# Technical Compliance Statement
# FCC Test Report

**For the following information Ref. File No.: A1Z2306021**

| | | |
|---|---|---|
| Product | : | OLED Monitor |
| Model No. | : | AG456UCZD; AG456********<br>(*=0-9,A-Z,a-z,+,-,/,\ or blank) |
| Brand | : | AOC |
| Applicant | : | TPV Electronics (FuJian) Co., Ltd. |
| Address | : | Rongqiao Economic and Technological Development Zone,Fuqing City,Fujian Province,P.R. China |
| Rules and Standards | : | 47 CFR FCC Part 15 Subpart B<br>ANSI C63.4: 2014+ANSI C63.4a: 2017<br>(Class B Limits) |

We hereby certify that the above product has been tested by us and complied with above FCC standard limits. The test was performed according to the procedures ANSI C63.4: 2014+ANSI C63.4a: 2017. The equipment might be marketed in US in accordance with the rules of 47 CFR FCC Part 2 regulations.

The test data and results are issued on the test report **ACS-F23116.**

信華科技（深圳）有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature: David Jin

Test Laboratory:
Audix Technology (Shenzhen) Co., Ltd.
NVLAP Lab. Code: 200372-0
FCC OET Designation: CN5022
Web Site: www.audix.com.cn

(David Jin / Deputy General Manager)
Date: Jul.11, 2023

The statement is based on a single evaluation of one sample of the above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo.

# TEST REPORT

OLED Monitor

Model No.: AG456UCZD; AG456******** (*=0-9,A-Z,a-z,+,-,/,\ or blank)

Brand: AOC

Prepared for: TPV Electronics (FuJian) Co., Ltd.
Rongqiao Economic and Technological Development Zone,Fuqing City,Fujian Province,P.R. China

Prepared By: Audix Technology (Shenzhen) Co., Ltd.
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TESTING
NVLAP LAB CODE 200372-0

Testing Laboratory
1418

| | | |
|---|---|---|
| Report Number | : | ACS-F23116 |
| Date of Test | : | Jun.11~17, 2023 |
| Date of Report | : | Jul.11, 2023 |

The test report is based on a single evaluation of one sample of the above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, TAF, or any agency of the U.S. Government.

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# TEST REPORT

| | | |
|---|---|---|
| Applicant | : | TPV Electronics (FuJian) Co., Ltd. |
| Product | : | OLED Monitor |
| Brand | : | AOC |
| Model No. | : | AG456UCZD; AG456******** (*=0-9,A-Z,a-z,+,-,/,\ or blank) |
| Report No. | : | ACS-F23116 |
| Power Supply | : | AC 100-240V, 50/60Hz |
| Test Voltage | : | AC 120V/60Hz |

Rules of Compliance and Applicable Standards:

47 CFR FCC Part 15 Subpart B, Class B Limits
ANSI C63.4: 2014+ANSI C63.4a: 2017

The device described above was tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. All of the tests were requested by the applicant and the results thereof based upon the information that the applicant provided to us. We, Audix Technology (Shenzhen) Co., Ltd. assume full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is compliance with the requirements of 47 CFR FCC Part 2 regulations.

No modifications were required during testing to bring this product into compliance.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

This report applies to single evaluation of one sample of above mentioned products. This report shall not be reproduced in parts without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test : Jun.11~17, 2023 Report of date: Jul.11, 2023

Prepared by : Sisi Wu
Sisi Wu / Assistant

Reviewed by : Fire Zhang
Fire Zhang / Assistant Manager

AUDIX® 信華科技（深圳）有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report

Approved & Authorized Signer : Signature: David Jin
David Jin / Deputy General Manager

Name of the Representative of the Responsible Party: _____

Signature: _____

# 1. SUMMARY OF STANDARDS AND RESULTS

## 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

| EMISSION | | | |
|---|---|---|---|
| **Description of Test Item** | **Standard** | **Results** | **Remark** |
| Power Line Conducted Emission Test | 47 CFR FCC Part 15 Subpart B ANSI C63.4: 2014+ANSI C63.4a: 2017 | PASS | Minimum passing margin is 16.92dB at 0.186MHz |
| Radiated Emission Test (30MHz-1000MHz) | 47 CFR FCC Part 15 Subpart B ANSI C63.4: 2014+ANSI C63.4a: 2017 | PASS | Minimum passing margin is 4.65dB at 34.850MHz |
| Radiated Emission Test (1GHz-18GHz) | 47 CFR FCC Part 15 Subpart B ANSI C63.4: 2014+ANSI C63.4a: 2017 | PASS | Minimum passing margin is 13.23dB at 6646.218MHz |
| Note: Measurement uncertainty affection to the result is considered, the EUT is technically compliant with standard requirements. | | | |

# 2. GENERAL INFORMATION

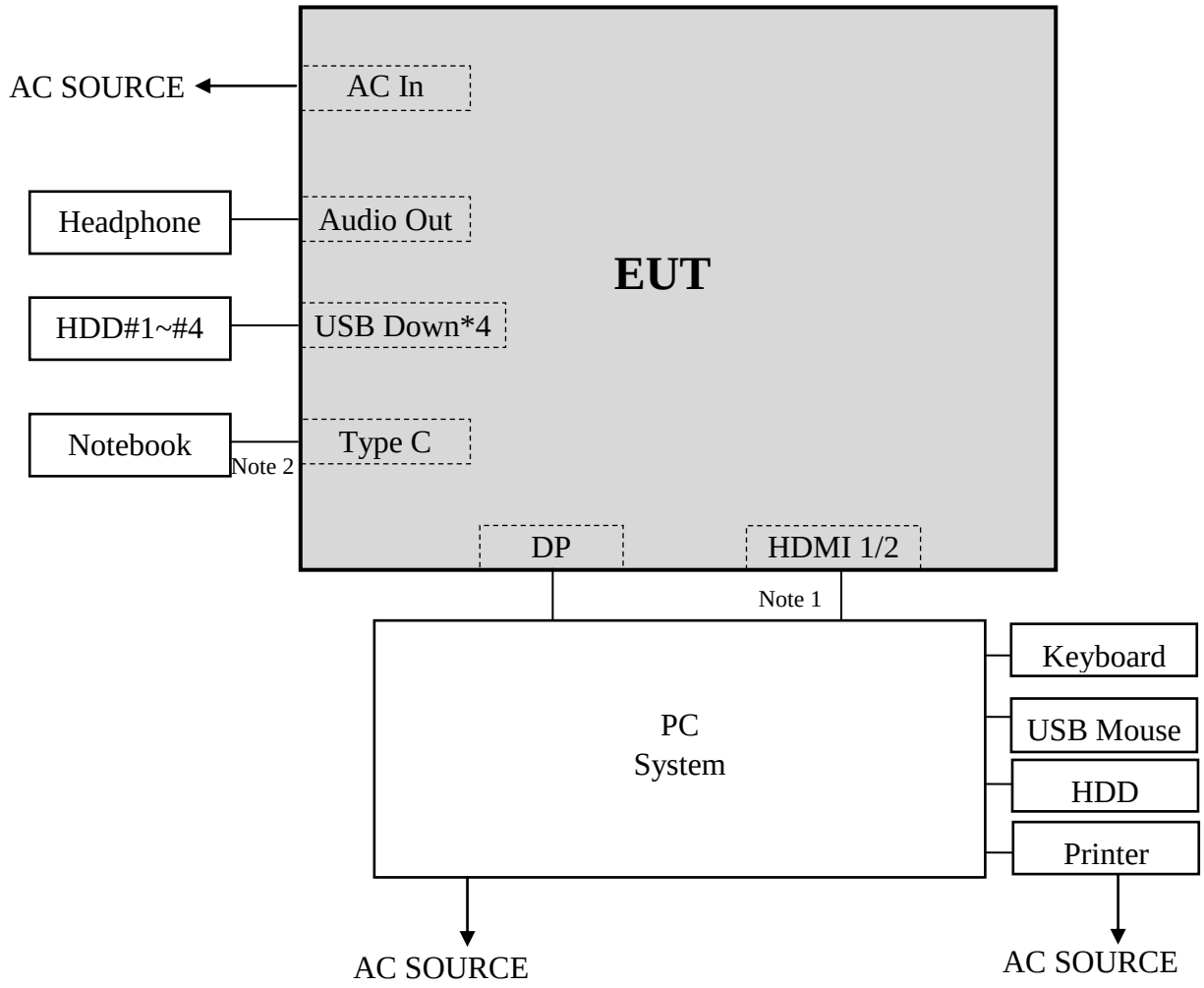
## 2.1.Description of Device (EUT)

