

FCC Test Report

Report No.: RFBFBE-WTW-P21080189

FCC ID: I88C4000LZ

Test Model: C4000BZ

Series Model: C4000LZ

Received Date: 2021/8/4

Test Date: 2021/9/1 ~ 2021/9/2

Issued Date: 2021/10/7

Applicant: Zyxel Communications Corporation

Address: No.2 Industry East RD. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan

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

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Taiwan

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
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**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

| Issue No. | Description | Date Issued |
|----------------------|-------------------|-------------|
| RFBFBE-WTW-P21080189 | Original release. | 2021/10/7 |

1 Certificate of Conformity

Product: Dual-Band Wireless AX VDSL2 Gigabit Gateway,
Dual-Band Wireless AX VDSL2 Gigabit Bonding Gateway

Brand: CenturyLink, ZYXEL

Test Model: C4000BZ

Series Model: C4000LZ

Sample Status: ENGINEERING SAMPLE

Applicant: Zyxel Communications Corporation

Test Date: 2021/9/1 ~ 2021/9/2

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 :  , **Date:** 2021/10/7
Claire Kuan / Specialist

Approved by :  , **Date:** 2021/10/7
Clark Lin / Technical Manager

2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart C (Section 15.247) | | | |
|--|--|--------|--|
| FCC Clause | Test Item | Result | Remarks |
| 15.207 | AC Power Conducted Emission | PASS | Meet the requirement of limit. Minimum passing margin is -10.66dB at 0.15000MHz. |
| 15.205 / 15.209 / 15.247(d) | Radiated Emissions and Band Edge Measurement | PASS | Meet the requirement of limit. Minimum passing margin is -3.2dB at 666.66MHz. |
| 15.247(d) | Antenna Port Emission | N/A | Refer to Note 1 below |
| 15.247(a)(2) | 6dB bandwidth | N/A | Refer to Note 1 below |
| 15.247(b) | Conducted power | N/A | Refer to Note 1 below |
| 15.247(e) | Power Spectral Density | N/A | Refer to Note 1 below |
| 15.203 | Antenna Requirement | PASS | Antenna connector is i-pex (MHF) not a standard connector. |

Note:

1. AC Power Conducted Emission test and Radiated Emissions (below 1GHz) were performed for this addendum. Other test items data refer to original test report.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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) (±) |
|------------------------------------|----------------|--------------------------------|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz | 1.9 dB |
| Radiated Emissions up to 1 GHz | 9kHz ~ 30MHz | 3.1 dB |
| | 30MHz ~ 1GHz | 5.5 dB |

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

| | |
|-----------------------|--|
| Product | Dual-Band Wireless AX VDSL2 Gigabit Gateway, Dual-Band Wireless AX VDSL2 Gigabit Bonding Gateway |
| Brand | CenturyLink, ZYXEL |
| Test Model | C4000BZ |
| Series Model | C4000LZ |
| CPU Model No. | GRX350 |
| RF Chip Model No. | WAV654 |
| Status of EUT | ENGINEERING SAMPLE |
| Power Supply Rating | 12Vdc from adapter |
| Modulation Type | CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT20/40 in 2.4GHz 1024QAM for OFDMA in 11ax HE mode |
| Modulation Technology | DSSS, OFDM, OFDMA |
| Transfer Rate | 802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2401.9 Mbps |
| Operating Frequency | 2.4GHz: 2.412GHz ~ 2.462GHz 5GHz: 5.18 ~ 5.24GHz, 5.26GHz ~ 5.32GHz, 5.5 ~ 5.72GHz 5.745 ~ 5.825GHz |
| Number of Channel | 2.4GHz: 802.11b, 802.11g, 802.11n (HT20), VHT20, 80211ax (HE20): 11 802.11n (HT40), VHT40, 80211ax (HE40): 7 5GHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 80211ax (HE20): 25 802.11n (HT40), 802.11ac (VHT40), 80211ax (HE40): 12 802.11ac (VHT80), 80211ax (HE80): 6 802.11ac (VHT160), 802.11ax (HE160): 2 |
| Output Power | Non-Beamforming Mode: 2.412 ~ 2.462 GHz: 832.061 mW 5.18 ~ 5.24 GHz: 827.149 mW 5.26 ~ 5.32 GHz: 221.25 mW 5.5 ~ 5.72 GHz: 221.692 mW 5.745 ~ 5.825 GHz: 945.395 mW Beamforming Mode: 2.412 ~ 2.462 GHz: 759.637 mW 5.18 ~ 5.24 GHz: 827.149 mW 5.26 ~ 5.32 GHz: 221.25 mW 5.5 ~ 5.72 GHz: 221.692 mW 5.745 ~ 5.825 GHz: 835.929 mW |
| Antenna Type | Refer to Note |
| Antenna Connector | Refer to Note |
| Accessory Device | - AC Adaptor, Brand:UMEC, Model:UP0251M-12PA - AC Adaptor, Brand:DVE, Model:DSA-24PFS-12 FUS 120200 - AC Adaptor, Brand:MNC, Model:MAUS-120200 - Ethernet Cable , Non-shielded, 1.8m x1 - DSL cable , Non-shielded, 3.66m x1 |

Note:

1. This is a supplementary report of Report No.: RF200320E01. The differences between them are as below information:

- ◆ Add model name :C4000BZ
- ◆ HW change :
 - 1.) DSL (from single change to bonding)
 - 2.) Add heat sink at CPU
 - 3.) Add LED control IC

2. According to above condition, only AC power conducted emission test and radiated emissions (below 1GHz) test items need to be performed. And all data was verified to meet the requirements.

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

| Original | | | |
|---|-------------|---------|--|
| Brand | Model | Model | Difference |
| Dual-Band Wireless AX VDSL2 Gigabit Gateway | CenturyLink | C4000LZ | Different brand names are for marketing purpose. |
| | ZYXEL | | |
| Newly | | | |
| Brand | Model | Model | Difference |
| Dual-Band Wireless AX VDSL2 Gigabit Bonding Gateway | CenturyLink | C4000BZ | HW change : 1.) DSL (from single change to bonding) 2.) Add heat sink at CPU 3.) Add LED control IC |
| | ZYXEL | | |

From the above models, model: C4000BZ was selected as representative model for the test and its data was recorded in this report.

