



FCC TEST REPORT

For

SCALA Digital Technology(Ningbo) Co., LTD

AMD R1505G Player

Test Model: SMPA-R1505G

| | | |
|--------------------------------|---|---|
| Prepared for | : | SCALA Digital Technology(Ningbo) Co., LTD |
| Address | : | No. 7 Hong Da Road, Hong Tang Industrial Zone A, Jiang Bei District, Ning Bo City, China |
| Prepared by | : | Shenzhen LCS Compliance Testing Laboratory Ltd. |
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| Mail | : | webmaster@LCS-cert.com |
| Date of receipt of test sample | : | August 16, 2021 |
| Number of tested samples | : | 2 |
| Sample No. | : | 220217151A-1, 220217151A-2 |
| Serial number | : | Prototype |
| Date of Test | : | August 16, 2021 ~ February 17, 2022 |
| Date of Report | : | February 18, 2022 |

**FCC TEST REPORT**
FCC CFR 47 PART 15E (15.407)**Report Reference No.** : **LCS220217151AED**

Date of Issue..... : February 18, 2022

Testing Laboratory Name..... : **Shenzhen LCS Compliance Testing Laboratory Ltd.**Address..... : 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei,
Shajing Street, Baoan District, Shenzhen, 518000, ChinaTesting Location/ Procedure..... : Full application of Harmonised standards ■
Partial application of Harmonised standards □
Other standard testing method □**Applicant's Name**..... : **SCALA Digital Technology(Ningbo) Co., LTD**Address..... : No. 7 Hong Da Road, Hong Tang Industrial Zone A, Jiang Bei District,
Ning Bo City, China**Test Specification**

Standard..... : FCC CFR 47 PART 15E (15.407)

Test Report Form No...... : LCSEMC-1.0

TRF Originator..... : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF..... : Dated 2011-03

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EUT Description..... : **AMD R1505G Player**

Trade Mark..... : SCALA

Test Model..... : SMPA-R1505G

Ratings..... : Input: 12V~5.0A
For AC Adapter Input: 100-240V~, 50/60Hz, 1.3A
For AC Adapter Output: 12V~5.0A 60.0WResult : **Positive****Supervised by:**

Kevin Huang/ Administrator

Compiled by:

Jin Wang/ Technique principal

Approved by:

Gavin Liang/ Manager

**FCC -- TEST REPORT**

| | | |
|--------------------------|------------------------|---|
| Test Report No. : | LCS220217151AED | <u>February 18, 2022</u> Date of issue |
|--------------------------|------------------------|---|

| | |
|--------------------------|--|
| EUT..... | : AMD R1505G Player |
| Test Model..... | : SMPA-R1505G |
| Applicant..... | : SCALA Digital Technology(Ningbo) Co., LTD |
| Address..... | : No. 7 Hong Da Road, Hong Tang Industrial Zone A, Jiang Bei District, Ning Bo City, China |
| Telephone..... | : / |
| Fax..... | : / |
| Manufacturer..... | : SCALA Digital Technology(Ningbo) Co., LTD |
| Address..... | : No. 7 Hong Da Road, Hong Tang Industrial Zone A, Jiang Bei District, Ning Bo City, China |
| Telephone..... | : / |
| Fax..... | : / |
| Factory..... | : SCALA Digital Technology(Ningbo) Co., LTD |
| Address..... | : No. 7 Hong Da Road, Hong Tang Industrial Zone A, Jiang Bei District, Ning Bo City, China |
| Telephone..... | : / |
| Fax..... | : / |

| | |
|---------------------|-----------------|
| Test Result: | Positive |
|---------------------|-----------------|

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



Revision History

| Revision | Issue Date | Revisions | Revised By |
|----------|-------------------|---------------|-------------|
| 000 | February 18, 2022 | Initial Issue | Gavin Liang |
| | | | |
| | | | |



