

FCC Test Report

Report No.: RF150528E05H

FCC ID: TLZ-CU300

Test Model: AW-CU300A

Series Model: AW-CU300

Received Date: Sep. 05, 2018

Test Date: Nov. 15, 2018

Issued Date: Nov. 20, 2018

Applicant: AzureWave Technologies, Inc.

Address: 8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City , Taiwan 231

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

**FCC Registration /
Designation Number:** 723255 / TW2022



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

Table of Contents

| | |
|--|-----------|
| Release Control Record | 3 |
| 1 Certificate of Conformity | 4 |
| 2 Summary of Test Results | 5 |
| 2.1 Measurement Uncertainty | 5 |
| 2.2 Modification Record | 5 |
| 3 General Information | 6 |
| 3.1 General Description of EUT | 6 |
| 3.2 Description of Test Modes | 9 |
| 3.2.1 Test Mode Applicability and Tested Channel Detail | 10 |
| 3.3 Description of Support Units | 12 |
| 3.3.1 Configuration of System under Test | 12 |
| 3.4 General Description of Applied Standards | 13 |
| 4 Test Types and Results | 14 |
| 4.1 Radiated Emission and Bandedge Measurement | 14 |
| 4.1.1 Limits of Radiated Emission and Bandedge Measurement | 14 |
| 4.1.2 Test Instruments | 15 |
| 4.1.3 Test Procedures | 16 |
| 4.1.4 Deviation from Test Standard | 17 |
| 4.1.5 Test Setup | 17 |
| 4.1.6 EUT Operating Conditions | 18 |
| 4.1.7 Test Results (Mode 1) | 19 |
| 4.1.8 Test Results (Mode 2) | 24 |
| 4.1.9 Test Results (Mode 3) | 29 |
| 4.1.10 Test Results (Mode 4) | 34 |
| 4.2 Conducted Output Power Measurement | 39 |
| 4.2.1 Limits of Conducted Output Power Measurement | 39 |
| 4.2.2 Test Setup | 39 |
| 4.2.3 Test Instruments | 39 |
| 4.2.4 Test Procedures | 39 |
| 4.2.5 Deviation from Test Standard | 39 |
| 4.2.6 EUT Operating Conditions | 39 |
| 4.2.7 Test Results | 40 |
| 5 Pictures of Test Arrangements | 41 |
| Appendix – Information on the Testing Laboratories | 42 |

Release Control Record

| Issue No. | Description | Date Issued |
|--------------|-------------------|---------------|
| RF150528E05H | Original release. | Nov. 20, 2018 |

1 Certificate of Conformity

Product: IEEE 802.11 b/g/n WLAN Microcontroller Module

Brand: AzureWave

Test Model: AW-CU300A

Series Model: AW-CU300

Sample Status: ENGINEERING SAMPLE

Applicant: AzureWave Technologies, Inc.

Test Date: Nov. 15, 2018

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10: 2013

The above equipment 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 : Wendy Wu , **Date:** Nov. 20, 2018
Wendy Wu / Specialist

Approved by : May Chen , **Date:** Nov. 20, 2018
May Chen / Manager

2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart C (Section 15.247) | | | |
|--|--|--------|---|
| FCC Clause | Test Item | Result | Remarks |
| 15.205 / 15.209 / 15.247(d) | Radiated Emissions and Band Edge Measurement | PASS | Meet the requirement of limit. Minimum passing margin is -2.2dB at 2390.00MHz. |
| 15.247(b) | Conducted power | PASS | Meet the requirement of limit. |

NOTE: 1 This report is prepared for FCC Class II change.

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 | Expanded Uncertainty (k=2) (\pm) |
|--------------------------------|---------------|--------------------------------------|
| Radiated Emissions up to 1 GHz | 30MHz ~ 1GHz | 5.33 dB |
| Radiated Emissions above 1 GHz | 1GHz ~ 6GHz | 5.10 dB |
| | 6GHz ~ 18GHz | 4.85 dB |
| | 18GHz ~ 40GHz | 5.24 dB |

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

| | |
|-----------------------|--|
| Product | IEEE 802.11 b/g/n WLAN Microcontroller Module |
| Brand | AzureWave |
| Test Model | AW-CU300A |
| Series Model | AW-CU300 |
| Status of EUT | ENGINEERING SAMPLE |
| Power Supply Rating | 3.3Vdc from host equipment |
| Modulation Type | CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM |
| Modulation Technology | DSSS, OFDM |
| Transfer Rate | 802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n : up to 72.2Mbps |
| Operating Frequency | 2.412 ~ 2.462GHz |
| Number of Channel | 11 |
| Output Power | 200.447mW |
| Antenna Type | Please see Note |
| Antenna Connector | Please see Note |
| Accessory Device | NA |
| Data Cable Supplied | NA |

Note:

1. This report is prepared for FCC Class II change. The difference compared with the Report No.: RF150528E05C design is as the following:

- ◆ Added chip model (for more details please refer to declaration letter by applicant).
- ◆ Added new antennas as below table:

| Original | | | | | | | |
|--------------|------------|------------------------|--------------------------------------|--------------|----------------|------------------------------|-------------------|
| Antenna No | Brand | Model | Gain (dBi) (Including cable loss) | Antenna Type | Connector Type | Frequency range (GHz to GHz) | Cable Length (mm) |
| 1(Internal) | AzureWave | AW-CU300 ANT | 5.12 | PCB | NA | 2.4~2.4835 | NA |
| 2(External) | TAOGLAS | FXP73.07.0100A | 3 | Monopole | I-PEX | 2.4~2.4835 | 100 |
| 3(External) | TAOGLAS | PC11.07.0100A | 3 | Dipole | I-PEX | 2.4~2.4835 | 100 |
| 4(External) | TAOGLAS | FXP74.07.0100A | 4 | PIFA | I-PEX | 2.4~2.4835 | 100 |
| 5(External) | TAOGLAS | GW.17.07.0250E | 2.7 | Dipole | I-PEX | 2.4~2.4835 | 250 |
| 6(External) | TAOGLAS | PC17.07.0070A | 0.9 | PIFA | I-PEX | 2.4~2.4835 | 70 |
| 7(External) | LAIRD | NanoBlue-IP04_MAF94045 | 2 | Monopole | I-PEX | 2.4~2.4835 | 100 |
| 8(External) | MAG.LAYERS | EDA_1313_2G4C1-A16 | 2.39 | Dipole | I-PEX | 2.4~2.4835 | 150 |
| 9(External) | LAIRD | EBL2400A1-23UFL | 2.45 | Dipole | I-PEX | 2.4~2.4835 | 230 |
| Newly | | | | | | | |
| Antenna No | Brand | Model | Gain (dBi) (Including cable loss) | Antenna Type | Connector Type | Frequency range (GHz to GHz) | Cable Length (mm) |
| 10(External) | MOLEX | 1461530100 | 3 | Dipole | I-PEX | 2.4~2.4835 | 100 |
| 11(External) | MOLEX | 1461530150 | 2.8 | Dipole | I-PEX | 2.4~2.4835 | 150 |
| 12(External) | MOLEX | 1461530200 | 2.6 | Dipole | I-PEX | 2.4~2.4835 | 20 |
| 13(External) | MOLEX | 1461530250 | 2.4 | Dipole | I-PEX | 2.4~2.4835 | 250 |
| 14(External) | MOLEX | 1461530300 | 2.2 | Dipole | I-PEX | 2.4~2.4835 | 300 |
| 15(External) | MOLEX | 2042810050 | 2.2 | Dipole | I-PEX | 2.4~2.4835 | 50 |
| 16(External) | MOLEX | 2042810100 | 2 | Dipole | I-PEX | 2.4~2.4835 | 100 |
| 17(External) | MOLEX | 2042810150 | 1.8 | Dipole | I-PEX | 2.4~2.4835 | 150 |
| 18(External) | MOLEX | 2042810200 | 1.6 | Dipole | I-PEX | 2.4~2.4835 | 200 |
| 19(External) | MOLEX | 2042810250 | 1.4 | Dipole | I-PEX | 2.4~2.4835 | 250 |
| 20(External) | MOLEX | 2042810300 | 1.2 | Dipole | I-PEX | 2.4~2.4835 | 300 |
| 21(External) | YAGEO | ANTX100F113B24003 | 2.9 | PIFA | I-PEX | 2.4~2.4835 | 100 |
| 22(External) | YAGEO | ANTX100P113B24003 | 2.8 | PIFA | I-PEX | 2.4~2.4835 | 100 |
| 23(External) | LYNWAVE | ALA110-052020 | 2 | Dipole | I-PEX | 2.4~2.4835 | 50 |
| 24(External) | LYNWAVE | ALA120-052024 | 2 | Dipole | I-PEX | 2.4~2.4835 | 160 |
| 25(External) | LYNWAVE | ALA150-052020 | 2 | Dipole | I-PEX | 2.4~2.4835 | 85 |
| 26(External) | LYNWAVE | ALA140-05102J | 2 | Dipole | I-PEX | 2.4~2.4835 | 40 |
| 27(External) | LYNWAVE | ALA120-051020 | 2 | Dipole | I-PEX | 2.4~2.4835 | 50 |
| 28(External) | LYNWAVE | ALA120-051022 | 2 | Dipole | I-PEX | 2.4~2.4835 | 100 |
| 29(External) | LYNWAVE | ALA140-051020 | 1.88 | Dipole | I-PEX | 2.4~2.4835 | 70 |
| 30(External) | LYNWAVE | ALA150-05102B | 2 | Dipole | I-PEX | 2.4~2.4835 | 100 |
| 31(External) | LYNWAVE | ALA150-05102C | 2 | Dipole | I-PEX | 2.4~2.4835 | 75 |
| 32(External) | LYNWAVE | ALA150-05102F | 2 | Dipole | I-PEX | 2.4~2.4835 | 140 |
| 33(External) | LYNWAVE | ALA150-05102J | 2 | Dipole | I-PEX | 2.4~2.4835 | 100 |
| 34(External) | LYNWAVE | ALA140-05102D | 2 | Dipole | I-PEX | 2.4~2.4835 | 95 |
| 35(External) | LYNWAVE | ALA150-051026 | 2 | Dipole | I-PEX | 2.4~2.4835 | 150 |