4. The EUT has two radios as following table:

| Radio 1 | Radio 2 |
|-------------|-----------|
| WLAN 2.4GHz | WLAN 5GHz |

5. Simultaneously transmission condition.

| Condition | Technology | |
|-----------|-------------|-----------|
| 1 | WLAN 2.4GHz | WLAN 5GHz |

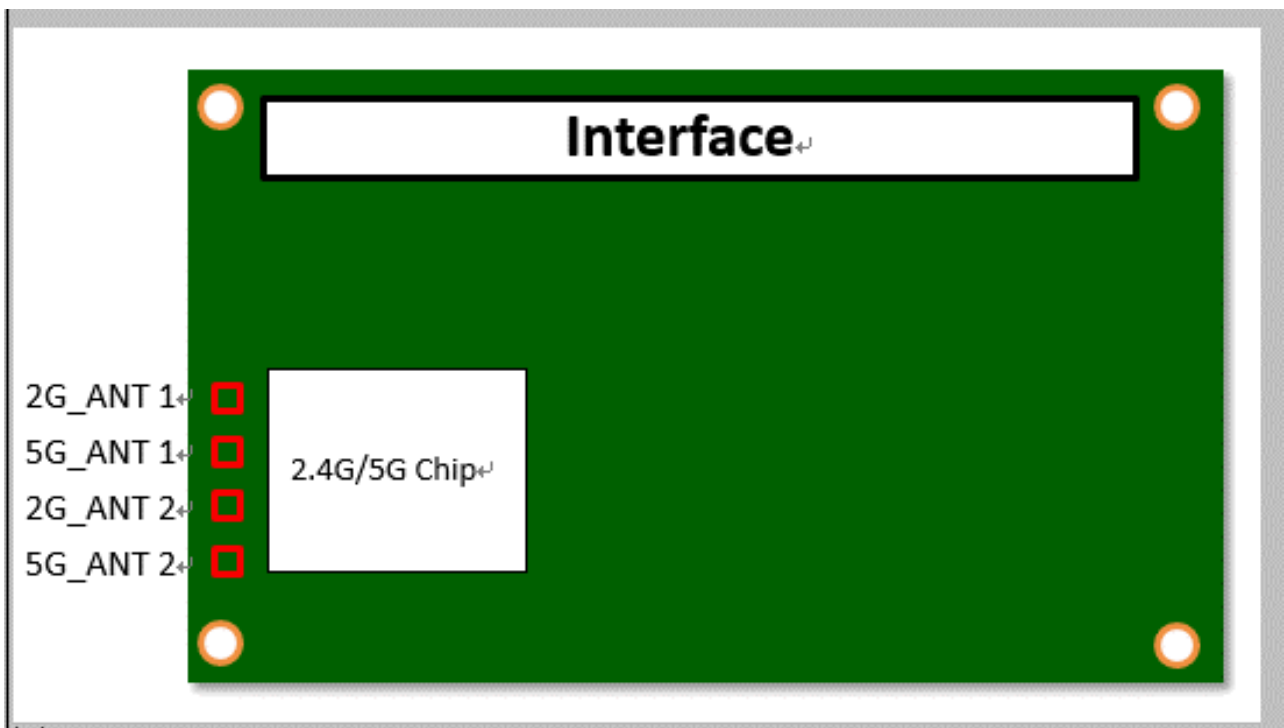
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

6. The EUT must be supplied one power adapter and following different models could be chosen as following table:

| No. | Brand | Model No. | Spec. |
|-----|-------|-------------------------|--|
| 1 | UMEC | UP0251M-12PA | Input: 100-240Vac, 0.6A, 50/60Hz Output: 12V, 2A DC Output cable: Unshielded, 1.8m |
| 2 | DVE | DSA-24PFS-12 FUS 120200 | Input: 100-240Vac, 0.8A, 50/60Hz Output: 12V, 2A DC Output cable: Unshielded, 1.8m |
| 3 | MNC | MAUS-120200 | Input: 100-240Vac, 0.7A, 50/60Hz Output: 12V, 2A DC Output cable: Unshielded, 1.8m |

7. The antennas provided to the EUT, please refer to the following table:

| Antenna NO. | Chain NO. | Brand | Antenna Net Gain(dBi) | Frequency range | Antenna Type | Connector Type | Cable Length(mm) |
|-------------|-----------|--------|-----------------------|-----------------|--------------|----------------|------------------|
| 2G_ANT1 | Chain 0 | M.gear | 2.48 | 2.4~2.4835GHz | Dipole | i-pex(MHF) | 108.8 |
| 5G_ANT1 | Chain 0 | M.gear | 3.36 | 5.15~5.25GHz | Dipole | i-pex(MHF) | 113.5 |
| | | | 3.45 | 5.25~5.35GHz | | | |
| | | | 3.44 | 5.47~5.725GHz | | | |
| | | | 3.36 | 5.725~5.85GHz | | | |
| 2G_ANT2 | Chain 1 | M.gear | 2.77 | 2.4~2.4835GHz | Dipole | i-pex(MHF) | 148.5 |
| 5G_ANT2 | Chain 1 | M.gear | 3.41 | 5.15~5.25GHz | Dipole | i-pex(MHF) | 78.5 |
| | | | 3.18 | 5.25~5.35GHz | | | |
| | | | 3.47 | 5.47~5.725GHz | | | |
| | | | 3.47 | 5.725~5.85GHz | | | |



* Antenna port location

8. The EUT incorporates a MIMO function:

| 2.4GHz Band | | |
|------------------|-----------------------|-----|
| MODULATION MODE | TX & RX CONFIGURATION | |
| 802.11b | 1Tx Fixed Chain 0 | 2RX |
| 802.11g | 2TX | 2RX |
| 802.11n (HT20) | 2TX | 2RX |
| 802.11n (HT40) | 2TX | 2RX |
| VHT20 | 2TX | 2RX |
| VHT40 | 2TX | 2RX |
| 802.11ax (HE20) | 2TX | 2RX |
| 802.11ax (HE40) | 2TX | 2RX |
| 5GHz Band | | |
| MODULATION MODE | TX & RX CONFIGURATION | |
| 802.11a | 2TX | 2TX |
| 802.11n (HT20) | 2TX | 2TX |
| 802.11n (HT40) | 2TX | 2TX |
| 802.11ac (VHT20) | 2TX | 2TX |
| 802.11ac (VHT40) | 2TX | 2TX |
| 802.11ac (VHT80) | 2TX | 2TX |
| 802.11ax (HE20) | 2TX | 2TX |
| 802.11ax (HE40) | 2TX | 2TX |
| 802.11ax (HE80) | 2TX | 2TX |

Note:

1. All of modulation mode support beamforming function except 802.11a/b/g modulation mode.
2. The EUT support Beamforming and Non-Beamforming mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz), VHT mode for 20MHz (40MHz) and 802.11ax mode for 20MHz (40MHz), therefore the manufacturer will control the power for 802.11n mode is the same as the VHT mode or more lower than it and investigated worst case to representative mode in test report. (Final test mode refer to section 3.2.1)

