



# TEST REPORT

**Report No.:** 20230517G04176X-W1

**Product Name:** WIFI Module Antenna

**Model No.:** GOC-RG440-WZ

**Applicant:** Shanghai Huace Navigation Technology.LTD.

**Address:** 577 Songying Road, Qingpu District, 201706 Shanghai, China

**Dates of Testing:** 05/12/2023 - 05/12/2023

**Issued by:** CCIC Southern Testing Co., Ltd.

**Lab Location:** Electronic Testing Building, No. 43 Shahe Road, Xili Street,  
Nanshan District, Shenzhen, Guangdong, China.

**Tel:** 86 755 26627338      **Fax:** 86 755 26627238

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### Test Report

**Product** .....: WIFI Module Antenna

**Brand Name** .....: **CHCN****AV**

**Trade Name** .....: **CHCN****AV**

**Applicant**.....: Shanghai Huace Navigation Technology.LTD.

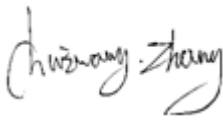
**Applicant Address**.....: 577 Songying Road, Qingpu District, 201706 Shanghai, China

**Manufacturer** .....: Shanghai Huace Navigation Technology.LTD.

**Manufacturer Address** .....: 577 Songying Road, Qingpu District, 201706 Shanghai, China

**Test Standards** .....: ANSI/IEEE Std 149-2003

**Test Result**.....: Pass

**Tested by** .....:  2023.05.13

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Chuiwang Zhang, Test Engineer

**Reviewed by** .....:  2023.05.13

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Chris You, Senior Engineer

**Approved by** .....:  2023.05.13

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Yang Fan, Manager



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Change History		
Issue	Date	Reason for change
1.0	2023.05.13	First edition



## 1. General Information

### 1.1. Description of EUT

EUT Type	WIFI Module Antenna
Type of the Equipment	Stand-alone
Frequency Range	2400~2500MHz

### 1.2. Test Standards and Results

No.	Identity	Document Title
1	ANSI/IEEE Std 149-2003	Standard Test Procedures for Antennas

### 1.3. List of Equipment Used

Description	Manufacturer	Model No.	Serial No.	Cal. Date
EMI Horn Antenna	R&S	HF906	A0304225	2023.04.17
Signal Generator	R&S	SMB100A	A180502936	2023.03.19
Network Analyzer	R&S	ZVB8	100343	2023.02.20

### 1.4. Environmental Conditions

Ambient temperature:	15~35 °C
Relative humidity:	20~75%
Atmosphere pressure:	86-106kPa



## 1.5. Measurement Uncertainty

PARAMETER	UNCERTAINTY
RF frequency	$\pm 5.1\text{kHz}$
ANTENNA GAIN	$\pm 1.3\text{dB}$
Humidity	$\pm 3.1\%$
Temperature	$\pm 0.8^\circ \text{C}$
DC and low frequency voltages	$\pm 2.9\%$

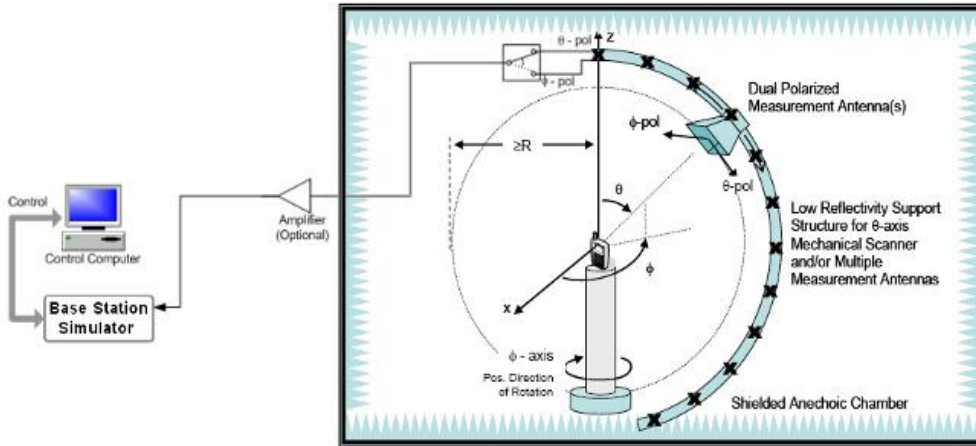
For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in according with TR 100 028-1[2] and shall correspond to an expansion to expansion factor (coverage factor)  $k=1.96$  or  $k=2$ (which provide confidence levels of respectively 95% and 95.45% in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

## 1.6. Test Facility

CCIC Southern Testing Co., Ltd. CCIC is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

