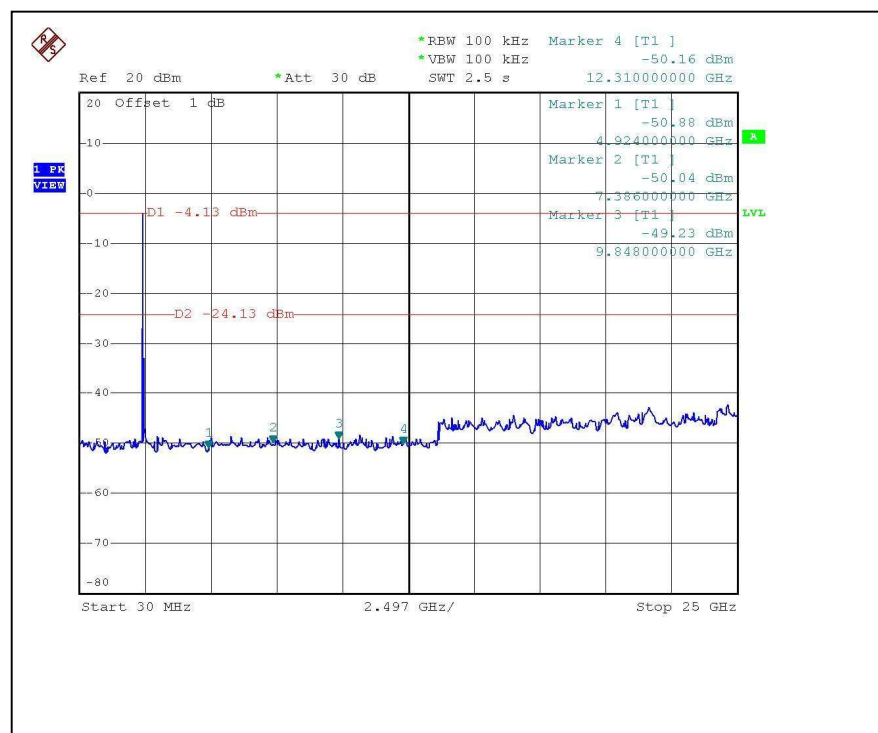
CH11



# CH1



# CH11



## 4.7 ANTENNA REQUIREMENT

### 4.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antennas used in this product are as following:

| No. | Model No.         | Gain (dBi) | Antenna Type | Connector |
|-----|-------------------|------------|--------------|-----------|
| 1   | ML-2499-FHPA5-01R | 7.7        | Omni         | Type-N(m) |
| 2   | ML-2499-FHPA9-01R | 9          | Omni         | Type-N(m) |
| 3   | ML-2452-PNA7-01R  | 7.8        | Panel        | Type-N(m) |
| 4   | ML-2452-PNA5-01R  | 4.5        | Panel        | Type-N(m) |



## 5. TEST TYPES AND RESULTS (802.11a, 5725~5850MHz Band)

### 5.1 CONDUCTED EMISSION MEASUREMENT

#### 5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

| FREQUENCY OF EMISSION (MHz) | CONDUCTED LIMIT (dBμV) |          |
|-----------------------------|------------------------|----------|
|                             | Quasi-peak             | Average  |
| 0.15-0.5                    | 66 to 56               | 56 to 46 |
| 0.5-5                       | 56                     | 46       |
| 5-30                        | 60                     | 50       |

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
  2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
  3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 5.1.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER                           | MODEL NO.       | SERIAL NO.  | CALIBRATED UNTIL |
|------------------------------------------------------|-----------------|-------------|------------------|
| Test Receiver                                        | ESCS 30         | 847124/029  | Dec. 15, 2007    |
| Line-Impedance Stabilization Network(for EUT)        | ENV-216         | 100071      | Nov. 26, 2007    |
| Line-Impedance Stabilization Network(for Peripheral) | KNW-407         | 8/1395/12   | Aug. 15, 2007    |
| RF Cable (JETBAO)                                    | RG233/U         | Cable_CB_01 | Dec. 09, 2007    |
| Terminator                                           | 50              | 2           | Oct. 19, 2007    |
| Software                                             | ADT_Cond_V7.3.2 | NA          | NA               |

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  4. The test was performed in ADT Shielded Room No. B.
  5. The VCCI Con B Registration No. is C-2193.

