



RADIO TEST REPORT

FCC ID : MSQ-AXHZ00
Equipment : AX6600 Tri Band WiFi Router
Brand Name : ASUS
Model Name : RT-AX95Q, ZenWiFi XT8, ASUS ZenWiFi XT8, XT8, ASUS ZenWiFi
Applicant : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou, Taipei 112, Taiwan
Manufacturer (1) : Compal Networking (KunShan) Co., LTD.
No. 520, Nanbang Rd., Economic & Technical
Development Zone Kunshan, Jiangsu
Province China
Manufacturer (2) : ARCADYAN TECHNOLOGY (VIETNAM) CO., LTD.
Ba Thien Industrial Park, Ba Hien commune, Binh
Xuyen district, Vinh Phuc Province
Standard : 47 CFR FCC Part 15.247

The product was received on Sep. 19, 2019, and testing was started from Sep. 19, 2019 and completed on Nov. 10, 2021. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



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Photographs of EUT v01



Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---------------|-----------------|---|--------------------|--------|
| 1.1.2 | 15.203 | Antenna Requirement | PASS | - |
| 3.1 | 15.207 | AC Power-line Conducted Emissions | PASS | - |
| 3.2 | 15.247(d) | Emissions in Restricted Frequency Bands | PASS | - |

Note: Reference to Sporton Project No.: 951008-01, 951008-02, 951008-03.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Wendy Pan



1 General Description

1.1 Information

1.1.1 RF General Information

| Frequency Range (MHz) | Bluetooth Mode | Ch. Frequency (MHz) | Channel Number |
|-----------------------|----------------|---------------------|----------------|
| 2400-2483.5 | LE | 2402-2480 | 0-39 [40] |

| Band | Mode | BWch (MHz) | Nant |
|---------------|--------------|------------|------|
| 2.4-2.4835GHz | BT-LE(1Mbps) | 1.0 | 1TX |

Note:

- ♦ Bluetooth LE uses a GFSK modulation.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

| Set | Ant. | Port | Brand | P/N | Antenna Type | Connector | Bluetooth Antenna Gain (dBi) |
|-----|------|------|-------|-------------------|--------------|-----------|------------------------------|
| 3 | 7 | 1 | YAGEO | ANT3216A063R2400A | Chip Antenna | N/A | 2.02 |

Note 1: The above information was declared by manufacturer.

Note 2: **For Bluetooth function (Radio 3)**

Only Port 1 can be used as transmitting/receiving antenna.

1.1.3 EUT Operational Condition

| | | | |
|------------------------------|---|---|--|
| EUT Power Type | From Power Adapter | | |
| Function | <input checked="" type="checkbox"/> Point-to-multipoint | <input type="checkbox"/> Point-to-point | |
| Test Software Version | | | |
| Support Mode | <input checked="" type="checkbox"/> LE 1M PHY: 1 Mb/s | | |
| | <input type="checkbox"/> LE Coded PHY (S=2): 500 Kb/s | | |
| | <input type="checkbox"/> LE Coded PHY (S=8): 125 Kb/s | | |
| | <input type="checkbox"/> LE 2M PHY: 2 Mb/s | | |

Note: The above information was declared by manufacturer.

**1.1.4 Table for Multiple Listing**

The five model names in the following table are all refer to the identical product.

| Brand Name | Model Name | Description |
|------------|------------------|---|
| ASUS | RT-AX95Q | All the models are identical, the different model names served as marketing strategy. |
| | ZenWiFi XT8 | |
| | ASUS ZenWiFi XT8 | |
| | XT8 | |
| | ASUS ZenWiFi | |

Note 1: From the above models, model: RT-AX95Q was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.1.5 Table for SKU information

| EUT | SKU | LAN Transformer | | 2.5G PHY | | Front PCB Board | Back PCB Board |
|-----|-------|-----------------|-----------------------|------------|--------------------|-----------------|-------------------|
| | | Brand Name | P/N | Brand Name | P/N | | |
| 1 | SKU 1 | NETSWAP | NS773602 / NS771802 | BROADCOM | BCM54991ELB0K FEBG | 1 LED | Without Debug LED |
| 2 | SKU 2 | Mingtek | HN36201CG / HN18101CG | BROADCOM | BCM54991ELB0K FEBG | | |
| 3 | SKU 3 | NETSWAP | NS773602 / NS771802 | Realtek | RTL8221B-VB-CG | | |
| 4 | SKU 4 | Mingtek | HN36201CG / HN18101CG | Realtek | RTL8221B-VB-CG | | |

Note: The above information was declared by manufacturer.

1.1.6 Table for EUT supports functions

| Function | Support Type |
|-----------|-------------------------------|
| AP Router | Master |
| Bridge | Slave without radar detection |
| Repeater | Master |
| Mesh | Master |

Note: The above information was declared by manufacturer.



1.1.7 Table for radio information

| Radio | 2.4GHz | 5GHz | Bluetooth |
|-------|--------|-------------------------|-----------|
| 1 | V | V (UNII 1) | X |
| 2 | X | V (Band UNII 2C~UNII 4) | X |
| 3 | X | X | V |

Note: The above information was declared by manufacturer.

