# TEST REPORT

| | | |
|---|---|---|
| Applicant | : | ASA Electronics Shenzhen Limited |
| Address of Applicant | : | Room 503,5/F.,Unit A, Skyworth Building, Gaoxin Avenue.1.S., Nanshan District, Shen Zhen, 518057, China |
| Manufacturer | : | ASA Electronics, LLC. |
| Address of Manufacturer | : | 2602 Marina Drive, Elkhart, IN 46514 USA |
| Equipment under Test | : | Car audio player |
| Model No. | : | KH100 |
| Test Standard(s) | : | GB/T 9410-2008<br>ANSI/IEEE Std149-2021 |
| Report No. | : | DDT-RE25122329-2E01 |
| Issue Date | : | 2026/01/13 |
| Issued By | : | Guangdong Dongdian Testing Service Co., Ltd.<br>Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808 |

REPORT

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# Test Report Declare

| | | |
|---|---|---|
| **Manufacturer** | : | ASA Electronics, LLC. |
| **Address of Manufacturer** | : | 2602 Marina Drive, Elkhart, IN 46514 USA |
| **Equipment under Test** | : | Car audio player |
| **Model No.** | : | KH100 |

**Test Standard Used:**

GB/T 9410-2008
ANSI/IEEE Std149-2021

**We Declare:**

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

| | | | |
|---|---|---|---|
| **Report No.:** | DDT-RE25122329-2E01 | | |
| **Date of Receipt:** | 2025/12/17 | **Date of Test:** | 2025/12/17~2026/01/05 |

| Created: Ella Gong | Reviewed: Chen Ziqin | Approved: Damon Hu |
|---|---|---|
| Ella Gong | Chen Ziqin | GUANGDONG DONGDIAN TESTING SERVICE CO.,LTD. 广东东电检测技术有限公司 Certificate and Report Seal 检验检测专用章 |
| 2026/01/05 | 2026/01/13 | 2026/01/13 |

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

# Revision History

| Version | Revision Content | Issue Date | Approved |
|---|---|---|---|
| V0 | Initial issue | 2026/01/13 | Damon Hu |
| | | | |

# 1. General Test Information

## 1.1. Description of EUT

| | | |
|---|---|---|
| Product Name | : | Car audio player |
| Model Number | : | KH100 |
| Antenna Type | : | PCB Antenna |
| Frequency Range | : | 2400-2500MHz |

## 1.2. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, http://www.dgddt.com, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

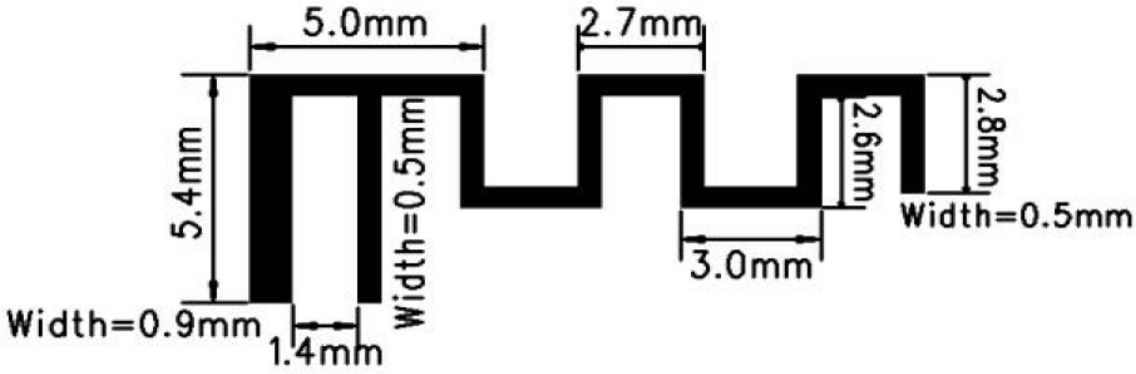
FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

