

# **Antenna Test Report**

Report No.: AGC00469240801PA01

**PRODUCT DESIGNATION**: Wireless Headphone

**BRAND NAME** : N/A

MODEL NAME : LPT09, LPT07, LPT35

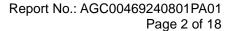
**APPLICANT** : Shenzhen Ktoxi Electronic Co., Ltd

**DATE OF ISSUE** : Sep. 02, 2024

**REPORT VERSION**: V1.0

## Attestation of Global Compliance (Shenzhen) Co., Ltd

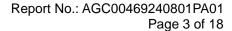






#### REPORT REVISE RECORD

| Report Version | Revise Time | Issued Date   | Valid Version | Notes           |
|----------------|-------------|---------------|---------------|-----------------|
| V1.0           | /           | Sep. 02, 2024 | Valid         | Initial release |





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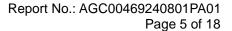
## 1. PRODUCT INFORMATON

| General information                        |   |  |  |  |
|--|---|--|--|--|
| Applicant                                  | Shenzhen Ktoxi Electronic Co., Ltd  |  |  |  |
| Address                                    | 3F, Building 3, 11 Dingzhen Road, Jiuwei, Jiuwei Community, Hangcheng Subdistrict, Baoan Dist. Shenzhen, Guangdong, China |  |  |  |
| Manufacturer                               | Shenzhen Ktoxi Electronic Co., Ltd  |  |  |  |
| Address                                    | 3F, Building 3, 11 Dingzhen Road, Jiuwei, Jiuwei Community, Hangcheng Subdistrict, Baoan Dist. Shenzhen, Guangdong, China |  |  |  |
| Factory                                    | Shenzhen Ktoxi Electronic Co., Ltd  |  |  |  |
| Address                                    | 3F, Building 3, 11 Dingzhen Road, Jiuwei, Jiuwei Community, Hangcheng Subdistrict, Baoan Dist. Shenzhen, Guangdong, China |  |  |  |
| Product Designation                        | Wireless Headphone  |  |  |  |
| Brand Name                                 | N/A   |  |  |  |
| Test Model                                 | LPT09   |  |  |  |
| Series Model                               | LPT07, LPT35  |  |  |  |
| Difference Description                     | All the same except the model name and color of appearance  |  |  |  |
| Date of receipt of test item Aug. 26, 2024 |   |  |  |  |
| Date of Test                               | Aug. 26, 2024~ Sep. 02, 2024  |  |  |  |
| Report Template                            | AGCRT-ER-PA/V1.0  |  |  |  |
| Technical information                      |   |  |  |  |
| Frequency Range                            | 2400-2500MHz  |  |  |  |
| Test Frequencies                           | 2400MHz, 2410MHz, 2420MHz, 2430MHz, 2440MHz, 2450MHz, 2460MHz, 2470MHz, 2480MHz, 2490MHz, 2500MHz                         |  |  |  |
| Antenna Type                               | PCB Antenna   |  |  |  |
| Dimensions                                 | 4mmx12mm  |  |  |  |
| Impedance                                  | 50 Ω  |  |  |  |
| Maximum test values                        | Gain: 0.802263dBi; Efficiency: 16.7752%; VSWR: 1.087:1  |  |  |  |

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd.

The test results of this report relate only to the tested sample identified in this report.

| Prepared By | Bibo Zhang                       |               |  |  |
|-------------|----------------------------------|---------------|--|--|
|             | Bibo Zhang<br>(Project Engineer) | Sep. 02, 2024 |  |  |
| Reviewed By | Calin Lin                        |               |  |  |
|             | Calvin Liu<br>(Reviewer)         | Sep. 02, 2024 |  |  |
| Approved By | Max Zhang                        |               |  |  |
|             | Max Zhang<br>Authorized Officer  | Sep. 02, 2024 |  |  |





## 2. TEST FACILITY

| Test Site | Attestation of Global Compliance (Shenzhen) Co., Ltd   |
|-----------|--|
| Location  | 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China |

#### 3. TEST EQUIPMENT LIST

| Equipment                        | Manufacturer | Model                  | Cal. Date     | Cal. Due      |
|----------------------------------|--------------|------------------------|---------------|---------------|
| ANTENNA<br>MEASUREMENT<br>SYSTEM | ETS-Lindgren | AMS-8600               | Nov. 28, 2023 | Nov. 27, 2024 |
| Network Analyzer                 | R&S          | ZVL-6                  | Sep. 21, 2023 | Sep. 20, 2024 |
| Test software                    | ETS-Lindgren | EMQuest<br>(Ver V1.12) | N/A           | N/A           |

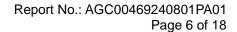
#### 4. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in measurement" (GUM) published by CISPR and ANSI.