9. The power setting are list as below:

| Non-Beamforming Mode | | | | | | | | | | | |
|----------------------|---------------|-------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| 802.11b | | 802.11g | | VHT20 | | VHT40 | | 802.11ax (HE20) | | 802.11ax (HE40) | |
| Freq. (MHz) | Power Setting | Freq. (MHz) | Power Setting | Freq. (MHz) | Power Setting | Freq. (MHz) | Power Setting | Freq. (MHz) | Power Setting | Freq. (MHz) | Power Setting |
| 2412 | 25.5 | 2412 | 21 | 2412 | 19.5 | 2422 | 19 | 2412 | 19.5 | 2422 | 19 |
| 2437 | 25.5 | 2437 | 27 | 2437 | 25.5 | 2437 | 21.5 | 2437 | 25.5 | 2437 | 21.5 |
| 2462 | 25.5 | 2462 | 21 | 2462 | 20 | 2452 | 20 | 2462 | 20 | 2452 | 20 |
| Beamforming Mode | | | | | | | | | | | |
| VHT20 | | VHT40 | | 802.11ax (HE20) | | 802.11ax (HE40) | | | | | |
| Freq. (MHz) | Power Setting | Freq. (MHz) | Power Setting | Freq. (MHz) | Power Setting | Freq. (MHz) | Power Setting | | | | |
| 2412 | 19.5 | 2422 | 19 | 2412 | 19.5 | 2422 | 19 | | | | |
| 2437 | 25.5 | 2437 | 21.5 | 2437 | 25.5 | 2437 | 21.5 | | | | |
| 2462 | 20 | 2452 | 20 | 2462 | 20 | 2452 | 20 | | | | |

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

3.2 Description of Test Modes

11 channels are provided for 802.11b, 802.11g, 802.11n (HT20), VHT20 and 802.11ax (HE20):

| 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 | | |

7 channels are provided for 802.11n (HT40), VHT40 and 802.11ax (HE40):

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 3 | 2422MHz | 7 | 2442MHz |
| 4 | 2427MHz | 8 | 2447MHz |
| 5 | 2432MHz | 9 | 2452MHz |
| 6 | 2437MHz | | |

3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT CONFIGURE MODE | APPLICABLE TO | | DESCRIPTION |
|--------------------|---------------|-----|-------------|
| | RE<1G | PLC | |
| 1 | √ | √ | Adapter 1 |
| 2 | √ | √ | Adapter 2 |
| 3 | √ | √ | Adapter 3 |

Where **RE<1G**: Radiated Emission below 1GHz **PLC**: Power Line Conducted Emission

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.

| Non-Beamforming Mode | | | | | |
|----------------------|-------------------|----------------|-----------------------|-----------------|---------------------|
| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | Data Rate Parameter |
| 802.11g | 1 to 11 | 6 | OFDM | BPSK | 6Mb/s |

Power Line Conducted Emission Test:

- 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.

| Non-Beamforming Mode | | | | | |
|----------------------|-------------------|----------------|-----------------------|-----------------|---------------------|
| MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | Data Rate Parameter |
| 802.11g | 1 to 11 | 6 | OFDM | BPSK | 6Mb/s |

Test Condition:

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER | TESTED BY |
|---------------|--------------------------|--------------|--------------|
| RE<1G | 26deg. C, 66%RH | 120Vac, 60Hz | Sampson Chen |
| PLC | 26deg. C, 68%RH | 120Vac, 60Hz | Sampson 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.

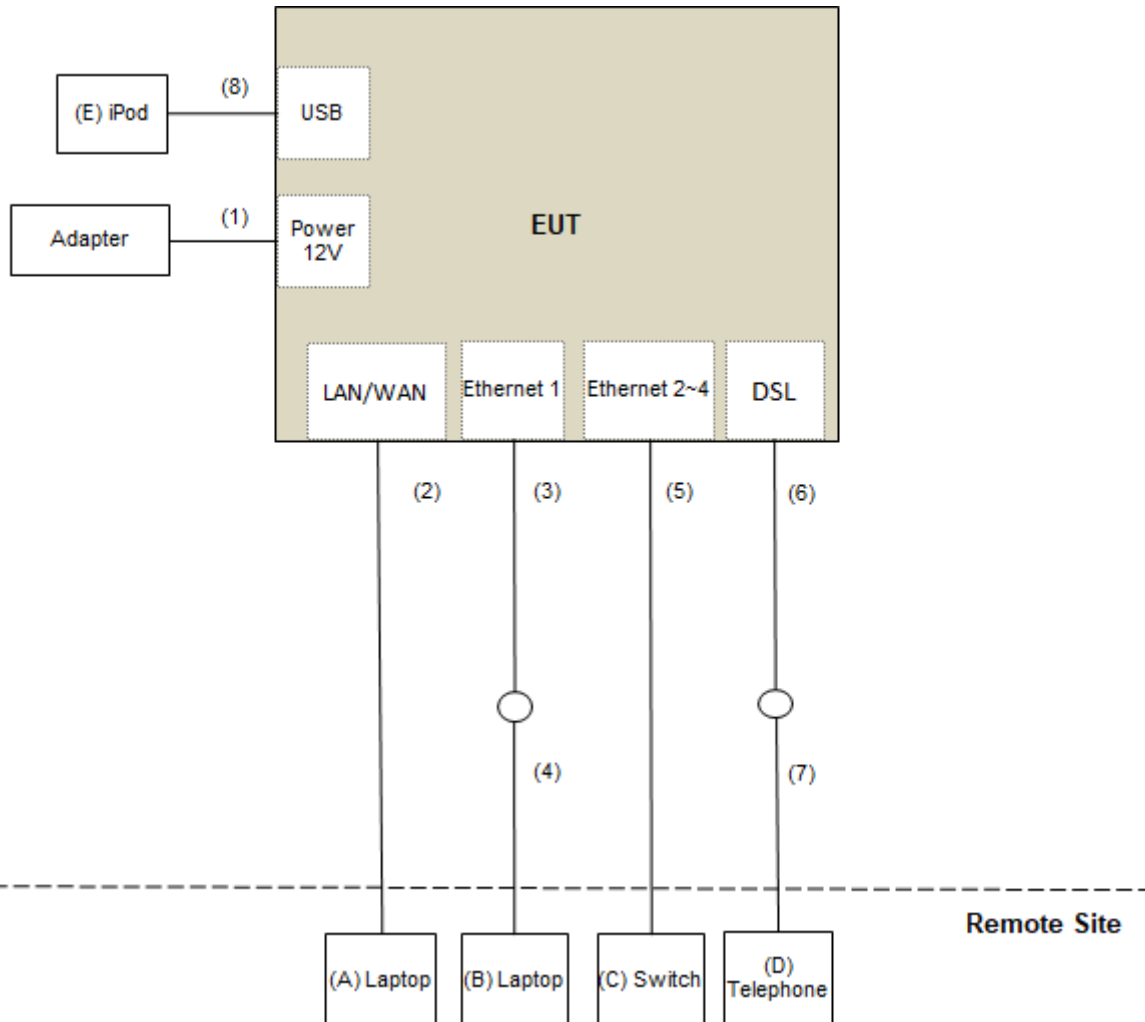
| ID | Product | Brand | Model No. | Serial No. | FCC ID | Remarks |
|----|-----------|--------|----------------|---------------|--------|-----------------|
| A. | Laptop | Lenovo | 20U5S01X00 L14 | PF-28LKK7 | NA | Provided by Lab |
| B. | Laptop | Lenovo | 20U5S01X00 L14 | PF-1ANPYA | NA | Provided by Lab |
| C. | Switch | D-Link | DGS-1005D | DR8WC92000523 | NA | Provided by Lab |
| D. | Telephone | WONDER | WD-303 | 7C17KA04011 | NA | Provided by Lab |
| E. | iPod | Apple | MC749TA/A | CC4DN25WDFDM | NA | Provided by Lab |