## 2. Antenna Parameter

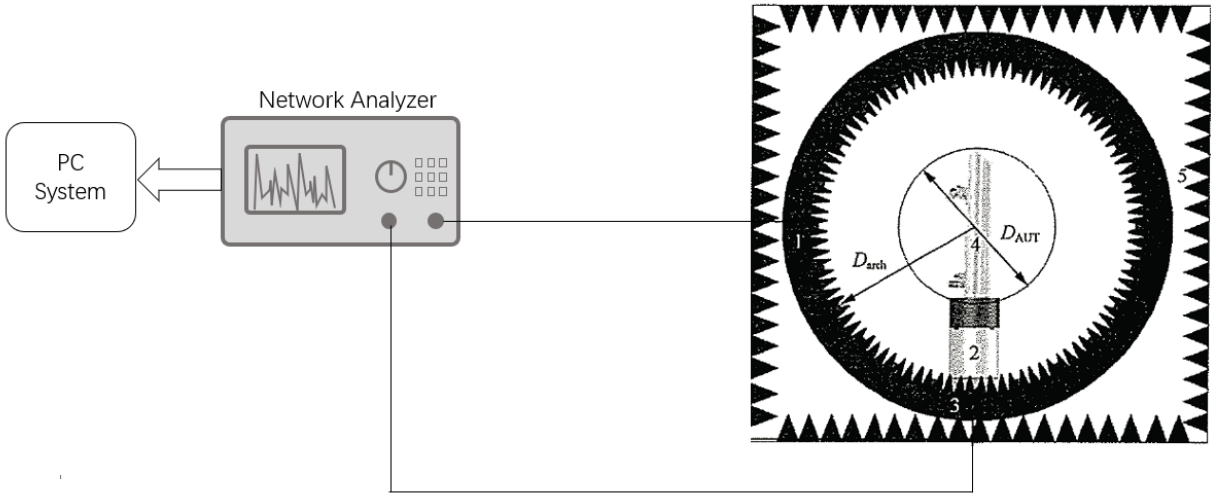


# 3. Antenna Gain Measurement

## 3.1. Test equipment

| Equipment | Manufacturer | Model No. | Serial No. | Cal Due To |
|---|---|---|---|---|
| ENA Network Analyzer | Agilent | E5071C | MY46900684 | 2026/03/28 |
| Software | SHENZHEN XINGHANG | XH.PassiveTest | V2.7.6 | N/A |
| Software | SHENZHEN XINGHANG | XHDP | V2.8.0 | N/A |

## 3.2. Block Diagram of Test Setup




## 3.3. Test procedure

(1) Set up the antenna to be measured. Set up the antenna and mark the cross reference line at the center of the antenna port surface to be measured.

(2) Connect the cable connector and adjust the downdip Angle (electrically tuned antenna).

(3) Open the test software, create the test project, and configure the test port.

(4) Use test software for automatic testing and save test data of electromagnetic field distribution.

(5) Change the port, downdip Angle, or test frequency (if necessary), and repeat steps (3) to (4) until all status data to be measured is collected.

(6) After near and far field exchange, the three-position spherical pattern of the antenna to be tested is obtained, and the Theta and Phi angles of the position where the maximum level of the three-position spherical pattern is located are found. The horizontal plane pattern curve of the antenna to be tested is obtained by cutting according to equal Theta Angle, and the vertical plane pattern of the antenna to be tested is cancelled by cutting according to equal Phi Angle. Then the radiation parameters of the horizontal plane and vertical plane pattern of the antenna to be measured are obtained by using the processing method similar to that of the far field.