| | | |
|---|---|---|
| Product | : | OLED Monitor |
| Model No. | : | AG456UCZD; AG456******** (*=0-9,A-Z,a-z,+,-,/,\ or blank)<br>Model differences(Declared by the Applicant ): Above all models difference are in sale marketing. |
| Test Model | : | AG456UCZD |
| Brand | : | AOC |
| Applicant | : | TPV Electronics (FuJian) Co., Ltd.<br>Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China |
| Max. Resolution | : | HDMI: 3440*1440@100Hz<br>DP/Type C: 3440*1440@240Hz |
| Max.Work Frequency | : | Above 108MHz |
| I/O Port | : | (1)One AC Port<br>(2)Two HDMI Ports<br>(3)One DP Port<br>(4)One Type C Port<br>(5)One USB Up-Steam Port<br>(6)Four USB Down-Stream Ports<br>(7)One Audio Out Port |
| Power Cord | : | Unshielded, Detachable, 1.8m/1.5m (3 pins) |
| HDMI Cable | : | Shielded, Detachable, 1.8m/1.5m |
| DP Cable | : | Shielded, Detachable, 1.8m/1.5m |
| Type C Cable | : | Shielded, Detachable, 1.8m/1.5m |
| USB3.0 to Type C Cable | : | Shielded, Detachable, 1.8m/1.5m |
| USB3.0 Cable | : | Shielded, Detachable, 1.8m/1.5m |
| Date of Test | : | Jun.11~17, 2023 |
| Date of Receipt | : | Jun.07, 2023 |
| Sample Type | : | Prototype production |

## 2.2. Tested Supporting System Details

| No. | Description | ACS No. | Manufacturer | Model | Serial Number |
|---|---|---|---|---|---|
| 1. | Personal Computer | Test PC Z | DELL | Optiplex 7090MT | --- |
| | | Power Cord(3C): Unshielded, Detachable, 1.8m<br>HDMI Cable: Shielded, Detachable, 1.8m | | | |
| 2. | USB Keyboard | ACS-EMC-K03R | DELL | SK-8120 | CN-ODJ365-71616-2BE-0DCE-A00 |
| | | USB Cable: Shielded, Undetachable, 1.8m | | | |
| 3. | USB Mouse | ACS-EMC-M03R | DELL | M0C5UO | 512023253 |
| | | USB Cable: Shielded, Undetachable, 1.8m | | | |
| 4. | Printer | ACS-EMC-PT04 | HP | C9079A | N/A |
| | | USB Cable: Shielded, Detachable, 1.8m<br>Power Cord(2C): Unshielded, Detachable, 1.8m | | | |
| 5. | HDD01 | ACS-EMC-HDD01 | Terasys | F12-UF | A0100215-5390031 |
| | | USB Cable: Shielded, Detachable, 1.8m | | | |
| 6. | DVD | --- | Pioneer | DV-310NC-K | --- |
| | | Power Cord(2C): Unshielded, Detachable, 1.5m | | | |
| 7. | Headphone | ACS-EMC-EP01 | OVANN | 0V-T880V | --- |
| | | Data Cable: Shielded, Detachable, 2.0m | | | |
| 8. | HDD#1 | ACS-EMC-HDD42 | WD | WD Elements | WXA1A7396898 |
| | | Data Cable: Shielded, Detachable, 0.4m | | | |
| 9. | HDD#2 | ACS-EMC-HDD43 | WD | WD Elements | WX31E63TU717 |
| | | Data Cable: Shielded, Detachable, 0.4m | | | |
| 10. | HDD#3 | ACS-EMC-HDD44 | WD | WD Elements | WX11E73U9352 |
| | | Data Cable: Shielded, Detachable, 0.4m | | | |
| 11. | HDD#4 | ACS-EMC-HDD45 | WD | WD Elements | WXF1A19JNX5E |
| | | Data Cable: Shielded, Detachable, 0.4m | | | |
| 12. | Notebook | --- | DELL | precision 5550 | --- |

## 2.3. Block Diagram of Test Setup




**Note 1: PC Mode, DVD Mode can not link the HDMI port at the same time.**
**Note 2: The Type C Port can not Link to PC and Notebook at the same time.**

**(EUT: OLED Monitor)**

## 2.4. Method of Exercising EUT

| | |
|---|---|
| Operating System | Windows 7 of PC system |
| Test Program | BurnIn Test V9.0 |
| Video Signal (Display Image) | “H” pattern |
| Audio | 1kHz signal playing |
| USB Port | Hard drive data read and write |
| Type C Port | Upstream port / downstream port / Display Port/ power charge |
| Other | Other peripheral devices were driven and operated in turn |

Display and video parameters

| Function | Setting |
|---|---|
| Hardware acceleration | Maximum |
| Screen settings | High/medium/low effective resolution |
| Color quality | Highest color bit depth |
| Brightness, contrast, color saturation | Set the contrast and color saturation to the maximum value. Set the brightness to the maximum value or the maximum value before the cursor disappears |
| Other | Adjusted to obtain a typical picture using settings giving the highest performance |

## 2.5. Description of Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Kefeng Road, Science & Technology Park,
Nanshan District, Shenzhen, Guangdong, China

EMC Lab. : Accredited by NVLAP, USA
NVLAP Code: 200372-0
Valid Date: Mar.31, 2024

Certificated by FCC, USA
Designation No: CN5022
Valid Date: Mar.31, 2024

Accredited by TAF, Taiwan
Registration No: 1418
Valid Date: Nov.30, 2023

## 2.6. Measurement Uncertainty ( 95% confidence levels, k=2 )

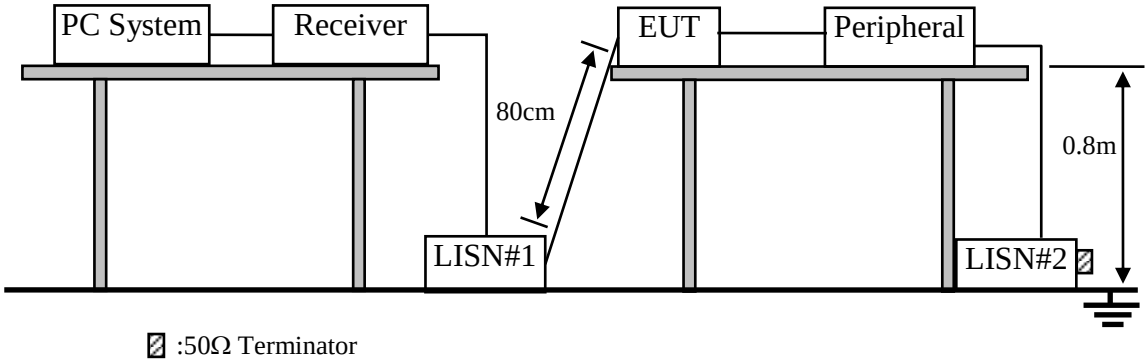
| Test Item | Uncertainty |
|---|---|
| Uncertainty for Conduction emission test in No. 2 Conduction | ±2.4dB (150kHz to 30MHz) |
| Uncertainty for Radiation Emission test in 10m chamber (Distance: 10m) | ±3.8dB (30~200MHz, Polarization: H) |
| | ±3.8dB (30~200MHz, Polarization: V) |
| | ±4.0dB (200M~1GHz, Polarization: H) |
| | ±4.4dB (200M~1GHz, Polarization: V) |
| Uncertainty for Radiation Emission test in 10m chamber (1GHz-18GHz) | ±4.4dB (1-6GHz, Distance: 3m) |
| | ±4.6dB (6-18GHz, Distance: 3m) |
| Uncertainty for $S_{VSWR}$ in 10m Chamber | ±2.8dB (1-6GHz,Distance: 3m) |
| | ±2.8dB (6-18GHz,Distance: 3m) |
| Uncertainty for test site temperature and humidity and Pressure | ±0.6℃ |
| | ±3% |
| | ±1kPa |