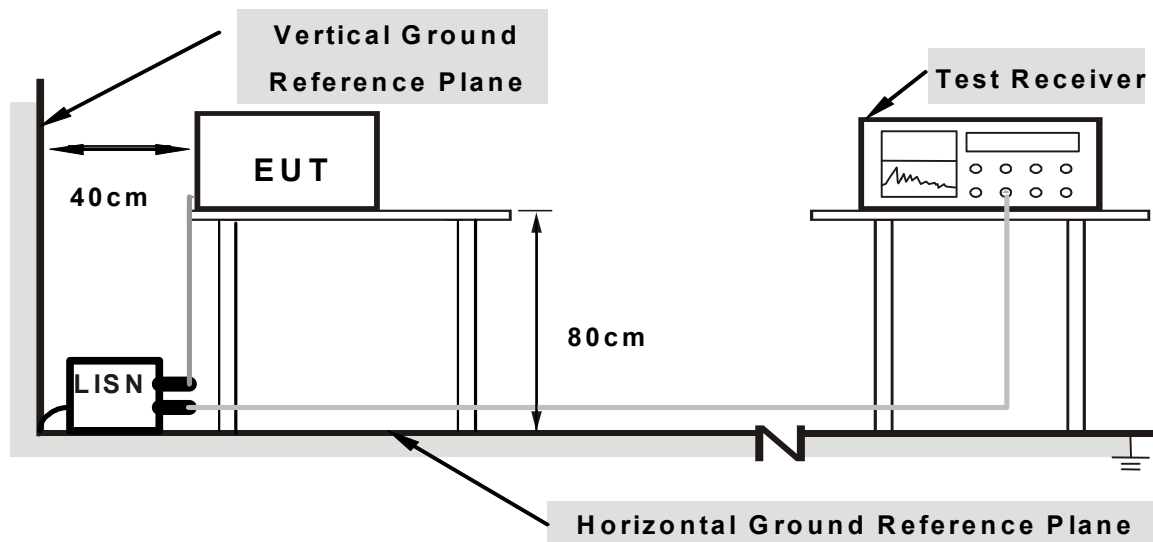
### 5.1.3 TEST PROCEDURES

- a. 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.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) were not recorded.

### 5.1.4 DEVIATION FROM TEST STANDARD

No deviation

### 5.1.5 TEST SETUP



**Note: 1.Support units were connected to second LISN.**

**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

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

### 5.1.6 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 test program “Wintron V00.02” to enable EUT under transmission/receiving condition continuously at specific channel frequency via UTP cable.

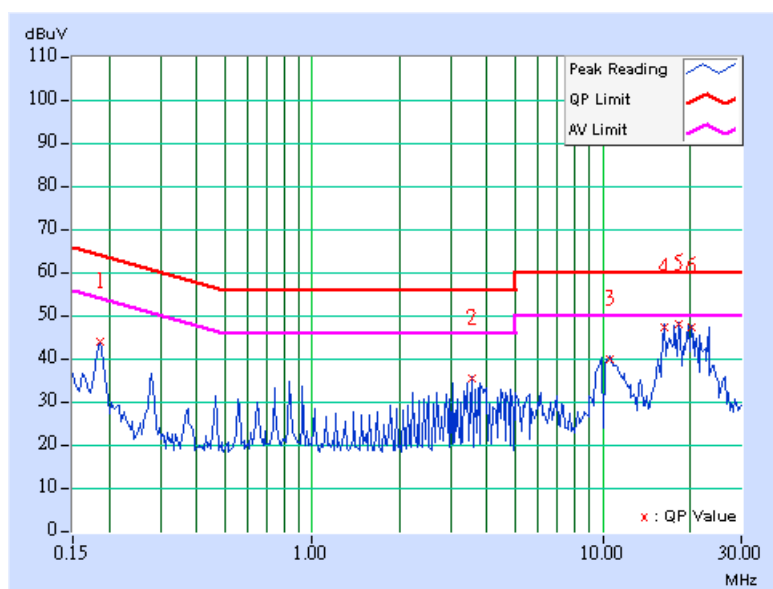
## 5.1.7 TEST RESULTS

### Conducted Worst-Case Data

|                                 |                         |                      |          |
|---------------------------------|-------------------------|----------------------|----------|
| <b>MODULATION TYPE</b>          | BPSK                    | <b>6dB BANDWIDTH</b> | 9 kHz    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz           | <b>TRANSFER RATE</b> | 6Mbps    |
| <b>ENVIRONMENTAL CONDITIONS</b> | 26deg. C, 63%RH, 961hPa | <b>PHASE</b>         | Line (L) |
| <b>TESTED BY</b>                | Tony Chen               |                      |          |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |     | Emission Level<br>[dB (uV)] |     | Limit<br>[dB (uV)] |       | Margin<br>(dB) |     |
|----|----------------|-------------------------|----------------------------|-----|-----------------------------|-----|--------------------|-------|----------------|-----|
|    |                |                         |                            |     |                             |     |                    |       |                |     |
|    |                |                         | Q.P.                       | AV. | Q.P.                        | AV. | Q.P.               | AV.   | Q.P.           | AV. |
| 1  | 0.185          | 9.60                    | 34.08                      | -   | 43.68                       | -   | 64.25              | 54.25 | -20.57         | -   |
| 2  | 3.527          | 9.70                    | 25.50                      | -   | 35.20                       | -   | 56.00              | 46.00 | -20.80         | -   |
| 3  | 10.590         | 9.92                    | 29.76                      | -   | 39.68                       | -   | 60.00              | 50.00 | -20.32         | -   |
| 4  | 16.227         | 10.10                   | 37.48                      | -   | 47.58                       | -   | 60.00              | 50.00 | -12.42         | -   |
| 5  | 18.242         | 10.10                   | 37.92                      | -   | 48.02                       | -   | 60.00              | 50.00 | -11.98         | -   |
| 6  | 20.258         | 10.10                   | 37.32                      | -   | 47.42                       | -   | 60.00              | 50.00 | -12.58         | -   |

