



# TEST REPORT

**Report No.:** 20230517G04176X-W4

**Product Name:** 2.4G Antenna

**Model No.:** 2.4G PCB Antenna

**Applicant:** Shenzhen Leqi Network Technology Co., LTD

Rooms 103, 501 and 601, Building 5, Fenghe Industrial Park, Nos.

**Address:** 1301-50 Guanguang Road, Longhua District, Shenzhen, Guangdong, China.

**Dates of Testing:** 05/29/2023 - 05/30/2023

**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** .....: 2.4G Antenna

**Brand Name** .....: NA

**Trade Name** .....: NA

**Applicant**.....: Shenzhen Leqi Network Technology Co., LTD

**Applicant Address**.....: Rooms 103, 501 and 601, Building 5, Fenghe Industrial Park,  
Nos. 1301-50 Guanguang Road, Longhua District, Shenzhen,  
Guangdong, China.

**Manufacturer** .....: Shenzhen Leqi Network Technology Co., LTD.

**Manufacturer Address** .....: Rooms 103, 501 and 601, Building 5, Fenghe Industrial Park,  
Nos. 1301-50 Guanguang Road, Longhua District, Shenzhen,  
Guangdong, China.

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

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

**Tested by** .....: Chuiwang Zhang 2023.05.30  
Chuiwang Zhang, Test Engineer

**Reviewed by** .....: Chris You 2023.05.30  
Chris You, Senior Engineer

**Approved by** .....: Yang Fan 2023.05.30  
Yang Fan, Manager



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Change History		
Issue	Date	Reason for change
1.0	2023.05.30	First edition



## 1. General Information

### 1.1. Description of EUT

EUT Type	2.4G 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	2022.04.17
Signal Generator	R&S	SMB100A	A180502936	2022.03.19
Network Analyzer	R&S	ZVB8	100343	2023.02.20
OTA Chamber	R&S	/	/	/

### 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	$\pm 2.9\%$

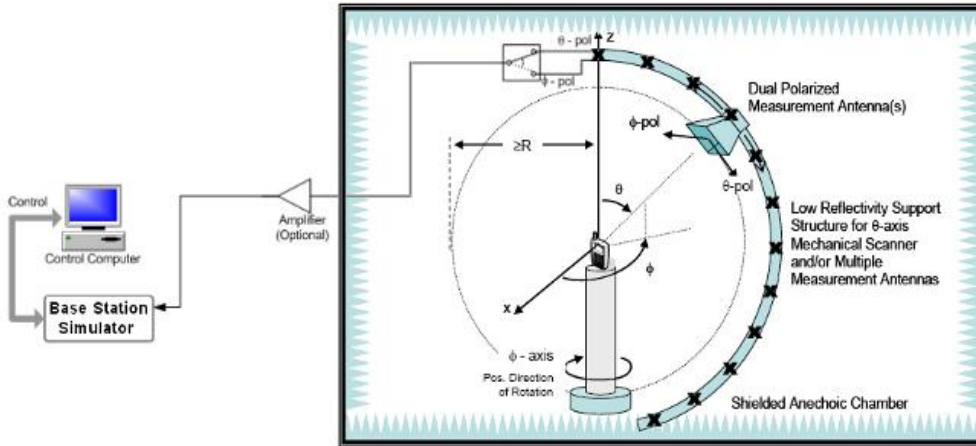
For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in according with TR 100 028-1[2] and shall correspond to an expansion to expansion factor (coverage factor)  $k=1.96$  or  $k=2$ (which provide confidence levels of respectively 95% and 95.45%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