- Uncertainty of VSWR, Uc = ±1.5dB
- Uncertainty of Gain, Uc = ±0.8dB

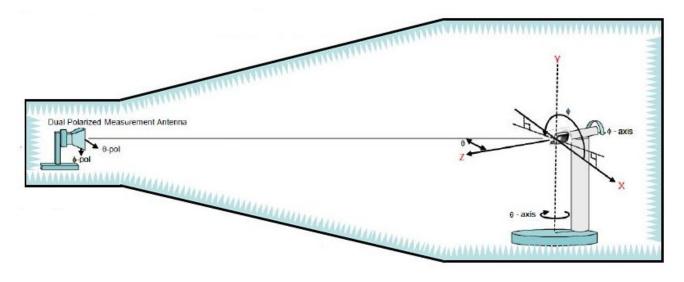
## **5. TEST SUMMARY LIST**

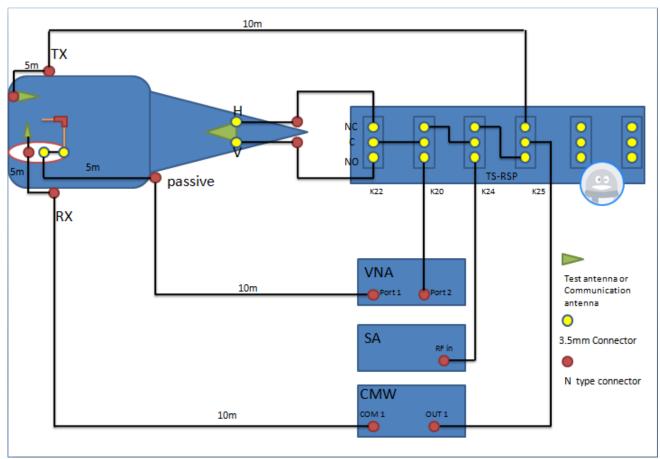
| NO. | Test item           | Remark |
|-----|---------------------|--------|
| 1   | VSWR                |        |
| 2   | Gain and efficiency |        |
| 3   | Radiation pattern   |        |





## 6. TEST SETUP

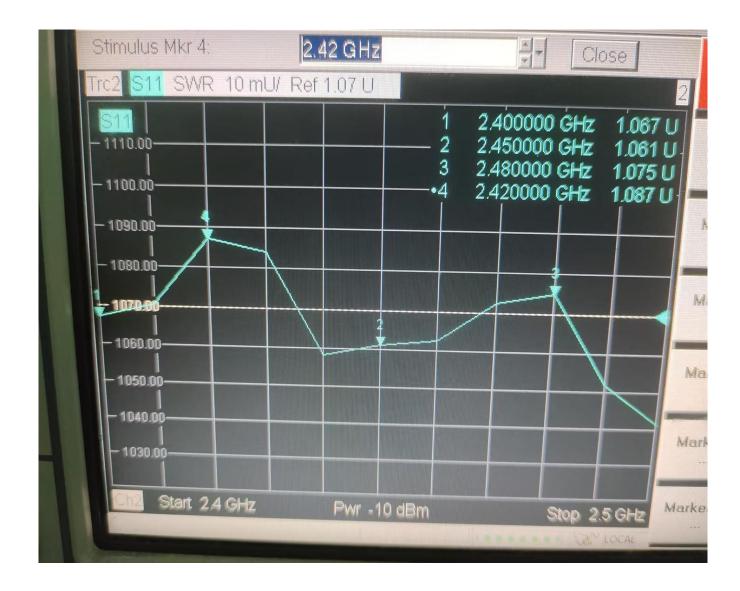


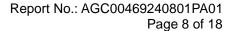




#### **7.1. VSWR**

| Frequency(MHz) | VSWR    |
|----------------|---------|
| 2400           | 1.067:1 |
| 2450           | 1.061:1 |
| 2480           | 1.075:1 |
| 2420           | 1.087:1 |