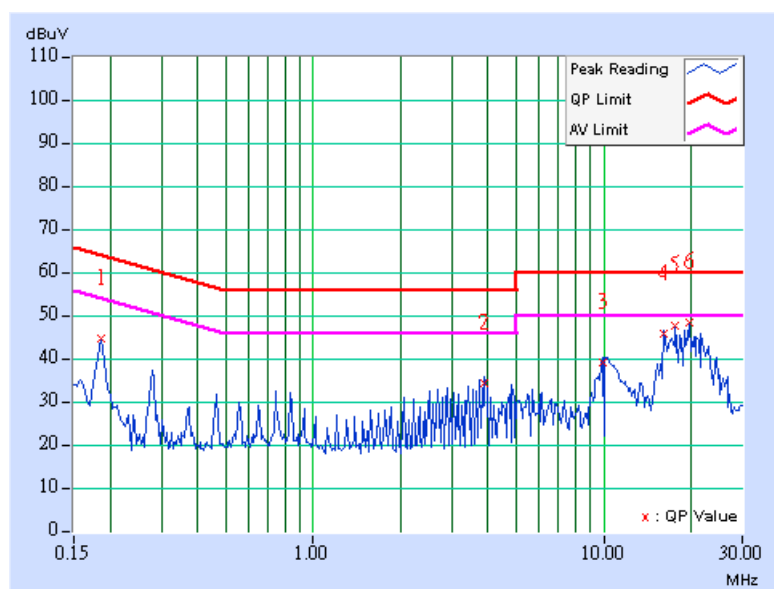
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



|                                 |                         |                      |             |
|---------------------------------|-------------------------|----------------------|-------------|
| <b>MODULATION TYPE</b>          | BPSK                    | <b>6dB BANDWIDTH</b> | 9 kHz       |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz           | <b>TRANSFER RATE</b> | 6Mbps       |
| <b>ENVIRONMENTAL CONDITIONS</b> | 26deg. C, 63%RH, 961hPa | <b>PHASE</b>         | Neutral (N) |
| <b>TESTED BY</b>                | Tony Chen               |                      |             |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |     | Emission Level<br>[dB (uV)] |     | Limit<br>[dB (uV)] |       | Margin<br>(dB) |     |
|----|----------------|-------------------------|----------------------------|-----|-----------------------------|-----|--------------------|-------|----------------|-----|
|    |                |                         |                            |     |                             |     |                    |       |                |     |
|    |                |                         | Q.P.                       | AV. | Q.P.                        | AV. | Q.P.               | AV.   | Q.P.           | AV. |
| 1  | 0.185          | 9.60                    | 34.62                      | -   | 44.22                       | -   | 64.25              | 54.25 | -20.03         | -   |
| 2  | 3.902          | 9.70                    | 24.44                      | -   | 34.14                       | -   | 56.00              | 46.00 | -21.86         | -   |
| 3  | 9.938          | 9.90                    | 29.02                      | -   | 38.92                       | -   | 60.00              | 50.00 | -21.08         | -   |
| 4  | 16.168         | 10.02                   | 35.72                      | -   | 45.74                       | -   | 60.00              | 50.00 | -14.26         | -   |
| 5  | 17.691         | 10.05                   | 37.62                      | -   | 47.67                       | -   | 60.00              | 50.00 | -12.33         | -   |
| 6  | 19.707         | 10.09                   | 38.28                      | -   | 48.37                       | -   | 60.00              | 50.00 | -11.63         | -   |

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



## 5.2 RADIATED EMISSION MEASUREMENT

### 5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

| Frequencies (MHz) | Field strength (microvolts/meter) | Measurement distance (meters) |
|-------------------|-----------------------------------|-------------------------------|
| 0.009-0.490       | 2400/F(kHz)                       | 300                           |
| 0.490-1.705       | 24000/F(kHz)                      | 30                            |
| 1.705-30.0        | 30                                | 30                            |
| 30-88             | 100                               | 3                             |
| 88-216            | 150                               | 3                             |
| 216-960           | 200                               | 3                             |
| Above 960         | 500                               | 3                             |

**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.

## 5.2.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER    | MODEL NO.           | SERIAL NO.       | CALIBRATED UNTIL |
|-------------------------------|---------------------|------------------|------------------|
| ADVANTEST Spectrum Analyzer   | R3271A              | 85060311         | July 03, 2007    |
| HP Pre_Amplifier              | 8449B               | 3008A01922       | Sep. 18, 2007    |
| ROHDE & SCHWARZ Test Receiver | ESCS30              | 100375           | Sep. 20, 2007    |
| CHASE Broadband Antenna       | VULB9168            | 138              | Dec. 11, 2007    |
| Schwarzbeck Horn_Antenna      | BBHA9120            | D124             | Dec. 27, 2006    |
| Schwarzbeck Horn_Antenna      | BBHA 9170           | BBHA9170153      | Jan. 05, 2007    |
| SCHWARZBECK Biconical Antenna | VHBA9123            | 459              | Jun. 08, 2009    |
| SCHWARZBECK Periodic Antenna  | UPA6108             | 1148             | Jun. 08, 2009    |
| R&S Loop Antenna              | HFH2-Z2             | 881058/15        | Nov. 29, 2007    |
| RF Switches (ARNITSU)         | CS-201              | 1565157          | NA               |
| RF CABLE (Chaintek)           | SF102               | 22054-2          | Nov. 14, 2007    |
| RF Cable(RICHTEC)             | 9913-30M N-N Cable  | STCCAB-30M-1 GHz | Jul. 15, 2007    |
| Software                      | ADT_Radiated_V 5.14 | NA               | NA               |
| CHANCE MOST Antenna Tower     | AT-100              | 0203             | NA               |
| CHANCE MOST Turn Table        | TT-100              | 0203             | NA               |

- Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Biconical and Periodic Antenna) and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna, HP preamplifier (model: 8449B) and Spectrum Analyzer (model: R3271A) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in ADT Open Site No. C.
4. The FCC Site Registration No. is 656396.
5. The VCCI Site Registration No. is R-1626.
6. The CANADA Site Registration No. is IC 4824A-3.

### 5.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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 10dB 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 10dB 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:**

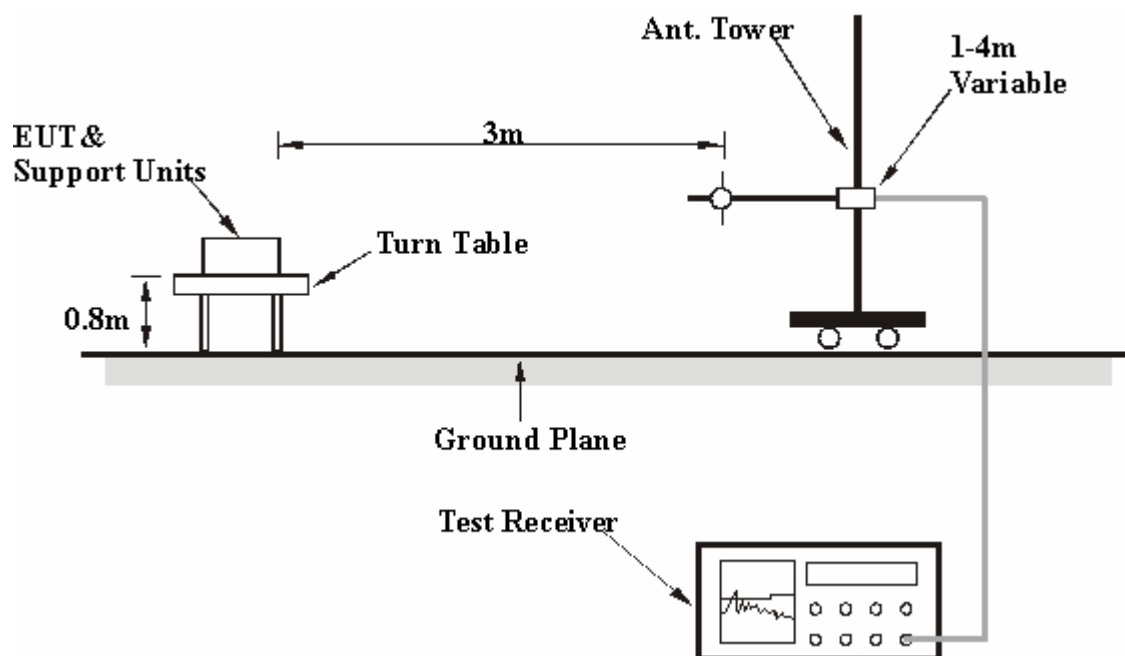
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

### 5.2.4 DEVIATION FROM TEST STANDARD

No deviation



### 5.2.5 TEST SETUP



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

### 5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

## 5.2.7 TEST RESULTS

### Below 1GHz Worst-Case Data

|                                 |                         |                          |               |
|---------------------------------|-------------------------|--------------------------|---------------|
| <b>TEST MODE</b>                | Mode 1                  | <b>FREQUENCY RANGE</b>   | Below 1000MHz |
| <b>MODULATION TYPE</b>          | BPSK                    | <b>TRANSFER RATE</b>     | 6Mbps         |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz           | <b>DETECTOR FUNCTION</b> | Quasi-Peak    |
| <b>ENVIRONMENTAL CONDITIONS</b> | 27deg. C, 59%RH, 961hPa | <b>TESTED BY</b>         | Tony Chen     |

### 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) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | 280.00      | 34.70 QP                | 46.00          | -11.30      | 1.02 H             | 52                   | 18.80            | 15.90                    |
| 2   | 440.00      | 35.70 QP                | 46.00          | -10.30      | 1.00 H             | 153                  | 15.50            | 20.20                    |
| 3   | 480.00      | 37.40 QP                | 46.00          | -8.60       | 1.13 H             | 90                   | 16.20            | 21.20                    |
| 4   | 520.00      | 32.70 QP                | 46.00          | -13.30      | 1.24 H             | 90                   | 10.40            | 22.40                    |
| 5   | 600.00      | 32.90 QP                | 46.00          | -13.10      | 1.54 H             | 6                    | 8.40             | 24.50                    |
| 6   | 880.00      | 35.40 QP                | 46.00          | -10.60      | 1.17 H             | 110                  | 6.70             | 28.70                    |