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1. GENERAL INFORMATION

1.1. Description of Device (EUT)

| | |
|---------------------|--|
| EUT | : AMD R1505G Player |
| Test Model | : SMPA-R1505G |
| Power Supply | : Input: 12V $\overline{\text{---}}$ 5.0A For AC Adapter Input: 100-240V~, 50/60Hz, 1.3A For AC Adapter Output: 12V $\overline{\text{---}}$ 5.0A 60.0W |
| Hardware Version | : V1.0 |
| Software Version | : / |
| Bluetooth | : |
| Frequency Range | : 2402MHz ~ 2480MHz |
| Chanel Number | : 79 channels for Bluetooth V4.0(DSS) 40 channels for Bluetooth V4.0 (DTS) |
| Chanel Spacing | : 1MHz for Bluetooth V4.0 (DSS) 2MHz for Bluetooth V4.0 (DTS) |
| Modulation Type | : GFSK, $\pi/4$ -DQPSK, 8-DPSK for Bluetooth V4.0(DSS) GFSK for Bluetooth V4.0 (DTS) |
| Bluetooth Version | : V4.0 |
| Antenna Description | : External Antenna, 2.0dBi (max.) |
| WIFI(2.4G Band) | : |
| Frequency Range | : 2412MHz ~ 2462MHz |
| Channel Spacing | : 5MHz |
| Channel Number | : 11 Channels for 20MHz bandwidth (2412~2462MHz) 7 Channels for 40MHz bandwidth (2422~2452MHz) |
| Modulation Type | : IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) |
| Antenna Description | : External Antenna, 2.0dBi (max.) |
| 5.2G WLAN | : |
| Frequency Range | : 5180MHz-5240MHz |
| Channel Number | : 4 channels for 20MHz bandwidth(5180MHz-5240MHz) 2 channels for 40MHz bandwidth(5190MHz~5230MHz) 1 channels for 80MHz bandwidth(5210MHz) |
| Modulation Type | : IEEE 802.11a/n/ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) |
| Antenna Description | : External Antenna, 2.0dBi (max.) |
| 5.8G WLAN | : |
| Frequency Range | : 5745MHz-5825MHz |
| Channel Number | : 5 channels for 20MHz bandwidth(5745MHz-5825MHz) |



2 channels for 40MHz bandwidth(5755MHz~5795MHz)

1 channels for 80MHz bandwidth(5775MHz)

Modulation Type : IEEE 802.11a/n/ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)

Antenna Description : External Antenna, 2.0dBi (max.)



1.2. Host System Configuration List and Details

| Manufacturer | Description | Model | Serial Number | Certificate |
|--------------------------------------|--------------|------------|---------------|-------------|
| XINSU GLOBAL ELECTRONIC CO., LIMITED | POWER SUPPLY | XSG1205000 | --- | FCC |

1.3. External I/O Port

| I/O Port Description | Quantity | Cable |
|----------------------|----------|-------|
| Power Port | 1 | N/A |
| Power Ext Port | 1 | N/A |
| HDMI Port | 2 | N/A |
| AJ45 Port | 2 | N/A |
| AUX Port | 1 | N/A |
| Headset Port | 1 | N/A |
| USB Port | 4 | N/A |
| COM Port | 1 | N/A |

1.4. Description of Test Facility

NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024.

CAB identifier is CN0071.

CNAS Registration Number is L4595.

Test Firm Registration Number: 254912

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

1.5. Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

1.6. Measurement Uncertainty

| Test Item | Frequency Range | Uncertainty | Note |
|------------------------|-----------------|-------------|------|
| Radiation Uncertainty | 9KHz~30MHz | ±3.10dB | (1) |
| | 30MHz~200MHz | ±2.96dB | (1) |
| | 200MHz~1000MHz | ±3.10dB | (1) |
| | 1GHz~26.5GHz | ±3.80dB | (1) |
| | 26.5GHz~40GHz | ±3.90dB | (1) |
| Conduction Uncertainty | 150kHz~30MHz | ±1.63dB | (1) |
| Power disturbance | 30MHz~300MHz | ±1.60dB | (1) |

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



1.7. Description of Test Modes

The EUT has been tested under operating condition.

This test was performed with EUT in X, Y, Z position and the worst case was found when EUT in X position.

Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded worst case.

Worst-case mode and channel used for 150 KHz-30 MHz power line conducted emissions was determined to be IEEE 802.11ac VHT40 (Low Channel).

Worst-case mode and channel used for 9 KHz-1000 MHz radiated emissions was determined to be IEEE 802.11ac VHT40 (Low Channel).

Worst-Case data rates were utilized from preliminary testing of the Chipset, worst-case data rates used during the testing are as follows:

IEEE 802.11a Mode: 6 Mbps, OFDM.

IEEE 802.11n HT20 Mode: MCS0, OFDM.

IEEE 802.11n HT40 Mode: MCS0, OFDM.

IEEE 802.11ac VHT20 Mode: MCS0

IEEE 802.11ac VHT40 Mode: MCS0, OFDM.

IEEE 802.11ac VHT80 Mode: MCS0, OFDM.

1.8. Channel List and Frequency

| Frequency Band | Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) |
|---|-------------|-----------------|-------------|-----------------|
| 5180~5240MHz | 36 | 5180 | 44 | 5220 |
| | 38 | 5190 | 46 | 5230 |
| | 40 | 5200 | 48 | 5240 |
| | 42 | 5210 | / | / |
| For IEEE 802.11a/n HT20/ac VHT20, Channel 36, 40 and 48 were tested. For IEEE 802.11n HT40/ac VHT40, Channel 38 and 46 were tested. For IEEE 802.11ac VHT80, Channel 42 was tested. | | | | |



2. TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

The radiated testing was performed at an antenna-to-EUT distance of 3 meters. All radiated and conducted emissions measurement was performed at Shenzhen LCS Compliance Testing Laboratory Ltd.

