

# PARTIAL FCC TEST REPORT (15.407)

**REPORT NO.:** RF130606C23-1  
**MODEL NO.:** TP00042A  
**FCC ID:** GKR-TP00042ATP  
**RECEIVED:** Jun. 06, 2013  
**TESTED:** Jun. 19, 2013  
**ISSUED:** Jun. 21, 2013

**APPLICANT:** COMPAL ELECTRONICS, INC.

**ADDRESS:** No. 581, Ruiguang RD., Neihu District, Taipei City  
11492, Taiwan, R.O.C.

**ISSUED BY:** Bureau Veritas Consumer Products Services  
(H.K.) Ltd., Taoyuan Branch

**LAB ADDRESS:** No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,  
New Taipei City, Taiwan ( R.O.C )

**TEST LOCATION:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei  
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

This report should not be used by the client to claim  
product certification, approval, or endorsement by  
TAF or any government agencies.



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification

## TABLE OF CONTENTS

|   |    |
|---|----|
| RELEASE CONTROL RECORD .....  | 3  |
| 1. CERTIFICATION.....   | 4  |
| 2. SUMMARY OF TEST RESULTS .....  | 5  |
| 2.1 MEASUREMENT UNCERTAINTY .....   | 5  |
| 3. GENERAL INFORMATION.....   | 6  |
| 3.1 GENERAL DESCRIPTION OF EUT .....  | 6  |
| 3.2 DESCRIPTION OF TEST MODES.....  | 7  |
| 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL .....                               | 8  |
| 3.3 DESCRIPTION OF SUPPORT UNITS .....  | 9  |
| 3.3.1 CONFIGURATION OF SYSTEM UNDER TEST .....  | 9  |
| 3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS .....  | 9  |
| 4. TEST TYPES AND RESULTS .....   | 10 |
| 4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT .....  | 10 |
| 4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT .....                            | 10 |
| 4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS .....                         | 10 |
| 4.1.3 TEST INSTRUMENTS.....   | 11 |
| 4.1.4 TEST PROCEDURES .....   | 12 |
| 4.1.5 DEVIATION FROM TEST STANDARD .....  | 12 |
| 4.1.6 TEST SETUP.....   | 13 |
| 4.1.7 EUT OPERATING CONDITION .....   | 13 |
| 4.1.8 TEST RESULTS .....  | 14 |
| 5. PHOTOGRAPHS OF THE TEST CONFIGURATION .....  | 21 |
| 6. INFORMATION ON THE TESTING LABORATORIES.....   | 22 |
| 7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB ..... | 23 |



## RELEASE CONTROL RECORD

| ISSUE NO.     | REASON FOR CHANGE | DATE ISSUED   |
|---------------|-------------------|---------------|
| RF130606C23-1 | Original release  | Jun. 21, 2013 |

## 1. CERTIFICATION

**PRODUCT:** Convertible Tablet Computer, ThinkPad S230u  
**MODEL NO.:** TP00042A  
**BRAND:** Lenovo  
**APPLICANT:** COMPAL ELECTRONICS, INC.  
**TESTED:** Jun. 19, 2013  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARDS:** **FCC Part 15, Subpart E (Section 15.407)**  
ANSI C63.10-2009

The above equipment (model: TP00042A) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY** : Ivonne Wu , **DATE** : Jun. 21, 2013  
Ivonne Wu / Senior Specialist

**APPROVED BY** : Sam Chen , **DATE** : Jun. 21, 2013  
Sam Chen / Assistant Manager

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407) |                             |        |  |
|---|-----------------------------|--------|--|
| STANDARD SECTION  | TEST TYPE                   | RESULT | REMARK   |
| 15.407(b)(6)  | AC Power Conducted Emission | NA     | Refer to Note  |
| 15.407(b/1/2/3)<br>(b)(6)                                 | Spurious Emissions          | PASS   | Meet the requirement of limit. Minimum passing margin is -0.79dB at 5150MHz. |
| 15.407(a/1/2)   | Peak Transmit Power         | NA     | Refer to Note  |
| 15.407(a)(6)  | Peak Power Excursion        | NA     | Refer to Note  |
| 15.407(a/1/2)   | Peak Power Spectral Density | NA     | Refer to Note  |
| 15.407(g)   | Frequency Stability         | NA     | Refer to Note  |
| 15.203  | Antenna Requirement         | NA     | Refer to Note  |

**Note:** Only the radiated emission test was performed for this report. Other test data please refer to module report on FCC ID: PD962205ANHU (File: R80361).