1.1.8 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR951008AC

Below is the table for the change of the product with respect to the original one.

| Modifications | Performance Checking |
|---|--|
| <ol style="list-style-type: none"> Adding four adapters.(Please refer to section 2.4 for detailed information). Adding the second source for 2.5G PHY (Brand: Realtek, Model: RTL8221B-VB-CG) | <ol style="list-style-type: none"> AC Conducted Emissions Emissions in Restricted Frequency Bands below 1GHz |
| <ol style="list-style-type: none"> Changing the quantity of front PCB board LED to 1 LED from 3 LED. Removing the debug LED of the back PCB board. Changing Applicant address to "1F., No. 15, Lide Rd., Beitou, Taipei 112, Taiwan" from "4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan". Add UNII 4 for this device. | <ol style="list-style-type: none"> After evaluating, it doesn't affect the test results of this test report. |



1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15.247
- ♦ ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ FCC KDB 558074 D01 v05r02
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

| Testing Location Information | |
|---|--|
| Test Lab. : Sporton International Inc. Hsinchu Laboratory | |
| Hsinchu (TAF: 3787) | ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) TEL: 886-3-656-9065 FAX: 886-3-656-9085 Test site Designation No. TW3787 with FCC. Conformity Assessment Body Identifier (CABID) TW3787 with ISED. |

| Test Condition | Test Site No. | Test Engineer | Test Environment (°C / %) | Test Date |
|--|---------------|---------------|---------------------------|---------------|
| Radiated | 03CH05-CB | Ken Yeh | 24.2-26.1 / 55-58 | Nov. 10, 2021 |
| AC Conduction (Test Mode: Mode 1~2) | CO01-CB | Max Lin | 23~24 / 58~59 | Sep. 19, 2019 |
| AC Conduction (Test Mode: Mode 3~5) | CO01-CB | Wei Li | 24~25 / 51~56 | Apr. 30, 2020 |

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

| Test Items | Uncertainty | Remark |
|--------------------------------------|-------------|--------------------------|
| Conducted Emission (150kHz ~ 30MHz) | 2.0 dB | Confidence levels of 95% |
| Radiated Emission (9kHz ~ 30MHz) | 4.2 dB | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 5.5 dB | Confidence levels of 95% |



2 Test Configuration of EUT

2.1 The Worst Case Measurement Configuration

| The Worst Case Mode for Following Conformance Tests | |
|---|--|
| Tests Item | AC power-line conducted emissions |
| Condition | AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz |
| Operating Mode | Normal Link |
| | <ol style="list-style-type: none"> The device supports AP Router mode, Mesh mode - Radio 2_5GHz, Mesh mode - Radio 1_5GHz, Mesh mode - Radio 1_2.4GHz. After evaluating, AP Router mode is the worst case, thus measurement will follow this same test mode. The EUT has four SKU: SKU 1 ~ SKU 4. After evaluating, SKU 1 is the worst case, thus measurement will follow this same test mode. |
| 1 | AP Router mode - EUT 1 + Adapter 1 |
| 2 | AP Router mode - EUT 1 + Adapter 2 |
| 3 | AP Router mode - EUT 1 + Adapter 3 |
| 4 | AP Router mode - EUT 1 + Adapter 4 |
| 5 | AP Router mode - EUT 1 + Adapter 5 |
| For operating mode 1 is the worst case and it was record in this test report. | |

| The Worst Case Mode for Following Conformance Tests | |
|---|--|
| Tests Item | Emissions in Restricted Frequency Bands |
| Test Condition | Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type. |
| Operating Mode < 1GHz | CTX |
| | <ol style="list-style-type: none"> The EUT was performed at X axis, Y axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration. The EUT has four wireless functions are: Radio 1 + WLAN 2.4GHz, Radio 1 + WLAN 5GHz Low Band (UNII 1), Radio 2 + WLAN 5GHz High Band (UNII 2C~UNII 4) and Radio 3 + Bluetooth, After evaluating, Radio 1 + WLAN 5GHz UNII 1 mode is the worst case, thus measurement will follow this same test mode. “adapter 4” has been evaluated to be the worst case for adapter 1 ~ 5, thus measurement for this item will follow this same test mode. The EUT has four SKU: SKU 1 ~ SKU 4. After evaluating, SKU 2 is the worst case, thus measurement will follow this same test mode. |
| 1 | EUT 2 in Y axis + Radio 1 + WLAN 5GHz UNII 1 + adapter 4 |



2.2 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.3 Accessories

| Accessories | | | | | |
|-----------------------------------|------------|------------|-------|--------------|--|
| Equipment Name | Brand Name | Model Name | Type | Country Code | Rating |
| Adapter 1 | PI | AD2088320 | 010LF | - | Input: 100-240V~50/60Hz, 0.8A Output: 19V, 1.75A |
| Adapter 2 | Delta | ADP-33AW B | - | G | Input: 100-240V~1A, 50-60Hz Output: 19V, 1.75A |
| Adapter 3 | Delta | ADP-33AW Y | - | 2G | Input: 100-240V~1A, 50-60Hz Output: 19V, 1.75A, 33.0W |
| Adapter 4 | PI | AD2131M20 | - | 00 | Input: 100-240V~50/60Hz, 0.8A Output: 19V, 1.75A, 33.0W |
| Adapter 5 | PI | AD2131320 | - | 00 | Input: 100-240V~50/60Hz, 0.8A Output: 19V, 1.75A, 33.0W |
| Other | | | | | |
| RJ-45 cable*1: Non-shielded, 1.5m | | | | | |

Note: Adapter 4 with EU plug performed the testing by manufacturer request.