# 3. POWER LINE CONDUCTED EMISSION TEST

## 3.1. Test Equipments

| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | 2# Shielding Room | AUDIX | N/A | N/A | Sep.16,22 | 5 Year |
| 2. | EMI Test Receiver | Rohde & Schwarz | ESCI | 100843 | Oct.09,22 | 1 Year |
| 3. | L.I.S.N.#1 | Rohde & Schwarz | ENV216 | 102834 | Jul.01,22 | 1 Year |
| 4. | L.I.S.N.#2 | Kyoritsu | KNW-407 | 8-1636-1 | Apr.01,23 | 1 Year |
| 5. | RF Cable | Eastsheep | RG223 | 190425 | Oct.09,22 | 1 Year |
| 6. | Terminator | Hubersuhner | 50Ω | No.4 | Apr.02,23 | 1 Year |
| 7. | Test Software | AUDIX | e3 | 210616 | N/A | N/A |
| Note: N/A means Not applicable. | | | | | | |

## 3.2.Block Diagram of Test Setup




## 3.3.Power Line Conducted Emission Class B Limits

| Frequency | Maximum RF Line Voltage | |
|---|---|---|
| | Quasi-Peak Level dB(μV) | Average Level dB(μV) |
| 150kHz ~ 500kHz | 66 ~ 56* | 56 ~ 46* |
| 500kHz ~ 5MHz | 56 | 46 |
| 5MHz ~ 30MHz | 60 | 50 |

Notes: 1. * Decreasing linearly with logarithm of frequency.
2. The lower limits shall apply at the transition frequencies.
3. Emission Level (dBμV) = Factor (L.I.S.N.) (dB) + Cable Loss (dB)+Reading (Receiver) (dBμV)

## 3.4. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N. #2). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 on conducted Emission test.

The bandwidth of the (R&S ESCI) was set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test results are recorded in Section 3.5.

## 3.5. Conducted Disturbance at Mains Terminals Test Results

**PASS.** **(**All emissions not reported below are too low against the prescribed limits.)

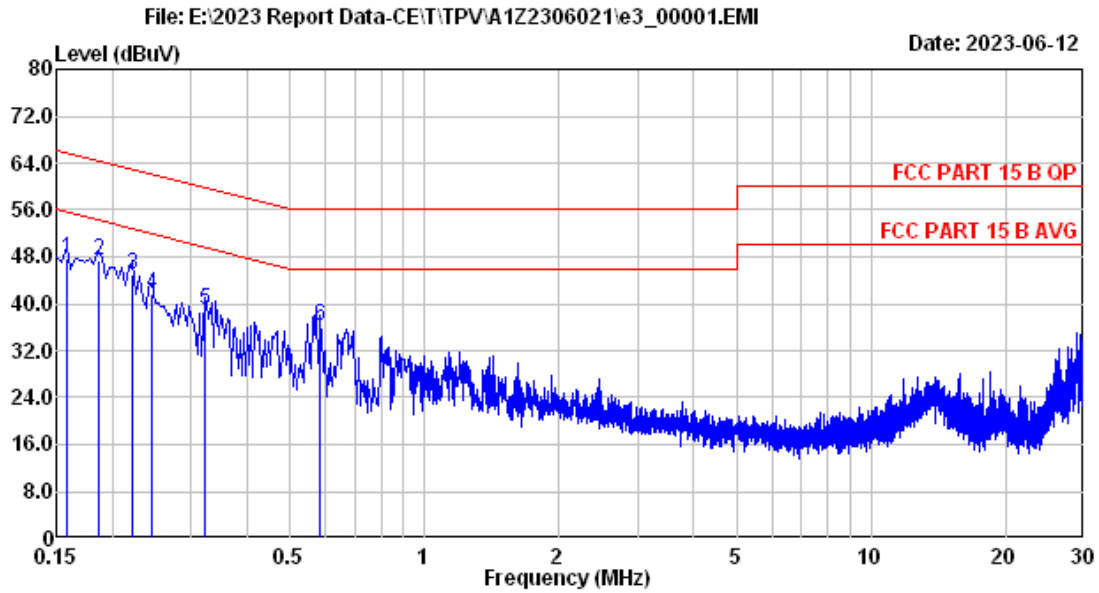
**EUT: OLED Monitor** **Model No. : AG456UCZD**

The EUT with following test modes were pre-tested:

| No. | Test Mode | Input Port | Cable Length | Resolution & Frequency |
|---|---|---|---|---|
| 1. | PC Mode | HDMI 1/2 | 1.8m | 640*480@60Hz |
| 2. | | | | 1280*1024@75Hz |
| 3. | | | | 3440*1440@100Hz |
| 4. | | HDMI 1 | 1.5m | 3440*1440@100Hz |
| 5. | | Type C | 1.8m | 640*480@60Hz |
| | | | | 1280*1024@75Hz |
| | | | | 3440*1440@240Hz |
| 6. | | DP | 1.8m | 640*480@60Hz |
| 7. | | | | 1280*1024@75Hz |
| 8. | | | | 3440*1440@240Hz |
| 9. | PIP Mode | HDMI+DP | 1.8m | 3440*1440@100Hz |
| 10. | PBP Mode | HDMI+DP | 1.8m | 1720*1440@60Hz |
| 11. | DVD Mode | HDMI 1/2 | 1.8m | Color Bar |

The result of worst test mode is presented in the report as below and the test data are listed in next pages.

| No. | Test Mode | Cable Length | Input Port | Resolution & Frequency | Reference Test Data No. | |
|---|---|---|---|---|---|---|
| | | | | | Line | Neutral |
| 1. | PC Mode | 1.8m | HDMI 1 | 3440*1440@100Hz | #1 | #2 |

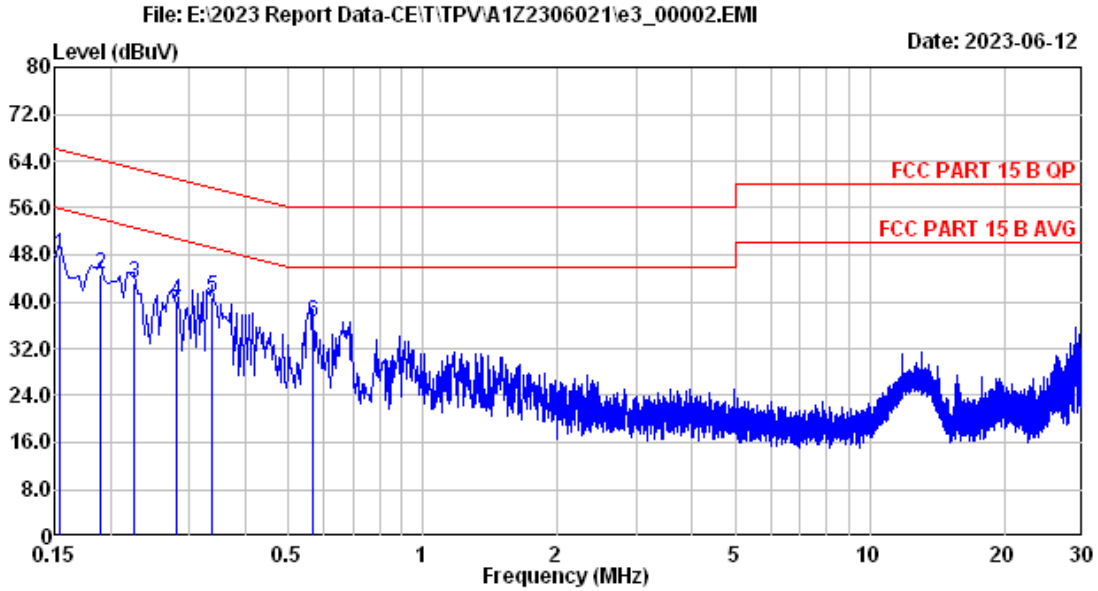



Site no :2# Conduction
Dis./Lisn :2022 ENV216 0.15-30M-L
Limit :FCC PART 15 B QP
Env./Ins. :23.3*C/46%
EUT :M/N:AG456UCZD
Power Rating :AC 120V/60Hz
Test Mode :HDMI1:3440*1440@100Hz
Line:1.8m

Data No :1
LISN phase:
Pressure :101.5kPa
Engineer :Fire

| No | Freq (MHz) | LISN Factor (dB) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.158 | 9.40 | 0.02 | 38.36 | 47.78 | 65.57 | 17.79 | QP |
| 2 | 0.186 | 9.40 | 0.02 | 37.87 | 47.29 | 64.21 | 16.92 | QP |
| 3 | 0.222 | 9.40 | 0.02 | 35.64 | 45.06 | 62.74 | 17.68 | QP |
| 4 | 0.246 | 9.40 | 0.02 | 32.14 | 41.56 | 61.89 | 20.33 | QP |
| 5 | 0.322 | 9.40 | 0.02 | 29.49 | 38.91 | 59.66 | 20.75 | QP |
| 6 | 0.582 | 9.40 | 0.03 | 26.72 | 36.15 | 56.00 | 19.85 | QP |

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.