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to FCC's request, Test Procedure KDB789033 D02 General UNII Test Procedures New Rules v02r01 and KDB 662911 D01 Multiple Transmitter Output v02r01 are required to be used for this kind of FCC 15.407 UII device.

According to its specifications, the EUT must comply with the requirements of the Section 15.203, 15.205, 15.207, 15.209 and 15.407 under the FCC Rules Part 15 Subpart E.

2.3. General Test Procedures

2.3.1 Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

2.3.2 Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane below 1GHz and 1.5 m above ground plane above 1GHz. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 6.3 of ANSI C63.10-2013.



3. SYSTEM TEST CONFIGURATION

3.1. Justification

The system was configured for testing in a continuous transmits condition.

3.2. EUT Exercise Software

The system was configured for testing in a continuous transmits condition and change test channels by software (Realtek) provided by application.

3.3. Special Accessories

N/A

3.4. Block Diagram/Schematics

Please refer to the related document

3.5. Equipment Modifications

Shenzhen LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

3.6. Test Setup

Please refer to the test setup photo.



4. SUMMARY OF TEST RESULTS

| Applied Standard: FCC Part 15 Subpart E | | | |
|---|--------------------------------|-----------|--------------------------------|
| FCC Rules | Description of Test | Result | Remark |
| §15.407(a) | 26dB Bandwidth | Compliant | Appendix D.1 |
| §2.1047 | 99% Occupied Bandwidth | Compliant | N/A |
| §15.407(a) | Maximum Conducted Output Power | Compliant | Appendix D.2 |
| §15.407(a) | Power Spectral Density | Compliant | Appendix D.3 |
| §15.209, §15.407(b) | Emissions in Restricted Bands | Compliant | Appendix D.4 |
| §15.407(g) | Frequency Stability | Compliant | Appendix D.5 |
| / | On Time and Duty Cycle | / | Only reported; Appendix D.6 |
| §15.209, §15.407(b) | Radiated Emissions | Compliant | Note 1 |
| §15.207(a) | AC Conducted Emissions | Compliant | Note 1 |
| §15.203 | Antenna Requirements | Compliant | Note 1 |
| §15.407 §2.1091 | RF Exposure | Compliant | Note 2 |

Remark:

1. Note 1 – Test results inside test report;
2. Note 2 – Test results in other test report (RF report);



5. TEST RESULT

5.1. Radiated Emissions Measurement

5.1.1. Standard Applicable

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz | MHz | MHz | GHz |
|-------------------|---------------------|---------------|-------------|
| 0.090-0.110 | 16.42-16.423 | 399.9-410 | 4.5-5.15 |
| \1\ 0.495-0.505 | 16.69475-16.69525 | 608-614 | 5.35-5.46 |
| 2.1735-2.1905 | 16.80425-16.80475 | 960-1240 | 7.25-7.75 |
| 4.125-4.128 | 25.5-25.67 | 1300-1427 | 8.025-8.5 |
| 4.17725-4.17775 | 37.5-38.25 | 1435-1626.5 | 9.0-9.2 |
| 4.20725-4.20775 | 73-74.6 | 1645.5-1646.5 | 9.3-9.5 |
| 6.215-6.218 | 74.8-75.2 | 1660-1710 | 10.6-12.7 |
| 6.26775-6.26825 | 108-121.94 | 1718.8-1722.2 | 13.25-13.4 |
| 6.31175-6.31225 | 123-138 | 2200-2300 | 14.47-14.5 |
| 8.291-8.294 | 149.9-150.05 | 2310-2390 | 15.35-16.2 |
| 8.362-8.366 | 156.52475-156.52525 | 2483.5-2500 | 17.7-21.4 |
| 8.37625-8.38675 | 156.7-156.9 | 2690-2900 | 22.01-23.12 |
| 8.41425-8.41475 | 162.0125-167.17 | 3260-3267 | 23.6-24.0 |
| 12.29-12.293 | 167.72-173.2 | 3332-3339 | 31.2-31.8 |
| 12.51975-12.52025 | 240-285 | 3345.8-3358 | 36.43-36.5 |
| 12.57675-12.57725 | 322-335.4 | 3600-4400 | (\2\) |
| 13.36-13.41 | | | |

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

\2\ Above 38.6

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2dBuV/m at 3m).

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

| 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 |

5.1.2. Measuring Instruments and Setting

Please refer to equipment list in this report. The following table is the setting of spectrum analyzer and receiver.

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Start Frequency | 1000 MHz |
| Stop Frequency | 10 th carrier harmonic |
| RB / VB (Emission in restricted band) | 1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average |
| RB / VB (Emission in non-restricted band) | 1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average |

| Receiver Parameter | Setting |
|--------------------|---------|
| Attenuation | Auto |



| | |
|------------------------|-----------------------------------|
| Start ~ Stop Frequency | 9kHz~150kHz / RB 200Hz for QP/AVG |
| Start ~ Stop Frequency | 150kHz~30MHz / RB 9kHz for QP/AVG |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 120kHz for QP |

5.1.3. Test Procedures

1) Sequence of testing 9 kHz to 30 MHz

Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

Premeasurement:

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna height is 1.0 meter.
- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).
- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.
- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.