Antennas 1~4 were chosen for final test.

2. According to above conditions, only worst modulation of Radiated Emissions and Antenna Port Conducted Measurement test items need to be performed. And all data were verified to meet the requirements.

3. The EUT has below model names, which are identical to each other in all aspects except for the following:

| Brand | Model No. | Remark |
|-----------|-----------|---|
| AzureWave | AW-CU300 | - |
| AzureWave | AW-CU300A | PCB size is extended added flash component |

From the above models, model: AW-CU300A was selected as representative model for the test and its data was recorded in this report.

4. The EUT incorporates a SISO function.

| MODULATION MODE | DATA RATE (MCS) | TX & RX CONFIGURATION | |
|-----------------------|-----------------|-----------------------|-----|
| 802.11b | 1 ~ 11Mbps | 1TX | 1RX |
| 802.11g | 6 ~ 54Mbps | 1TX | 1RX |
| 802.11n (HT20) | MCS 0~7 | 1TX | 1RX |

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

3.2 Description of Test Modes

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 1 | 2412MHz | 7 | 2442MHz |
| 2 | 2417MHz | 8 | 2447MHz |
| 3 | 2422MHz | 9 | 2452MHz |
| 4 | 2427MHz | 10 | 2457MHz |
| 5 | 2432MHz | 11 | 2462MHz |
| 6 | 2437MHz | | |

3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT CONFIGURE MODE | APPLICABLE TO | | | DESCRIPTION |
|--------------------|---------------|-----------|------|---------------------------|
| | RE \geq 1G | RE $<$ 1G | APCM | |
| 1 | √ | √ | √ | With antenna 1 (PCB) |
| 2 | √ | √ | - | With antenna 2 (Monopole) |
| 3 | √ | √ | - | With antenna 3 (Dipole) |
| 4 | √ | √ | - | With antenna 4 (PIFA) |

Where **RE \geq 1G**: Radiated Emission above 1GHz & Bandedge Measurement
RE $<$ 1G: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

NOTE 1: “-” means no effect.

2: In original report, Antenna placement had been investigated on the positioned of each 3 axis.

Following worst case were found as listed below.

| Antenna | Worst position |
|----------|----------------|
| PCB | Y-plane |
| Monopole | Y-plane |
| PIFA | X-plane |

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.

| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|---------|-------------------|----------------|-----------------------|-----------------|------------------|
| 802.11g | 1 to 11 | 1, 6, 11 | OFDM | BPSK | 6 |

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.

| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|---------|-------------------|----------------|-----------------------|-----------------|------------------|
| 802.11g | 1 to 11 | 6 | OFDM | BPSK | 6 |

Antenna Port Conducted Measurement:

- 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.

| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|---------|-------------------|----------------|-----------------------|-----------------|------------------|
| 802.11g | 1 to 11 | 1, 6, 11 | OFDM | BPSK | 6 |

Test Condition:

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER (SYSTEM) | TESTED BY |
|---------------|--------------------------|-------------------------|---------------|
| RE \geq 1G | 22deg. C, 66%RH | 120Vac, 60Hz | Steven Chaing |
| RE<1G | 22deg. C, 66%RH | 120Vac, 60Hz | Steven Chaing |
| APCM | 25deg. C, 60%RH | 120Vac, 60Hz | Anderson Chen |

3.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

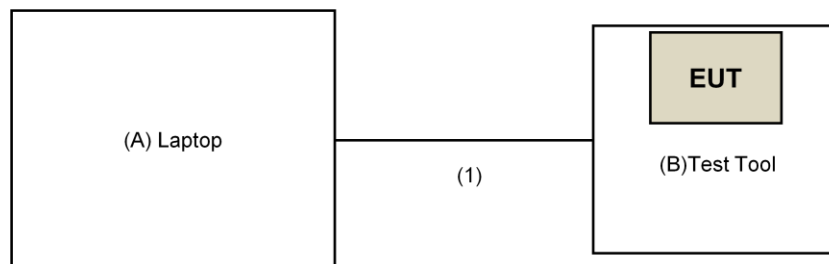
| ID | Product | Brand | Model No. | Serial No. | FCC ID | Remarks |
|----|-----------|-----------|-----------|------------|---------|--------------------|
| A. | Laptop | HP | TPN-Q186 | 5CD8212YYK | FCC DoC | Provided by Lab |
| B. | Test Tool | AzureWave | NA | NA | NA | Supplied by client |

Note:

1. All power cords of the above support units are non-shielded (1.8m).

| ID | Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks |
|----|--------------|------|------------|--------------------|--------------|-----------------|
| 1. | USB Cable | 1 | 1.8 | Yes | 0 | Provided by Lab |

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 C (15.247)
KDB 558074 D01 15.247 Meas Guidance v05
ANSI C63.10-2013

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

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. Other emissions shall be at least 20dB below the highest level of the desired power:

| 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. 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 Test Instruments