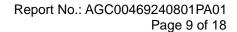






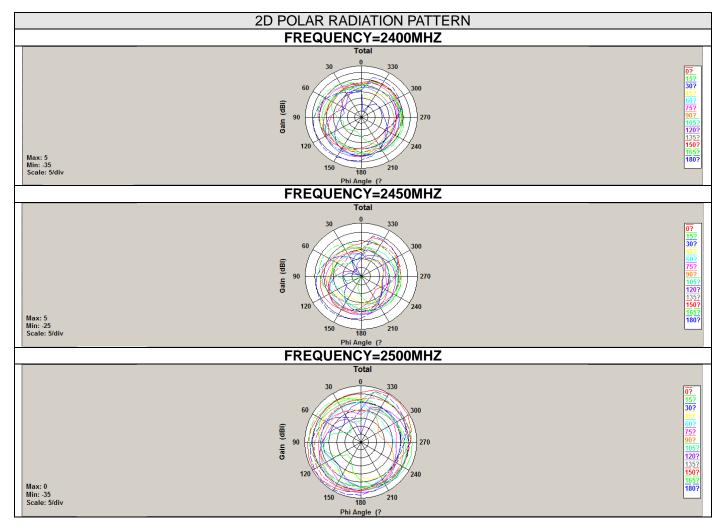
#### 7.2. GAIN AND EFFICIENCY

| Frequency(MHz) | Efficiency(dB) | Efficiency(%) | Gain(dBi) |
|----------------|----------------|---------------|-----------|
| 2400           | -7.83249       | 16.4722       | 0.787925  |
| 2410           | -7.85941       | 16.3704       | 0.802263  |
| 2420           | -7.96815       | 15.9656       | 0.677907  |
| 2430           | -7.92031       | 16.1424       | 0.714554  |
| 2440           | -7.78853       | 16.6398       | 0.779222  |
| 2450           | -7.75332       | 16.7752       | 0.76249   |
| 2460           | -7.84546       | 16.4231       | 0.515096  |
| 2470           | -8.03406       | 15.7251       | 0.0674462 |
| 2480           | -8.00748       | 15.8217       | -0.165825 |
| 2490           | -8.1944        | 15.1551       | -0.630044 |
| 2500           | -8.26129       | 14.9235       | -0.831768 |