Note:

- 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. | DC Cable | 1 | 1.8 | No | 0 | Supplied by client |
| 2. | RJ-45 Cable | 1 | 10 | No | 0 | Provided by Lab |
| 3. | RJ-45 Cable | 1 | 1.8 | No | 0 | Supplied by client |
| 4. | RJ-45 Cable | 1 | 10 | No | 0 | Provided by Lab |
| 5. | RJ-45 Cable | 1 | 10 | No | 0 | Provided by Lab |
| 6. | RJ-11 Cable | 1 | 3.66 | No | 0 | Supplied by client |
| 7. | RJ-11 Cable | 1 | 10 | No | 0 | Provided by Lab |
| 8. | USB Cable | 1 | 0.1 | Yes | 0 | Provided by Lab |

3.3.1 Configuration of System under Test



3.4 General Description of Applied Standards and References

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

Test Standard:

FCC Part 15, Subpart C (15.247)

ANSI C63.10-2013

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

References Test Guidance:

KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

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 30dB 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 Agilent | N9038A | MY51210202 | 2020/12/1 | 2021/11/30 |
| Software | ADT_Radiated_V8.7.08 | NA | NA | NA |
| Boresight Antenna Tower & Turn Table Max-Full | MF-7802BS | MF780208530 | NA | NA |
| Pre_Amplifier EMCI | EMC001340 | 980142 | 2021/5/24 | 2022/5/23 |
| LOOP ANTENNA Electro-Metrics | EM-6879 | 264 | 2021/3/5 | 2022/3/4 |
| RF Coaxial Cable JYEBO | 5D-FB | LOOPCAB-001 | 2021/1/7 | 2022/1/6 |
| RF Coaxial Cable JYEBO | 5D-FB | LOOPCAB-002 | 2021/1/7 | 2022/1/6 |
| Pre_Amplifier EMCI | EMC330N | 980701 | 2021/3/10 | 2022/3/9 |
| Trilog Broadband Antenna Schwarzbeck | VULB 9168 | 9168-406 | 2020/11/6 | 2021/11/5 |
| RF Coaxial Cable COMMATE/PEWC | 8D | 966-4-1 | 2021/3/17 | 2022/3/16 |
| RF Coaxial Cable COMMATE/PEWC | 8D | 966-4-2 | 2021/3/17 | 2022/3/16 |
| RF Coaxial Cable COMMATE/PEWC | 8D | 966-4-3 | 2021/3/17 | 2022/3/16 |
| Fixed attenuator Mini-Circuits | UNAT-5+ | PAD-ATT5-03 | 2021/1/11 | 2022/1/10 |

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 test was performed in 966 Chamber No. 4.
3. Loop antenna was used for all emissions below 30 MHz.
4. Tested Date: 2021/9/2

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.

Note:

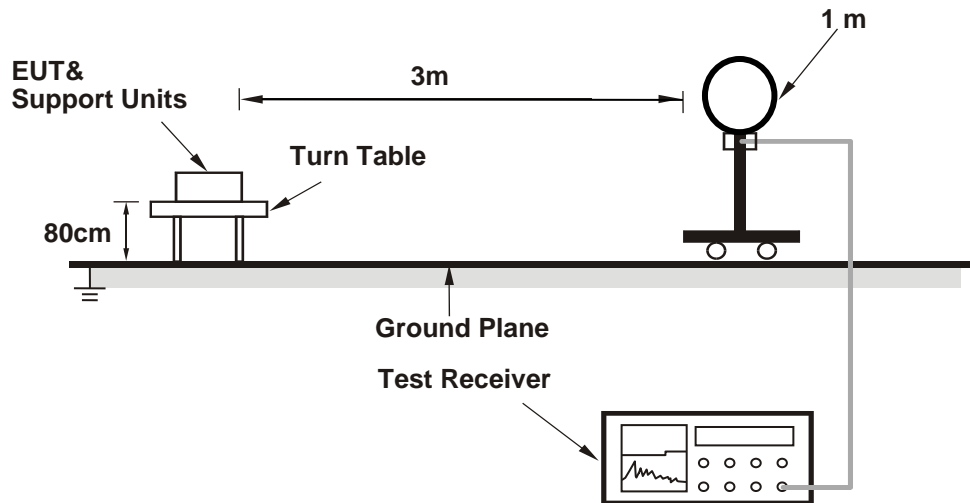
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

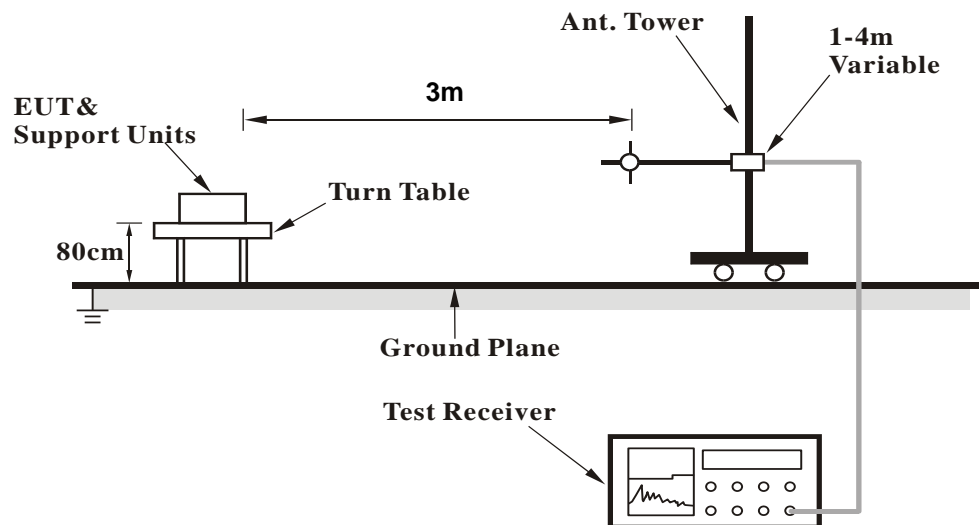
No deviation.