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|----------------------|-------------|-----------------|------------------|
| Test Receiver Keysight | N9038A | MY54450088 | July 05, 2018 | July 04, 2019 |
| Pre-Amplifier EMCI | EMC001340 | 980142 | Feb. 09, 2018 | Feb. 08, 2019 |
| Loop Antenna ^(*) Electro-Metrics | EM-6879 | 264 | Dec. 16, 2016 | Dec. 15, 2018 |
| RF Cable | NA | LOOPCAB-001 | Jan. 15, 2018 | Jan. 14, 2019 |
| RF Cable | NA | LOOPCAB-002 | Jan. 15, 2018 | Jan. 14, 2019 |
| Pre-Amplifier Mini-Circuits | ZFL-1000VH2B | AMP-ZFL-01 | Oct. 30, 2018 | Oct. 29, 2019 |
| Trilog Broadband Antenna SCHWARZBECK | VULB 9168 | 9168-406 | Nov. 29, 2017 | Nov. 28, 2018 |
| RF Cable | 8D | 966-4-1 | Mar. 21, 2018 | Mar. 20, 2019 |
| RF Cable | 8D | 966-4-2 | Mar. 21, 2018 | Mar. 20, 2019 |
| RF Cable | 8D | 966-4-3 | Mar. 21, 2018 | Mar. 20, 2019 |
| Fixed attenuator Mini-Circuits | UNAT-5+ | PAD-3m-4-01 | Sep. 27, 2018 | Sep. 26, 2019 |
| Horn_Antenna SCHWARZBECK | BBHA 9120D | 9120D-783 | Dec. 12, 2017 | Dec. 11, 2018 |
| Pre-Amplifier Mini-Circuits | ZVA-183-S+ | AMP-ZVA-03 | May 10, 2018 | May 09, 2019 |
| RF Cable | EMC104-SM-SM-1200 | 160923 | Jan. 29, 2018 | Jan. 28, 2019 |
| RF Cable | EMC104-SM-SM-2000 | 150318 | Jan. 29, 2018 | Jan. 28, 2019 |
| RF Cable | EMC104-SM-SM-5000 | 150321 | Jan. 29, 2018 | Jan. 28, 2019 |
| Pre-Amplifier EMCI | EMC184045SE | 980387 | Jan. 29, 2018 | Jan. 28, 2019 |
| Horn_Antenna SCHWARZBECK | BBHA 9170 | BBHA9170608 | Dec. 14, 2017 | Dec. 13, 2018 |
| RF Cable | EMC102-KM-KM-1200 | 160925 | Jan. 29, 2018 | Jan. 28, 2019 |
| Software | ADT_Radiated_V8.7.08 | NA | NA | NA |
| Boresight Antenna Tower & Turn Table Max-Full | MF-7802BS | MF780208530 | 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.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 4.
4. The CANADA Site Registration No. is 20331-2
5. Loop antenna was used for all emissions below 30 MHz.
6. Tested Date: Nov. 15, 2018

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case 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 Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. 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 height of antenna 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

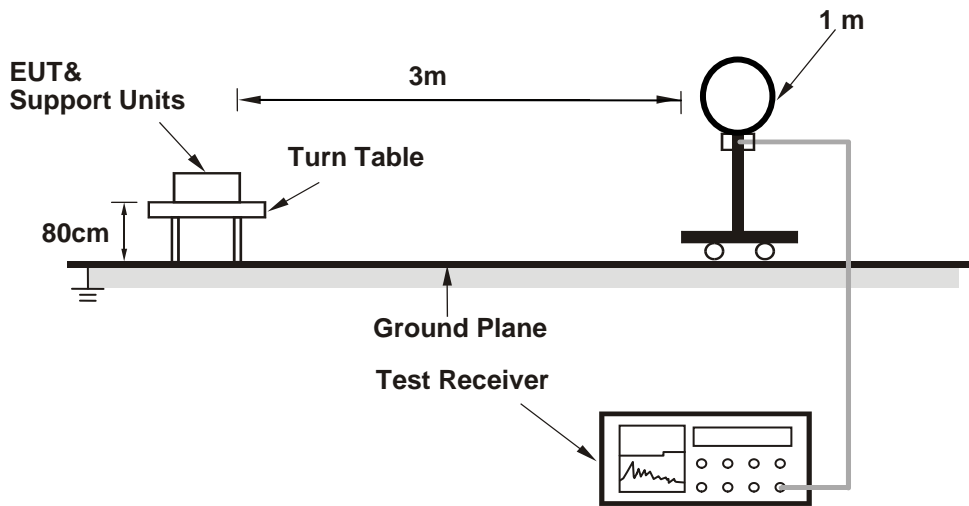
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

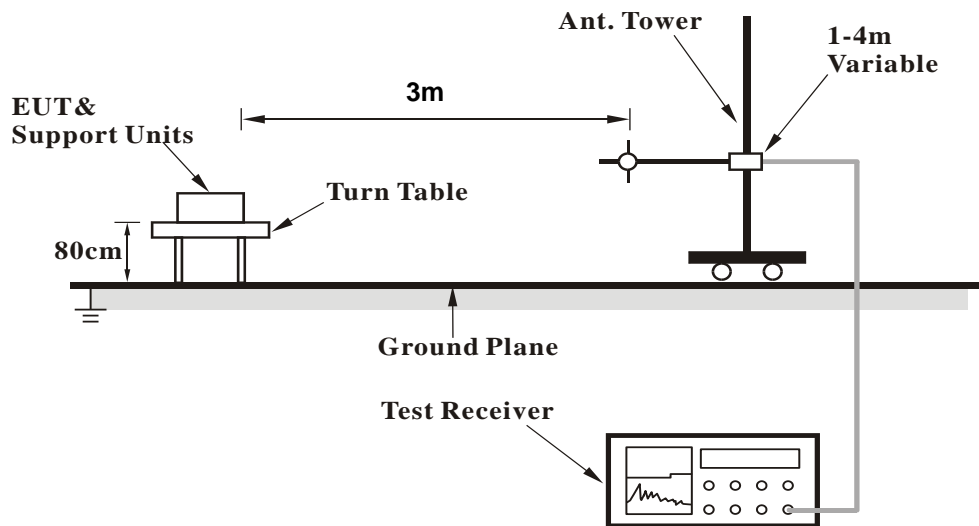
No deviation.

4.1.5 Test Setup

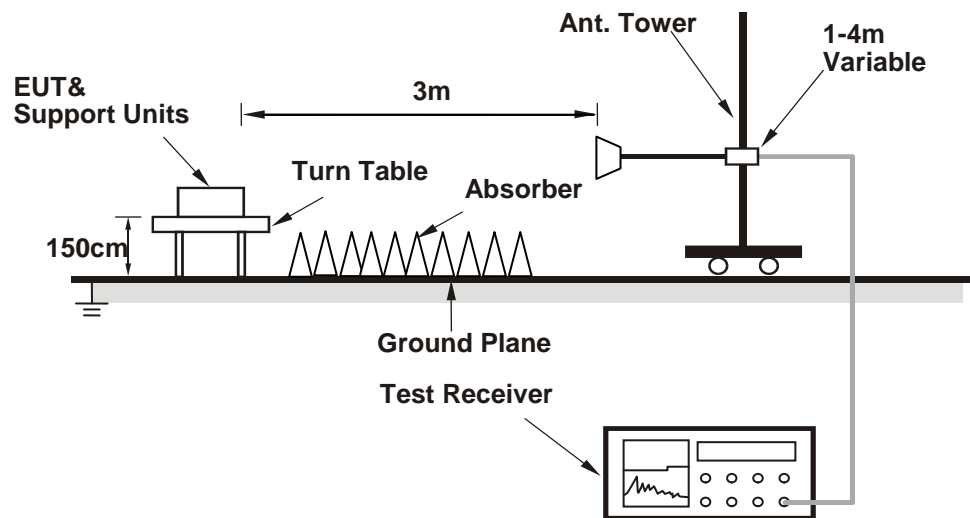
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

1. Connect the EUT with the support unit A (Laptop) which is placed on a testing table.
2. The communication partner run test program "DutApiWiFi8801BrdigeUart paste External/Internal (Chip) Ant.txt command" to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.1.7 Test Results (Mode 1)

Above 1GHz Data:

802.11g

| | | | |
|------------------------|--------------|------------------------------|--------------|
| CHANNEL | TX Channel 1 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | 2390.00 | 69.2 PK | 74.0 | -4.8 | 1.61 H | 236 | 71.4 | -2.2 |
| 2 | 2390.00 | 49.4 AV | 54.0 | -4.6 | 1.61 H | 236 | 51.6 | -2.2 |
| 3 | *2412.00 | 103.5 PK | | | 1.61 H | 236 | 105.9 | -2.4 |
| 4 | *2412.00 | 91.7 AV | | | 1.61 H | 236 | 94.1 | -2.4 |
| 5 | 4824.00 | 47.5 PK | 74.0 | -26.5 | 1.00 H | 200 | 45.7 | 1.8 |
| 6 | 4824.00 | 34.0 AV | 54.0 | -20.0 | 1.00 H | 200 | 32.2 | 1.8 |

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 | 2390.00 | 63.5 PK | 74.0 | -10.5 | 1.06 V | 120 | 65.7 | -2.2 |
| 2 | 2390.00 | 45.7 AV | 54.0 | -8.3 | 1.06 V | 120 | 47.9 | -2.2 |
| 3 | *2412.00 | 96.0 PK | | | 1.06 V | 120 | 98.4 | -2.4 |
| 4 | *2412.00 | 84.1 AV | | | 1.06 V | 120 | 86.5 | -2.4 |
| 5 | 4824.00 | 46.6 PK | 74.0 | -27.4 | 1.25 V | 93 | 44.8 | 1.8 |
| 6 | 4824.00 | 33.4 AV | 54.0 | -20.6 | 1.25 V | 93 | 31.6 | 1.8 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| | | | |
|------------------------|--------------|------------------------------|--------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | *2437.00 | 106.5 PK | | | 1.25 H | 226 | 109.1 | -2.6 |
| 2 | *2437.00 | 94.8 AV | | | 1.25 H | 226 | 97.4 | -2.6 |
| 3 | 4874.00 | 47.0 PK | 74.0 | -27.0 | 1.05 H | 205 | 45.0 | 2.0 |
| 4 | 4874.00 | 34.1 AV | 54.0 | -19.9 | 1.05 H | 205 | 32.1 | 2.0 |
| 5 | 7311.00 | 51.8 PK | 74.0 | -22.2 | 1.19 H | 82 | 43.4 | 8.4 |
| 6 | 7311.00 | 38.1 AV | 54.0 | -15.9 | 1.19 H | 82 | 29.7 | 8.4 |

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 | *2437.00 | 98.1 PK | | | 1.14 V | 106 | 100.7 | -2.6 |
| 2 | *2437.00 | 87.0 AV | | | 1.14 V | 106 | 89.6 | -2.6 |
| 3 | 4874.00 | 46.6 PK | 74.0 | -27.4 | 1.26 V | 103 | 44.6 | 2.0 |
| 4 | 4874.00 | 33.3 AV | 54.0 | -20.7 | 1.26 V | 103 | 31.3 | 2.0 |
| 5 | 7311.00 | 52.1 PK | 74.0 | -21.9 | 1.69 V | 301 | 43.7 | 8.4 |
| 6 | 7311.00 | 38.3 AV | 54.0 | -15.7 | 1.69 V | 301 | 29.9 | 8.4 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| | | | |
|------------------------|---------------|------------------------------|--------------|
| CHANNEL | TX Channel 11 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | *2462.00 | 104.5 PK | | | 1.73 H | 235 | 107.1 | -2.6 |
| 2 | *2462.00 | 93.1 AV | | | 1.73 H | 235 | 95.7 | -2.6 |
| 3 | 2483.50 | 67.9 PK | 74.0 | -6.1 | 1.73 H | 235 | 70.3 | -2.4 |
| 4 | 2483.50 | 48.9 AV | 54.0 | -5.1 | 1.73 H | 235 | 51.3 | -2.4 |
| 5 | 4924.00 | 47.5 PK | 74.0 | -26.5 | 1.00 H | 220 | 45.5 | 2.0 |
| 6 | 4924.00 | 34.5 AV | 54.0 | -19.5 | 1.00 H | 220 | 32.5 | 2.0 |
| 7 | 7386.00 | 51.6 PK | 74.0 | -22.4 | 1.13 H | 113 | 43.0 | 8.6 |
| 8 | 7386.00 | 37.6 AV | 54.0 | -16.4 | 1.13 H | 113 | 29.0 | 8.6 |

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 | *2462.00 | 95.6 PK | | | 1.06 V | 91 | 98.2 | -2.6 |
| 2 | *2462.00 | 84.8 AV | | | 1.06 V | 91 | 87.4 | -2.6 |
| 3 | 2483.50 | 63.3 PK | 74.0 | -10.7 | 1.06 V | 91 | 65.7 | -2.4 |
| 4 | 2483.50 | 46.0 AV | 54.0 | -8.0 | 1.06 V | 91 | 48.4 | -2.4 |
| 5 | 4924.00 | 47.5 PK | 74.0 | -26.5 | 1.20 V | 110 | 45.5 | 2.0 |
| 6 | 4924.00 | 34.1 AV | 54.0 | -19.9 | 1.20 V | 110 | 32.1 | 2.0 |
| 7 | 7386.00 | 51.9 PK | 74.0 | -22.1 | 1.67 V | 294 | 43.3 | 8.6 |
| 8 | 7386.00 | 38.1 AV | 54.0 | -15.9 | 1.67 V | 294 | 29.5 | 8.6 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

Below 1GHz Data:

802.11g

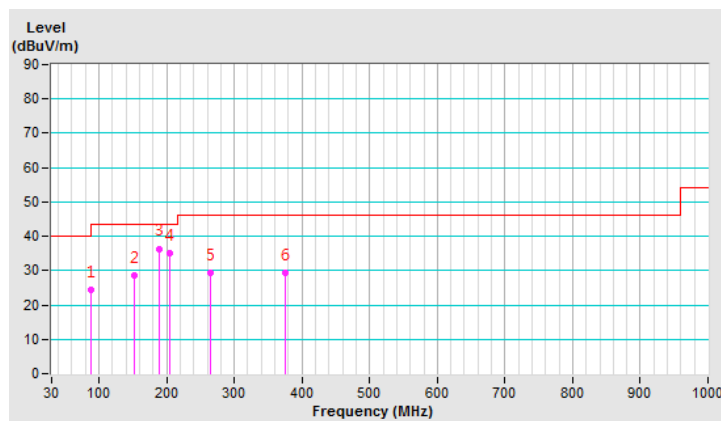
| | | | |
|------------------------|--------------|--------------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

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 | 88.78 | 24.5 QP | 43.5 | -19.0 | 2.00 H | 205 | 38.1 | -13.6 |
| 2 | 151.66 | 28.5 QP | 43.5 | -15.0 | 1.50 H | 289 | 36.1 | -7.6 |
| 3 | 189.93 | 36.4 QP | 43.5 | -7.1 | 1.50 H | 252 | 46.9 | -10.5 |
| 4 | 205.06 | 35.2 QP | 43.5 | -8.3 | 1.50 H | 255 | 46.3 | -11.1 |
| 5 | 264.01 | 29.4 QP | 46.0 | -16.6 | 1.50 H | 324 | 37.8 | -8.4 |
| 6 | 375.03 | 29.3 QP | 46.0 | -16.7 | 2.00 H | 213 | 34.1 | -4.8 |

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) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