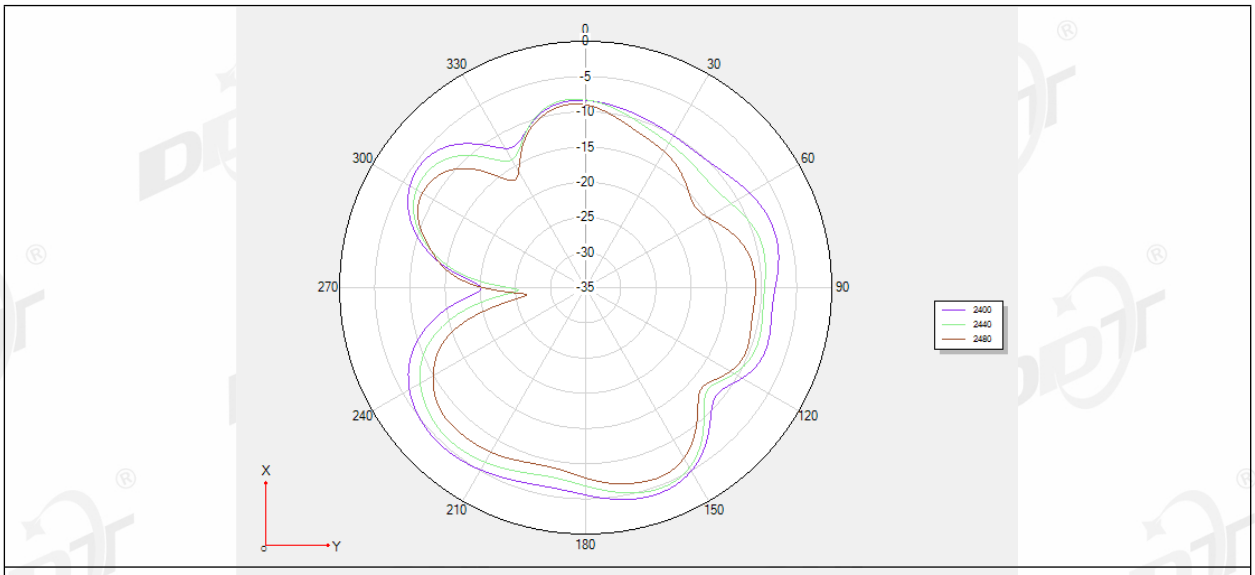
## 3.4. Test Data

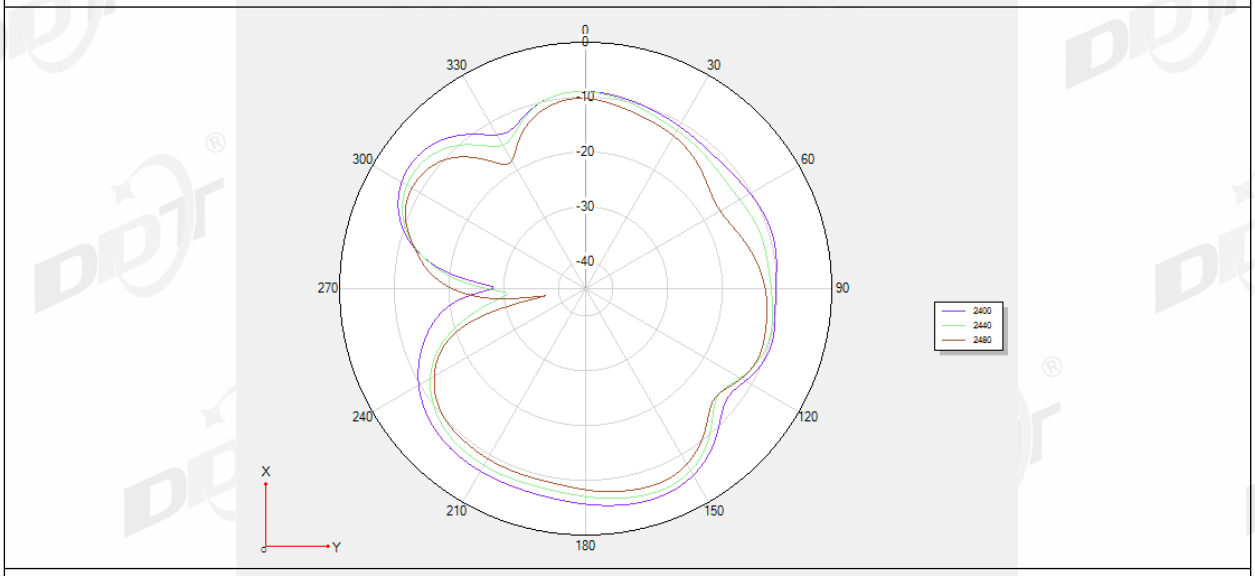
| | | | |
|---|---|---|---|
| Test Engineer: | Tyang | Test Site: | OTA chamber |
| Ambient Condition: | 23.8 ℃, 46.2%RH | Test Date: | 2025/12/30 - 2025/12/30 |
| Sample Number: | S25122329-005 | | |