4.1.5 Test Setup

For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



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

4.1.6 EUT Operating Conditions

- a. Connected the EUT with the Laptop which is placed on remote site.
- b. Controlling software (DUT_setup.610.26) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results (Mode 1)

Below 1GHz Data:

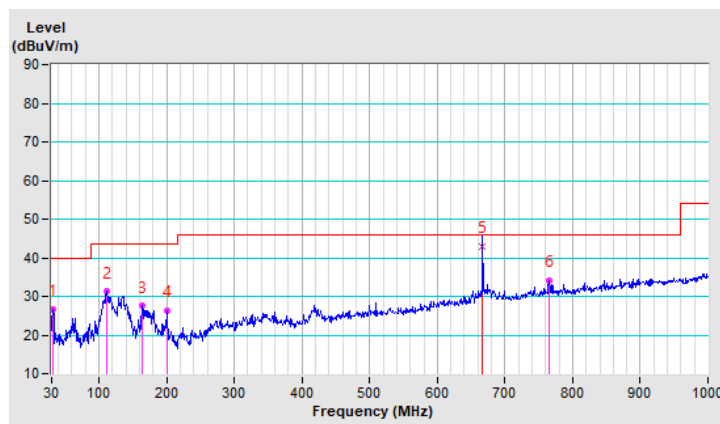
802.11g

| | | | |
|------------------------|-------------|--------------------------|-----------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 9kHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|--|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 32.59 | 26.8 QP | 40.0 | -13.2 | 1.50 H | 344 | 40.4 | -13.6 |
| 2 | 111.24 | 31.2 QP | 43.5 | -12.3 | 3.00 H | 268 | 46.2 | -15.0 |
| 3 | 164.54 | 27.5 QP | 43.5 | -16.0 | 2.00 H | 84 | 39.7 | -12.2 |
| 4 | 200.43 | 26.4 QP | 43.5 | -17.1 | 1.50 H | 263 | 41.4 | -15.0 |
| 5 | 666.66 | 42.8 QP | 46.0 | -3.2 | 1.00 H | 137 | 44.0 | -1.2 |
| 6 | 765.02 | 34.2 QP | 46.0 | -11.8 | 1.00 H | 218 | 33.0 | 1.2 |

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 other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

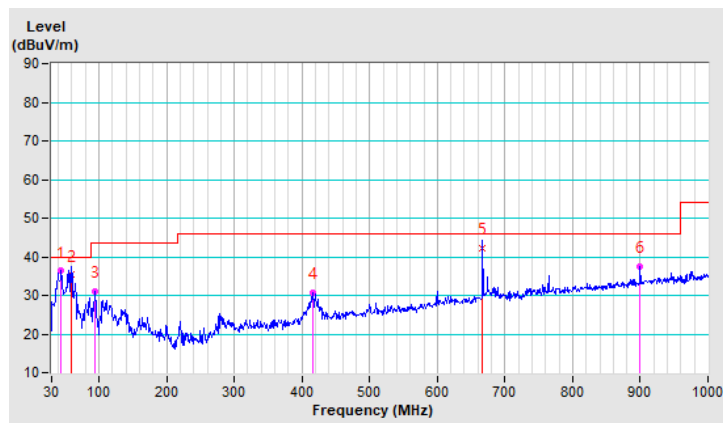


| | | | |
|------------------------|-------------|--------------------------|-----------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 9kHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |

| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
|--|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 43.80 | 36.3 QP | 40.0 | -3.7 | 1.00 V | 257 | 48.9 | -12.6 |
| 2 | 58.74 | 35.3 QP | 40.0 | -4.7 | 1.00 V | 207 | 48.4 | -13.1 |
| 3 | 94.41 | 31.0 QP | 43.5 | -12.5 | 1.00 V | 274 | 48.7 | -17.7 |
| 4 | 416.25 | 30.6 QP | 46.0 | -15.4 | 1.50 V | 2 | 37.9 | -7.3 |
| 5 | 666.66 | 42.3 QP | 46.0 | -3.7 | 1.00 V | 136 | 43.5 | -1.2 |
| 6 | 899.41 | 37.4 QP | 46.0 | -8.6 | 1.50 V | 222 | 33.9 | 3.5 |

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 other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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)

Below 1GHz Data:

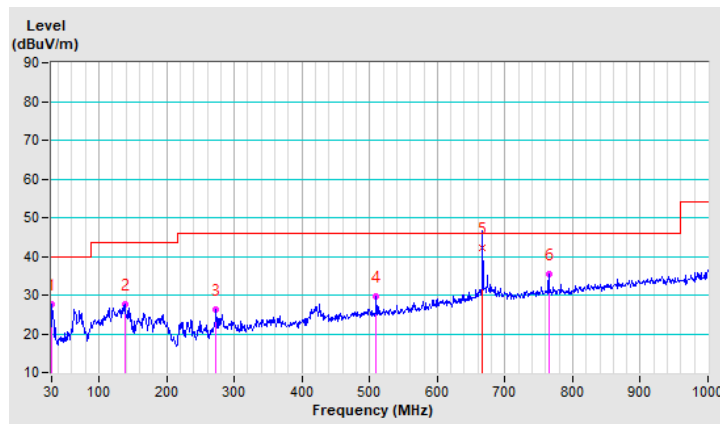
802.11g

| | | | |
|------------------------|-------------|--------------------------|-----------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 9kHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|--|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 30.63 | 27.6 QP | 40.0 | -12.4 | 1.00 H | 2 | 41.2 | -13.6 |
| 2 | 137.69 | 27.7 QP | 43.5 | -15.8 | 2.00 H | 102 | 40.2 | -12.5 |
| 3 | 273.15 | 26.2 QP | 46.0 | -19.8 | 1.50 H | 221 | 37.8 | -11.6 |
| 4 | 510.00 | 29.8 QP | 46.0 | -16.2 | 1.50 H | 74 | 34.4 | -4.6 |
| 5 | 666.66 | 42.3 QP | 46.0 | -3.7 | 1.00 H | 230 | 43.5 | -1.2 |
| 6 | 764.97 | 35.4 QP | 46.0 | -10.6 | 1.00 H | 143 | 34.2 | 1.2 |

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 other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

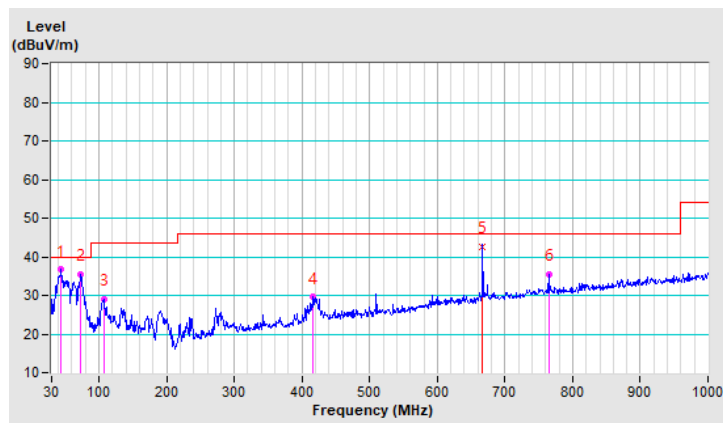


| | | | |
|------------------------|-------------|--------------------------|-----------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 9kHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |

| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
|--|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 43.77 | 36.6 QP | 40.0 | -3.4 | 1.00 V | 324 | 49.2 | -12.6 |
| 2 | 73.12 | 35.5 QP | 40.0 | -4.5 | 1.00 V | 232 | 51.2 | -15.7 |
| 3 | 106.73 | 29.1 QP | 43.5 | -14.4 | 1.00 V | 52 | 44.5 | -15.4 |
| 4 | 416.91 | 29.5 QP | 46.0 | -16.5 | 1.50 V | 284 | 36.8 | -7.3 |
| 5 | 666.65 | 42.7 QP | 46.0 | -3.3 | 1.00 V | 256 | 43.9 | -1.2 |
| 6 | 764.97 | 35.5 QP | 46.0 | -10.5 | 2.00 V | 360 | 34.3 | 1.2 |