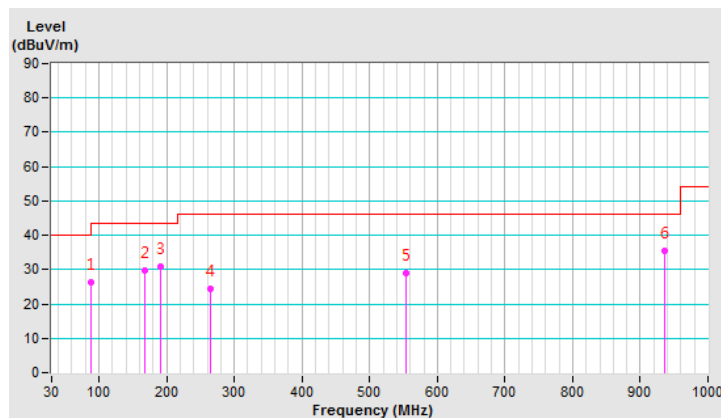
| | | | |
|------------------------|--------------|------------------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

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 | 88.30 | 26.2 QP | 43.5 | -17.3 | 1.00 V | 299 | 39.8 | -13.6 |
| 2 | 167.96 | 29.6 QP | 43.5 | -13.9 | 1.00 V | 264 | 37.8 | -8.2 |
| 3 | 191.29 | 31.0 QP | 43.5 | -12.5 | 1.00 V | 264 | 41.6 | -10.6 |
| 4 | 264.01 | 24.4 QP | 46.0 | -21.6 | 1.00 V | 299 | 32.8 | -8.4 |
| 5 | 553.00 | 29.1 QP | 46.0 | -16.9 | 1.00 V | 329 | 29.9 | -0.8 |
| 6 | 936.00 | 35.4 QP | 46.0 | -10.6 | 1.50 V | 0 | 29.3 | 6.1 |

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) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.1.8 Test Results (Mode 2)

Above 1GHz Data:

802.11g

| | | | |
|------------------------|--------------|------------------------------|--------------|
| CHANNEL | TX Channel 1 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | 2390.00 | 71.6 PK | 74.0 | -2.4 | 1.53 H | 164 | 73.8 | -2.2 |
| 2 | 2390.00 | 51.8 AV | 54.0 | -2.2 | 1.53 H | 164 | 54.0 | -2.2 |
| 3 | *2412.00 | 102.4 PK | | | 1.53 H | 164 | 104.8 | -2.4 |
| 4 | *2412.00 | 92.5 AV | | | 1.53 H | 164 | 94.9 | -2.4 |
| 5 | 4824.00 | 46.3 PK | 74.0 | -27.7 | 1.01 H | 195 | 44.5 | 1.8 |
| 6 | 4824.00 | 33.3 AV | 54.0 | -20.7 | 1.01 H | 195 | 31.5 | 1.8 |

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 | 2390.00 | 67.0 PK | 74.0 | -7.0 | 1.04 V | 214 | 69.2 | -2.2 |
| 2 | 2390.00 | 44.8 AV | 54.0 | -9.2 | 1.04 V | 214 | 47.0 | -2.2 |
| 3 | *2412.00 | 96.9 PK | | | 1.04 V | 214 | 99.3 | -2.4 |
| 4 | *2412.00 | 87.2 AV | | | 1.04 V | 214 | 89.6 | -2.4 |
| 5 | 4824.00 | 46.6 PK | 74.0 | -27.4 | 1.28 V | 103 | 44.8 | 1.8 |
| 6 | 4824.00 | 33.7 AV | 54.0 | -20.3 | 1.28 V | 103 | 31.9 | 1.8 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| | | | |
|------------------------|--------------|------------------------------|--------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | *2437.00 | 106.9 PK | | | 1.36 H | 177 | 109.5 | -2.6 |
| 2 | *2437.00 | 95.5 AV | | | 1.36 H | 177 | 98.1 | -2.6 |
| 3 | 4874.00 | 47.2 PK | 74.0 | -26.8 | 1.11 H | 199 | 45.2 | 2.0 |
| 4 | 4874.00 | 34.5 AV | 54.0 | -19.5 | 1.11 H | 199 | 32.5 | 2.0 |
| 5 | 7311.00 | 51.6 PK | 74.0 | -22.4 | 1.29 H | 103 | 43.2 | 8.4 |
| 6 | 7311.00 | 38.0 AV | 54.0 | -16.0 | 1.29 H | 103 | 29.6 | 8.4 |

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 | *2437.00 | 100.1 PK | | | 1.05 V | 202 | 102.7 | -2.6 |
| 2 | *2437.00 | 89.7 AV | | | 1.05 V | 202 | 92.3 | -2.6 |
| 3 | 4874.00 | 47.5 PK | 74.0 | -26.5 | 1.35 V | 87 | 45.5 | 2.0 |
| 4 | 4874.00 | 34.0 AV | 54.0 | -20.0 | 1.35 V | 87 | 32.0 | 2.0 |
| 5 | 7311.00 | 51.3 PK | 74.0 | -22.7 | 1.58 V | 272 | 42.9 | 8.4 |
| 6 | 7311.00 | 37.3 AV | 54.0 | -16.7 | 1.58 V | 272 | 28.9 | 8.4 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| | | | |
|------------------------|---------------|------------------------------|--------------|
| CHANNEL | TX Channel 11 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | *2462.00 | 105.0 PK | | | 1.59 H | 174 | 107.6 | -2.6 |
| 2 | *2462.00 | 93.8 AV | | | 1.59 H | 174 | 96.4 | -2.6 |
| 3 | 2483.50 | 68.7 PK | 74.0 | -5.3 | 1.59 H | 174 | 71.1 | -2.4 |
| 4 | 2483.50 | 50.4 AV | 54.0 | -3.6 | 1.59 H | 174 | 52.8 | -2.4 |
| 5 | 4924.00 | 47.5 PK | 74.0 | -26.5 | 1.05 H | 195 | 45.5 | 2.0 |
| 6 | 4924.00 | 34.3 AV | 54.0 | -19.7 | 1.05 H | 195 | 32.3 | 2.0 |
| 7 | 7386.00 | 51.9 PK | 74.0 | -22.1 | 1.20 H | 105 | 43.3 | 8.6 |
| 8 | 7386.00 | 38.0 AV | 54.0 | -16.0 | 1.20 H | 105 | 29.4 | 8.6 |

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 | *2462.00 | 98.4 PK | | | 1.03 V | 177 | 101.0 | -2.6 |
| 2 | *2462.00 | 87.7 AV | | | 1.03 V | 177 | 90.3 | -2.6 |
| 3 | 2483.50 | 67.5 PK | 74.0 | -6.5 | 1.03 V | 177 | 69.9 | -2.4 |
| 4 | 2483.50 | 45.0 AV | 54.0 | -9.0 | 1.03 V | 177 | 47.4 | -2.4 |
| 5 | 4924.00 | 47.1 PK | 74.0 | -26.9 | 1.27 V | 71 | 45.1 | 2.0 |
| 6 | 4924.00 | 33.9 AV | 54.0 | -20.1 | 1.27 V | 71 | 31.9 | 2.0 |
| 7 | 7386.00 | 49.9 PK | 74.0 | -24.1 | 1.63 V | 301 | 41.3 | 8.6 |
| 8 | 7386.00 | 36.6 AV | 54.0 | -17.4 | 1.63 V | 301 | 28.0 | 8.6 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

Below 1GHz Data:

802.11g

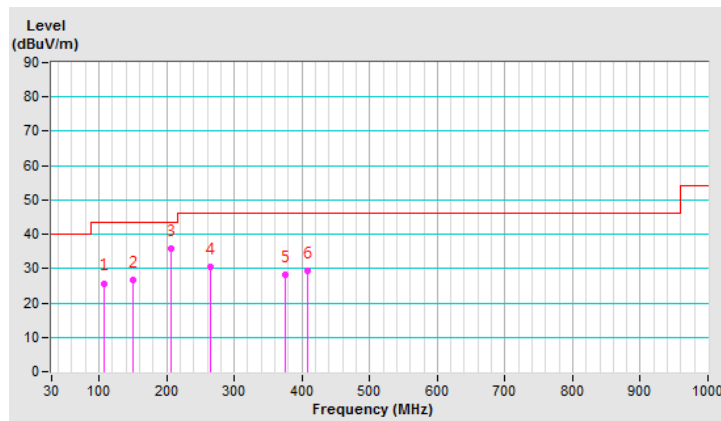
| | | | |
|------------------------|--------------|--------------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