## 2. TEST SETUP AND RESULTS

### 2.1 Test Setup



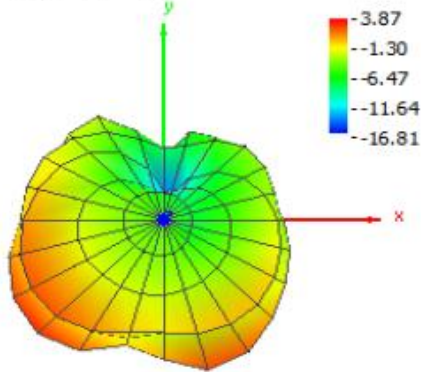
### 2.2 Test results

Frequency(MHz)	Efficiency (%)	Peak Antenna Gain(dBi)
2400	25.08	-0.39
2450	65.59	3.87
2500	94.09	5.54

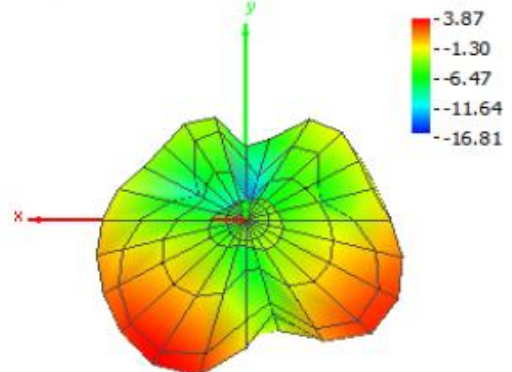
### 2.3 Test Plots

#### 2450MHz 3D Pattern

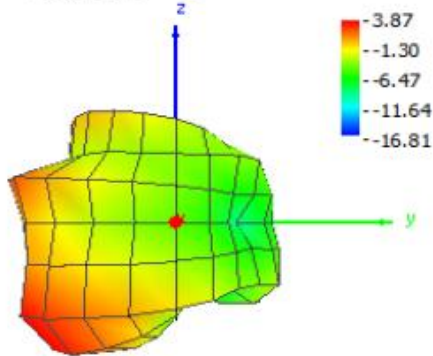
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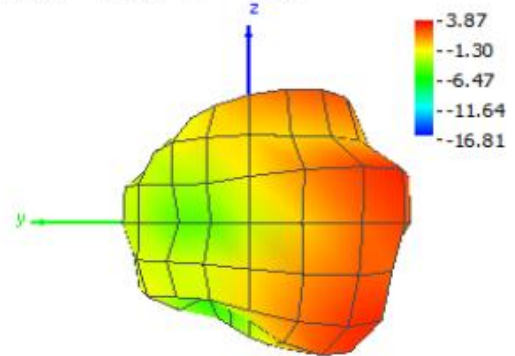
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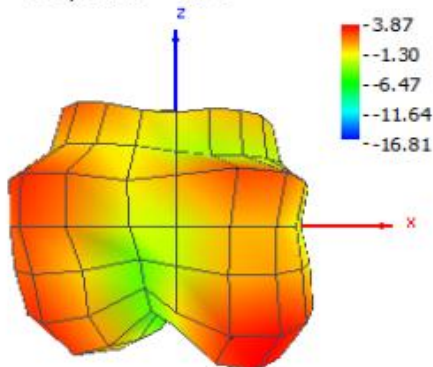
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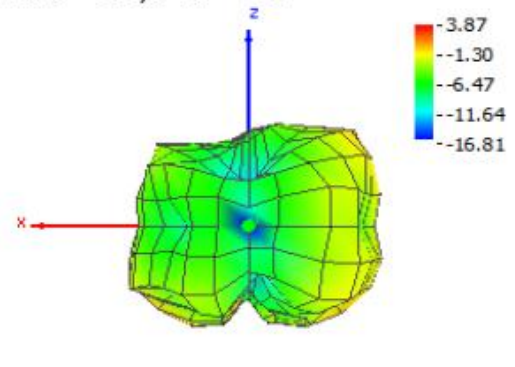
Theta = 90, Phi = 180