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 other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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)

Below 1GHz Data:

802.11g

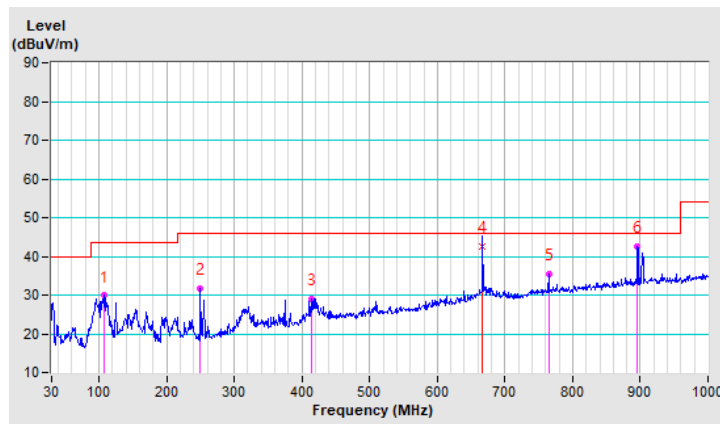
| | | | |
|------------------------|-------------|--------------------------|-----------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 9kHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |

Antenna Polarity & Test Distance : Horizontal at 3 m

| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
|----|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| 1 | 106.70 | 29.9 QP | 43.5 | -13.6 | 2.00 H | 109 | 45.3 | -15.4 |
| 2 | 250.00 | 31.8 QP | 46.0 | -14.2 | 1.00 H | 88 | 44.5 | -12.7 |
| 3 | 414.77 | 29.0 QP | 46.0 | -17.0 | 2.00 H | 130 | 36.4 | -7.4 |
| 4 | 666.66 | 42.5 QP | 46.0 | -3.5 | 1.50 H | 5 | 43.7 | -1.2 |
| 5 | 764.99 | 35.4 QP | 46.0 | -10.6 | 1.00 H | 140 | 34.2 | 1.2 |
| 6 | 895.85 | 42.6 QP | 46.0 | -3.4 | 2.00 H | 2 | 39.1 | 3.5 |

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 other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

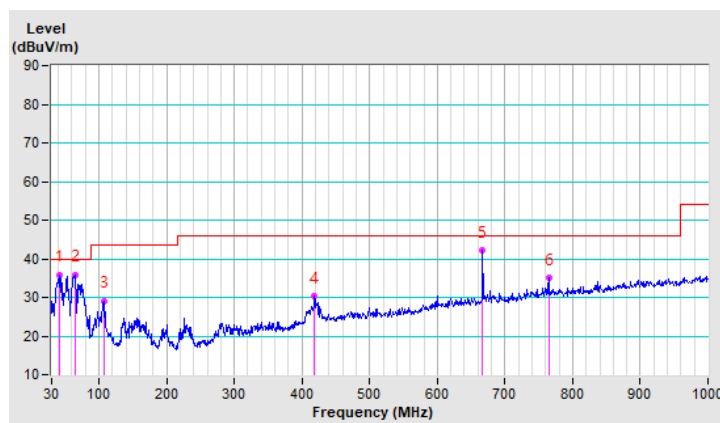


| | | | |
|------------------------|-------------|--------------------------|-----------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 9kHz ~ 1GHz | Detector Function | Quasi-Peak (QP) |

| Antenna Polarity & Test Distance : Vertical at 3 m | | | | | | | | |
|--|-----------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 41.47 | 35.7 QP | 40.0 | -4.3 | 1.50 V | 360 | 48.4 | -12.7 |
| 2 | 64.77 | 35.8 QP | 40.0 | -4.2 | 1.00 V | 150 | 49.8 | -14.0 |
| 3 | 106.73 | 29.0 QP | 43.5 | -14.5 | 1.00 V | 30 | 44.4 | -15.4 |
| 4 | 418.39 | 30.2 QP | 46.0 | -15.8 | 1.00 V | 271 | 37.4 | -7.2 |
| 5 | 666.66 | 42.1 QP | 46.0 | -3.9 | 1.00 V | 127 | 43.3 | -1.2 |
| 6 | 764.99 | 35.0 QP | 46.0 | -11.0 | 1.50 V | 113 | 33.8 | 1.2 |

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 other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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 Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

| Frequency (MHz) | Conducted Limit (dBuV) | |
|-----------------|------------------------|---------|
| | Quasi-peak | Average |
| 0.15 - 0.5 | 66 - 56 | 56 - 46 |
| 0.50 - 5.0 | 56 | 46 |
| 5.0 - 30.0 | 60 | 50 |

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Calibrated Date | Calibrated Until |
|----------------------------|-------------------------|------------|-----------------|------------------|
| Test Receiver R&S | ESCS 30 | 847124/029 | 2020/10/20 | 2021/10/19 |
| LISN R&S | ESH3-Z5 | 848773/004 | 2020/10/27 | 2021/10/26 |
| LISN R & S | ESH3-Z5 | 835239/001 | 2021/3/26 | 2022/3/25 |
| 50 ohms Terminator | 50 | 3 | 2020/10/26 | 2021/10/25 |
| RF Coaxial Cable JYEBO | 5D-FB | COCCAB-001 | 2020/9/26 | 2021/9/25 |
| Fixed attenuator STI | STI02-2200-10 | 005 | 2021/8/27 | 2022/8/26 |
| Software BVADT | BVADT_Cond_ V7.3.7.4 | NA | NA | NA |

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
3. Tested Date: 2021/9/1

4.2.3 Test Procedures

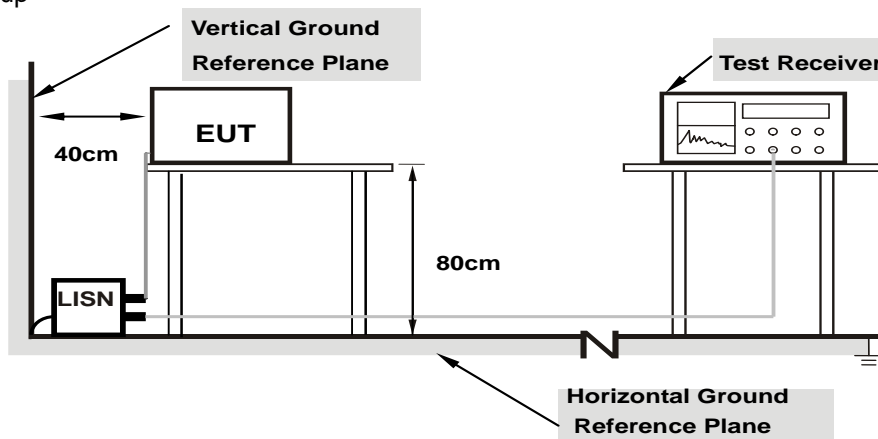
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