Site no :2# Conduction
Dis./Lisn :2022 ENV216 0.15-30M-N
Limit :FCC PART 15 B QP
Env./Ins. :23.3*C/46%
EUT :M/N:AG456UCZD
Power Rating :AC 120V/60Hz
Test Mode :HDMI1:3440*1440@100Hz
Line:1.8m

Data No :2
LISN phase:
Pressure :101.5kPa
Engineer :Fire

| No | Freq (MHz) | LISN Factor (dB) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.154 | 9.50 | 0.02 | 38.60 | 48.12 | 65.78 | 17.66 | QP |
| 2 | 0.190 | 9.50 | 0.02 | 35.16 | 44.68 | 64.04 | 19.36 | QP |
| 3 | 0.226 | 9.50 | 0.02 | 33.53 | 43.05 | 62.60 | 19.55 | QP |
| 4 | 0.282 | 9.50 | 0.02 | 30.52 | 40.04 | 60.76 | 20.72 | QP |
| 5 | 0.338 | 9.50 | 0.03 | 31.29 | 40.82 | 59.25 | 18.43 | QP |
| 6 | 0.570 | 9.50 | 0.03 | 27.11 | 36.64 | 56.00 | 19.36 | QP |

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

# 4. RADIATED EMISSION TEST

## 4.1. Test Equipments

### 4.1.1.For frequency range 30MHz~1000MHz (In 10m Anechoic Chamber)

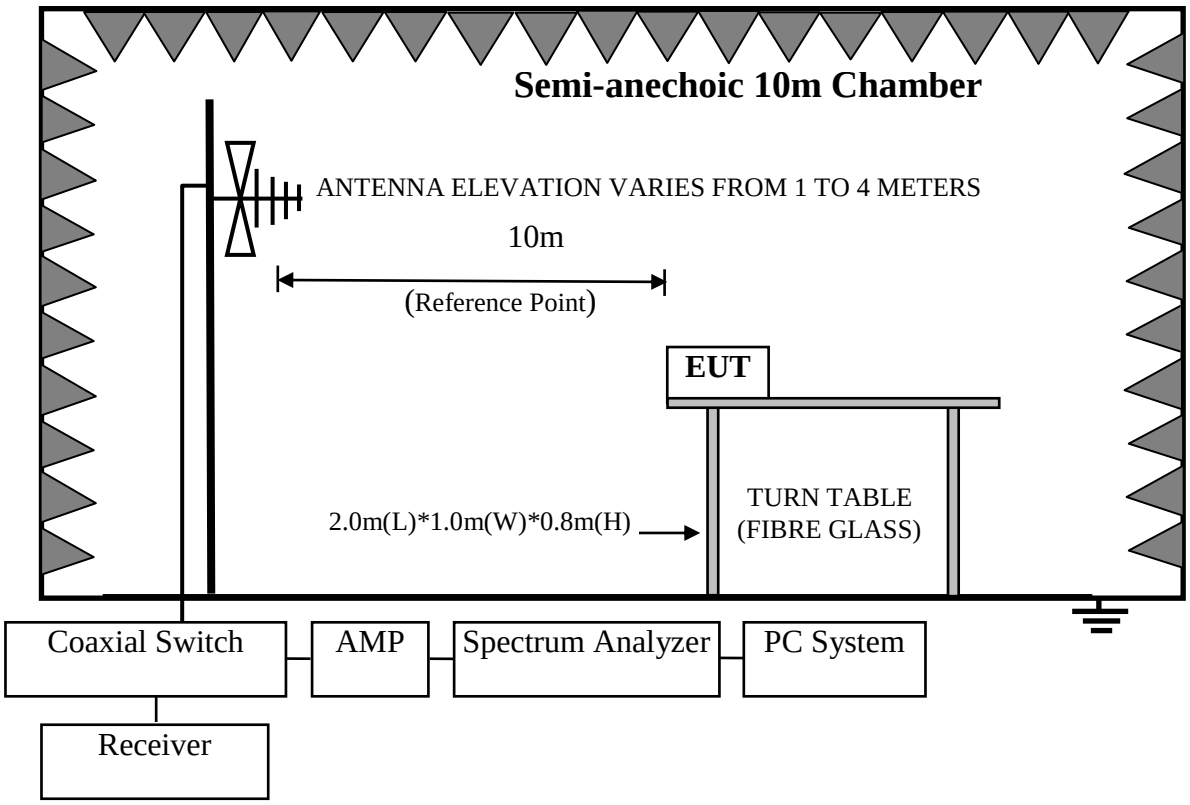
| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | 10m Chamber(NSA) | AUDIX | N/A | N/A | Aug.12,22 | 5 Year |
| 2. | 10m Chamber(SE) | AUDIX | N/A | N/A | Sep.16,22 | 5 Year |
| 3. | Signal Analyzer | Rohde & Schwarz | FSV30 | 103669 | Oct.09,22 | 1 Year |
| 4. | Signal Analyzer | Rohde & Schwarz | FSV30 | 103670 | Jul.08,22 | 1 Year |
| 5. | EMI Test Receiver | Rohde & Schwarz | ESR3 | 102891 | Oct.10,22 | 1 Year |
| 6. | Amplifier | EMCI | EMC9135 | 980348 | Feb.23,23 | 1 Year |
| 7. | Amplifier | EMCI | EMC9135 | 980347 | Apr.02,23 | 1 Year |
| 8. | Tri-log-Broadband Antenna | SCHWARZBECK | VULB 9168 | 429 | Sep.19,22 | 1 Year |
| 9. | Tri-log-Broadband Antenna | SCHWARZBECK | VULB 9168 | 01313 | Aug.04,22 | 1 Year |
| 10. | RF Cable | SPUMA | CFD400NL-LW | NO.4 | Apr.02,23 | 1 Year |
| 11. | RF Cable | SPUMA | CFD400-NM-NM | 160727+160728 | Apr.02,23 | 1 Year |
| 12. | Coaxial Switch | Anritsu | MP59B | 6201397220 | Apr.02,23 | 1 Year |
| 13. | Coaxial Switch | Anritsu | MP59B | 6201397221 | Apr.02,23 | 1 Year |
| 14. | Coaxial Switch | Anritsu | MP59B | 6201397224 | Apr.02,23 | 1 Year |
| 15. | Test Software | AUDIX | e3 | 210616 | N/A | N/A |
| Note: N/A means Not applicable. | | | | | | |