### 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) | Correction Factor (dB/m) |
|-----|--------------|-------------------------|----------------|--------------|--------------------|----------------------|------------------|--------------------------|
| 1   | <b>43.77</b> | <b>34.00 QP</b>         | <b>40.00</b>   | <b>-6.00</b> | <b>1.01 V</b>      | <b>48</b>            | <b>19.50</b>     | <b>14.50</b>             |
| 2   | 440.00       | 32.60 QP                | 46.00          | -13.40       | 1.32 V             | 178                  | 12.40            | 20.20                    |
| 3   | 480.00       | 31.80 QP                | 46.00          | -14.20       | 1.00 V             | 338                  | 10.50            | 21.20                    |
| 4   | 520.00       | 31.50 QP                | 46.00          | -14.50       | 1.00 V             | 196                  | 9.20             | 22.40                    |
| 5   | 600.00       | 30.20 QP                | 46.00          | -15.80       | 1.02 V             | 15                   | 5.80             | 24.50                    |
| 6   | 920.00       | 35.00 QP                | 46.00          | -11.00       | 1.00 V             | 20                   | 5.70             | 29.30                    |

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value

### Below 1GHz Worst-Case Data

|                                 |                         |                          |               |
|---------------------------------|-------------------------|--------------------------|---------------|
| <b>TEST MODE</b>                | Mode 2                  | <b>FREQUENCY RANGE</b>   | Below 1000MHz |
| <b>MODULATION TYPE</b>          | BPSK                    | <b>TRANSFER RATE</b>     | 6Mbps         |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz           | <b>DETECTOR FUNCTION</b> | Quasi-Peak    |
| <b>ENVIRONMENTAL CONDITIONS</b> | 27deg. C, 59%RH, 961hPa | <b>TESTED BY</b>         | Tony Chen     |

### 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) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | 280.00      | 33.80 QP                | 46.00          | -12.20      | 1.38 H             | 70                   | 17.90            | 15.90                    |
| 2   | 440.00      | 31.50 QP                | 46.00          | -14.50      | 1.30 H             | 122                  | 11.30            | 20.20                    |
| 3   | 480.00      | 31.70 QP                | 46.00          | -14.30      | 1.00 H             | 73                   | 10.40            | 21.20                    |
| 4   | 520.00      | 31.90 QP                | 46.00          | -14.10      | 1.12 H             | 102                  | 9.60             | 22.40                    |
| 5   | 600.00      | 33.10 QP                | 46.00          | -12.90      | 1.00 H             | 256                  | 8.70             | 24.50                    |
| 6   | 880.00      | 30.50 QP                | 46.00          | -15.50      | 1.01 H             | 7                    | 1.80             | 28.70                    |

### 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) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | 43.77       | 33.90 QP                | 40.00          | -6.10       | 1.14 V             | 30                   | 19.40            | 14.50                    |
| 2   | 440.00      | 32.80 QP                | 46.00          | -13.20      | 1.21 V             | 222                  | 12.60            | 20.20                    |
| 3   | 480.00      | 31.90 QP                | 46.00          | -14.10      | 1.10 V             | 290                  | 10.70            | 21.20                    |
| 4   | 520.00      | 30.80 QP                | 46.00          | -15.20      | 1.06 V             | 202                  | 8.40             | 22.40                    |
| 5   | 600.00      | 31.00 QP                | 46.00          | -15.00      | 1.02 V             | 148                  | 6.50             | 24.50                    |
| 6   | 920.00      | 33.20 QP                | 46.00          | -12.80      | 1.01 V             | 358                  | 3.90             | 29.30                    |

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value

## 5.2.8 TEST RESULTS(ANTENNA A)

### 802.11a OFDM modulation

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 1                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Phoenix Huang            |

#### 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) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | *5745.00    | 105.20 PK               |                |             | 1.02 H             | 329                  | 67.56            | 37.64                    |
| 1   | *5745.00    | 94.90 AV                |                |             | 1.02 H             | 329                  | 57.26            | 37.64                    |
| 2   | #11490.00   | 59.50 PK                | 74.00          | -14.50      | 1.43 H             | 17                   | 12.48            | 47.02                    |
| 2   | #11490.00   | 46.60 AV                | 54.00          | -7.40       | 1.43 H             | 17                   | -0.42            | 47.02                    |

#### 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) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | *5745.00    | 119.60 PK               |                |             | 1.46 V             | 3                    | 81.96            | 37.64                    |
| 1   | *5745.00    | 108.40 AV               |                |             | 1.46 V             | 3                    | 70.76            | 37.64                    |
| 2   | #11490.00   | 60.90 PK                | 74.00          | -13.10      | 1.52 V             | 338                  | 13.88            | 47.02                    |
| 2   | #11490.00   | 47.10 AV                | 54.00          | -6.90       | 1.52 V             | 338                  | 0.08             | 47.02                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. “\*” : Fundamental frequency
  6. “#”The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 3                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Phoenix Huang            |