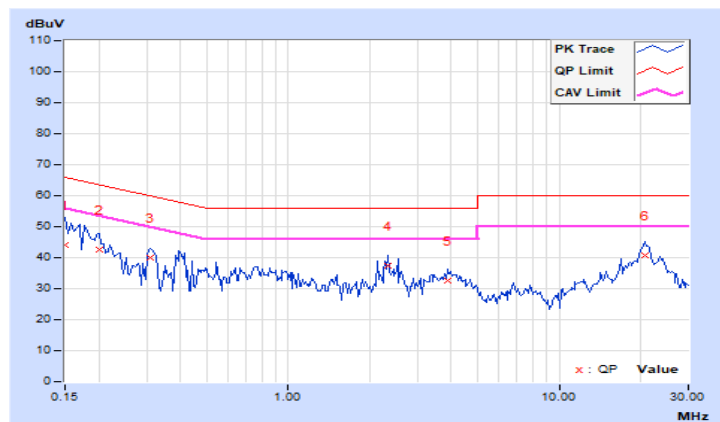
4.2.7 Test Results (Mode 1)

| | | | |
|------------------------|----------------|---|--------------------------------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 150kHz ~ 30MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9kHz |

| Phase Of Power : Line (L) | | | | | | | | | | |
|---------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) | | Emission Level (dBuV) | | Limit (dBuV) | | Margin (dB) | |
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.15000 | 9.97 | 34.18 | 20.46 | 44.15 | 30.43 | 66.00 | 56.00 | -21.85 | -25.57 |
| 2 | 0.20078 | 10.00 | 32.44 | 20.11 | 42.44 | 30.11 | 63.58 | 53.58 | -21.14 | -23.47 |
| 3 | 0.31016 | 10.02 | 30.07 | 24.25 | 40.09 | 34.27 | 59.97 | 49.97 | -19.88 | -15.70 |
| 4 | 2.32813 | 10.14 | 27.30 | 14.17 | 37.44 | 24.31 | 56.00 | 46.00 | -18.56 | -21.69 |
| 5 | 3.86719 | 10.25 | 22.46 | 15.51 | 32.71 | 25.76 | 56.00 | 46.00 | -23.29 | -20.24 |
| 6 | 20.63672 | 11.49 | 29.14 | 22.21 | 40.63 | 33.70 | 60.00 | 50.00 | -19.37 | -16.30 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

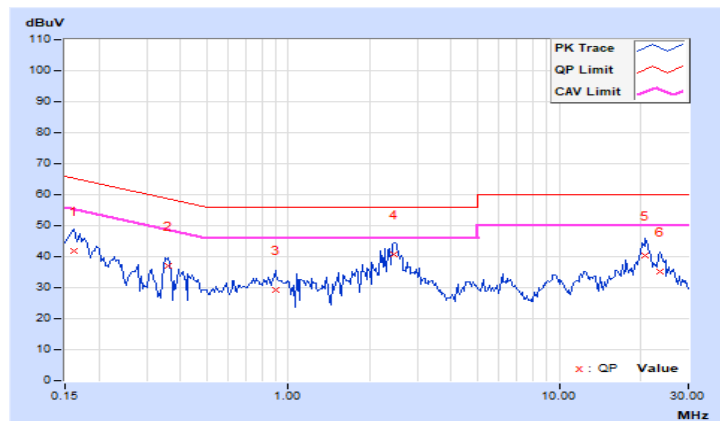


| | | | |
|------------------------|----------------|---|--------------------------------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 150kHz ~ 30MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9kHz |

| Phase Of Power : Neutral (N) | | | | | | | | | | |
|------------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) | | Emission Level (dBuV) | | Limit (dBuV) | | Margin (dB) | |
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.16172 | 9.96 | 31.73 | 18.66 | 41.69 | 28.62 | 65.38 | 55.38 | -23.69 | -26.76 |
| 2 | 0.36094 | 10.02 | 26.84 | 19.34 | 36.86 | 29.36 | 58.71 | 48.71 | -21.85 | -19.35 |
| 3 | 0.89609 | 10.05 | 19.20 | 12.09 | 29.25 | 22.14 | 56.00 | 46.00 | -26.75 | -23.86 |
| 4 | 2.46094 | 10.16 | 30.69 | 19.15 | 40.85 | 29.31 | 56.00 | 46.00 | -15.15 | -16.69 |
| 5 | 20.76172 | 11.19 | 29.01 | 22.02 | 40.20 | 33.21 | 60.00 | 50.00 | -19.80 | -16.79 |
| 6 | 23.70313 | 11.25 | 23.95 | 16.67 | 35.20 | 27.92 | 60.00 | 50.00 | -24.80 | -22.08 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



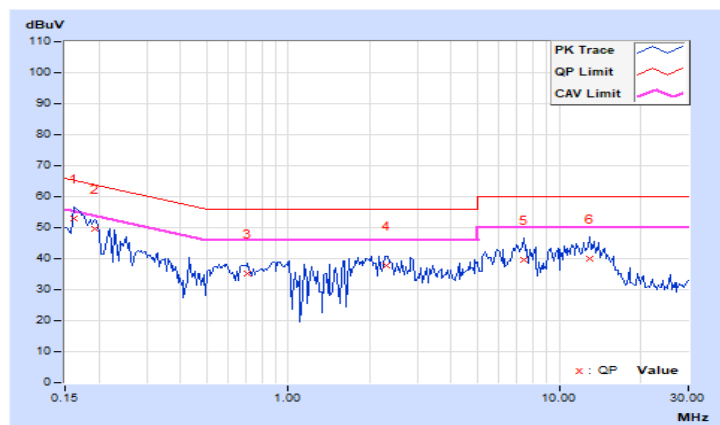
4.2.8 Test Results (Mode 2)

| | | | |
|------------------------|----------------|---|--------------------------------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 150kHz ~ 30MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9kHz |

| Phase Of Power : Line (L) | | | | | | | | | | |
|---------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) | | Emission Level (dBuV) | | Limit (dBuV) | | Margin (dB) | |
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.16172 | 9.98 | 43.14 | 20.59 | 53.12 | 30.57 | 65.38 | 55.38 | -12.26 | -24.81 |
| 2 | 0.19297 | 10.00 | 39.52 | 21.43 | 49.52 | 31.43 | 63.91 | 53.91 | -14.39 | -22.48 |
| 3 | 0.70859 | 10.05 | 25.32 | 13.05 | 35.37 | 23.10 | 56.00 | 46.00 | -20.63 | -22.90 |
| 4 | 2.29688 | 10.14 | 27.64 | 14.63 | 37.78 | 24.77 | 56.00 | 46.00 | -18.22 | -21.23 |
| 5 | 7.42578 | 10.51 | 29.24 | 18.61 | 39.75 | 29.12 | 60.00 | 50.00 | -20.25 | -20.88 |
| 6 | 12.94141 | 10.93 | 29.24 | 20.03 | 40.17 | 30.96 | 60.00 | 50.00 | -19.83 | -19.04 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