2) Sequence of testing 30 MHz to 1 GHz

Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

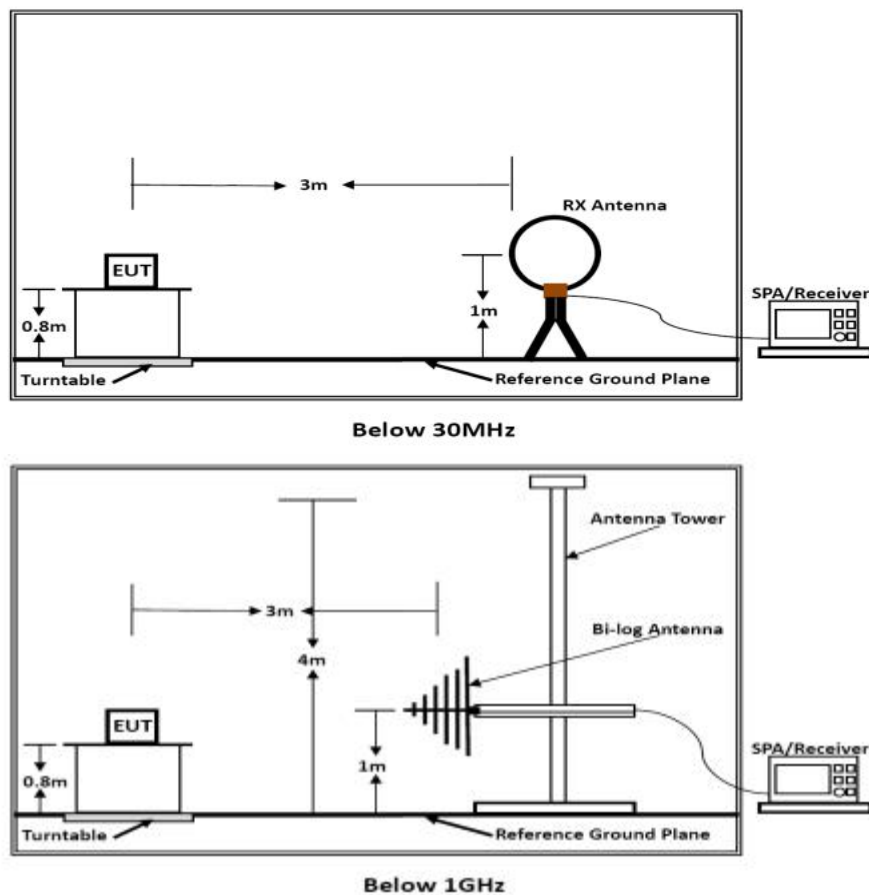
Premeasurement:

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 to 3 meter.
- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position ($\pm 45^\circ$) and antenna movement between 1 and 4 meter.
- The final measurement will be done with QP detector with an EMI receiver.
- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

5.1.4. Test Setup Layout



5.1.5. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.



5.1.6. Results of Radiated Emissions (9 KHz~30MHz)

| | | | |
|---------------|----------|----------------|--------------|
| Temperature | 23.5℃ | Humidity | 52.3% |
| Test Engineer | Bill zhu | Configurations | IEEE 802.11a |

| Freq. (MHz) | Level (dBuV) | Over Limit (dB) | Over Limit (dB) | Remark |
|----------------|-----------------|--------------------|--------------------|----------|
| - | - | - | - | See Note |

Note:

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

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

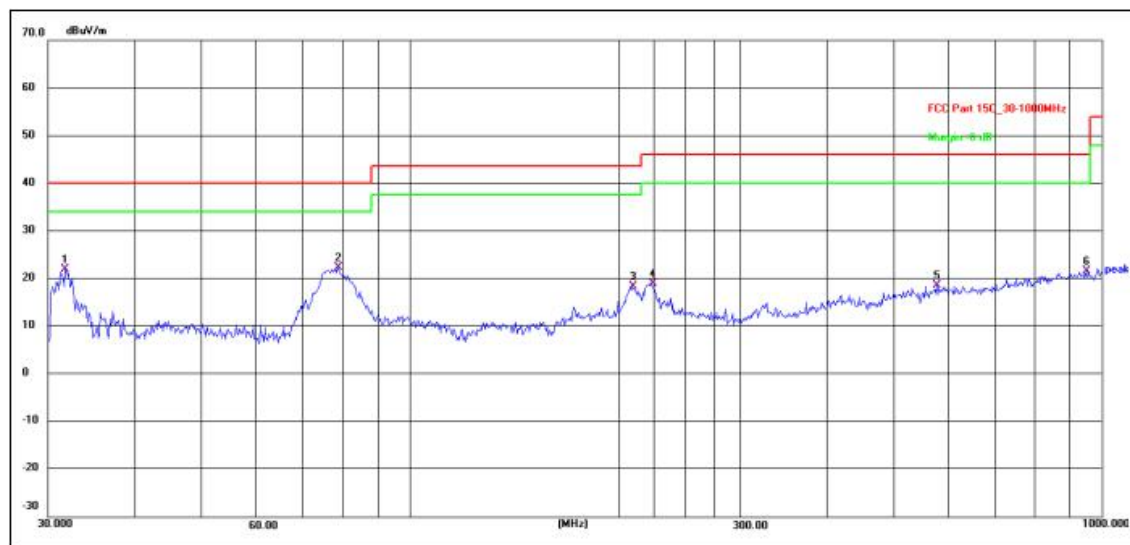
5.1.7. Results of Radiated Emissions (30MHz~1GHz)