Theta = 90, Phi = 270

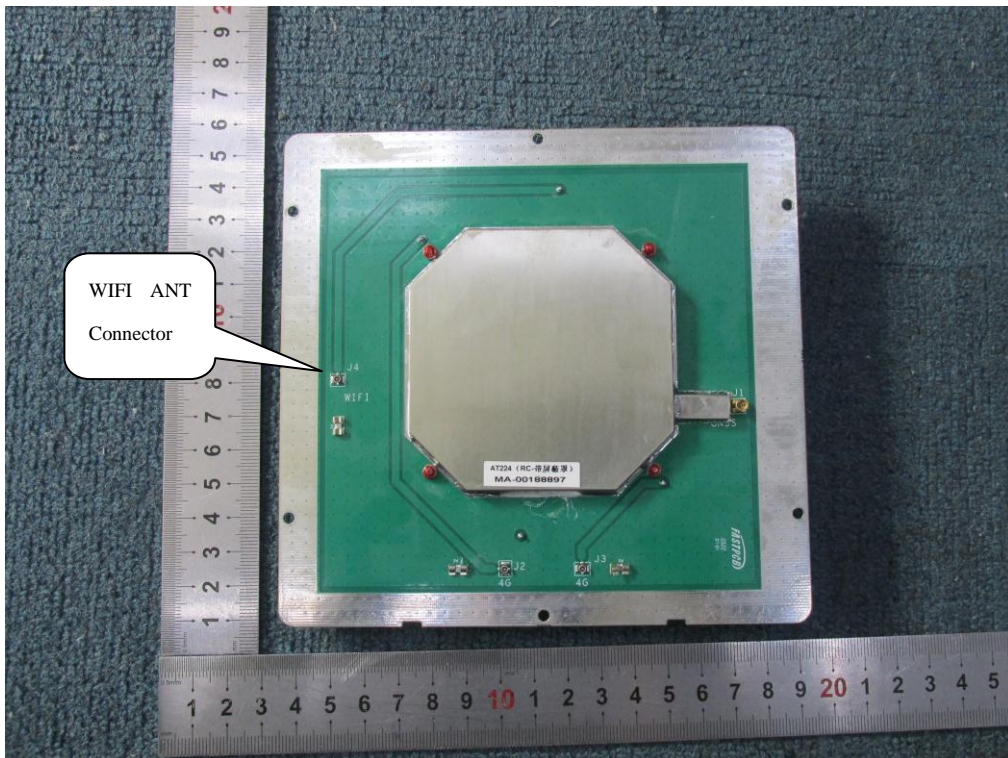
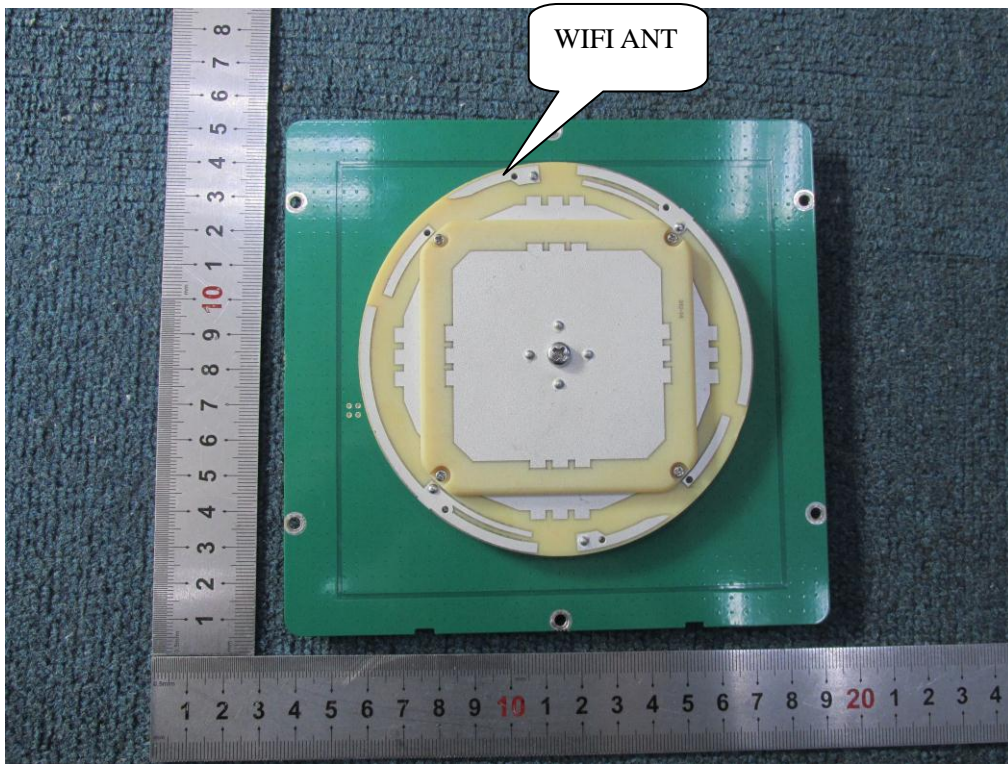