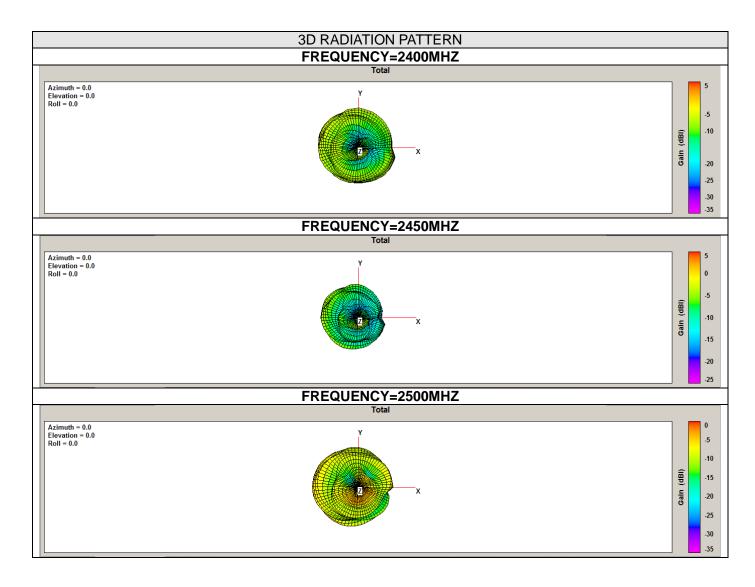


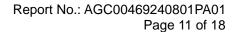


#### 7.3. RADIATION PATTERN



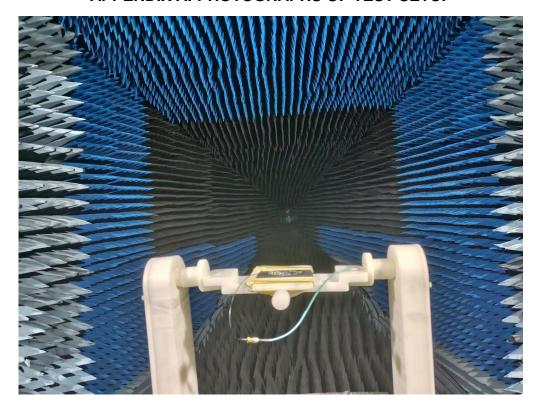


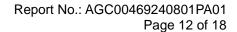






## **APPENDIX A: PHOTOGRAPHS OF TEST SETUP**







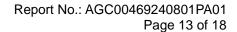
## **APPENDIX B: PHOTOGRAPHS OF EUT**

ALL VIEW OF EUT



TOP VIEW OF EUT





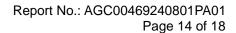


#### **BOTTOM VIEW OF EUT**



FRONT VIEW OF EUT





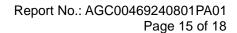


## **BACK VIEW OF EUT**



**LEFT VIEW OF EUT** 







#### **RIGHT VIEW OF EUT**

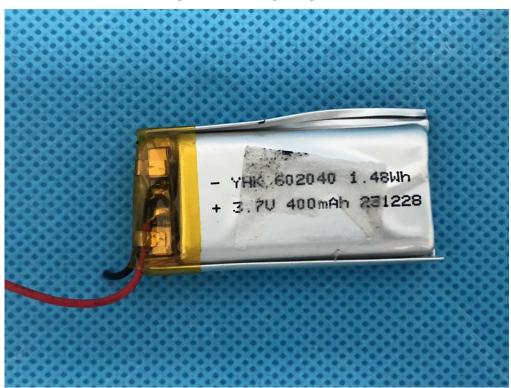


**OPEN VIEW OF EUT-1** 

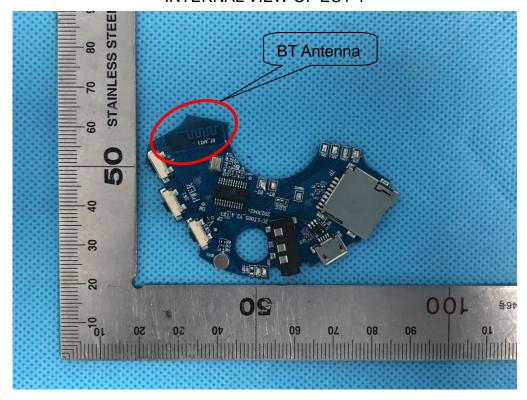


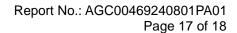


#### **OPEN VIEW OF EUT-2**



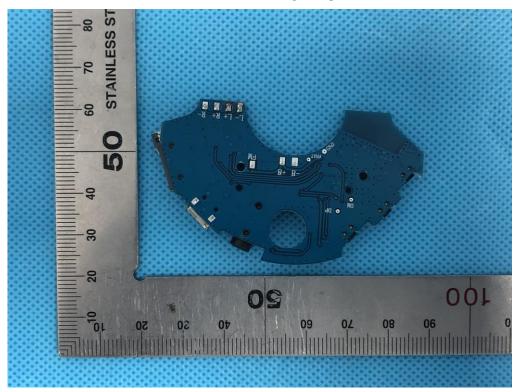
#### **INTERNAL VIEW OF EUT-1**



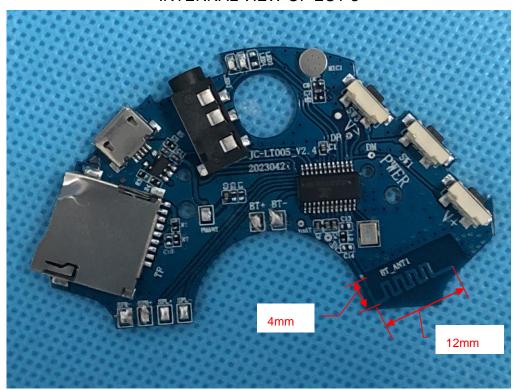




## **INTERNAL VIEW OF EUT-2**



**INTERNAL VIEW OF EUT-3** 





## **INTERNAL VIEW OF EUT-4**



**INTERNAL VIEW OF EUT-5** 



----END OF REPORT----

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- 9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.