2.4 Support Equipment

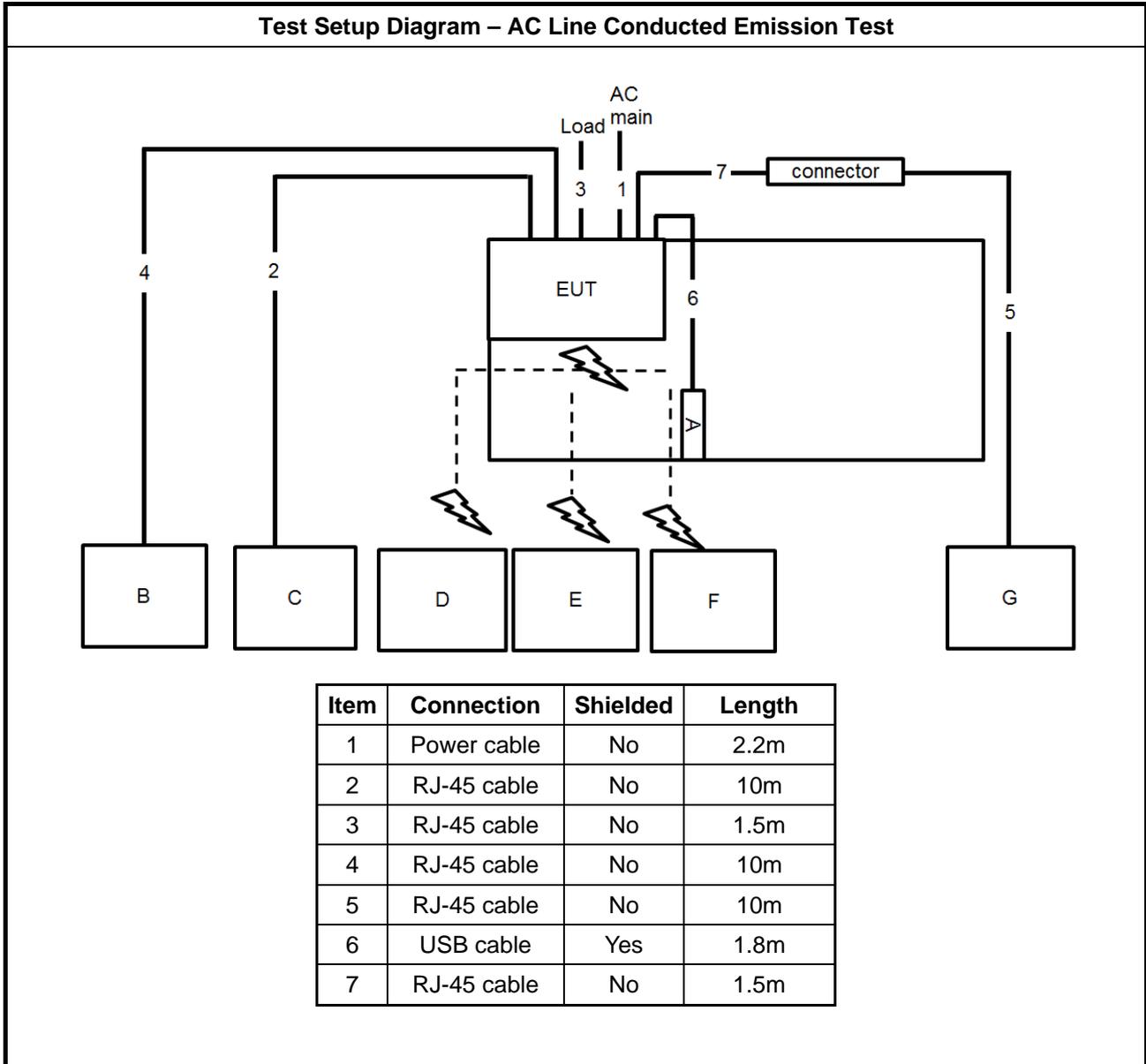
For AC Conduction:

| Support Equipment | | | | |
|-------------------|-------------|------------|---------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| A | HDD3.0 | WD | WDBACY5000AWT | N/A |
| B | LAN1 NB | DELL | E6430 | N/A |
| C | LAN3 NB | DELL | E6430 | N/A |
| D | 2.4G NB | DELL | E6430 | N/A |
| E | 5G-H NB | DELL | E6430 | N/A |
| F | 5G-L NB | DELL | E6430 | N/A |
| G | 2.5G WAN PC | DELL | T3400 | N/A |

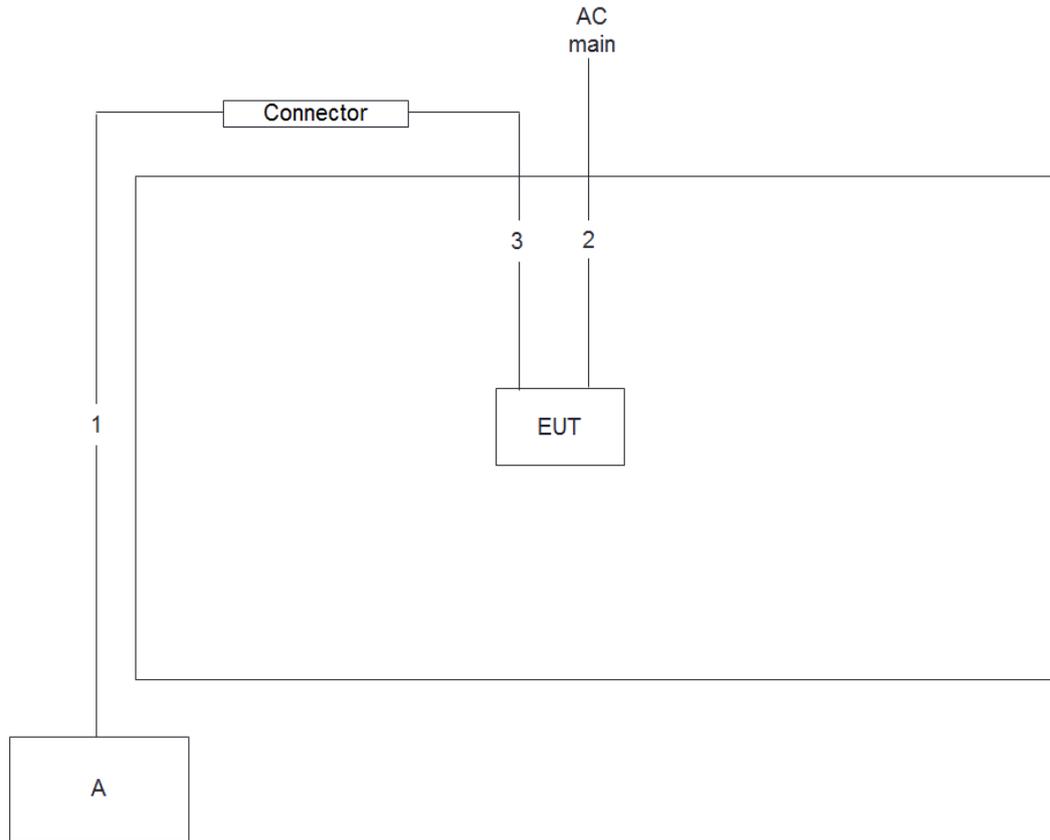
For Radiated (below 1GHz):

| Support Equipment | | | | |
|-------------------|-----------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| A | LAN NB | DELL | E4300 | N/A |