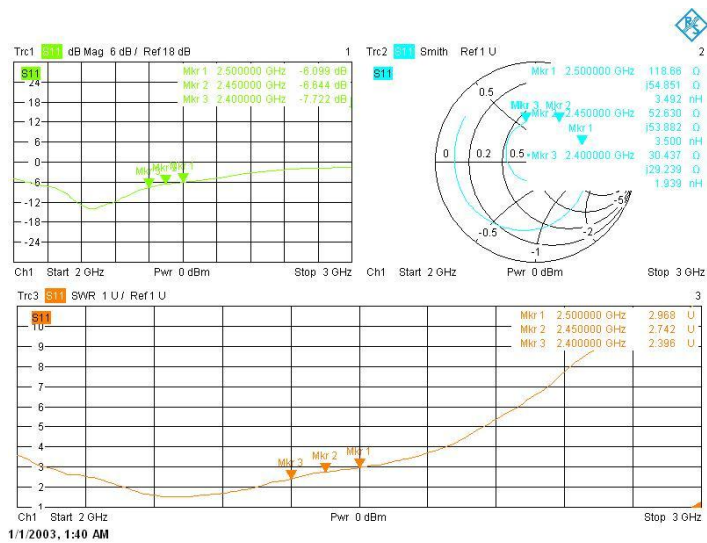
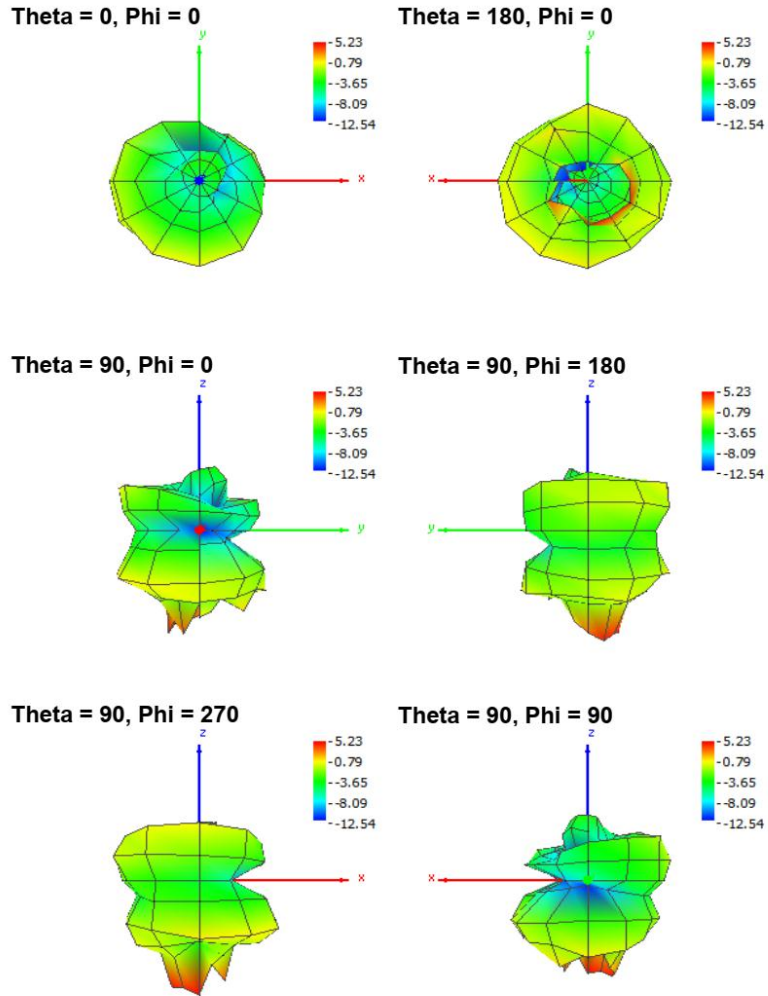


### 2.2 Test results

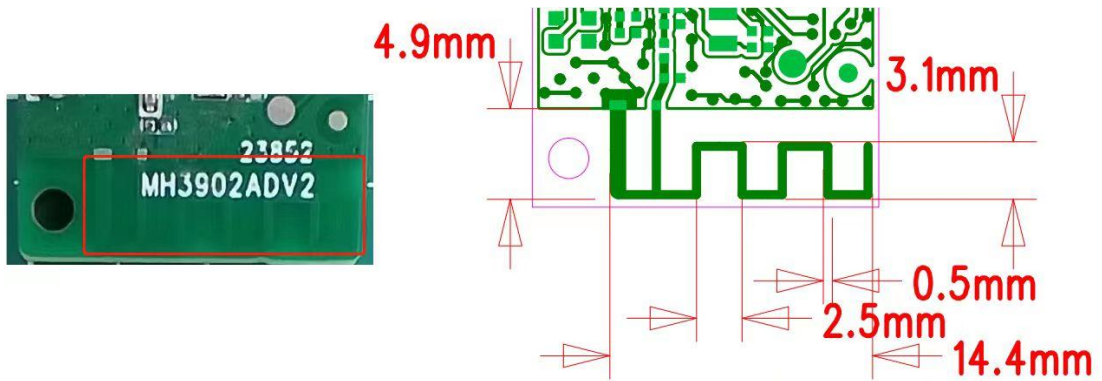
Frequency(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain(dBi)	5.76	5.52	5.47	5.62	5.67	5.23	5.09	4.66	4.29	4.24	4.10
Efficiency (%)	63.58	75.24	75.26	79.13	79.91	57.2	69.79	64.52	61.63	62.62	52.05