| 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) | Correction Factor (dB/m) |
| 1                                                   | *5785.00    | 106.70 PK               |                |             | 1.08 H             | 354                  | 68.96            | 37.74                    |
| 1                                                   | *5785.00    | 95.00 AV                |                |             | 1.08 H             | 354                  | 57.26            | 37.74                    |
| 2                                                   | #11570.00   | 59.02 PK                | 74.00          | -14.98      | 1.54 H             | 16                   | 12.07            | 46.95                    |
| 2                                                   | #11570.00   | 45.82 AV                | 54.00          | -8.18       | 1.54 H             | 16                   | -1.13            | 46.95                    |

| 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) | Correction Factor (dB/m) |
| 1                                                 | *5785.00    | 118.80 PK               |                |             | 1.54 V             | 2                    | 81.06            | 37.74                    |
| 1                                                 | *5785.00    | 108.40 AV               |                |             | 1.54 V             | 2                    | 70.66            | 37.74                    |
| 2                                                 | #11570.00   | 58.82 PK                | 74.00          | -15.18      | 1.63 V             | 14                   | 11.87            | 46.95                    |
| 2                                                 | #11570.00   | 46.12 AV                | 54.00          | -7.88       | 1.63 V             | 14                   | -0.83            | 46.95                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 5                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Phoenix Huang            |

| <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) | Correction Factor (dB/m) |
| 1                                                              | *5825.00    | 106.60 PK               |                |             | 1.18 H             | 343                  | 68.76            | 37.84                    |
| 1                                                              | *5825.00    | 94.50 AV                |                |             | 1.18 H             | 343                  | 56.66            | 37.84                    |
| 2                                                              | #11650.00   | 57.52 PK                | 74.00          | -16.48      | 1.33 H             | 20                   | 10.65            | 46.87                    |
| 2                                                              | #11650.00   | 45.12 AV                | 54.00          | -8.88       | 1.33 H             | 20                   | -1.75            | 46.87                    |

| <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) | Correction Factor (dB/m) |
| 1                                                            | *5825.00    | 119.20 PK               |                |             | 1.36 V             | 3                    | 81.36            | 37.84                    |
| 1                                                            | *5825.00    | 108.20 AV               |                |             | 1.36 V             | 3                    | 70.36            | 37.84                    |
| 2                                                            | #11650.00   | 59.12 PK                | 74.00          | -14.88      | 1.38 V             | 14                   | 12.25            | 46.87                    |
| 2                                                            | #11650.00   | 46.32 AV                | 54.00          | -7.68       | 1.38 V             | 14                   | -0.55            | 46.87                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

## 5.2.9 TEST RESULTS(ANTENNA B)

### 802.11a OFDM modulation

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 1                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Phoenix Huang            |

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

| No. | Freq.<br>(MHz) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| 1   | *5745.00       | 101.10 PK                     |                   |                | 1.00 H                   | 312                        | 63.46                  | 37.64                          |
| 1   | *5745.00       | 90.00 AV                      |                   |                | 1.00 H                   | 312                        | 52.36                  | 37.64                          |
| 2   | #11490.00      | 53.90 PK                      | 74.00             | -20.10         | 1.00 H                   | 305                        | 6.88                   | 47.02                          |
| 2   | #11490.00      | 41.30 AV                      | 54.00             | -12.70         | 1.00 H                   | 305                        | -5.72                  | 47.02                          |

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

| No. | Freq.<br>(MHz) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
|-----|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| 1   | *5745.00       | 116.70 PK                     |                   |                | 1.12 V                   | 295                        | 79.06                  | 37.64                          |
| 1   | *5745.00       | 106.20 AV                     |                   |                | 1.12 V                   | 295                        | 68.56                  | 37.64                          |
| 2   | #11490.00      | 56.10 PK                      | 74.00             | -17.90         | 1.10 V                   | 290                        | 9.08                   | 47.02                          |
| 2   | #11490.00      | 44.10 AV                      | 54.00             | -9.90          | 1.10 V                   | 290                        | -2.92                  | 47.02                          |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 3                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Phoenix Huang            |

| 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) | Correction Factor (dB/m) |
| 1                                                   | *5785.00    | 100.80 PK               |                |             | 1.05 H             | 315                  | 63.06            | 37.74                    |
| 1                                                   | *5785.00    | 89.90 AV                |                |             | 1.05 H             | 315                  | 52.16            | 37.74                    |
| 2                                                   | #11570.00   | 54.02 PK                | 74.00          | -19.98      | 1.00 H             | 325                  | 7.07             | 46.95                    |
| 2                                                   | #11570.00   | 41.02 AV                | 54.00          | -12.98      | 1.00 H             | 325                  | -5.93            | 46.95                    |

| 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) | Correction Factor (dB/m) |
| 1                                                 | *5785.00    | 117.20 PK               |                |             | 1.10 V             | 292                  | 79.46            | 37.74                    |
| 1                                                 | *5785.00    | 106.80 AV               |                |             | 1.10 V             | 292                  | 69.06            | 37.74                    |
| 2                                                 | #11570.00   | 56.22 PK                | 74.00          | -17.78      | 1.18 V             | 303                  | 9.27             | 46.95                    |
| 2                                                 | #11570.00   | 44.22 AV                | 54.00          | -9.78       | 1.18 V             | 303                  | -2.73            | 46.95                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#":The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247



|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 5                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Phoenix Huang            |