### 2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| MEASUREMENT         | FREQUENCY        | UNCERTAINTY |
|---------------------|------------------|-------------|
| Conducted emissions | 9kHz~30MHz       | 2.44 dB     |
| Radiated emissions  | 30MHz ~ 200MHz   | 2.93 dB     |
|                     | 200MHz ~ 1000MHz | 2.95 dB     |
|                     | 1GHz ~ 18GHz     | 2.26 dB     |
|                     | 18GHz ~ 40GHz    | 1.94 dB     |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                              |   |
|------------------------------|---|
| <b>EUT</b>                   | Convertible Tablet Computer, ThinkPad S230u   |
| <b>MODEL NO.</b>             | TP00042A  |
| <b>POWER SUPPLY</b>          | 20Vdc (adapter)   |
| <b>MODULATION TYPE</b>       | 64QAM, 16QAM, QPSK, BPSK  |
| <b>MODULATION TECHNOLOGY</b> | OFDM  |
| <b>TRANSFER RATE</b>         | 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps<br>802.11n: up to MCS7  |
| <b>OPERATING FREQUENCY</b>   | 5180 ~ 5240MHz, 5260 ~ 5320MHz & 5500 ~ 5700MHz   |
| <b>NUMBER OF CHANNEL</b>     | 5180 ~ 5240MHz: 4 for 802.11a, 802.11n (20MHz)<br>2 for 802.11n (40MHz)<br>5260 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz)<br>2 for 802.11n (40MHz)<br>5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz)<br>3 for 802.11n (40MHz) |
| <b>ANTENNA TYPE</b>          | Refer to Note as below  |
| <b>ANTENNA CONNECTOR</b>     | NA  |
| <b>DATA CABLE</b>            | Refer to Note as below  |
| <b>I/O PORTS</b>             | Refer to user's manual  |
| <b>ACCESSORY DEVICES</b>     | Refer to Note as below  |

**NOTE:**

1. The module (Intel® Centrino® Advanced-N 6205) is allocated in the EUT.
2. The antenna information is listed as below.

| Antenna Type | Brand Name                   | Parts Number                      | Antenna Gain                               |
|--------------|------------------------------|-----------------------------------|--|
| PIFA         | Jess-Link Products CO., LTD. | Main Antenna: PANT11A00034-1      | 5150~5350MHz: -0.59<br>5470~5725MHz: 0.21  |
|              |                              | Auxiliary Antenna: PANT11A00035-1 | 5150~5350MHz: -0.07<br>5470~5725MHz: -0.08 |

3. The EUT contains following accessory devices.

| ITEM    | BRAND  | MODEL   | SPECIFICATION  |
|---------|--------|---------|--|
| Adapter | lenovo | 45N0185 | I/P: 100-240Vac, 50/60Hz, 1.5A<br>O/P: 20Vdc, 3.25A<br>1.8m non-shielded cable with ferrite core |

4. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 DESCRIPTION OF TEST MODES

#### FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (20MHz):

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 36      | 5180 MHz  | 44      | 5220 MHz  |
| 40      | 5200 MHz  | 48      | 5240 MHz  |

2 channels are provided for 802.11n (40MHz):

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 38      | 5190 MHz  | 46      | 5230 MHz  |

#### FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n (20MHz):

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 52      | 5260 MHz  | 60      | 5300 MHz  |
| 56      | 5280 MHz  | 64      | 5320 MHz  |

2 channels are provided for 802.11n (40MHz):

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 54      | 5270 MHz  | 62      | 5310 MHz  |

#### FOR 5500 ~ 5700MHz

8 channels are provided for 802.11a, 802.11n (20MHz):

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 100     | 5500MHz   | 116     | 5580MHz   |
| 104     | 5520MHz   | 132     | 5660MHz   |
| 108     | 5540MHz   | 136     | 5680MHz   |
| 112     | 5560MHz   | 140     | 5700MHz   |

3 channels are provided for 802.11n (40MHz):

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 102     | 5510MHz   | 134     | 5670MHz   |
| 110     | 5550MHz   |         |           |

### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

| EUT CONFIGURE MODE | APPLICABLE TO |       | DESCRIPTION                     |
|--------------------|---------------|-------|---------------------------------|
|                    | RE $\geq$ 1G  | RE<1G |                                 |
| A                  | √             | √     | EUT with antenna A+B (NB Mode)  |
| B                  | √             | √     | EUT with antenna A+B (Pad Mode) |

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz

**RE<1G**: Radiated Emission below 1GHz

**PLC**: Power Line Conducted Emission

**APCM**: Antenna Port Conducted Measurement

**NOTE 1**: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was listed as below.

**NOTE 2**: The system antenna type is the same as module antenna type, so Radiated Spurious Emission is re-tested on worst channel of the module report, which is FCC ID: PD962205ANHU.