### 4.1.2.For frequency range above 1GHz (In 10m Anechoic Chamber)

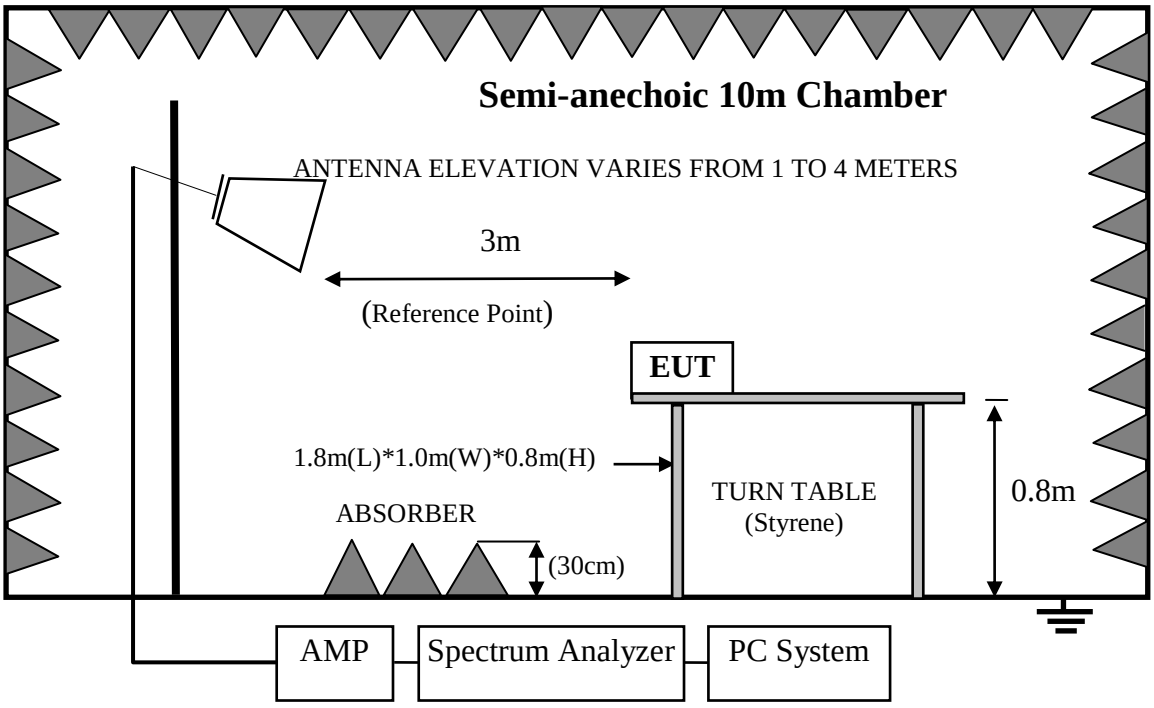
| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|---|---|---|---|---|---|---|
| 1. | 10m Chamber(Svswr) | AUDIX | N/A | N/A | Aug.08,22 | 5 Year |
| 2. | 10m Chamber(SE) | AUDIX | N/A | N/A | Sep.16,22 | 5 Year |
| 3. | Signal Analyzer | Rohde & Schwarz | FSV30 | 103669 | Oct.09,22 | 1 Year |
| 4. | Horn Antenna | ETS | 3117 | 00218552 | Jan.29,23 | 1 Year |
| 5. | Amplifier | KEYSIGHT | 83017A | 39500711 | Apr.02,23 | 1 Year |
| 6. | RF Cable | EMCI | EMC104-SM-SM-15000 | 190408 | Apr.02,23 | 1 Year |
| 7. | Test Software | AUDIX | e3 | 210616 | N/A | N/A |
| Note: N/A means Not applicable. | | | | | | |

## 4.2. Block Diagram of Test Setup

### 4.2.1.Test Setup Diagram for 30MHz~1000MHz (In 10m Anechoic Chamber)




### 4.2.2.For frequency range above 1GHz (In 10m Anechoic Chamber)



## 4.3. Radiated Emission Limits

All emanations from a Class B computing devices or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FCC §15.109/CISPR 22, Class B

| Frequency (MHz) | Distance (Meters) | Field strengths limits (dBμV/m) |
|---|---|---|
| 30 ~ 230 | 10 | 30 |
| 230~1000 | 10 | 37 |
| Above 1000 | 3 | 74(Peak) 54(Average) |

Notes: (1) Emission Level (dBμV/m) = Reading (Receiver) (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB)
Emission Level (dBμV/m) = Reading (Spectrum) (dBμV) + Antenna Factor (dB/m) – Amp Factor (dB) + Cable Loss (dB)(above 1000MHz)
(2) The lower limits shall apply at the transition frequencies.

## 4.4. Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 10m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 on radiated emission test.

The bandwidth setting on the test receiver is 120kHz.

The resolution bandwidth of the Signal Analyzer was set at 1MHz. (For above 1GHz)

The frequency range from 30MHz to 1000MHz was pre-scanned with a peak detector and all final readings of measurement from Test Receiver are Quasi-Peak values.

The frequency range from 1GHz to 18GHz was checked and all final readings of measurement were with Peak and Average detector, measurement distance was 10m at semi-anechoic chamber. the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. The portion of the test volume that was obstructed by absorber placed on the floor (30cm maximum).

Finally, selected operating situations at Anechoic Chamber measurement, all the test results are listed in section 4.5.

## 4.5. Radiated Disturbance Test Results

**PASS.** (All emissions not reported below are too low against the prescribed limits.)

EUT: OLED Monitor Model No. : AG456UCZD

**For frequency range 30MHz~1000MHz**

The EUT with following test modes were pre-tested:

| No. | Test Mode | Input Port | Cable Length | Resolution & Frequency |
|---|---|---|---|---|
| 1. | PC Mode | HDMI 1/2 | 1.8m | 640*480@60Hz |
| 2. | | | | 1280*1024@75Hz |
| 3. | | | | 3440*1440@100Hz |
| 4. | | HDMI 1 | 1.5m | 3440*1440@100Hz |
| 5. | | Type C | 1.8m | 640*480@60Hz |
| | | | | 1280*1024@75Hz |
| | | | | 3440*1440@240Hz |
| 6. | | DP | 1.8m | 640*480@60Hz |
| 7. | | | | 1280*1024@75Hz |
| 8. | | | | 3440*1440@240Hz |
| 9. | PIP Mode | HDMI+DP | 1.8m | 3440*1440@100Hz |
| 10. | PBP Mode | HDMI+DP | 1.8m | 1720*1440@60Hz |
| 11. | R-Load | Type C | --- | 20V/4.5A |
| 12. | DVD Mode | HDMI 1/2 | 1.8m | Color Bar |

The result of worst test mode is presented in the report as below and the test data are listed in next pages.

| No. | Test Mode | Input Port | Cable Length | Resolution & Frequency | Reference Test Data No. | |
|---|---|---|---|---|---|---|
| | | | | | Horizontal | Vertical |
| 1. | PC Mode | HDMI 1 | 1.8m | 3440*1440@100Hz | #6 | #5 |

**For frequency range 1GHz~18GHz**

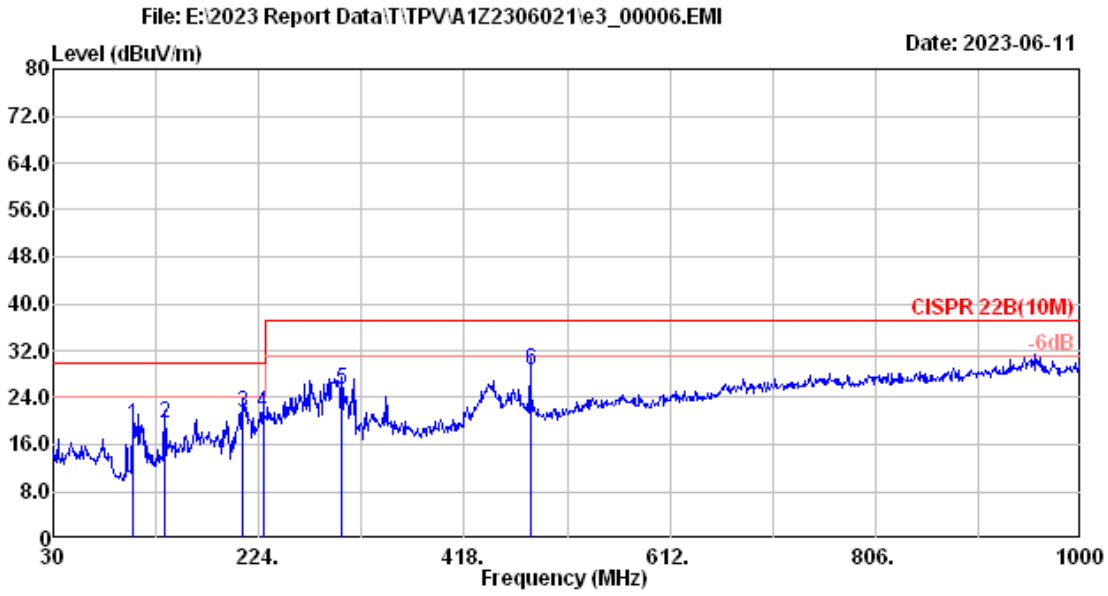
The EUT with below test mode were measured within Anechoic Chamber and the test results listed in next pages.