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 | 107.92 | 25.7 QP | 43.5 | -17.8 | 1.50 H | 262 | 36.8 | -11.1 |
| 2 | 150.67 | 26.7 QP | 43.5 | -16.8 | 1.00 H | 301 | 34.3 | -7.6 |
| 3 | 206.44 | 35.9 QP | 43.5 | -7.6 | 1.50 H | 260 | 47.0 | -11.1 |
| 4 | 264.01 | 30.5 QP | 46.0 | -15.5 | 1.00 H | 324 | 38.9 | -8.4 |
| 5 | 375.00 | 28.1 QP | 46.0 | -17.9 | 1.00 H | 326 | 32.9 | -4.8 |
| 6 | 407.98 | 29.5 QP | 46.0 | -16.5 | 1.00 H | 319 | 33.5 | -4.0 |

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) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



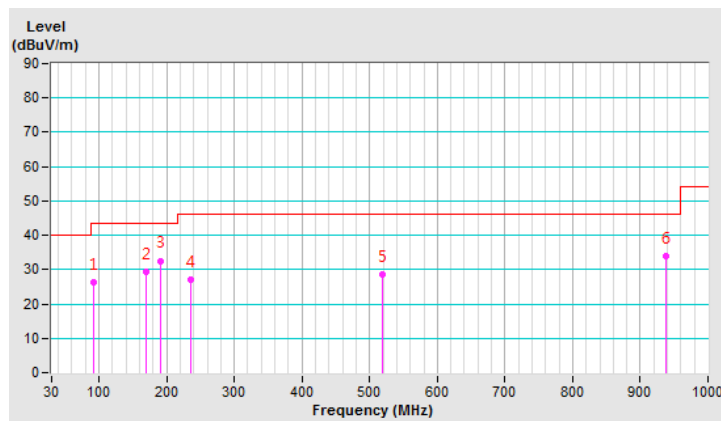
| | | | |
|------------------------|--------------|--------------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

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 | 91.33 | 26.2 QP | 43.5 | -17.3 | 1.50 V | 240 | 39.9 | -13.7 |
| 2 | 169.39 | 29.3 QP | 43.5 | -14.2 | 1.00 V | 286 | 37.6 | -8.3 |
| 3 | 190.32 | 32.6 QP | 43.5 | -10.9 | 1.50 V | 240 | 43.2 | -10.6 |
| 4 | 236.00 | 26.9 QP | 46.0 | -19.1 | 1.50 V | 325 | 36.6 | -9.7 |
| 5 | 519.49 | 28.6 QP | 46.0 | -17.4 | 1.00 V | 322 | 29.9 | -1.3 |
| 6 | 937.73 | 33.8 QP | 46.0 | -12.2 | 2.00 V | 106 | 27.6 | 6.2 |

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) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.1.9 Test Results (Mode 3)

Above 1GHz Data:

802.11g

| | | | |
|------------------------|--------------|------------------------------|--------------|
| CHANNEL | TX Channel 1 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | 2390.00 | 59.1 PK | 74.0 | -14.9 | 1.97 H | 134 | 61.3 | -2.2 |
| 2 | 2390.00 | 43.0 AV | 54.0 | -11.0 | 1.97 H | 134 | 45.2 | -2.2 |
| 3 | *2412.00 | 98.7 PK | | | 1.97 H | 134 | 101.1 | -2.4 |
| 4 | *2412.00 | 87.9 AV | | | 1.97 H | 134 | 90.3 | -2.4 |
| 5 | 4824.00 | 47.3 PK | 74.0 | -26.7 | 1.03 H | 227 | 45.5 | 1.8 |
| 6 | 4824.00 | 34.1 AV | 54.0 | -19.9 | 1.03 H | 227 | 32.3 | 1.8 |

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 | 2390.00 | 66.6 PK | 74.0 | -7.4 | 2.54 V | 103 | 68.8 | -2.2 |
| 2 | 2390.00 | 46.9 AV | 54.0 | -7.1 | 2.54 V | 103 | 49.1 | -2.2 |
| 3 | *2412.00 | 102.7 PK | | | 2.54 V | 103 | 105.1 | -2.4 |
| 4 | *2412.00 | 91.8 AV | | | 2.54 V | 103 | 94.2 | -2.4 |
| 5 | 4824.00 | 46.8 PK | 74.0 | -27.2 | 1.27 V | 99 | 45.0 | 1.8 |
| 6 | 4824.00 | 33.6 AV | 54.0 | -20.4 | 1.27 V | 99 | 31.8 | 1.8 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| | | | |
|------------------------|--------------|------------------------------|--------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | *2437.00 | 101.4 PK | | | 1.98 H | 149 | 104.0 | -2.6 |
| 2 | *2437.00 | 90.4 AV | | | 1.98 H | 149 | 93.0 | -2.6 |
| 3 | 4874.00 | 46.1 PK | 74.0 | -27.9 | 1.11 H | 224 | 44.1 | 2.0 |
| 4 | 4874.00 | 33.2 AV | 54.0 | -20.8 | 1.11 H | 224 | 31.2 | 2.0 |
| 5 | 7311.00 | 51.4 PK | 74.0 | -22.6 | 1.20 H | 70 | 43.0 | 8.4 |
| 6 | 7311.00 | 38.2 AV | 54.0 | -15.8 | 1.20 H | 70 | 29.8 | 8.4 |

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 | *2437.00 | 106.0 PK | | | 1.99 V | 186 | 108.6 | -2.6 |
| 2 | *2437.00 | 94.7 AV | | | 1.99 V | 186 | 97.3 | -2.6 |
| 3 | 4874.00 | 46.9 PK | 74.0 | -27.1 | 1.21 V | 90 | 44.9 | 2.0 |
| 4 | 4874.00 | 33.9 AV | 54.0 | -20.1 | 1.21 V | 90 | 31.9 | 2.0 |
| 5 | 7311.00 | 50.2 PK | 74.0 | -23.8 | 1.66 V | 306 | 41.8 | 8.4 |
| 6 | 7311.00 | 36.6 AV | 54.0 | -17.4 | 1.66 V | 306 | 28.2 | 8.4 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| | | | |
|------------------------|---------------|------------------------------|--------------|
| CHANNEL | TX Channel 11 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | *2462.00 | 99.4 PK | | | 2.02 H | 138 | 102.0 | -2.6 |
| 2 | *2462.00 | 88.4 AV | | | 2.02 H | 138 | 91.0 | -2.6 |
| 3 | 2483.50 | 59.7 PK | 74.0 | -14.3 | 2.02 H | 138 | 62.1 | -2.4 |
| 4 | 2483.50 | 43.6 AV | 54.0 | -10.4 | 2.02 H | 138 | 46.0 | -2.4 |
| 5 | 4924.00 | 47.6 PK | 74.0 | -26.4 | 1.03 H | 223 | 45.6 | 2.0 |
| 6 | 4924.00 | 34.1 AV | 54.0 | -19.9 | 1.03 H | 223 | 32.1 | 2.0 |
| 7 | 7386.00 | 51.6 PK | 74.0 | -22.4 | 1.21 H | 116 | 43.0 | 8.6 |
| 8 | 7386.00 | 37.8 AV | 54.0 | -16.2 | 1.21 H | 116 | 29.2 | 8.6 |