| | | | |
|---------------|----------|----------------|--------------|
| Temperature | 23.5℃ | Humidity | 52.3% |
| Test Engineer | Bill zhu | Configurations | IEEE 802.11a |



Test result for IEEE 802.11ac VHT40 (Low Channel)

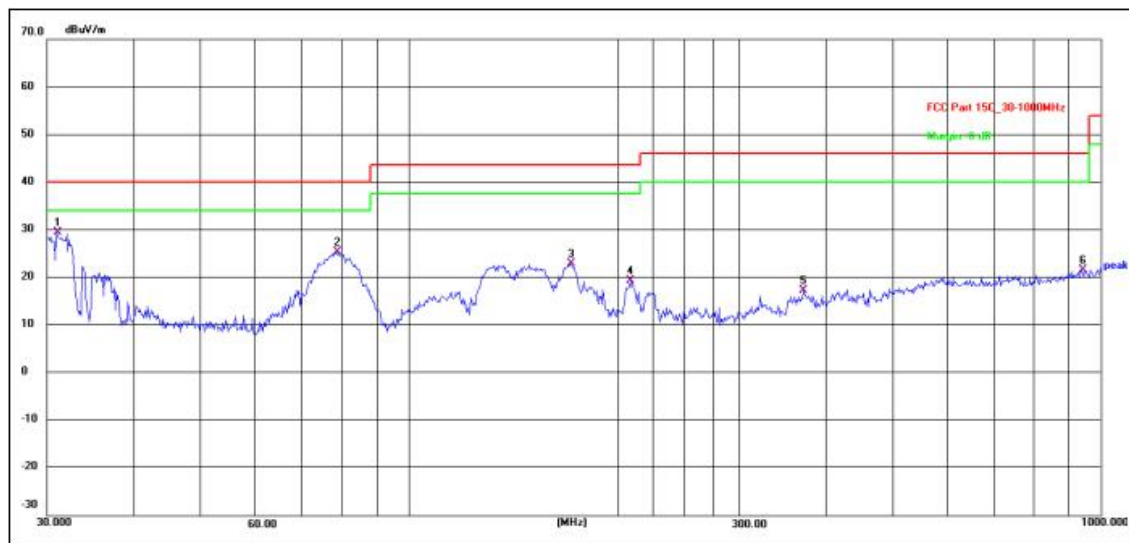
Horizontal



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Det. |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|------|
| 1 | 31.8427 | 40.22 | -18.22 | 22.00 | 40.00 | -18.00 | QP |
| 2 * | 78.6888 | 42.26 | -19.83 | 22.43 | 40.00 | -17.57 | QP |
| 3 | 210.0482 | 35.59 | -17.13 | 18.46 | 43.50 | -25.04 | QP |
| 4 | 223.7334 | 35.69 | -16.78 | 18.91 | 46.00 | -27.09 | QP |
| 5 | 578.6699 | 29.41 | -10.80 | 18.61 | 46.00 | -27.39 | QP |
| 6 | 952.0937 | 29.42 | -7.84 | 21.58 | 46.00 | -24.42 | QP |



Vertical



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|
| 1 * | 31.0706 | 47.71 | -18.31 | 29.40 | 40.00 | -10.60 |
| 2 | 78.6888 | 45.22 | -19.83 | 25.39 | 40.00 | -14.61 |
| 3 | 171.3926 | 42.36 | -19.42 | 22.94 | 43.50 | -20.56 |
| 4 | 209.3129 | 36.52 | -17.15 | 19.37 | 43.50 | -24.13 |
| 5 | 372.0045 | 32.07 | -14.74 | 17.33 | 46.00 | -28.67 |
| 6 | 938.8326 | 29.58 | -8.06 | 21.52 | 46.00 | -24.48 |

Note:

(1). Pre-scan all modes and recorded the worst case results in this report IEEE 802.11ac VHT40 (Low Channel).