The EUT with following test modes were pre-tested:.

| No. | Test Mode | Input Port | Cable Length | Resolution & Frequency |
|---|---|---|---|---|
| 1. | PC Mode | HDMI 1/2 | 1.8m | 1280*1024@75Hz |
| 2. | | | | 3440*1440@100Hz |
| 3. | | HDMI 1 | 1.5m | 3440*1440@100Hz |
| 4. | | Type C | 1.8m | 1280*1024@75Hz |
| | | | | 3440*1440@240Hz |
| 5. | | DP | 1.8m | 1280*1024@75Hz |
| 6. | | | | 3440*1440@240Hz |
| 7. | PIP Mode | HDMI+DP | 1.8m | 3440*1440@100Hz |
| 8. | PBP Mode | HDMI+DP | 1.8m | 1720*1440@60Hz |
| 9. | R-Load | Type C | --- | 20V/4.5A |
| 10. | DVD Mode | HDMI 1/2 | 1.8m | Color Bar |

The result of worst test mode is presented in the report as below and the test data are listed in next pages.

| No. | Test Mode | Input Port | Cable Length | Resolution & Frequency | Reference Test Data No. | |
|---|---|---|---|---|---|---|
| | | | | | Horizontal | Vertical |
| 1. | PC Mode | HDMI 1 | 1.8m | 3440*1440@100Hz | #10 | #9 |




Site no. : 10m Chamber
Dis. / Ant. : 10m 2022 VULB9168-01313
Limit : CISPR 22B(10M)
Env. / Ins. : 22.9*C/50%
EUT : M/N:AG456UCZD
Power rating : AC 120V/60Hz
Test Mode : HDMI1:3440*1440@100Hz
Line:1.8m

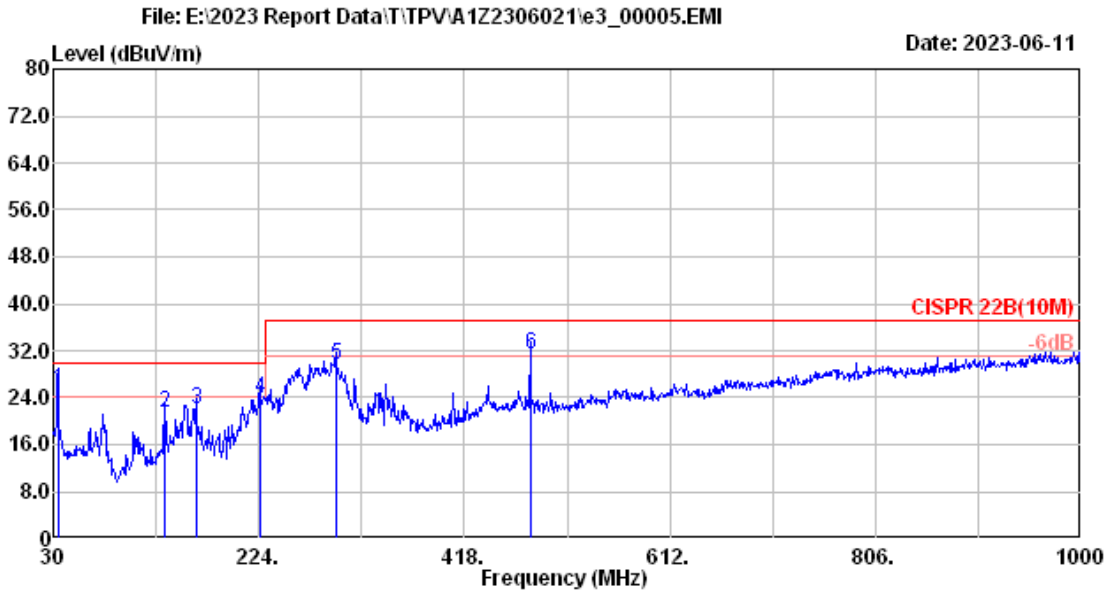
Data no. : 6
Ant. pol. : Horizontal
Pressure :101.5kPa
Engineer : Hongjie

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 105.660 | 15.49 | 1.03 | 2.93 | 19.45 | 30.00 | 10.55 | QP |
| 2 | 135.730 | 18.53 | 1.19 | 0.02 | 19.74 | 30.00 | 10.26 | QP |
| 3 | 209.450 | 16.50 | 1.57 | 3.36 | 21.43 | 30.00 | 8.57 | QP |
| 4 | 227.880 | 17.03 | 1.65 | 2.67 | 21.35 | 30.00 | 8.65 | QP |
| 5 | 301.600 | 19.23 | 1.98 | 4.30 | 25.51 | 37.00 | 11.49 | QP |
| 6 | 480.080 | 23.30 | 2.87 | 2.55 | 28.72 | 37.00 | 8.28 | QP* |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

2. The worst emission was detected at 480.080MHz with corrected signal level of 28.72dBµV/m (Antenna height 1.89m; Turntable degree 237°).

3. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

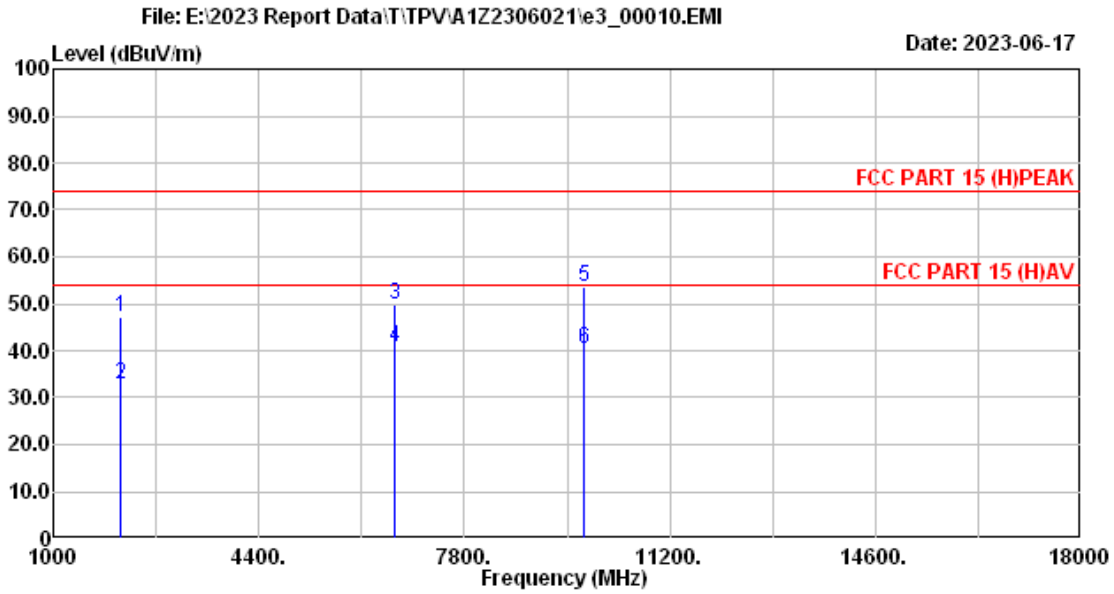



Site no. : 10m Chamber
Dis. / Ant. : 10m 2022 VULB9168-429
Limit : CISPR 22B(10M)
Env. / Ins. : 22.9*C/50%
EUT : M/N:AG456UCZD
Power rating : AC 120V/60Hz
Test Mode : HDMI1:3440*1440@100Hz
Line:1.8m

Data no. : 5
Ant. pol. : Vertical
Pressure :101.5kPa
Engineer : Hongjie

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 34.850 | 19.55 | 0.80 | 5.00 | 25.35 | 30.00 | 4.65 | QP* |
| 2 | 135.730 | 18.57 | 1.64 | 1.07 | 21.28 | 30.00 | 8.72 | QP |
| 3 | 164.830 | 18.96 | 1.80 | 1.18 | 21.94 | 30.00 | 8.06 | QP |
| 4 | 224.970 | 16.80 | 2.11 | 4.96 | 23.87 | 30.00 | 6.13 | QP |
| 5 | 296.750 | 19.21 | 2.48 | 7.98 | 29.67 | 37.00 | 7.33 | QP |
| 6 | 480.080 | 23.46 | 3.28 | 4.81 | 31.55 | 37.00 | 5.45 | QP |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The worst emission was detected at 34.850MHz with corrected signal level of 25.35dBµV/m (Antenna height 2.21m; Turntable degree 181°).
3. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