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 | *2462.00 | 104.4 PK | | | 2.43 V | 116 | 107.0 | -2.6 |
| 2 | *2462.00 | 93.1 AV | | | 2.43 V | 116 | 95.7 | -2.6 |
| 3 | 2483.50 | 67.4 PK | 74.0 | -6.6 | 2.43 V | 116 | 69.8 | -2.4 |
| 4 | 2483.50 | 47.7 AV | 54.0 | -6.3 | 2.43 V | 116 | 50.1 | -2.4 |
| 5 | 4924.00 | 46.8 PK | 74.0 | -27.2 | 1.18 V | 88 | 44.8 | 2.0 |
| 6 | 4924.00 | 33.8 AV | 54.0 | -20.2 | 1.18 V | 88 | 31.8 | 2.0 |
| 7 | 7386.00 | 51.1 PK | 74.0 | -22.9 | 1.72 V | 310 | 42.5 | 8.6 |
| 8 | 7386.00 | 37.6 AV | 54.0 | -16.4 | 1.72 V | 310 | 29.0 | 8.6 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

Below 1GHz Data:

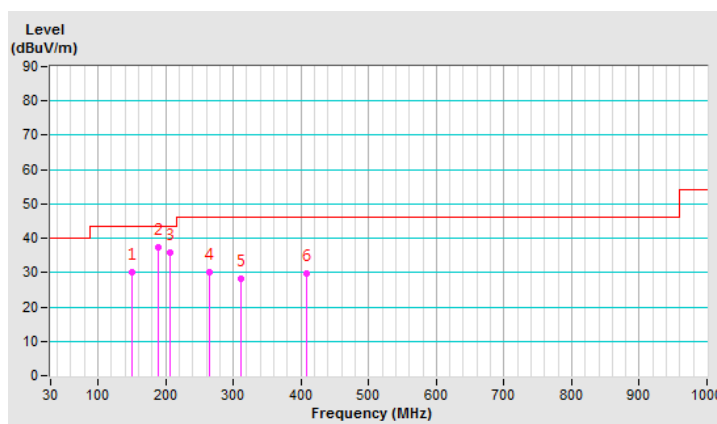
802.11g

| | | | |
|------------------------|--------------|--------------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

| 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 | 150.40 | 30.2 QP | 43.5 | -13.3 | 2.00 H | 284 | 37.8 | -7.6 |
| 2 | 189.86 | 37.4 QP | 43.5 | -6.1 | 1.50 H | 243 | 47.9 | -10.5 |
| 3 | 207.32 | 35.9 QP | 43.5 | -7.6 | 1.50 H | 254 | 47.0 | -11.1 |
| 4 | 264.01 | 30.1 QP | 46.0 | -15.9 | 1.00 H | 319 | 38.5 | -8.4 |
| 5 | 312.08 | 28.2 QP | 46.0 | -17.8 | 1.00 H | 95 | 34.8 | -6.6 |
| 6 | 408.69 | 29.8 QP | 46.0 | -16.2 | 1.00 H | 322 | 33.8 | -4.0 |

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) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



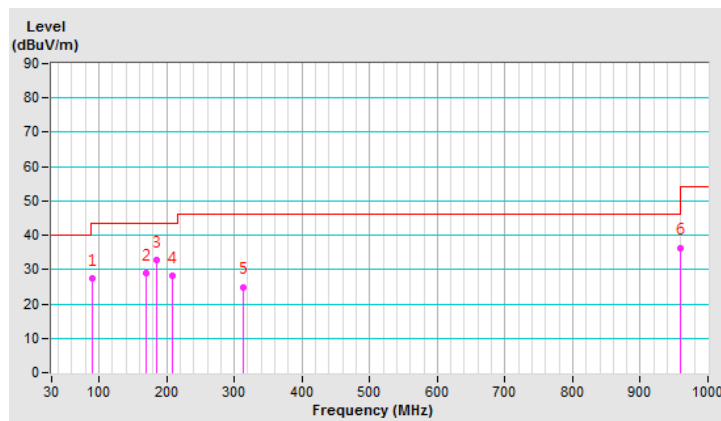
| | | | |
|------------------------|--------------|--------------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

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 | 90.55 | 27.5 QP | 43.5 | -16.0 | 1.00 V | 48 | 41.3 | -13.8 |
| 2 | 169.36 | 29.1 QP | 43.5 | -14.4 | 1.00 V | 54 | 37.4 | -8.3 |
| 3 | 184.91 | 32.8 QP | 43.5 | -10.7 | 1.00 V | 258 | 42.8 | -10.0 |
| 4 | 208.16 | 28.2 QP | 43.5 | -15.3 | 1.00 V | 84 | 39.3 | -11.1 |
| 5 | 313.14 | 25.0 QP | 46.0 | -21.0 | 1.00 V | 336 | 31.6 | -6.6 |
| 6 | 960.01 | 36.4 QP | 54.0 | -17.6 | 1.50 V | 360 | 30.2 | 6.2 |

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) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.1.10 Test Results (Mode 4)

Above 1GHz Data:

802.11g

| | | | |
|------------------------|--------------|------------------------------|--------------|
| CHANNEL | TX Channel 1 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | 2390.00 | 69.9 PK | 74.0 | -4.1 | 1.64 H | 127 | 72.1 | -2.2 |
| 2 | 2390.00 | 49.2 AV | 54.0 | -4.8 | 1.64 H | 127 | 51.4 | -2.2 |
| 3 | *2412.00 | 104.6 PK | | | 1.64 H | 127 | 107.0 | -2.4 |
| 4 | *2412.00 | 93.0 AV | | | 1.64 H | 127 | 95.4 | -2.4 |
| 5 | 4824.00 | 47.0 PK | 74.0 | -27.0 | 1.04 H | 211 | 45.2 | 1.8 |
| 6 | 4824.00 | 33.6 AV | 54.0 | -20.4 | 1.04 H | 211 | 31.8 | 1.8 |

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 | 2390.00 | 66.6 PK | 74.0 | -7.4 | 1.01 V | 191 | 68.8 | -2.2 |
| 2 | 2390.00 | 47.3 AV | 54.0 | -6.7 | 1.01 V | 191 | 49.5 | -2.2 |
| 3 | *2412.00 | 101.1 PK | | | 1.01 V | 191 | 103.5 | -2.4 |
| 4 | *2412.00 | 89.6 AV | | | 1.01 V | 191 | 92.0 | -2.4 |
| 5 | 4824.00 | 46.2 PK | 74.0 | -27.8 | 1.28 V | 65 | 44.4 | 1.8 |
| 6 | 4824.00 | 33.1 AV | 54.0 | -20.9 | 1.28 V | 65 | 31.3 | 1.8 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| | | | |
|------------------------|--------------|------------------------------|--------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | *2437.00 | 108.0 PK | | | 1.68 H | 105 | 110.6 | -2.6 |
| 2 | *2437.00 | 96.2 AV | | | 1.68 H | 105 | 98.8 | -2.6 |
| 3 | 4874.00 | 46.2 PK | 74.0 | -27.8 | 1.03 H | 218 | 44.2 | 2.0 |
| 4 | 4874.00 | 33.1 AV | 54.0 | -20.9 | 1.03 H | 218 | 31.1 | 2.0 |
| 5 | 7311.00 | 51.7 PK | 74.0 | -22.3 | 1.22 H | 73 | 43.3 | 8.4 |
| 6 | 7311.00 | 38.0 AV | 54.0 | -16.0 | 1.22 H | 73 | 29.6 | 8.4 |

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 | *2437.00 | 104.5 PK | | | 1.02 V | 190 | 107.1 | -2.6 |
| 2 | *2437.00 | 92.3 AV | | | 1.02 V | 190 | 94.9 | -2.6 |
| 3 | 4874.00 | 46.7 PK | 74.0 | -27.3 | 1.22 V | 113 | 44.7 | 2.0 |
| 4 | 4874.00 | 33.8 AV | 54.0 | -20.2 | 1.22 V | 113 | 31.8 | 2.0 |
| 5 | 7311.00 | 50.9 PK | 74.0 | -23.1 | 1.78 V | 271 | 42.5 | 8.4 |
| 6 | 7311.00 | 37.3 AV | 54.0 | -16.7 | 1.78 V | 271 | 28.9 | 8.4 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

| | | | |
|------------------------|---------------|------------------------------|--------------|
| CHANNEL | TX Channel 11 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | Average (AV) |