2.5 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz



| Item | Connection | Shielded | Length |
|------|-------------|----------|--------|
| 1 | RJ-45 cable | No | 10m |
| 2 | Power cable | No | 1.9m |
| 3 | RJ-45 cable | No | 1.5m |



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

| AC Power-line Conducted Emissions Limit | | |
|---|------------|-----------|
| Frequency Emission (MHz) | Quasi-Peak | Average |
| 0.15-0.5 | 66 - 56 * | 56 - 46 * |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

Note 1: * Decreases with the logarithm of the frequency.

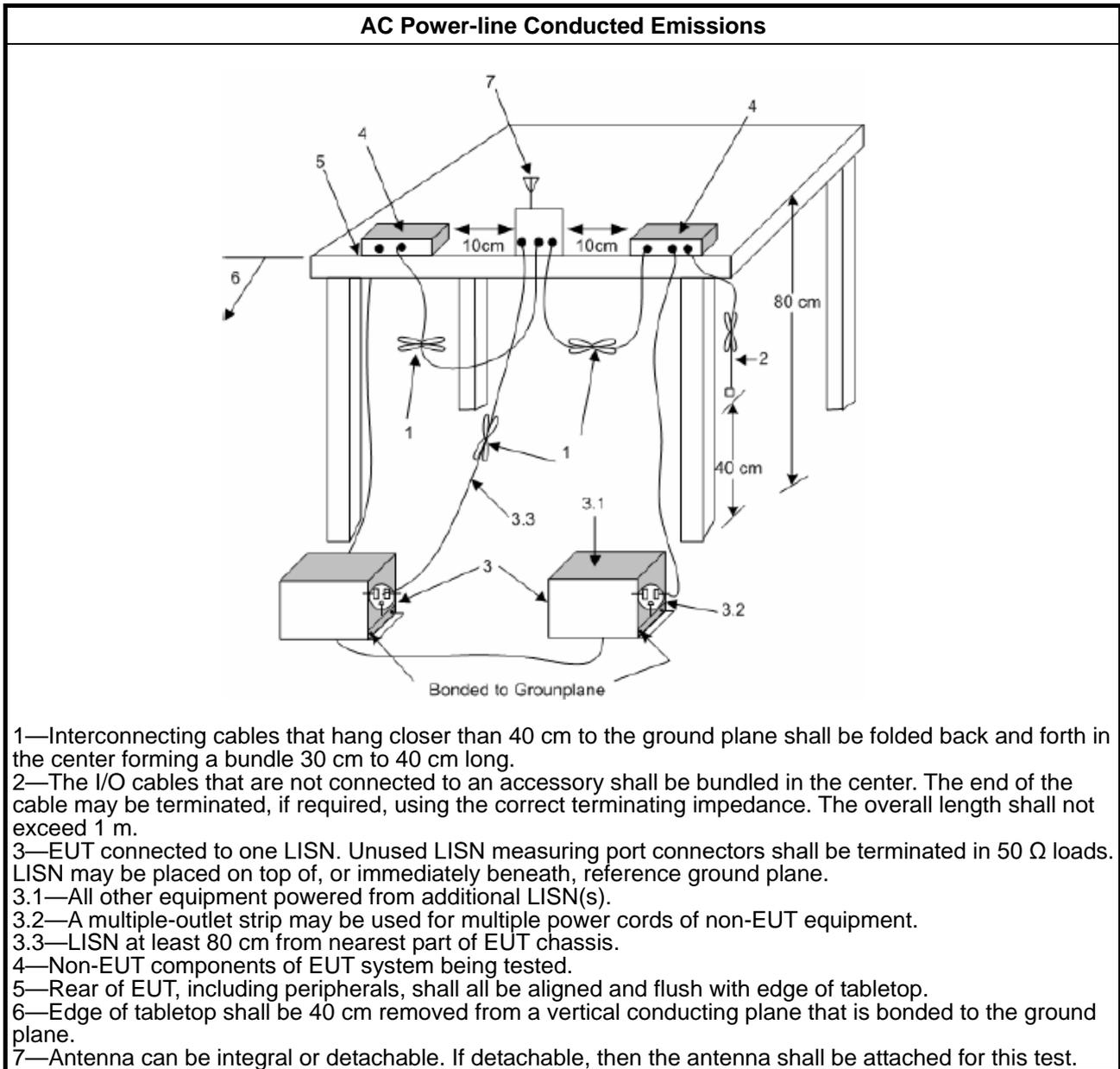
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

| Test Method |
|--|
| ▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions. |

3.1.4 Test Setup



1.1.1. Measurement Results Calculation

The measured Level is calculated using:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A



3.2 Emissions in Restricted Frequency Bands

3.2.1 Emissions in Restricted Frequency Bands Limit

| Restricted Band Emissions Limit | | | |
|---------------------------------|-----------------------|-------------------------|----------------------|
| Frequency Range (MHz) | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) |
| 0.009~0.490 | 2400/F(kHz) | 48.5 - 13.8 | 300 |
| 0.490~1.705 | 24000/F(kHz) | 33.8 - 23 | 30 |
| 1.705~30.0 | 30 | 29 | 30 |
| 30~88 | 100 | 40 | 3 |
| 88~216 | 150 | 43.5 | 3 |
| 216~960 | 200 | 46 | 3 |
| Above 960 | 500 | 54 | 3 |