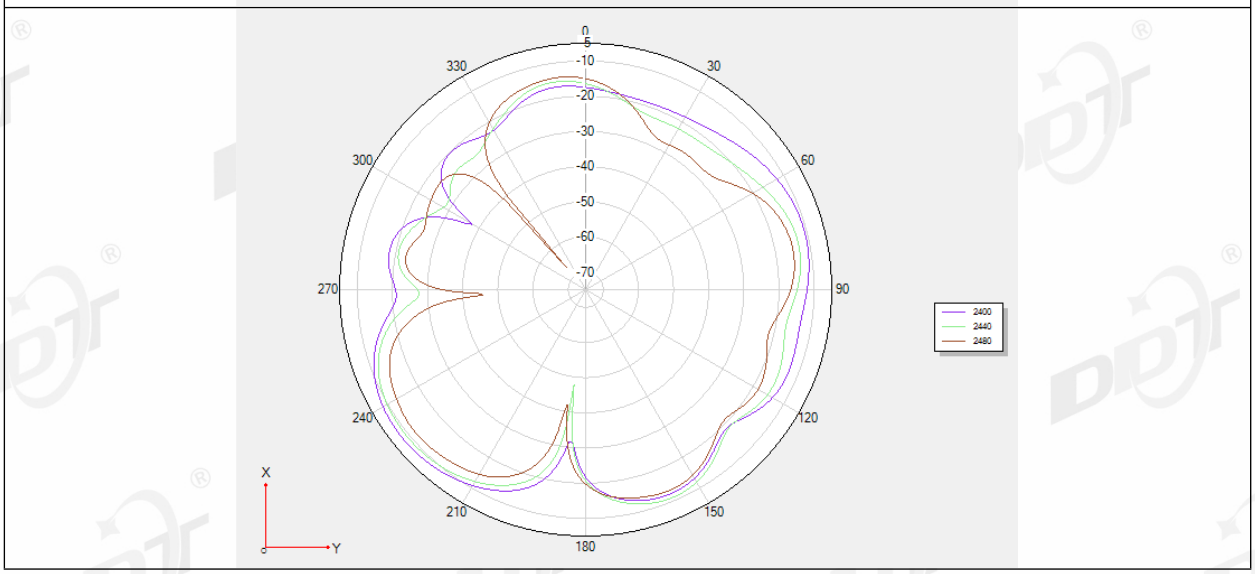
| Frequency [MHz] | Max Gain [dBi] | Avg Gain [dBi] |
|---|---|---|
| 2400 | -3.91 | -8.81 |
| 2410 | -4.58 | -9.67 |
| 2420 | -4.11 | -9.31 |
| 2430 | -4.54 | -9.91 |
| 2440 | -4.58 | -10 |
| 2450 | -5.32 | -10.77 |
| 2460 | -5.23 | -10.54 |
| 2470 | -6.03 | -11.38 |
| 2480 | -6.06 | -11.25 |
| 2490 | -7.51 | -12.73 |
| 2500 | -6.84 | -12.36 |