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 | *2462.00 | 106.0 PK | | | 1.66 H | 98 | 108.6 | -2.6 |
| 2 | *2462.00 | 94.6 AV | | | 1.66 H | 98 | 97.2 | -2.6 |
| 3 | 2483.50 | 70.2 PK | 74.0 | -3.8 | 1.66 H | 98 | 72.6 | -2.4 |
| 4 | 2483.50 | 49.8 AV | 54.0 | -4.2 | 1.66 H | 98 | 52.2 | -2.4 |
| 5 | 4924.00 | 47.0 PK | 74.0 | -27.0 | 1.00 H | 215 | 45.0 | 2.0 |
| 6 | 4924.00 | 33.9 AV | 54.0 | -20.1 | 1.00 H | 215 | 31.9 | 2.0 |
| 7 | 7386.00 | 51.4 PK | 74.0 | -22.6 | 1.22 H | 101 | 42.8 | 8.6 |
| 8 | 7386.00 | 37.6 AV | 54.0 | -16.4 | 1.22 H | 101 | 29.0 | 8.6 |

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 | *2462.00 | 102.1 PK | | | 1.08 V | 177 | 104.7 | -2.6 |
| 2 | *2462.00 | 90.4 AV | | | 1.08 V | 177 | 93.0 | -2.6 |
| 3 | 2483.50 | 66.4 PK | 74.0 | -7.6 | 1.08 V | 177 | 68.8 | -2.4 |
| 4 | 2483.50 | 47.1 AV | 54.0 | -6.9 | 1.08 V | 177 | 49.5 | -2.4 |
| 5 | 4924.00 | 46.9 PK | 74.0 | -27.1 | 1.25 V | 87 | 44.9 | 2.0 |
| 6 | 4924.00 | 33.8 AV | 54.0 | -20.2 | 1.25 V | 87 | 31.8 | 2.0 |
| 7 | 7386.00 | 51.0 PK | 74.0 | -23.0 | 1.65 V | 278 | 42.4 | 8.6 |
| 8 | 7386.00 | 37.1 AV | 54.0 | -16.9 | 1.65 V | 278 | 28.5 | 8.6 |

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) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

Below 1GHz Data:

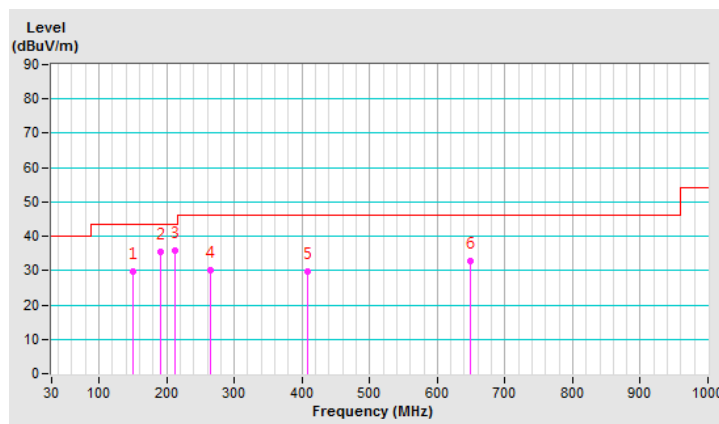
802.11g

| | | | |
|------------------------|--------------|--------------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

| 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 | 151.15 | 29.6 QP | 43.5 | -13.9 | 2.00 H | 302 | 37.2 | -7.6 |
| 2 | 191.00 | 35.4 QP | 43.5 | -8.1 | 1.50 H | 258 | 46.0 | -10.6 |
| 3 | 212.94 | 35.9 QP | 43.5 | -7.6 | 1.50 H | 258 | 47.0 | -11.1 |
| 4 | 264.01 | 30.2 QP | 46.0 | -15.8 | 1.00 H | 313 | 38.6 | -8.4 |
| 5 | 408.28 | 29.8 QP | 46.0 | -16.2 | 1.00 H | 306 | 33.8 | -4.0 |
| 6 | 647.99 | 32.9 QP | 46.0 | -13.1 | 1.50 H | 56 | 31.5 | 1.4 |

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) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



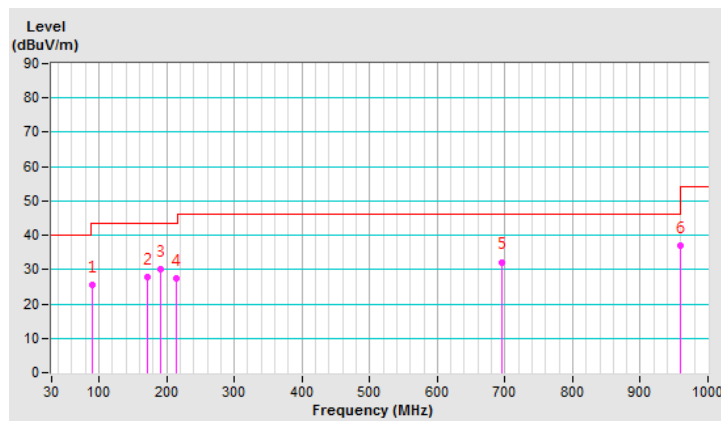
| | | | |
|------------------------|--------------|--------------------------|-----------------|
| CHANNEL | TX Channel 6 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | 9kHz ~ 1GHz | | |

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 | 90.12 | 25.5 QP | 43.5 | -18.0 | 2.00 V | 226 | 39.2 | -13.7 |
| 2 | 171.23 | 27.8 QP | 43.5 | -15.7 | 1.50 V | 360 | 36.2 | -8.4 |
| 3 | 191.04 | 30.1 QP | 43.5 | -13.4 | 1.50 V | 262 | 40.7 | -10.6 |
| 4 | 214.66 | 27.4 QP | 43.5 | -16.1 | 1.00 V | 93 | 38.6 | -11.2 |
| 5 | 695.98 | 32.2 QP | 46.0 | -13.8 | 1.00 V | 324 | 30.3 | 1.9 |
| 6 | 960.01 | 36.8 QP | 54.0 | -17.2 | 2.00 V | 0 | 30.6 | 6.2 |

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) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

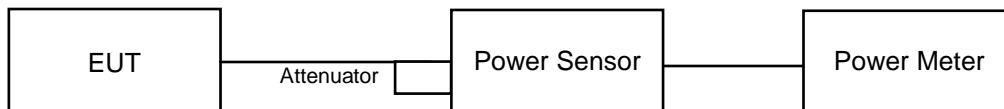


4.2 Conducted Output Power Measurement

4.2.1 Limits of Conducted Output Power Measurement

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedures

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.2.7 Test Results

FOR PEAK POWER

802.11g

| Channel | Frequency (MHz) | Peak Power (mW) | Peak Power (dBm) | Limit (dBm) | Pass/Fail |
|---------|-----------------|-----------------|------------------|-------------|-----------|
| 1 | 2412 | 148.594 | 21.72 | 30 | Pass |
| 6 | 2437 | 200.447 | 23.02 | 30 | Pass |
| 11 | 2462 | 167.494 | 22.24 | 30 | Pass |

FOR AVERAGE POWER

802.11b

| Channel | Frequency (MHz) | Average Power (mW) | Average Power (dBm) |
|---------|-----------------|--------------------|---------------------|
| 1 | 2412 | 16.032 | 12.05 |
| 6 | 2437 | 29.648 | 14.72 |
| 11 | 2462 | 19.275 | 12.85 |

5 Pictures of Test Arrangements

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

Appendix – 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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

Linkou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

--- END ---