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.2.2 Measuring Instruments

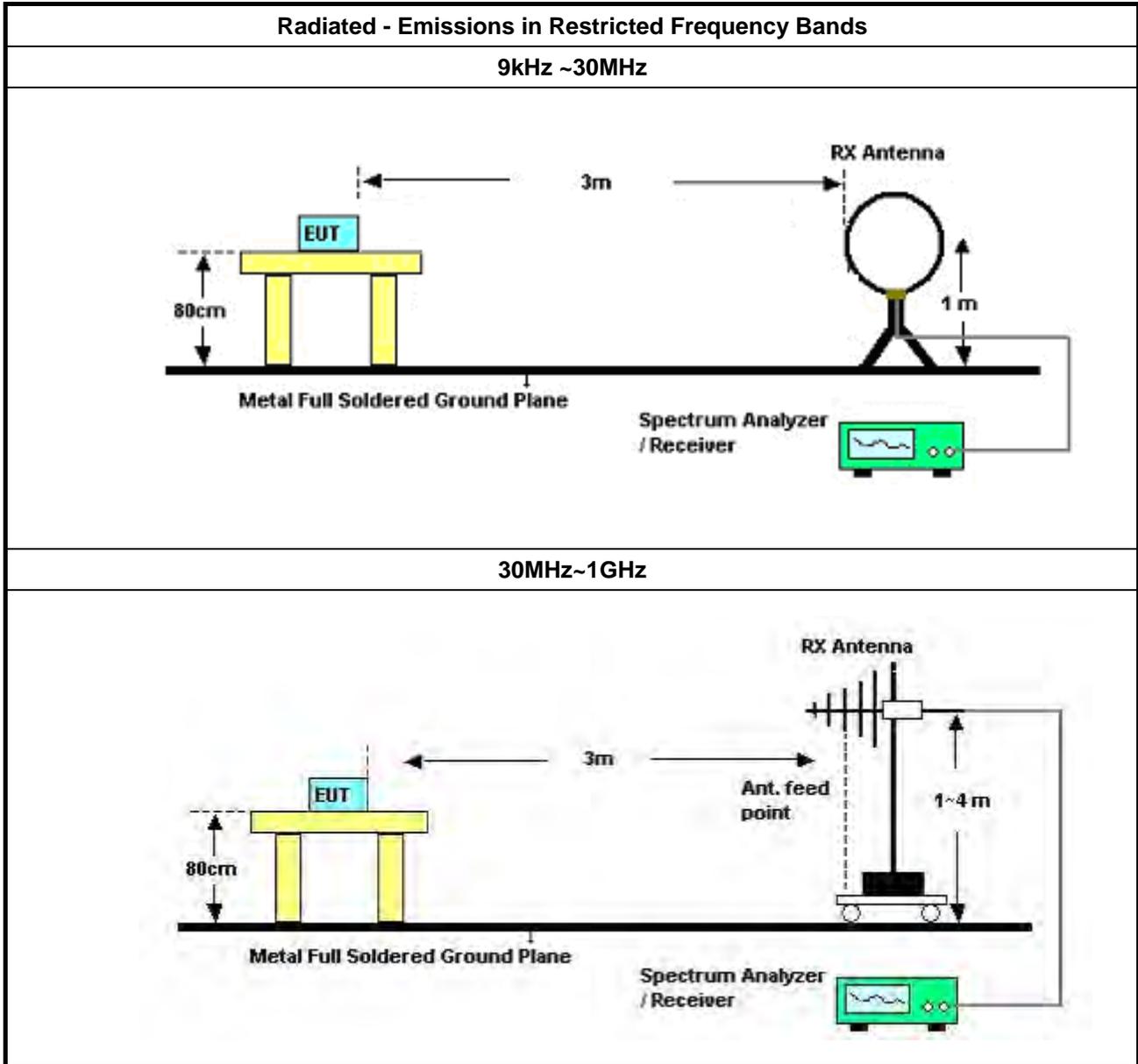
Refer a test equipment and calibration data table in this test report.



3.2.3 Test Procedures

| Test Method | |
|---|--|
| <ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor]. | |
| <ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band. | |
| <ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: | |
| | <ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands. |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle \geq 98%). |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor). |
| | <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW \geq 1/T). |
| | <input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW \geq 1/T, where T is pulse time. |
| | <input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions. |
| | <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit. |
| <ul style="list-style-type: none"> ▪ For the transmitter band-edge emissions shall be measured using following options below: | |
| | <ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074 clause 8.7 & c63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below. |
| | <ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements. |
| | <ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz). |
| | <ul style="list-style-type: none"> ▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB |
| | <ul style="list-style-type: none"> ▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred. |