**NOTE 3**: The EUT had been pre tested on NB mode and Pad mode for all bands, and only the worst case was presented in this report.

#### **RADIATED EMISSION TEST (ABOVE 1GHz):**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT CONFIGURE MODE | MODE            | FREQ. BAND (MHz) | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) | AXIS |
|--------------------|-----------------|------------------|-------------------|----------------|-----------------------|-----------------|------------------|------|
| A                  | 802.11n (40MHz) | 5180-5240        | 38 to 46          | 38             | OFDM                  | BPSK            | HT8              | X    |
| B                  | 802.11n (40MHz) | 5260-5320        | 54 to 62          | 62             | OFDM                  | BPSK            | HT8              | Z    |
|                    | 802.11n (40MHz) | 5500-5700        | 102 to 134        | 102, 134       | OFDM                  | BPSK            | HT8              | Y    |

#### **RADIATED EMISSION TEST (BELOW 1GHz):**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT CONFIGURE MODE | MODE            | FREQ. BAND (MHz) | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|--------------------|-----------------|------------------|-------------------|----------------|-----------------------|-----------------|------------------|
| A                  | 802.11n (40MHz) | 5180-5240        | 38 to 46          | 38             | OFDM                  | BPSK            | HT8              |
| B                  | 802.11n (40MHz) | 5260-5320        | 54 to 62          | 62             | OFDM                  | BPSK            | HT8              |
|                    | 802.11n (40MHz) | 5500-5700        | 102 to 134        | 102            | OFDM                  | BPSK            | HT8              |

#### **TEST CONDITION:**

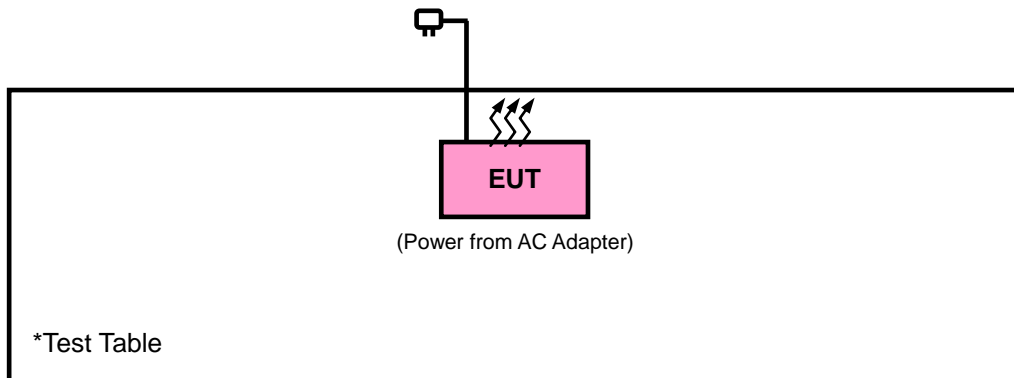
| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER  | TESTED BY    |
|---------------|--------------------------|--------------|--------------|
| RE $\geq$ 1G  | 25deg. C, 65%RH          | 120Vac, 60Hz | Johnson Liao |
| RE<1G         | 25deg. C, 65%RH          | 120Vac, 60Hz | Johnson Liao |



### 3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit.

#### 3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



### 3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

#### **FCC Part 15, Subpart E (15.407)**

ANSI C63.10-2009

KDB 789033 D01 General UNII Test Procedures v01r02

All test items 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.

## 4. TEST TYPES AND RESULTS

### 4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

#### 4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

| FREQUENCIES<br>(MHz) | FIELD STRENGTH<br>(microvolts/meter) | MEASUREMENT DISTANCE<br>(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. 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.

#### 4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

| APPLICABLE TO | LIMIT                         |  |
|---------------|-------------------------------|--|
|               | FIELD STRENGTH AT 3m (dBμV/m) |  |
|               | PK                            | AV                                       |
|               | 74                            | 54                                       |
| √             | EIRP LIMIT (dBm)              | EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m) |
|               | PK                            | PK                                       |
|               | -27                           | 68.3                                     |