| <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) | Correction Factor (dB/m) |
| 1                                                              | *5825.00    | 100.50 PK               |                |             | 1.04 H             | 312                  | 62.66            | 37.84                    |
| 1                                                              | *5825.00    | 89.40 AV                |                |             | 1.04 H             | 312                  | 51.56            | 37.84                    |
| 2                                                              | #11650.00   | 53.82 PK                | 74.00          | -20.18      | 1.02 H             | 308                  | 6.95             | 46.87                    |
| 2                                                              | #11650.00   | 41.12 AV                | 54.00          | -12.88      | 1.02 H             | 308                  | -5.75            | 46.87                    |

| <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) | Correction Factor (dB/m) |
| 1                                                            | *5825.00    | 116.30 PK               |                |             | 1.15 V             | 290                  | 78.46            | 37.84                    |
| 1                                                            | *5825.00    | 105.80 AV               |                |             | 1.15 V             | 290                  | 67.96            | 37.84                    |
| 2                                                            | #11650.00   | 54.82 PK                | 74.00          | -19.18      | 1.12 V             | 282                  | 7.95             | 46.87                    |
| 2                                                            | #11650.00   | 43.82 AV                | 54.00          | -10.18      | 1.12 V             | 282                  | -3.05            | 46.87                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

## 5.2.10 TEST RESULTS(ANTENNA C)

### 802.11a OFDM modulation

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 1                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Moris Lin                |

#### 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) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | *5745.00    | 101.80 PK               |                |             | 1.00 H             | 130                  | 64.20            | 37.60                    |
| 1   | *5745.00    | 90.30 AV                |                |             | 1.00 H             | 130                  | 52.70            | 37.60                    |
| 2   | #11490.00   | 53.70 PK                | 74.00          | -20.30      | 1.14 H             | 19                   | 6.60             | 47.00                    |
| 2   | #11490.00   | 41.30 AV                | 54.00          | -12.70      | 1.14 H             | 19                   | -5.70            | 47.00                    |

#### 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) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | *5745.00    | 119.30 PK               |                |             | 1.00 V             | 220                  | 81.70            | 37.60                    |
| 1   | *5745.00    | 108.90 AV               |                |             | 1.00 V             | 220                  | 71.30            | 37.60                    |
| 2   | #11490.00   | 57.80 PK                | 74.00          | -16.20      | 1.32 V             | 252                  | 10.80            | 47.00                    |
| 2   | #11490.00   | 43.80 AV                | 54.00          | -10.20      | 1.32 V             | 252                  | -3.20            | 47.00                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 3                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Moris Lin                |

| 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) | Correction Factor (dB/m) |
| 1                                                   | *5785.00    | 101.40 PK               |                |             | 1.00 H             | 132                  | 63.70            | 37.70                    |
| 1                                                   | *5785.00    | 89.90 AV                |                |             | 1.00 H             | 132                  | 52.20            | 37.70                    |
| 2                                                   | #11570.00   | 53.50 PK                | 74.00          | -20.50      | 1.36 H             | 26                   | 6.50             | 47.00                    |
| 2                                                   | #11570.00   | 40.90 AV                | 54.00          | -13.10      | 1.36 H             | 26                   | -6.00            | 47.00                    |

| 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) | Correction Factor (dB/m) |
| 1                                                 | 5785.00     | 118.80 PK               |                |             | 1.00 V             | 225                  | 81.10            | 37.70                    |
| 1                                                 | 5785.00     | 108.30 AV               |                |             | 1.00 V             | 225                  | 70.60            | 37.70                    |
| 2                                                 | #11570.00   | 56.70 PK                | 74.00          | -17.30      | 1.28 V             | 98                   | 9.80             | 47.00                    |
| 2                                                 | #11570.00   | 44.10 AV                | 54.00          | -9.90       | 1.28 V             | 98                   | -2.90            | 47.00                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 5                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 56%RH,<br>961hPa | <b>TESTED BY</b>         | Moris Lin                |

| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                |                               |                   |                |                          |                            |                        |                                |
|----------------------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No.                                                            | Freq.<br>(MHz) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                              | *5825.00       | 101.50 PK                     |                   |                | 1.00 H                   | 135                        | 63.70                  | 37.80                          |
| 1                                                              | *5825.00       | 90.00 AV                      |                   |                | 1.00 H                   | 135                        | 52.20                  | 37.80                          |
| 2                                                              | #11650.00      | 53.50 PK                      | 74.00             | -20.50         | 1.28 H                   | 300                        | 6.60                   | 46.90                          |
| 2                                                              | #11650.00      | 40.60 AV                      | 54.00             | -13.40         | 1.28 H                   | 300                        | -6.30                  | 46.90                          |

| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                |                               |                   |                |                          |                            |                        |                                |
|--------------------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No.                                                          | Freq.<br>(MHz) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                            | *5825.00       | 107.90 PK                     |                   |                | 1.00 V                   | 222                        | 70.10                  | 37.80                          |
| 1                                                            | *5825.00       | 118.30 AV                     |                   |                | 1.00 V                   | 222                        | 80.50                  | 37.80                          |
| 2                                                            | #11650.00      | 53.50 PK                      | 74.00             | -20.50         | 1.38 V                   | 19                         | 6.60                   | 46.90                          |
| 2                                                            | #11650.00      | 41.30 AV                      | 54.00             | -12.70         | 1.38 V                   | 19                         | -5.60                  | 46.90                          |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#"The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