3.2.4 Test Setup





3.2.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

3.2.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

3.2.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix B



4 Test Equipment and Calibration Data

| Instrument | Brand | Model No. | Serial No. | Characteristics | Calibration Date | Calibration Due Date | Remark |
|-----------------------------------|---------------|--------------------|------------------|-----------------|------------------|----------------------|-----------------------|
| EMI Receiver | Agilent | N9038A | My52260123 | 9kHz ~ 8.45GHz | Jan. 28, 2019 | Jan. 27, 2020 | Conduction (CO01-CB) |
| EMI Receiver | Agilent | N9038A | My52260123 | 9kHz ~ 8.45GHz | Feb. 26, 2020 | Feb. 25, 2021 | Conduction (CO01-CB) |
| LISN | F.C.C. | FCC-LISN-50-16-2 | 04083 | 150kHz ~ 100MHz | Dec. 24, 2018 | Dec. 23, 2019 | Conduction (CO01-CB) |
| LISN | F.C.C. | FCC-LISN-50-16-2 | 04083 | 150kHz ~ 100MHz | Dec. 25, 2019 | Dec. 24, 2020 | Conduction (CO01-CB) |
| LISN | Schwarzbeck | NSLK 8127 | 8127647 | 9kHz ~ 30MHz | Jan. 11, 2019 | Jan. 10, 2020 | Conduction (CO01-CB) |
| LISN | Schwarzbeck | NSLK 8127 | 8127647 | 9kHz ~ 30MHz | Feb. 25, 2020 | Feb. 24, 2021 | Conduction (CO01-CB) |
| Pulse Limiter | Rohde&Schwarz | ESH3-Z2 | 100430 | 9kHz ~ 30MHz | Feb. 01, 2019 | Jan. 31, 2020 | Conduction (CO01-CB) |
| Pulse Limiter | Rohde&Schwarz | ESH3-Z2 | 100430 | 9kHz ~ 30MHz | Jan. 31, 2020 | Jan. 30, 2021 | Conduction (CO01-CB) |
| COND Cable | Woken | Cable | Low cable-CO01 | 9kHz ~ 30MHz | May 21, 2019 | May 20, 2020 | Conduction (CO01-CB) |
| Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Conduction (CO01-CB) |
| Loop Antenna | Teseq | HLA 6120 | 24155 | 9kHz - 30 MHz | Apr. 14, 2021 | Apr. 13, 2022 | Radiation (03CH05-CB) |
| 3m Semi Anechoic Chamber NSA | TDK | SAC-3M | 03CH05-CB | 30 MHz ~ 1 GHz | Aug. 09, 2021 | Aug. 08, 2022 | Radiation (03CH05-CB) |
| Bilog Antenna with 6dB Attenuator | TESEQ & EMCI | CBL 6112D & N-6-06 | 35236 & AT-N0610 | 30MHz ~ 2GHz | Mar. 26, 2021 | Mar. 25, 2022 | Radiation (03CH05-CB) |
| Pre-Amplifier | EMCI | EMC330N | 980331 | 20MHz ~ 3GHz | Apr. 27, 2021 | Apr. 26, 2022 | Radiation (03CH05-CB) |
| Spectrum Analyzer | R&S | FSP40 | 100304 | 9kHz ~ 40GHz | Nov. 10, 2020 | Nov. 09, 2021 | Radiation (03CH05-CB) |
| EMI Test Receiver | R&S | ESCS | 826547/017 | 9kHz ~ 2.75GHz | Jun. 21, 2021 | Jun. 20, 2022 | Radiation (03CH05-CB) |
| RF Cable-low | Woken | RG402 | Low Cable-04+23 | 30MHz~1GHz | Oct. 04, 2021 | Oct. 03, 2022 | Radiation (03CH05-CB) |
| Test Software | SPORTON | SENSE | V5.10 | - | N.C.R. | N.C.R. | Radiation (03CH05-CB) |

Note: Calibration Interval of instruments listed above is one year.

N.C.R. means Non-Calibration required.