**NOTE:** The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).}$$

#### 4.1.3 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER                     | MODEL NO.      | SERIAL NO. | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|--|----------------|------------|---------------------|-------------------------|
| Test Receiver<br>ROHDE & SCHWARZ               | ESCI           | 100744     | Apr. 15, 2013       | Apr. 14, 2014           |
| Spectrum Analyzer<br>ROHDE & SCHWARZ           | FSU43          | 101261     | Dec. 17, 2012       | Dec. 16, 2013           |
| BILOG Antenna<br>SCHWARZBECK                   | VULB9168       | 9168-472   | Mar. 25, 2013       | Mar. 24, 2014           |
| HORN Antenna<br>SCHWARZBECK                    | BBHA 9120 D    | 9120D-969  | Jan. 07, 2013       | Jan. 06, 2014           |
| HORN Antenna<br>SCHWARZBECK                    | BBHA 9170      | 9170-480   | Dec. 25, 2012       | Dec. 24, 2013           |
| Loop Antenna                                   | HFH2-Z2        | 100070     | Jan. 31, 2012       | Jan. 30, 2014           |
| Preamplifier<br>EMCI                           | EMC 012645     | 980115     | Dec. 28, 2012       | Dec. 27, 2013           |
| Preamplifier<br>EMCI                           | EMC 184045     | 980116     | Dec. 28, 2012       | Dec. 27, 2013           |
| Preamplifier<br>EMCI                           | EMC 330H       | 980112     | Dec. 28, 2012       | Dec. 27, 2013           |
| RF signal cable<br>HUBER+SUHNNER               | SUCOFLEX 104   | 309219/4   | Oct. 19, 2012       | Oct. 18, 2013           |
| RF signal cable<br>HUBER+SUHNNER               | SUCOFLEX 104   | 250130/4   | Oct. 19, 2012       | Oct. 18, 2013           |
| RF signal cable<br>Worken                      | RG-213         | NA         | Dec. 29, 2012       | Dec. 28, 2013           |
| Software<br>BV ADT                             | E3<br>6.120103 | NA         | NA                  | NA                      |
| Antenna Tower<br>MF                            | MFA-440H       | NA         | NA                  | NA                      |
| Turn Table<br>MF                               | MFT-201SS      | NA         | NA                  | NA                      |
| Antenna Tower & Turn<br>Table Controller<br>MF | MF-7802        | NA         | NA                  | NA                      |
| Power Meter                                    | ML2495A        | 1232002    | Aug. 10, 2012       | Aug. 09, 2013           |
| Power Sensor                                   | MA2411B        | 1207325    | Aug. 15, 2012       | Aug. 14, 2013           |

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in HwaYa Chamber 10.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The FCC Site Registration No. is 690701.
6. The IC Site Registration No. is IC 7450F-10.

#### 4.1.4 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.

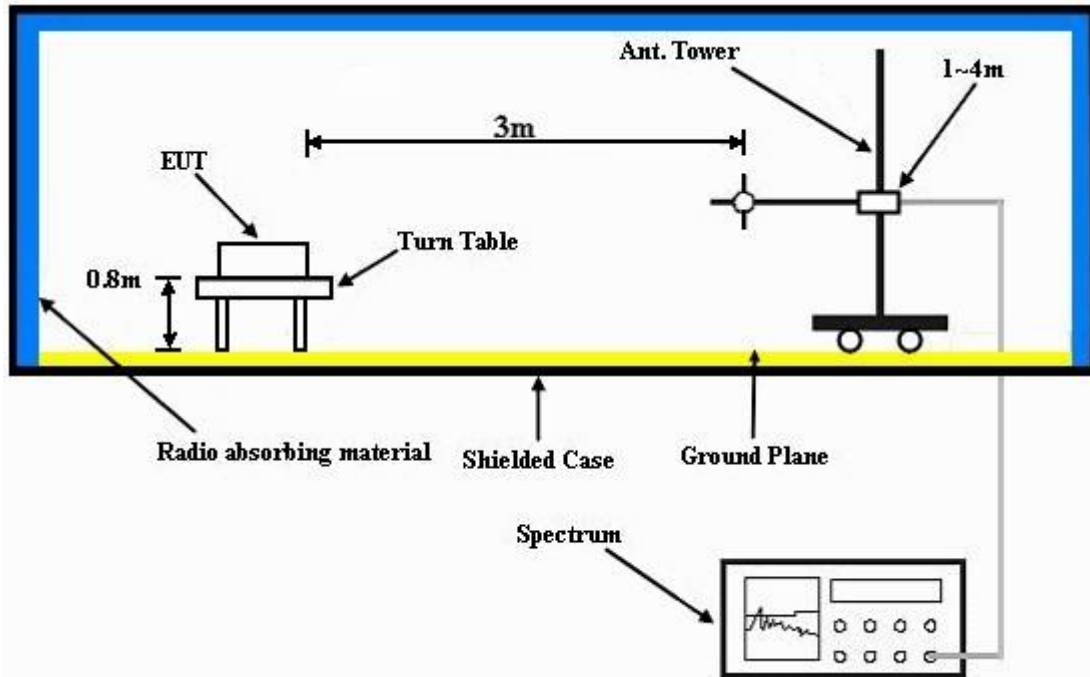
**NOTE:**

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 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

#### 4.1.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.1.6 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.1.7 EUT OPERATING CONDITION

- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.