2). Emission level (dBuV/m) = 20 log Emission level (uV/m). Margin= Level-limit;

3). Factor=Antenan Factor+Cable Loss-Pre Factor;Level=Reading+Factor.



5.2. Power Line Conducted Emissions

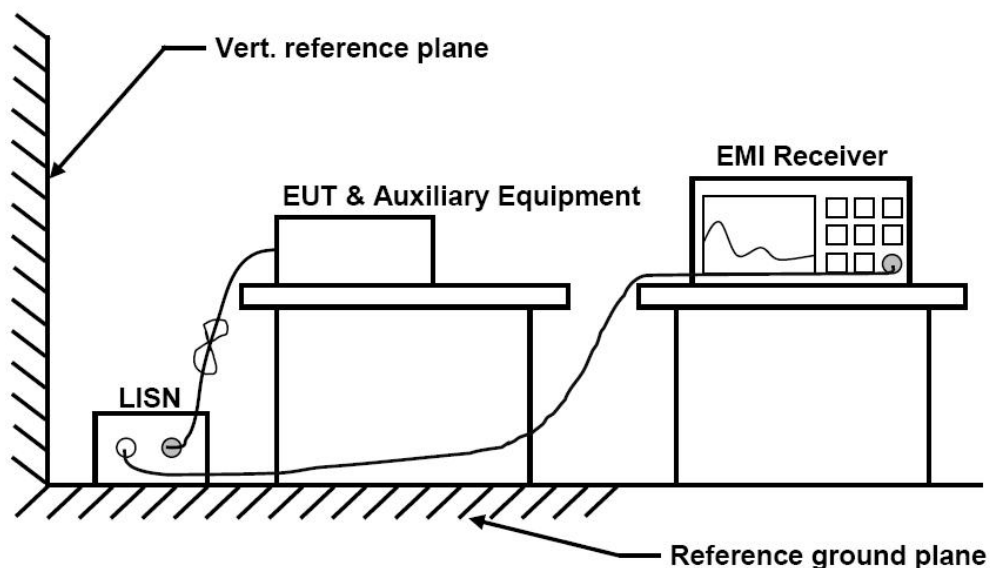
5.2.1 Standard Applicable

According to §15.207 (a): For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range are listed as follows:

| Frequency Range (MHz) | Limits (dB μ V) | |
|-----------------------|---------------------|-----------|
| | Quasi-peak | Average |
| 0.15 to 0.50 | 66 to 56* | 56 to 46* |
| 0.50 to 5 | 56 | 46 |
| 5 to 30 | 60 | 50 |

* Decreasing linearly with the logarithm of the frequency

5.2.2 Block Diagram of Test Setup



5.2.3 Test Results

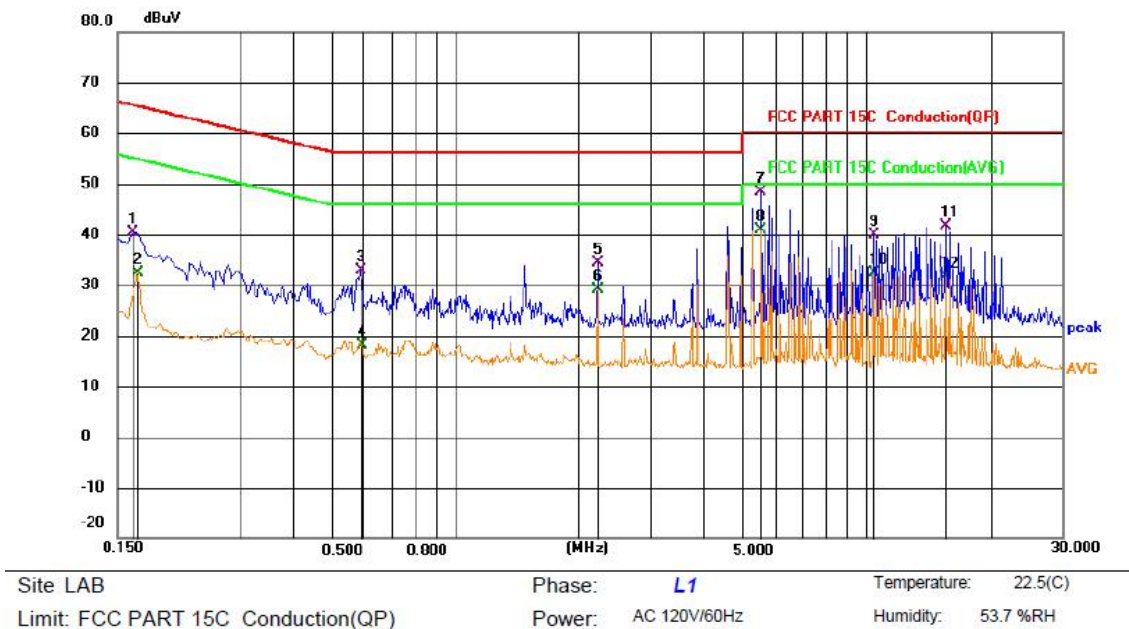
| | | | |
|---------------|----------|----------------|--------------|
| Temperature | 22.5°C | Humidity | 53.7% |
| Test Engineer | Bill zhu | Configurations | IEEE 802.11a |

PASS.