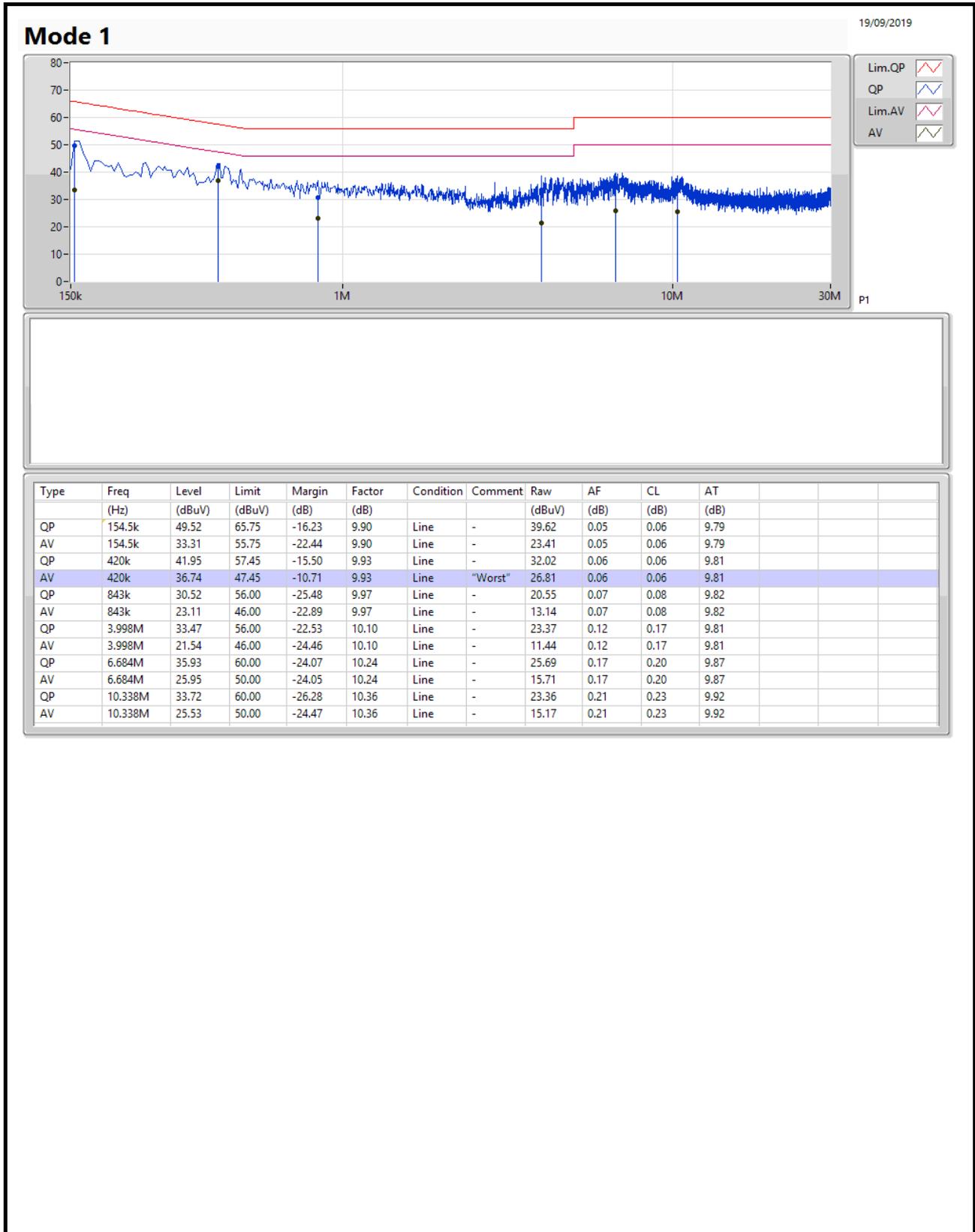


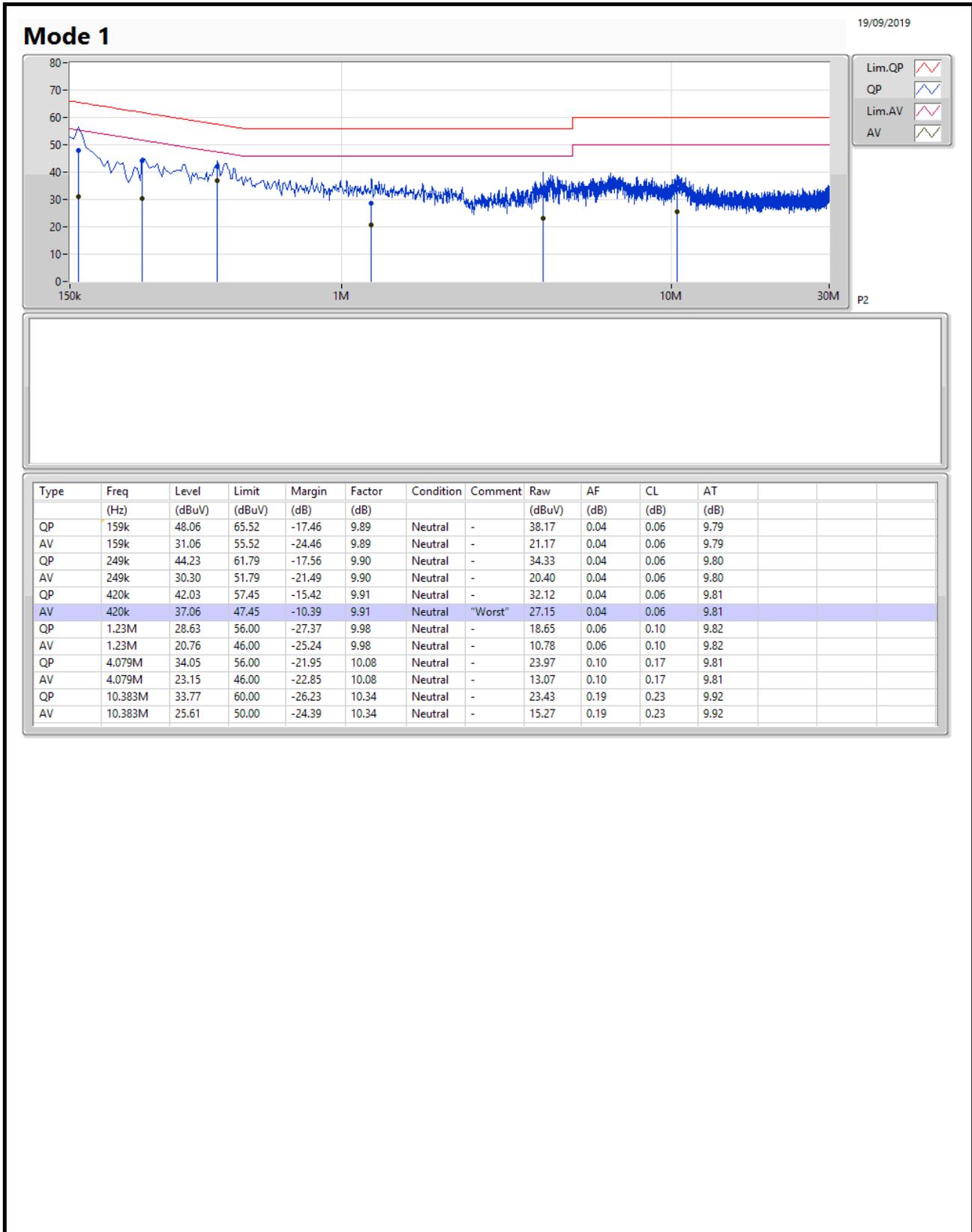
AC Power Port Conducted Emission Result

Appendix A

Summary

| Mode | Result | Type | Freq (Hz) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Factor (dB) | Condition |
|--------|--------|------|--------------|-----------------|-----------------|----------------|----------------|-----------|
| Mode 1 | Pass | AV | 420k | 37.06 | 47.45 | -10.39 | 9.91 | Neutral |