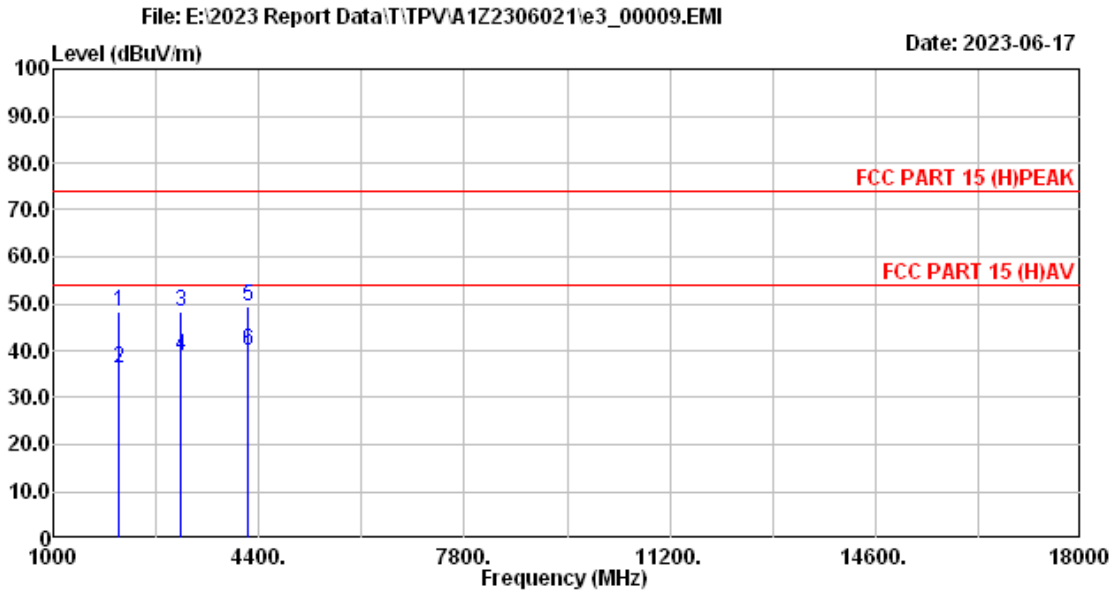



Site no. : 10m Chamber
Dis. / Ant. : 3m 2023 3117
Limit : FCC PART 15 (H)PEAK
Env. / Ins. : 23.5*C/51%
EUT : M/N:AG456UCZD
Power rating : AC 120V/60Hz
Test Mode : HDMI1:3440*1440@100Hz
Line:1.8m

Data no. : 10
Ant. pol. : Horizontal
Pressure : 101.6kPa
Engineer : Hongjie

| No. | Freq. (MHz) | ANT Factor (dB/m) | Cable Loss (dB) | AMP Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2105.000 | 31.69 | 6.13 | 31.88 | 41.31 | 47.25 | 74.00 | 26.75 | Peak |
| 2 | 2109.513 | 31.68 | 6.14 | 31.88 | 26.85 | 32.79 | 54.00 | 21.21 | Average |
| 3 | 6644.000 | 35.60 | 10.41 | 30.09 | 34.02 | 49.94 | 74.00 | 24.06 | Peak |
| 4 | 6646.218 | 35.60 | 10.41 | 30.09 | 24.85 | 40.77 | 54.00 | 13.23 | Average |
| 5 | 9789.000 | 36.89 | 13.38 | 29.78 | 33.15 | 53.64 | 74.00 | 20.36 | Peak |
| 6 | 9791.546 | 36.89 | 13.38 | 29.78 | 19.85 | 40.34 | 54.00 | 13.66 | Average |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor.




Site no. : 10m Chamber
Dis. / Ant. : 3m 2023 3117
Limit : FCC PART 15 (H)PEAK
Env. / Ins. : 23.5*C/51%
EUT : M/N:AG456UCZD
Power rating : AC 120V/60Hz
Test Mode : HDMI1:3440*1440@100Hz
Line:1.8m

Data no. : 9
Ant. pol. : Vertical
Pressure : 101.6kPa
Engineer : Hongjie

| No. | Freq. (MHz) | ANT Factor (dB/m) | Cable Loss (dB) | AMP Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2071.000 | 31.64 | 6.05 | 31.92 | 42.52 | 48.29 | 74.00 | 25.71 | Peak |
| 2 | 2072.513 | 31.65 | 6.05 | 31.92 | 30.61 | 36.39 | 54.00 | 17.61 | Average |
| 3 | 3108.000 | 33.48 | 8.52 | 30.85 | 37.02 | 48.17 | 74.00 | 25.83 | Peak |
| 4 | 3109.514 | 33.47 | 8.52 | 30.85 | 27.62 | 38.76 | 54.00 | 15.24 | Average |
| 5 | 4213.000 | 33.51 | 9.01 | 30.24 | 37.33 | 49.61 | 74.00 | 24.39 | Peak |
| 6 | 4216.216 | 33.52 | 9.01 | 30.24 | 27.61 | 39.90 | 54.00 | 14.10 | Average |

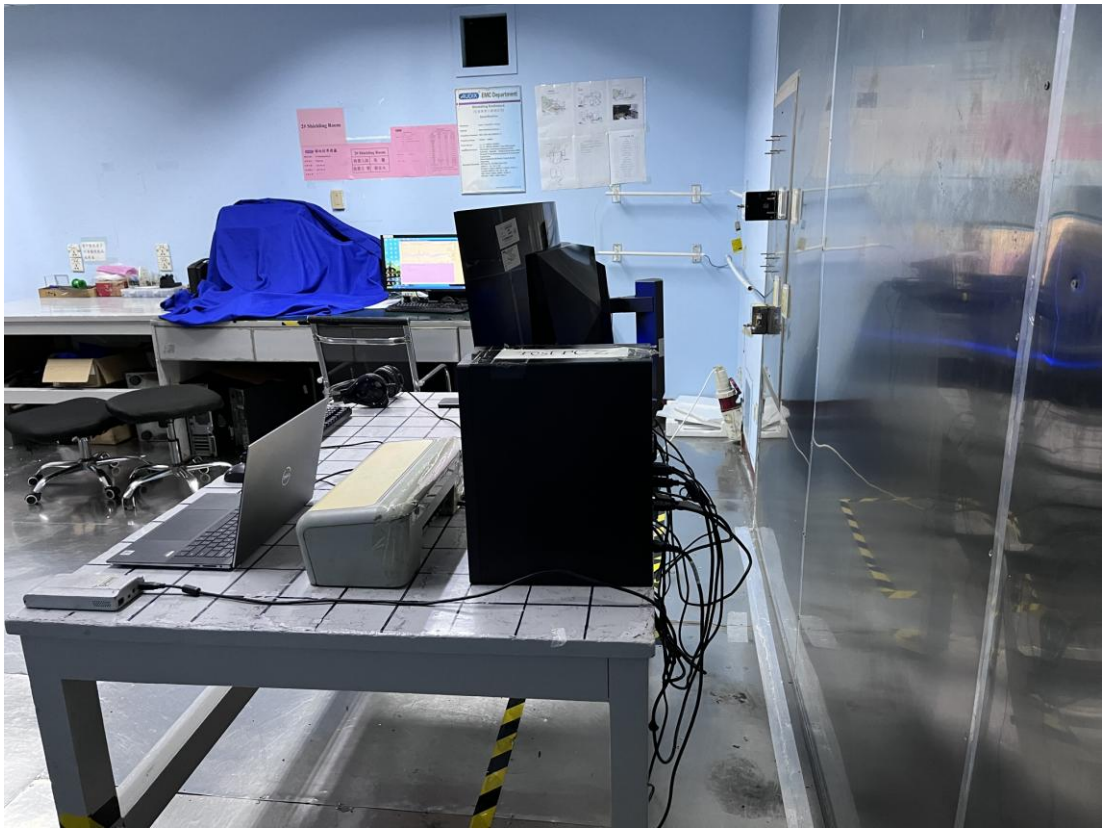
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor.