## 2.3 Test Plots

### 2450MHz 3D Pattern

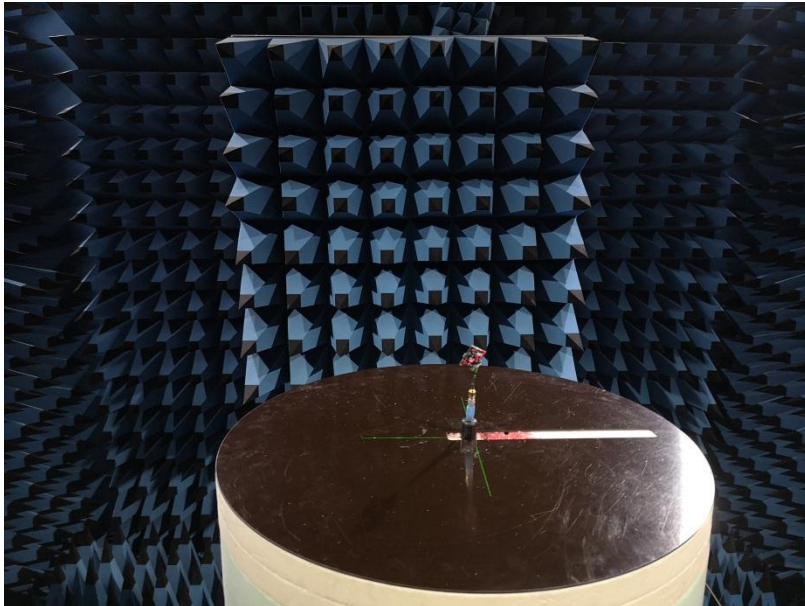
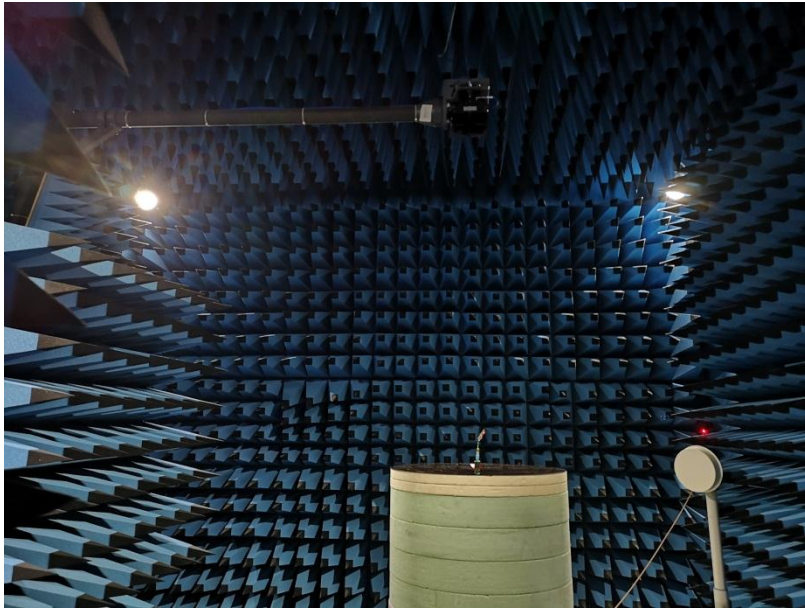


### Annex A Photos of the EUT





## Annex B      Photos of Test Setup



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