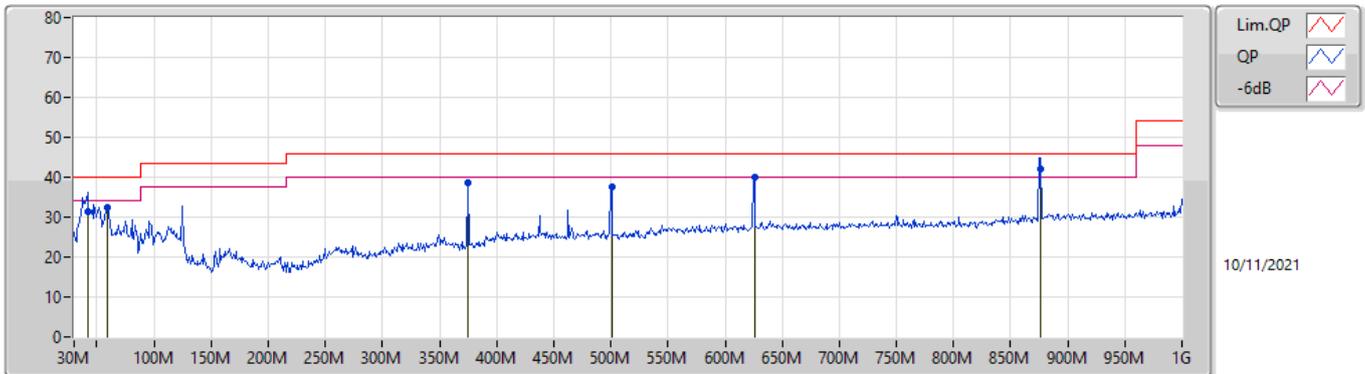




Summary

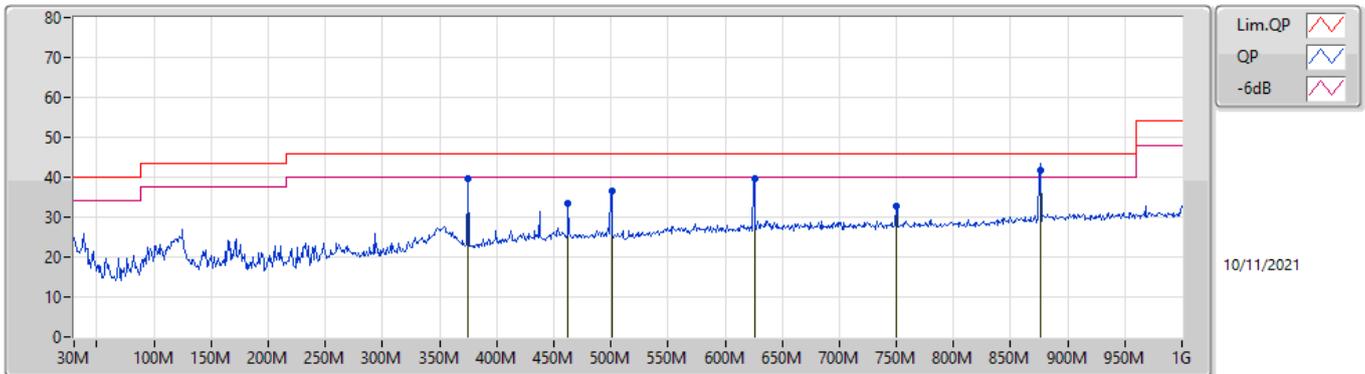
| Mode | Result | Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Condition |
|--------|--------|------|-----------|----------------|----------------|-------------|-----------|
| Mode 1 | Pass | QP | 875.84M | 41.96 | 46.00 | -4.04 | Vertical |

Mode 1



| Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Factor (dB/m) | Dist (m) | Condition | Azimuth (°) | Height (m) | Comment | Raw (dBuV/m) | AF (dB/m) | CL (dB) | PA (dB) |
|------|-----------|----------------|----------------|-------------|---------------|----------|-----------|-------------|------------|---------|--------------|-----------|---------|---------|
| QP | 41.64M | 31.42 | 40.00 | -8.58 | -12.93 | 3 | Vertical | 28 | 1.00 | - | 44.35 | 17.82 | 0.93 | 31.68 |
| PK | 59.1M | 32.56 | 40.00 | -7.44 | -18.34 | 3 | Vertical | 21 | 1.50 | - | 50.90 | 12.31 | 1.18 | 31.83 |
| PK | 375.32M | 38.47 | 46.00 | -7.53 | -8.38 | 3 | Vertical | 206 | 1.00 | - | 46.85 | 20.77 | 3.00 | 32.15 |
| PK | 500.45M | 37.64 | 46.00 | -8.36 | -5.65 | 3 | Vertical | 3 | 1.00 | - | 43.29 | 23.18 | 3.50 | 32.33 |
| PK | 625.58M | 39.89 | 46.00 | -6.11 | -4.11 | 3 | Vertical | 252 | 1.00 | - | 44.00 | 24.51 | 3.90 | 32.52 |
| QP | 875.84M | 41.96 | 46.00 | -4.04 | -1.68 | 3 | Vertical | 201 | 1.00 | "Worst" | 43.64 | 26.10 | 4.86 | 32.64 |

Mode 1



| Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Factor (dB/m) | Dist (m) | Condition | Azimuth (°) | Height (m) | Comment | Raw (dBuV/m) | AF (dB/m) | CL (dB) | PA (dB) |
|------|-----------|----------------|----------------|-------------|---------------|----------|------------|-------------|------------|---------|--------------|-----------|---------|---------|
| PK | 375.32M | 39.51 | 46.00 | -6.49 | -8.38 | 3 | Horizontal | 250 | 1.00 | - | 47.89 | 20.77 | 3.00 | 32.15 |
| PK | 462.62M | 33.33 | 46.00 | -12.67 | -6.08 | 3 | Horizontal | 360 | 2.00 | - | 39.41 | 22.86 | 3.35 | 32.29 |
| PK | 500.45M | 36.72 | 46.00 | -9.28 | -5.65 | 3 | Horizontal | 166 | 2.00 | - | 42.37 | 23.18 | 3.50 | 32.33 |
| PK | 625.58M | 39.78 | 46.00 | -6.22 | -4.11 | 3 | Horizontal | 137 | 1.25 | - | 43.89 | 24.51 | 3.90 | 32.52 |
| PK | 749.74M | 32.87 | 46.00 | -13.13 | -3.23 | 3 | Horizontal | 174 | 1.25 | - | 36.10 | 25.18 | 4.30 | 32.71 |
| QP | 875.84M | 41.57 | 46.00 | -4.43 | -1.68 | 3 | Horizontal | 208 | 1.00 | "Worst" | 43.25 | 26.10 | 4.86 | 32.64 |