## 4.1.8 TEST RESULTS

### ABOVE 1GHz DATA:

#### Mode A

#### 802.11n (40MHz)

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | Channel 38      | FREQUENCY RANGE    | 1GHz ~ 40GHz              |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH | TESTED BY          | Johnson Liao              |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                         |                   |                |             |                       |                 |                    |                     |                      |         |
|---|-------------------------|-------------------|----------------|-------------|-----------------------|-----------------|--------------------|---------------------|----------------------|---------|
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK  |
| 5150  | 48.6                    | 49.31             | 54             | -5.4        | 31.32                 | 5.29            | 37.32              | 103                 | 334                  | Average |
| 5150  | 62.38                   | 63.09             | 74             | -11.62      | 31.32                 | 5.29            | 37.32              | 103                 | 334                  | Peak    |
| 5190  | 89.31                   | 89.98             |                |             | 31.35                 | 5.32            | 37.34              | 103                 | 334                  | Average |
| 5190  | 99.26                   | 99.93             |                |             | 31.35                 | 5.32            | 37.34              | 103                 | 334                  | Peak    |
| 5350  | 38.1                    | 38.41             | 54             | -15.9       | 31.48                 | 5.39            | 37.18              | 103                 | 334                  | Average |
| 5350  | 53.39                   | 53.7              | 74             | -20.61      | 31.48                 | 5.39            | 37.18              | 103                 | 334                  | Peak    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                         |                   |                |             |                       |                 |                    |                     |                      |         |
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK  |
| 5150  | 53.21                   | 53.92             | 54             | -0.79       | 31.32                 | 5.29            | 37.32              | 100                 | 344                  | Average |
| 5150  | 66.19                   | 66.9              | 74             | -7.81       | 31.32                 | 5.29            | 37.32              | 100                 | 344                  | Peak    |
| 5190  | 92.53                   | 93.2              |                |             | 31.35                 | 5.32            | 37.34              | 100                 | 344                  | Average |
| 5190  | 102.17                  | 102.84            |                |             | 31.35                 | 5.32            | 37.34              | 100                 | 344                  | Peak    |
| 5436  | 38.18                   | 38.34             | 54             | -15.82      | 31.55                 | 5.42            | 37.13              | 100                 | 344                  | Average |
| 5436  | 53.9                    | 54.06             | 74             | -20.1       | 31.55                 | 5.42            | 37.13              | 100                 | 344                  | Peak    |

#### REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
2. 5190MHz: Fundamental frequency.

## Mode B

### 802.11n (40MHz)

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | Channel 62      | FREQUENCY RANGE    | 1GHz ~ 40GHz              |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH | TESTED BY          | Johnson Liao              |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                         |                   |                |             |                       |                 |                    |                     |                      |         |
|---|-------------------------|-------------------|----------------|-------------|-----------------------|-----------------|--------------------|---------------------|----------------------|---------|
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK  |
| 5150  | 38.99                   | 39.7              | 54             | -15.01      | 31.32                 | 5.29            | 37.32              | 138                 | 332                  | Average |
| 5150  | 54.1                    | 54.81             | 74             | -19.9       | 31.32                 | 5.29            | 37.32              | 138                 | 332                  | Peak    |
| 5310  | 91.99                   | 92.36             |                |             | 31.45                 | 5.37            | 37.19              | 138                 | 332                  | Average |
| 5310  | 101.19                  | 101.56            |                |             | 31.45                 | 5.37            | 37.19              | 138                 | 332                  | Peak    |
| 5348  | 48.35                   | 48.66             | 54             | -5.65       | 31.48                 | 5.39            | 37.18              | 138                 | 332                  | Average |
| 5348  | 63.6                    | 63.91             | 74             | -10.4       | 31.48                 | 5.39            | 37.18              | 138                 | 332                  | Peak    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                         |                   |                |             |                       |                 |                    |                     |                      |         |
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK  |
| 5094  | 38.14                   | 38.87             | 54             | -15.86      | 31.28                 | 5.27            | 37.28              | 121                 | 339                  | Average |
| 5094  | 53.32                   | 54.05             | 74             | -20.68      | 31.28                 | 5.27            | 37.28              | 121                 | 339                  | Peak    |
| 5310  | 93.76                   | 94.13             |                |             | 31.45                 | 5.37            | 37.19              | 121                 | 339                  | Average |
| 5310  | 103.74                  | 104.11            |                |             | 31.45                 | 5.37            | 37.19              | 121                 | 339                  | Peak    |
| 5348  | 49.03                   | 49.34             | 54             | -4.97       | 31.48                 | 5.39            | 37.18              | 121                 | 339                  | Average |
| 5348  | 62.18                   | 62.49             | 74             | -11.82      | 31.48                 | 5.39            | 37.18              | 121                 | 339                  | Peak    |

#### REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
2. 5310MHz: Fundamental frequency.



A D T

## 802.11n (40MHz)

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | Channel 102     | FREQUENCY RANGE    | 1GHz ~ 40GHz              |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH | TESTED BY          | Johnson Liao              |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                         |                   |                |             |                       |                 |                    |                     |                      |         |
|---|-------------------------|-------------------|----------------|-------------|-----------------------|-----------------|--------------------|---------------------|----------------------|---------|
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK  |
| 5458  | 43.49                   | 43.57             | 54             | -10.51      | 31.56                 | 5.44            | 37.08              | 100                 | 350                  | Average |
| 5458  | 56.08                   | 56.16             | 74             | -17.92      | 31.56                 | 5.44            | 37.08              | 100                 | 350                  | Peak    |
| 5470  | 63.09                   | 63.15             | 68.3           | -5.21       | 31.57                 | 5.45            | 37.08              | 100                 | 350                  | Peak    |
| 5510  | 91.88                   | 91.88             |                |             | 31.6                  | 5.46            | 37.06              | 100                 | 350                  | Average |
| 5510  | 101.9                   | 101.9             |                |             | 31.6                  | 5.46            | 37.06              | 100                 | 350                  | Peak    |
| 5725  | 52.51                   | 52.39             | 68.3           | -15.79      | 31.96                 | 5.59            | 37.43              | 100                 | 350                  | Peak    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                         |                   |                |             |                       |                 |                    |                     |                      |         |
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK  |
| 5460  | 42.46                   | 42.54             | 54             | -11.54      | 31.56                 | 5.44            | 37.08              | 136                 | 52                   | Average |
| 5460  | 56.25                   | 56.33             | 74             | -17.75      | 31.56                 | 5.44            | 37.08              | 136                 | 52                   | Peak    |
| 5470  | 62.09                   | 62.15             | 68.3           | -6.21       | 31.57                 | 5.45            | 37.08              | 136                 | 52                   | Peak    |
| 5510  | 90.5                    | 90.5              |                |             | 31.6                  | 5.46            | 37.06              | 136                 | 52                   | Average |
| 5510  | 101.41                  | 101.41            |                |             | 31.6                  | 5.46            | 37.06              | 136                 | 52                   | Peak    |
| 5725  | 53.33                   | 53.21             | 68.3           | -14.97      | 31.96                 | 5.59            | 37.43              | 136                 | 52                   | Peak    |

## REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
2. 5470MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band



### 802.11n (40MHz)

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | Channel 134     | FREQUENCY RANGE    | 1GHz ~ 40GHz              |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH | TESTED BY          | Johnson Liao              |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                         |                   |                |             |                       |                 |                    |                     |                      |         |
|---|-------------------------|-------------------|----------------|-------------|-----------------------|-----------------|--------------------|---------------------|----------------------|---------|
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK  |
| 5428  | 39.23                   | 39.41             | 54             | -14.77      | 31.53                 | 5.42            | 37.13              | 120                 | 349                  | Average |
| 5428  | 54.57                   | 54.75             | 74             | -19.43      | 31.53                 | 5.42            | 37.13              | 120                 | 349                  | Peak    |
| 5470  | 53.32                   | 53.38             | 68.3           | -14.98      | 31.57                 | 5.45            | 37.08              | 120                 | 349                  | Peak    |
| 5670  | 91.3                    | 91.2              |                |             | 31.88                 | 5.56            | 37.34              | 120                 | 349                  | Average |
| 5670  | 101.33                  | 101.23            |                |             | 31.88                 | 5.56            | 37.34              | 120                 | 349                  | Peak    |
| 5725  | 54.41                   | 54.29             | 68.3           | -13.89      | 31.96                 | 5.59            | 37.43              | 120                 | 349                  | Peak    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                         |                   |                |             |                       |                 |                    |                     |                      |         |
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK  |
| 5456  | 38.68                   | 38.76             | 54             | -15.32      | 31.56                 | 5.44            | 37.08              | 100                 | 17                   | Average |
| 5456  | 54.66                   | 54.74             | 74             | -19.34      | 31.56                 | 5.44            | 37.08              | 100                 | 17                   | Peak    |
| 5470  | 51.87                   | 51.93             | 68.3           | -16.43      | 31.57                 | 5.45            | 37.08              | 100                 | 17                   | Peak    |
| 5670  | 88.96                   | 88.86             |                |             | 31.88                 | 5.56            | 37.34              | 100                 | 17                   | Average |
| 5670  | 99.47                   | 99.37             |                |             | 31.88                 | 5.56            | 37.34              | 100                 | 17                   | Peak    |
| 5725  | 54.54                   | 54.42             | 68.3           | -13.76      | 31.96                 | 5.59            | 37.43              | 100                 | 17                   | Peak    |

#### REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
2. 5670MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

## BELOW 1GHz WORST-CASE DATA :

### Mode A

### 802.11n (40MHz)

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | Channel 38      | FREQUENCY RANGE    | 30MHz ~ 1GHz              |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH | TESTED BY          | Johnson Liao              |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                         |                   |                |             |                       |                 |                    |                     |                      |        |
|---|-------------------------|-------------------|----------------|-------------|-----------------------|-----------------|--------------------|---------------------|----------------------|--------|
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK |
| 59.16   | 17.25                   | 35.74             | 40             | -22.75      | 12.04                 | 0.82            | 31.35              | 100                 | 335                  | Peak   |
| 165.54  | 29.96                   | 48.18             | 43.5           | -13.54      | 12.15                 | 1.42            | 31.79              | 100                 | 317                  | Peak   |
| 265.98  | 29.35                   | 47.48             | 46             | -16.65      | 11.94                 | 1.89            | 31.96              | 100                 | 296                  | Peak   |
| 386.1   | 34.11                   | 48.73             | 46             | -11.89      | 15.01                 | 2.37            | 32                 | 100                 | 137                  | Peak   |
| 666.8   | 37.44                   | 45.59             | 46             | -8.56       | 20.41                 | 3.3             | 31.86              | 100                 | 235                  | Peak   |
| 928.6   | 29.23                   | 33.52             | 46             | -16.77      | 23.67                 | 4.03            | 31.99              | 100                 | 267                  | Peak   |
| ANTENNA POLARITY & test distance: VERTICAL at 3 m   |                         |                   |                |             |                       |                 |                    |                     |                      |        |
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK |
| 55.92   | 25.62                   | 43.81             | 40             | -14.38      | 12.35                 | 0.8             | 31.34              | 100                 | 131                  | Peak   |
| 165.81  | 28.06                   | 46.28             | 43.5           | -15.44      | 12.15                 | 1.42            | 31.79              | 100                 | 179                  | Peak   |
| 263.28  | 21.82                   | 39.99             | 46             | -24.18      | 11.85                 | 1.88            | 31.9               | 100                 | 290                  | Peak   |
| 374.9   | 31.3                    | 46.16             | 46             | -14.7       | 14.75                 | 2.33            | 31.94              | 100                 | 341                  | Peak   |
| 666.8   | 36.48                   | 44.63             | 46             | -9.52       | 20.41                 | 3.3             | 31.86              | 100                 | 186                  | Peak   |
| 912.5   | 29.85                   | 34.31             | 46             | -16.15      | 23.58                 | 4               | 32.04              | 100                 | 204                  | Peak   |