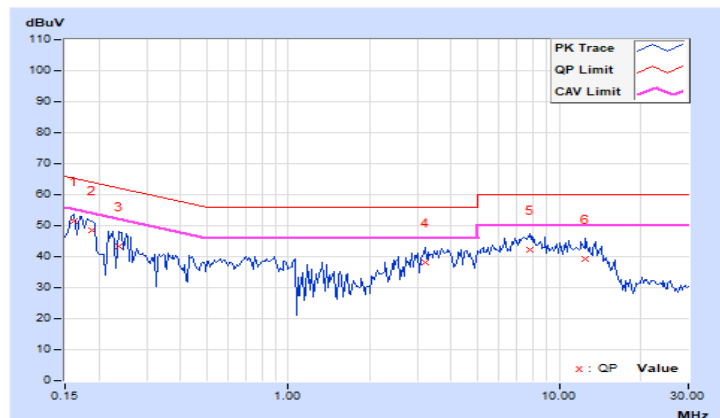


| | | | |
|------------------------|----------------|---|--------------------------------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 150kHz ~ 30MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9kHz |

| Phase Of Power : Neutral (N) | | | | | | | | | | |
|------------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) | | Emission Level (dBuV) | | Limit (dBuV) | | Margin (dB) | |
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.16172 | 9.96 | 41.61 | 19.46 | 51.57 | 29.42 | 65.38 | 55.38 | -13.81 | -25.96 |
| 2 | 0.18906 | 9.99 | 38.53 | 24.81 | 48.52 | 34.80 | 64.08 | 54.08 | -15.56 | -19.28 |
| 3 | 0.23594 | 10.00 | 33.50 | 14.61 | 43.50 | 24.61 | 62.24 | 52.24 | -18.74 | -27.63 |
| 4 | 3.19531 | 10.20 | 28.02 | 16.29 | 38.22 | 26.49 | 56.00 | 46.00 | -17.78 | -19.51 |
| 5 | 7.79688 | 10.47 | 31.66 | 21.90 | 42.13 | 32.37 | 60.00 | 50.00 | -17.87 | -17.63 |
| 6 | 12.55469 | 10.75 | 28.68 | 19.59 | 39.43 | 30.34 | 60.00 | 50.00 | -20.57 | -19.66 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



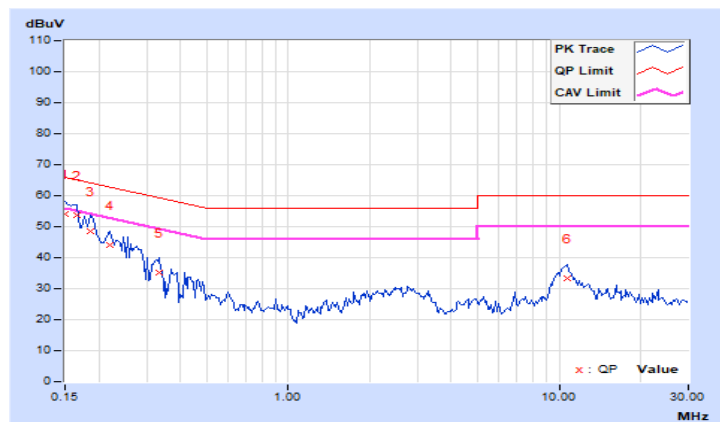
4.2.9 Test Results (Mode 3)

| | | | |
|------------------------|----------------|---|--------------------------------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 150kHz ~ 30MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9kHz |

| Phase Of Power : Line (L) | | | | | | | | | | |
|---------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) | | Emission Level (dBuV) | | Limit (dBuV) | | Margin (dB) | |
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.15000 | 9.97 | 44.19 | 28.24 | 54.16 | 38.21 | 66.00 | 56.00 | -11.84 | -17.79 |
| 2 | 0.16562 | 9.98 | 43.70 | 26.49 | 53.68 | 36.47 | 65.18 | 55.18 | -11.50 | -18.71 |
| 3 | 0.18516 | 9.99 | 38.47 | 23.51 | 48.46 | 33.50 | 64.25 | 54.25 | -15.79 | -20.75 |
| 4 | 0.22031 | 10.00 | 34.01 | 19.38 | 44.01 | 29.38 | 62.81 | 52.81 | -18.80 | -23.43 |
| 5 | 0.33359 | 10.02 | 25.14 | 14.75 | 35.16 | 24.77 | 59.36 | 49.36 | -24.20 | -24.59 |
| 6 | 10.68750 | 10.75 | 22.72 | 17.10 | 33.47 | 27.85 | 60.00 | 50.00 | -26.53 | -22.15 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

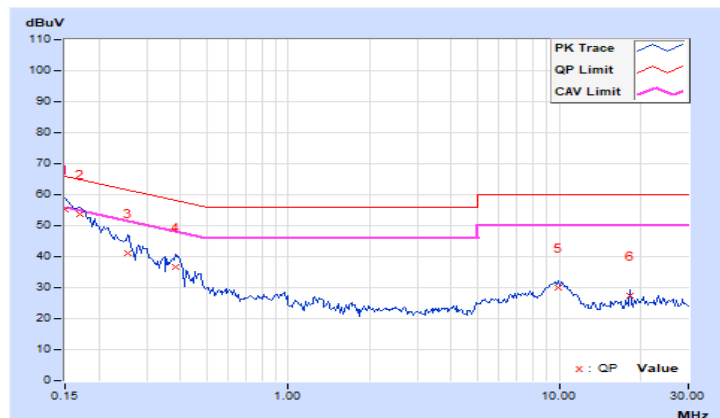


| | | | |
|------------------------|----------------|---|--------------------------------------|
| RF Mode | TX 802.11g | Channel | CH 6 : 2437 MHz |
| Frequency Range | 150kHz ~ 30MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9kHz |

| Phase Of Power : Neutral (N) | | | | | | | | | | |
|------------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) | | Emission Level (dBuV) | | Limit (dBuV) | | Margin (dB) | |
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.15000 | 9.95 | 45.39 | 31.68 | 55.34 | 41.63 | 66.00 | 56.00 | -10.66 | -14.37 |
| 2 | 0.16953 | 9.97 | 43.82 | 29.31 | 53.79 | 39.28 | 64.98 | 54.98 | -11.19 | -15.70 |
| 3 | 0.25547 | 10.01 | 31.11 | 14.38 | 41.12 | 24.39 | 61.58 | 51.58 | -20.46 | -27.19 |
| 4 | 0.38438 | 10.02 | 26.81 | 16.67 | 36.83 | 26.69 | 58.18 | 48.18 | -21.35 | -21.49 |
| 5 | 9.87500 | 10.59 | 19.42 | 13.91 | 30.01 | 24.50 | 60.00 | 50.00 | -29.99 | -25.50 |
| 6 | 18.24219 | 11.08 | 16.45 | 13.01 | 27.53 | 24.09 | 60.00 | 50.00 | -32.47 | -25.91 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



5 Pictures of Test Arrangements

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

Appendix – Information of 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:

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

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