## 3.5. Radiation pattern

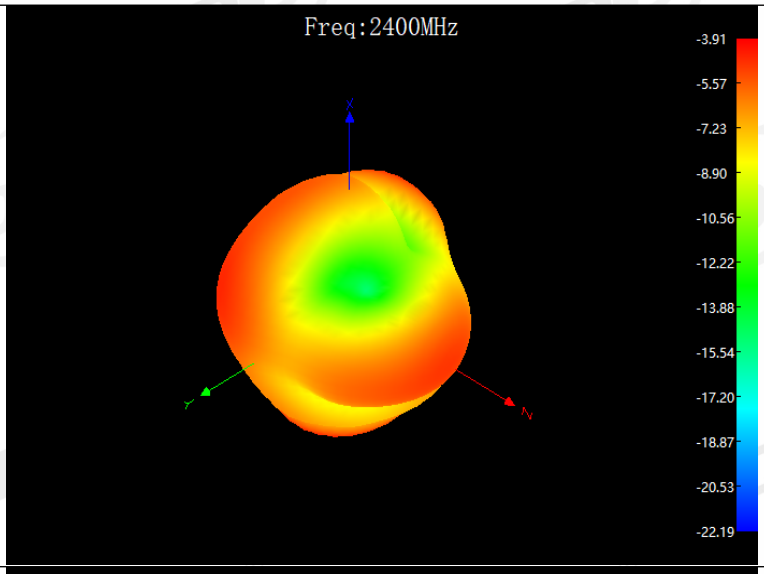
2-D Pattern Plots

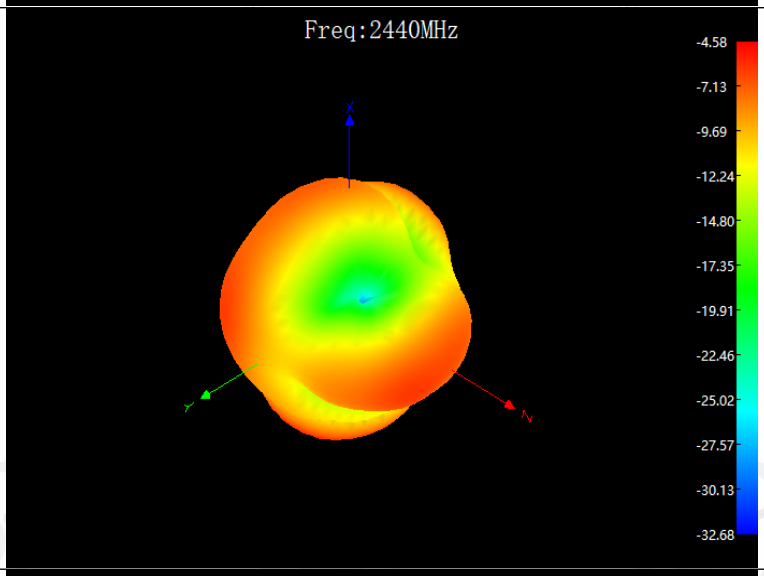


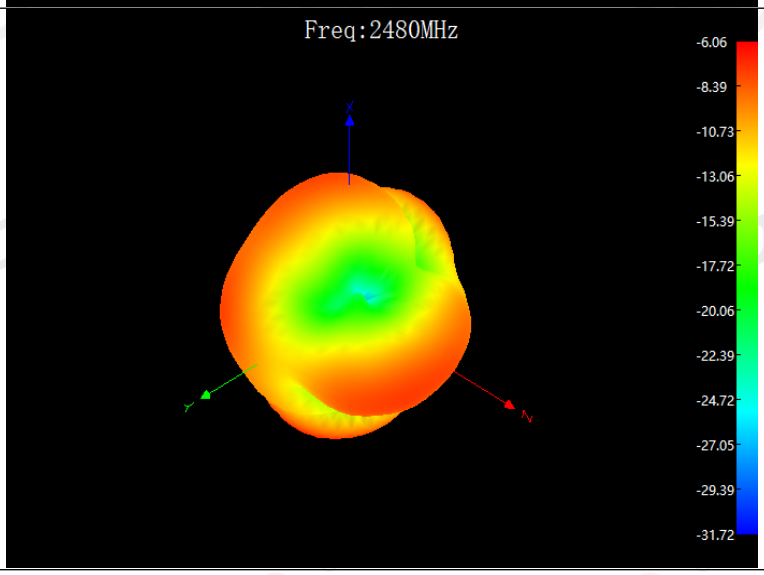



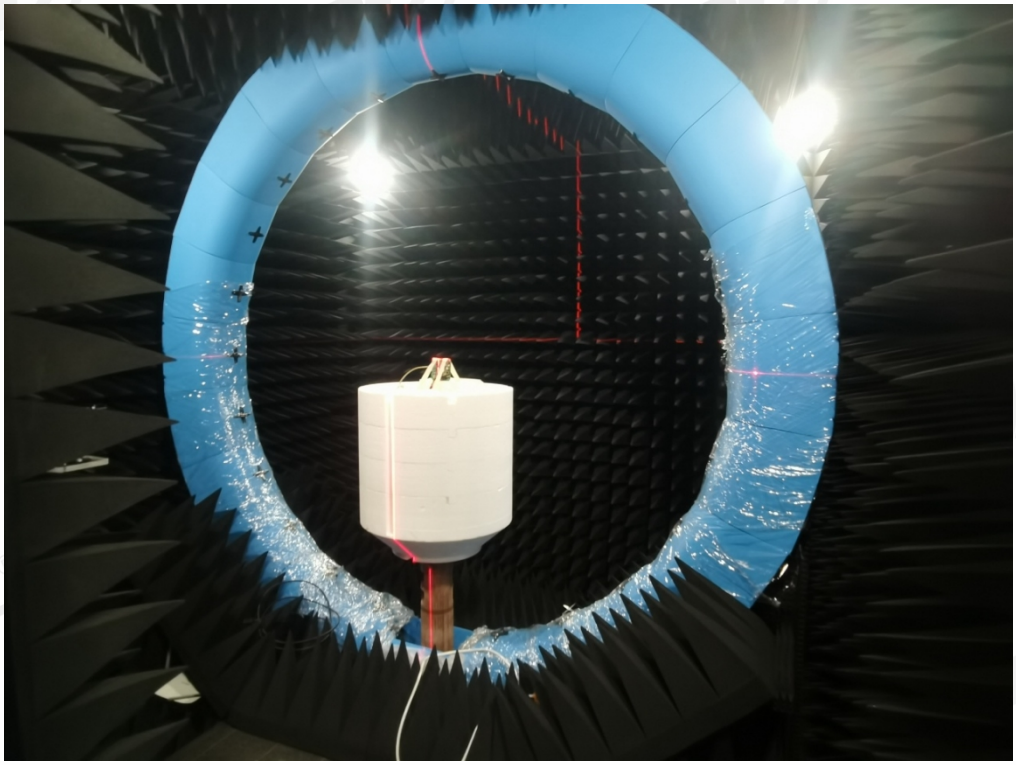
3-D Pattern Plots



# 4. Test Setup Photograph



----------End Report----------