**REMARKS:** Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

## Mode B

### 802.11n (40MHz)

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | Channel 62      | FREQUENCY RANGE    | 30MHz ~ 1GHz              |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH | TESTED BY          | Johnson Liao              |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                         |                   |                |             |                       |                 |                    |                     |                      |        |
|---|-------------------------|-------------------|----------------|-------------|-----------------------|-----------------|--------------------|---------------------|----------------------|--------|
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK |
| 56.19   | 24.51                   | 42.7              | 40             | -15.49      | 12.35                 | 0.8             | 31.34              | 100                 | 135                  | Peak   |
| 165.54  | 32.26                   | 50.48             | 43.5           | -11.24      | 12.15                 | 1.42            | 31.79              | 100                 | 141                  | Peak   |
| 263.28  | 29.28                   | 47.45             | 46             | -16.72      | 11.85                 | 1.88            | 31.9               | 100                 | 118                  | Peak   |
| 428.1   | 29.71                   | 43.31             | 46             | -16.29      | 15.89                 | 2.53            | 32.02              | 100                 | 289                  | Peak   |
| 666.1   | 37.37                   | 45.52             | 46             | -8.63       | 20.41                 | 3.3             | 31.86              | 100                 | 241                  | Peak   |
| 981.8   | 28.85                   | 32.49             | 54             | -25.15      | 23.97                 | 4.13            | 31.74              | 100                 | 139                  | Peak   |
| ANTENNA POLARITY & test distance: VERTICAL at 3 m   |                         |                   |                |             |                       |                 |                    |                     |                      |        |
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK |
| 36.21   | 24.97                   | 42.47             | 40             | -15.03      | 12.94                 | 0.61            | 31.05              | 100                 | 222                  | Peak   |
| 166.89  | 25.33                   | 43.62             | 43.5           | -18.17      | 12.05                 | 1.43            | 31.77              | 100                 | 143                  | Peak   |
| 266.25  | 20.44                   | 38.55             | 46             | -25.56      | 11.97                 | 1.9             | 31.98              | 100                 | 190                  | Peak   |
| 347.6   | 28.85                   | 44.38             | 46             | -17.15      | 14.08                 | 2.22            | 31.83              | 100                 | 140                  | Peak   |
| 629.7   | 28.34                   | 37.34             | 46             | -17.66      | 19.96                 | 3.18            | 32.14              | 100                 | 199                  | Peak   |
| 913.9   | 30.13                   | 34.57             | 46             | -15.87      | 23.59                 | 4               | 32.03              | 100                 | 235                  | Peak   |

**REMARKS:** Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

### 802.11n (40MHz)

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | Channel 102     | FREQUENCY RANGE    | 30MHz ~ 1GHz              |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH | TESTED BY          | David Huang               |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                         |                   |                |             |                       |                 |                    |                     |                      |        |
|---|-------------------------|-------------------|----------------|-------------|-----------------------|-----------------|--------------------|---------------------|----------------------|--------|
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK |
| 56.46   | 24.93                   | 43.12             | 40             | -15.07      | 12.35                 | 0.8             | 31.34              | 101                 | 184                  | Peak   |
| 166.08  | 30.19                   | 48.41             | 43.5           | -13.31      | 12.15                 | 1.42            | 31.79              | 106                 | 162                  | Peak   |
| 269.22  | 29.85                   | 47.92             | 46             | -16.15      | 12.05                 | 1.91            | 32.03              | 100                 | 165                  | Peak   |
| 399.4   | 33.96                   | 48.34             | 46             | -12.04      | 15.33                 | 2.42            | 32.13              | 100                 | 134                  | Peak   |
| 664   | 37.19                   | 45.39             | 46             | -8.81       | 20.39                 | 3.3             | 31.89              | 108                 | 284                  | Peak   |
| 830.6   | 31.98                   | 37.31             | 46             | -14.02      | 22.62                 | 3.77            | 31.72              | 100                 | 228                  | Peak   |
| ANTENNA POLARITY & test distance: VERTICAL at 3 m   |                         |                   |                |             |                       |                 |                    |                     |                      |        |
| FREQ. (MHz)   | EMISSION LEVEL (dBuV/m) | READ LEVEL (dBuV) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA FACTOR (dB/m) | CABLE LOSS (dB) | PREAMP FACTOR (dB) | ANTENNA HEIGHT (cm) | TABLE ANGLE (Degree) | REMARK |
| 56.46   | 25.71                   | 43.9              | 40             | -14.29      | 12.35                 | 0.8             | 31.34              | 100                 | 157                  | Peak   |
| 165.81  | 25.41                   | 43.63             | 43.5           | -18.09      | 12.15                 | 1.42            | 31.79              | 100                 | 183                  | Peak   |
| 226.56  | 21.05                   | 40.64             | 46             | -24.95      | 10.5                  | 1.73            | 31.82              | 100                 | 132                  | Peak   |
| 499.5   | 34.88                   | 46.42             | 46             | -11.12      | 17.31                 | 2.78            | 31.63              | 100                 | 234                  | Peak   |
| 786.5   | 30.1                    | 35.81             | 46             | -15.9       | 22.04                 | 3.66            | 31.41              | 100                 | 317                  | Peak   |
| 913.9   | 31.57                   | 36.01             | 46             | -14.43      | 23.59                 | 4               | 32.03              | 100                 | 64                   | Peak   |

**REMARKS:** Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

## 5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

## 6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Linko EMC/RF Lab:**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF Lab:**

Tel: 886-3-5935343

Fax: 886-3-5935342

**Hwa Ya EMC/RF/Safety Telecom Lab:**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

## **7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No modifications were made to the EUT by the lab during the test.

**---END---**