## 5.2.11 TEST RESULTS(ANTENNA D)

### 802.11a OFDM modulation

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 1                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 18deg. C, 66%RH,<br>961hPa | <b>TESTED BY</b>         | Sky Liao                 |

#### 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) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | *5745.00    | 107.20 PK               |                |             | 1.34 H             | 21                   | 70.10            | 37.10                    |
| 1   | *5745.00    | 96.40 AV                |                |             | 1.34 H             | 21                   | 59.30            | 37.10                    |
| 2   | #11490.00   | 59.90 PK                | 74.00          | -14.10      | 1.28 H             | 113                  | 13.10            | 46.80                    |
| 2   | #11490.00   | 46.30 AV                | 54.00          | -7.70       | 1.28 H             | 113                  | -0.50            | 46.80                    |

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 M

| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|-----|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1   | *5745.00    | 120.60 PK               |                |             | 1.32 V             | 157                  | 83.50            | 37.10                    |
| 1   | *5745.00    | 110.50 AV               |                |             | 1.32 V             | 157                  | 73.40            | 37.10                    |
| 2   | #11490.00   | 64.50 PK                | 74.00          | -9.50       | 1.03 V             | 130                  | 17.70            | 46.80                    |
| 2   | #11490.00   | 50.50 AV                | 54.00          | -3.50       | 1.03 V             | 130                  | 3.70             | 46.80                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. “\*” : Fundamental frequency
  6. “#”The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 3                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 18deg. C, 66%RH,<br>961hPa | <b>TESTED BY</b>         | Sky Liao                 |

| 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) | Correction Factor (dB/m) |
| 1                                                   | *5785.00    | 107.40 PK               |                |             | 1.37 H             | 18                   | 70.20            | 37.20                    |
| 1                                                   | *5785.00    | 96.80 AV                |                |             | 1.37 H             | 18                   | 59.60            | 37.20                    |
| 2                                                   | #11570.00   | 59.30 PK                | 74.00          | -14.70      | 1.30 H             | 140                  | 12.60            | 46.70                    |
| 2                                                   | #11570.00   | 45.80 AV                | 54.00          | -8.20       | 1.30 H             | 140                  | -0.90            | 46.70                    |

| 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) | Correction Factor (dB/m) |
| 1                                                 | *5785.00    | 120.20 PK               |                |             | 1.30 V             | 156                  | 83.00            | 37.20                    |
| 1                                                 | *5785.00    | 109.60 AV               |                |             | 1.30 V             | 156                  | 72.40            | 37.20                    |
| 2                                                 | #11570.00   | 63.20 PK                | 74.00          | -10.80      | 1.44 V             | 100                  | 16.50            | 46.70                    |
| 2                                                 | #11570.00   | 49.40 AV                | 54.00          | -4.60       | 1.44 V             | 100                  | 2.70             | 46.70                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. "\*" : Fundamental frequency
  6. "#":The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247

|                                 |                            |                          |                          |
|---------------------------------|----------------------------|--------------------------|--------------------------|
| <b>CHANNEL</b>                  | Channel 5                  | <b>FREQUENCY RANGE</b>   | 1 ~ 40 GHz               |
| <b>MODULATION TYPE</b>          | BPSK                       | <b>TRANSFER RATE</b>     | 6Mbps                    |
| <b>INPUT POWER (SYSTEM)</b>     | 120Vac, 60 Hz              | <b>DETECTOR FUNCTION</b> | Peak(PK)<br>Average (AV) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 18deg. C, 66%RH,<br>961hPa | <b>TESTED BY</b>         | Sky Liao                 |

| <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) | Correction Factor (dB/m) |
| 1                                                              | *5825.00    | 106.90 PK               |                |             | 1.30 H             | 19                   | 69.70            | 37.20                    |
| 1                                                              | *5825.00    | 96.30 AV                |                |             | 1.30 H             | 19                   | 59.10            | 37.20                    |
| 2                                                              | #11650.00   | 58.70 PK                | 74.00          | -15.30      | 1.22 H             | 135                  | 12.00            | 46.70                    |
| 2                                                              | #11650.00   | 45.40 AV                | 54.00          | -8.60       | 1.22 H             | 135                  | -1.30            | 46.70                    |

| <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) | Correction Factor (dB/m) |
| 1                                                            | 5825.00     | 118.70 PK               |                |             | 1.32 V             | 158                  | 81.50            | 37.20                    |
| 1                                                            | 5825.00     | 108.50 AV               |                |             | 1.32 V             | 158                  | 71.30            | 37.20                    |
| 2                                                            | 11650.00    | 59.90 PK                | 74.00          | -14.10      | 1.50 V             | 107                  | 13.20            | 46.70                    |
| 2                                                            | 11650.00    | 46.50 AV                | 54.00          | -7.50       | 1.50 V             | 107                  | -0.20            | 46.70                    |

- NOTE:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value
  5. “\*” : Fundamental frequency
  6. “#”The radiated frequency falling in the restricted band.
  7. The limit value is defined as per 15.247