The test data please refer to following page.

**AC Conducted Emission of charge from adapter mode @ AC 120V/60Hz @ IEEE 802.11ac VHT40 (Low Channel) (worst case)**

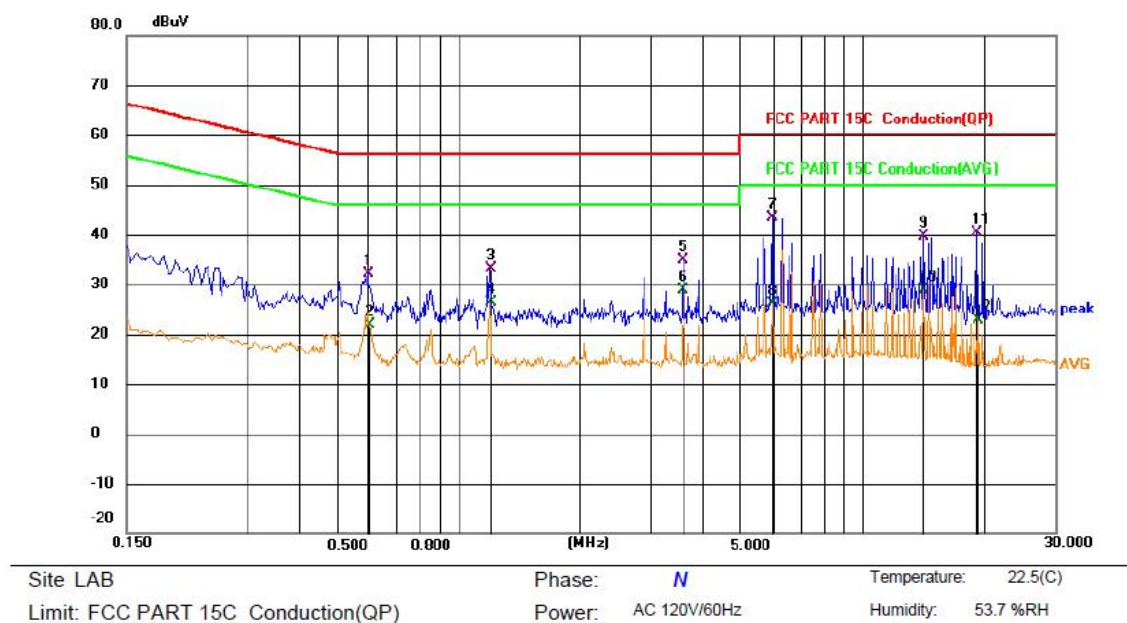
Line



| No. | Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measure- ment dBuV | Limit dBuV | Margin dB | Detector |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|--------------|----------|
| 1 | | 0.1636 | 20.74 | 19.76 | 40.50 | 65.28 | -24.78 | QP |
| 2 | | 0.1681 | 12.52 | 19.76 | 32.28 | 55.05 | -22.77 | AVG |
| 3 | | 0.5866 | 13.13 | 19.81 | 32.94 | 56.00 | -23.06 | QP |
| 4 | | 0.5916 | -1.73 | 19.81 | 18.08 | 46.00 | -27.92 | AVG |
| 5 | | 2.2201 | 14.51 | 19.85 | 34.36 | 56.00 | -21.64 | QP |
| 6 | | 2.2201 | 9.27 | 19.85 | 29.12 | 46.00 | -16.88 | AVG |
| 7 | | 5.5456 | 28.41 | 19.93 | 48.34 | 60.00 | -11.66 | QP |
| 8 | * | 5.5456 | 20.85 | 19.93 | 40.78 | 50.00 | -9.22 | AVG |
| 9 | | 10.4236 | 19.78 | 20.13 | 39.91 | 60.00 | -20.09 | QP |
| 10 | | 10.4236 | 12.34 | 20.13 | 32.47 | 50.00 | -17.53 | AVG |
| 11 | | 15.5761 | 20.99 | 20.60 | 41.59 | 60.00 | -18.41 | QP |
| 12 | | 15.5761 | 11.12 | 20.60 | 31.72 | 50.00 | -18.28 | AVG |