# 5. DEVIATION TO TEST SPECIFICATIONS

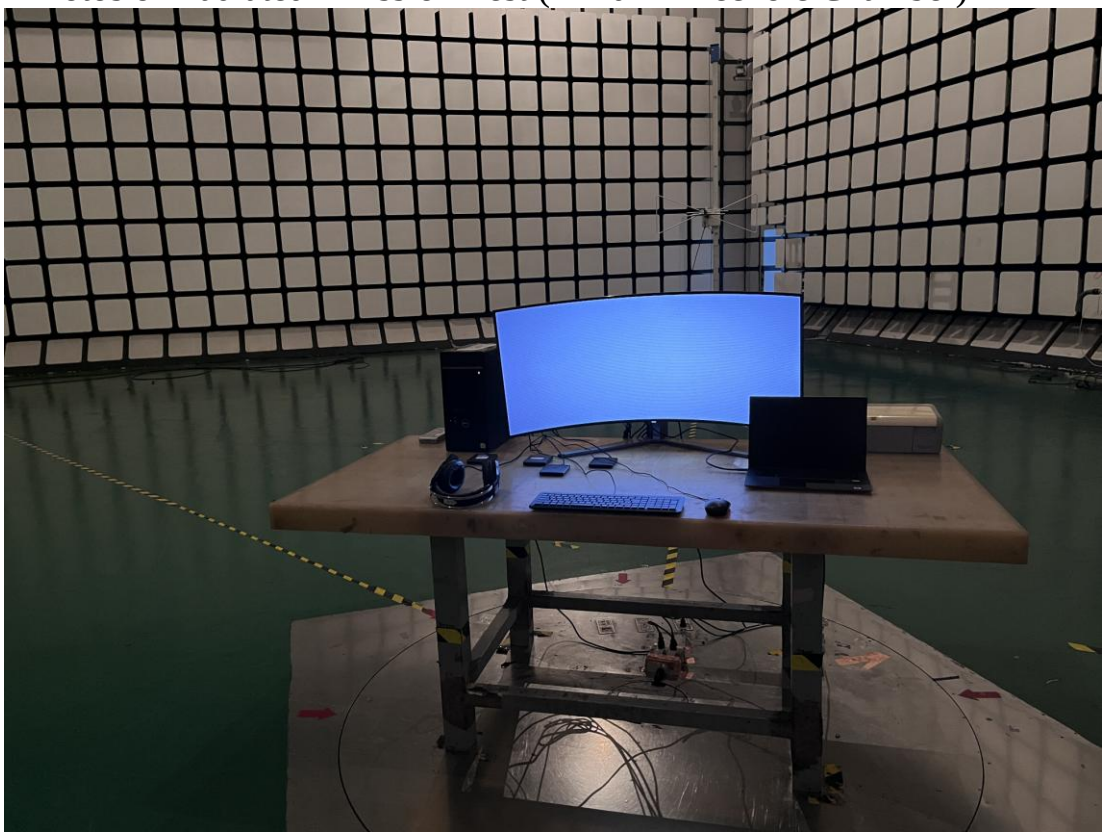
[NONE]

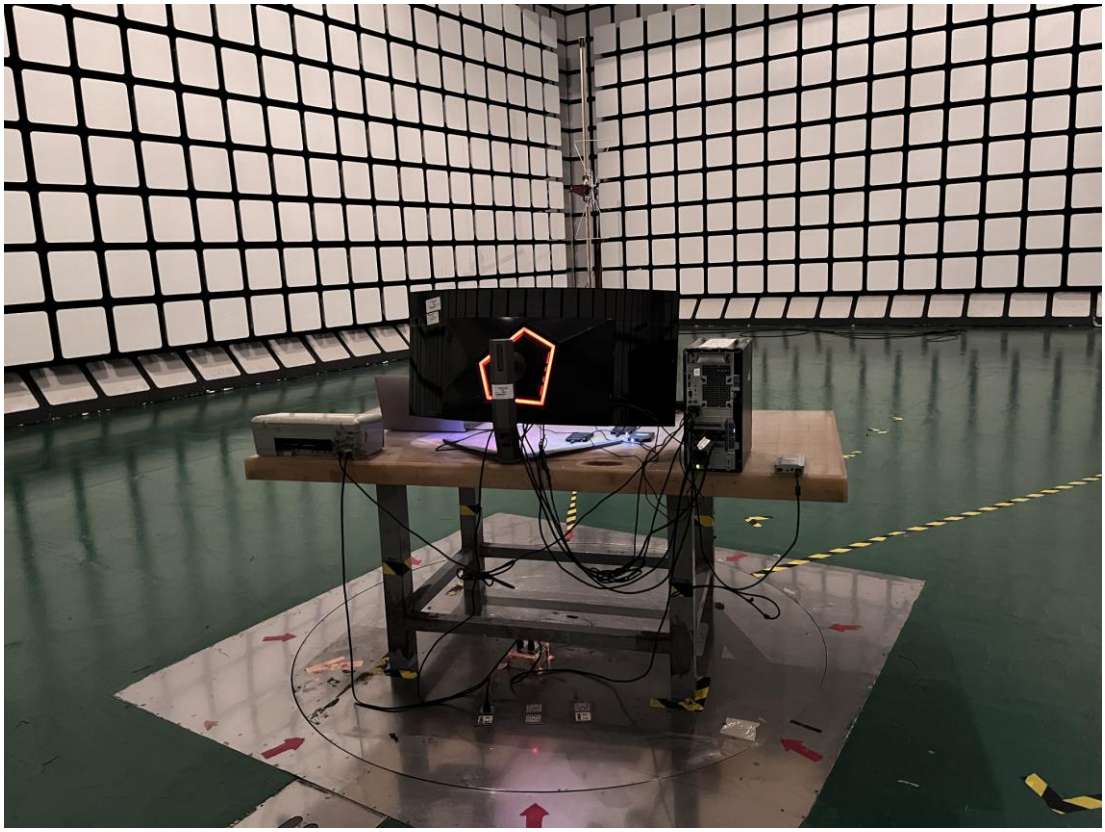
# 6. PHOTOGRAPH

## 6.1. Photos of Power Line Conducted Emission Test

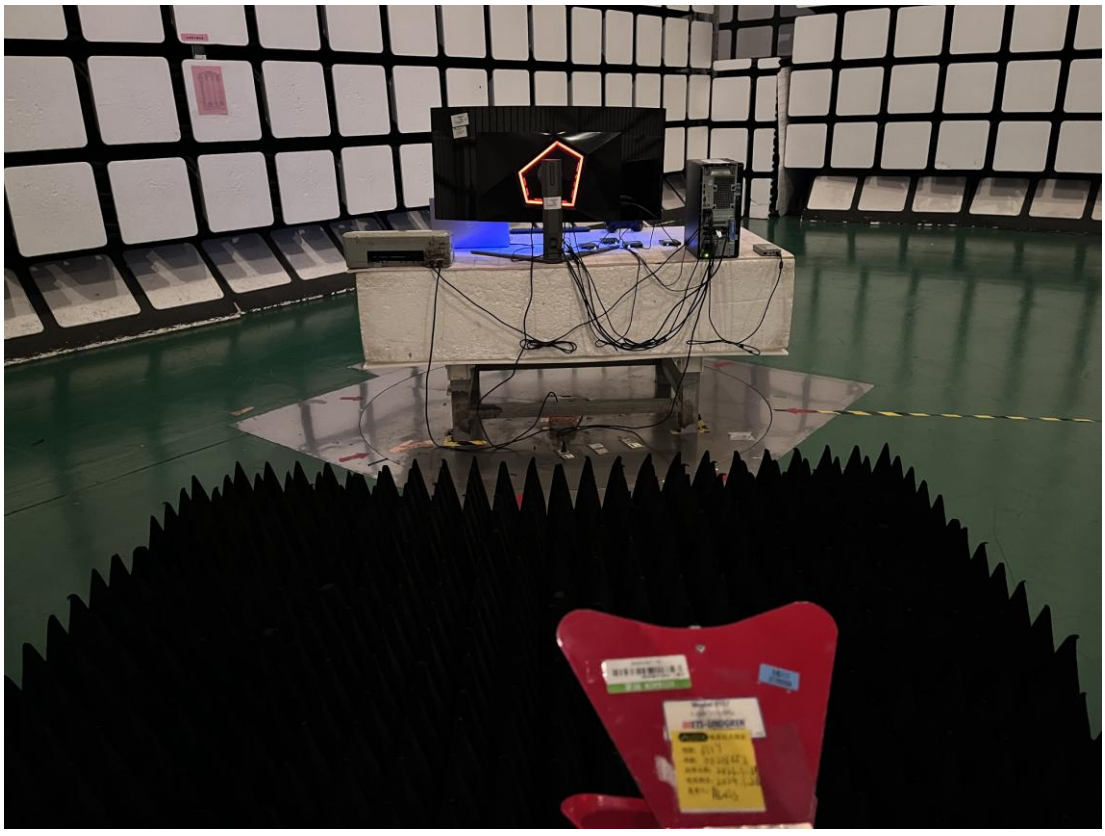


## 6.2. Photos of Radiated Emission Test (In 10m Anechoic Chamber)





(In 10m Anechoic Chamber Test 1GHz–18GHz)



**THE END**