Theta = 90, Phi = 90



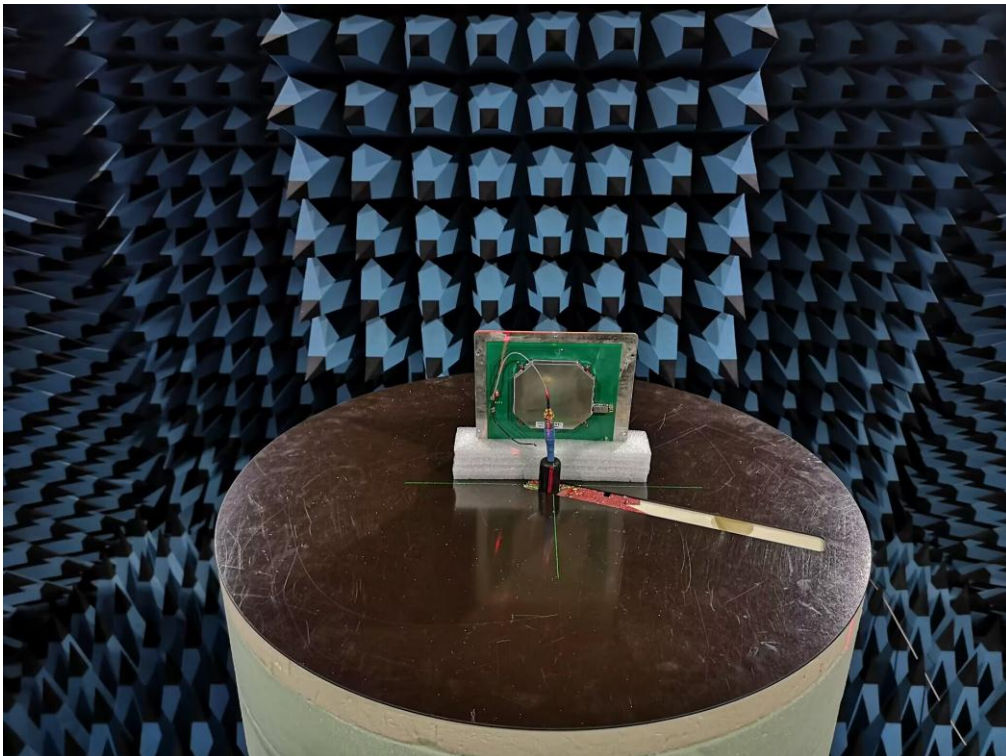
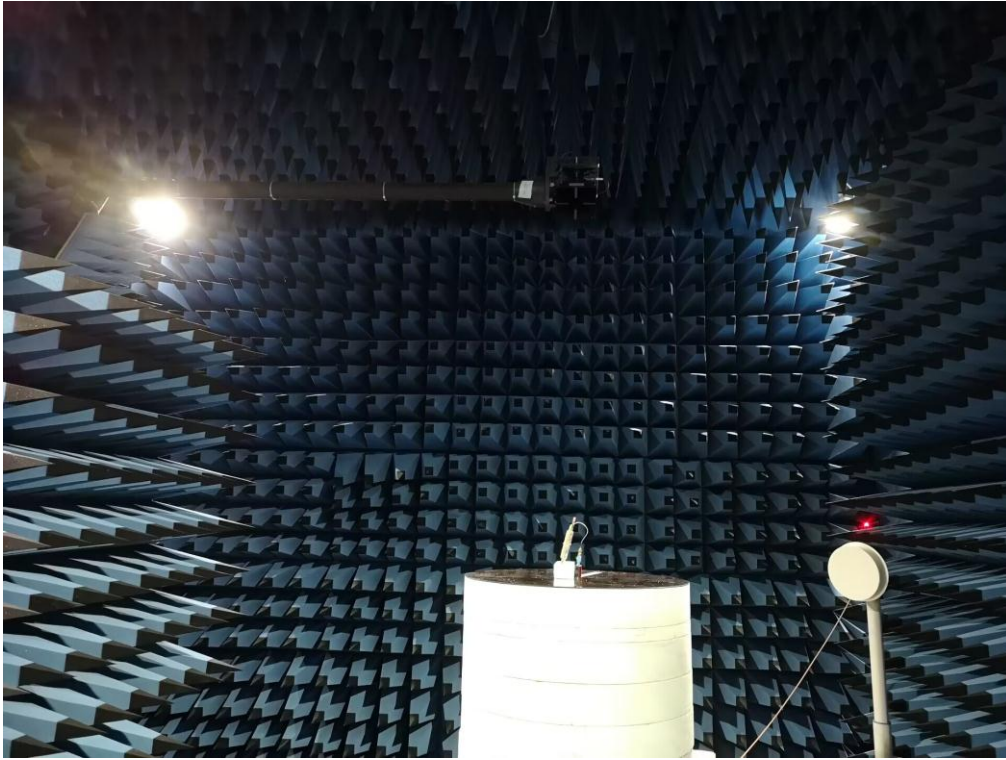


### Annex A Photos of the EUT





## Annex B      Photos of Test Setup



**\*\* END OF REPORT \*\***