Neutral



| No. | Mk. | Freq. | Reading | Correct | Measure- | Limit | Margin | |
|-----|-----|---------|---------|---------|----------|-------|--------|----------|
| | | MHz | Level | Factor | ment | | | Detector |
| | | | dBuV | dB | dBuV | dBuV | dB | |
| 1 | | 0.5955 | 12.42 | 19.79 | 32.21 | 56.00 | -23.79 | QP |
| 2 | | 0.6011 | 2.19 | 19.79 | 21.98 | 46.00 | -24.02 | AVG |
| 3 | | 1.1941 | 13.26 | 19.79 | 33.05 | 56.00 | -22.95 | QP |
| 4 | | 1.1941 | 6.52 | 19.79 | 26.31 | 46.00 | -19.69 | AVG |
| 5 | | 3.5926 | 15.11 | 19.88 | 34.99 | 56.00 | -21.01 | QP |
| 6 | | 3.5926 | 8.96 | 19.88 | 28.84 | 46.00 | -17.16 | AVG |
| 7 | * | 5.9821 | 23.38 | 19.93 | 43.31 | 60.00 | -16.69 | QP |
| 8 | | 5.9821 | 6.32 | 19.93 | 26.25 | 50.00 | -23.75 | AVG |
| 9 | | 14.2081 | 19.15 | 20.49 | 39.64 | 60.00 | -20.36 | QP |
| 10 | | 14.2081 | 8.27 | 20.49 | 28.76 | 50.00 | -21.24 | AVG |
| 11 | | 19.2121 | 19.60 | 20.80 | 40.40 | 60.00 | -19.60 | QP |
| 12 | | 19.3516 | 2.13 | 20.79 | 22.92 | 50.00 | -27.08 | AVG |

***Note: Pre-scan all modes and recorded the worst case results in this report IEEE 802.11ac VHT40 (Low Channel).

Result = Reading + Correct, Margin = Result – Limit.



6. LIST OF MEASURING EQUIPMENTS

| Item | Equipment | Manufacturer | Model No. | Serial No. | Cal Date | Due Date |
|------|--------------------------|-------------------|-------------|-----------------|------------|------------|
| 1 | Power Meter | R&S | NRVS | 100444 | 2021-06-21 | 2022-06-20 |
| 2 | Power Sensor | R&S | NRV-Z81 | 100458 | 2021-06-21 | 2022-06-20 |
| 3 | Power Sensor | R&S | NRV-Z32 | 10057 | 2021-06-21 | 2022-06-20 |
| 4 | Test Software | Tonscend | JS1120-2 | / | N/A | N/A |
| 5 | RF Control Unit | Tonscend | JS0806-2 | N/A | 2020-11-17 | 2021-11-16 |
| 6 | MXA Signal Analyzer | Agilent | N9020A | MY50510140 | 2020-11-17 | 2021-11-16 |
| 7 | DC Power Supply | Agilent | E3642A | N/A | 2020-11-26 | 2021-11-25 |
| 8 | EMI Test Software | AUDIX | E3 | / | N/A | N/A |
| 9 | 3m Semi Anechoic Chamber | SIDT FRANKONIA | SAC-3M | 03CH03-HY | 2021-06-21 | 2022-06-20 |
| 10 | Positioning Controller | MF | MF7082 | MF78020803 | 2021-06-21 | 2022-06-20 |
| 11 | Active Loop Antenna | SCHWARZBECK | FMZB 1519B | 00005 | 2021-07-25 | 2024-07-24 |
| 12 | By-log Antenna | SCHWARZBECK | VULB9163 | 9163-470 | 2021-07-25 | 2024-07-24 |
| 13 | Horn Antenna | SCHWARZBECK | BBHA 9120D | 9120D-1925 | 2021-07-01 | 2024-06-30 |
| 14 | Broadband Horn Antenna | SCHWARZBECK | BBHA 9170 | 791 | 2020-09-20 | 2023-09-19 |
| 15 | Broadband Preamplifier | SCHWARZBECK | BBV9745 | 9719-025 | 2021-06-21 | 2022-06-20 |
| 16 | EMI Test Receiver | R&S | ESR 7 | 101181 | 2021-06-21 | 2022-06-20 |
| 17 | RS SPECTRUM ANALYZER | R&S | FSP40 | 100503 | 2020-11-17 | 2021-11-16 |
| 18 | Broadband Preamplifier | / | BP-01M18G | P190501 | 2021-06-21 | 2022-06-20 |
| 19 | 6dB Attenuator | / | 100W/6dB | 1172040 | 2021-06-21 | 2022-06-20 |
| 20 | 3dB Attenuator | / | 2N-3dB | / | 2020-11-17 | 2021-11-16 |
| 21 | EMI Test Receiver | R&S | ESPI | 101840 | 2021-06-21 | 2022-06-20 |
| 22 | Artificial Mains | R&S | ENV216 | 101288 | 2021-06-21 | 2022-06-20 |
| 23 | 10dB Attenuator | SCHWARZBECK | MTS-IMP-136 | 261115-001-0032 | 2021-06-21 | 2022-06-20 |



7. TEST SETUP PHOTOGRAPHS OF EUT

Please refer to separated files for Test Setup Photos of the EUT.

8. EXTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for External Photos of the EUT.

9. INTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for Internal Photos of the EUT.

-----THE END OF REPORT-----