

---

# **Antenna Specification**

**Manufacture:** GUANGDONG ROULE ELECTRONICS CO. , LTD

**Product Name:** RL-11TX-1 Antenna

**Antenna Type:** Helical Antenna

**Test Date:** 2023.09.07

**Content**

---

|                               |   |
|-------------------------------|---|
| 1.General Description .....   | 3 |
| 2.Test Configurations .....   | 4 |
| 2.1 Test Environment .....    | 4 |
| 2.2 Test Equipment .....      | 4 |
| 2.3 Test Principle .....      | 4 |
| 3.Test Results .....          | 5 |
| 3.1 Gain and Efficiency ..... | 5 |
| 3.2 Radiation Pattern .....   | 6 |
| 4.Antenna Dimensions .....    | 7 |
| 5.EUT Photo .....             | 8 |
| 6.Test Setup Photo .....      | 8 |

---

# 1.General Description

|                |                                                                                                                             |
|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| Manufacturer   | GUANGDONG ROULE ELECTRONICS CO.,<br>LTD                                                                                     |
| Address        | No. 12, Pingdong 3rd Road, Nanping Science and<br>Technology Park, Zhuhai City, Guangdong Province                          |
| Test Location  | Room 201, Building 1, No. 12, Pingdong 3rd Road,<br>Nanping Science and Technology Park, Zhuhai City,<br>Guangdong Province |
| Product Name   | RL-11TX-1 Antenna                                                                                                           |
| Product model  | RL-11TX-1                                                                                                                   |
| Antenna Type   | Helical Antenna                                                                                                             |
| Test Items     | Gain; Efficiency; Radiation Pattern                                                                                         |
| Test Frequency | 433MHz                                                                                                                      |
| Test Standard  | ANSI/IEEE Std 149-1979                                                                                                      |

---

## 2.Test Configurations

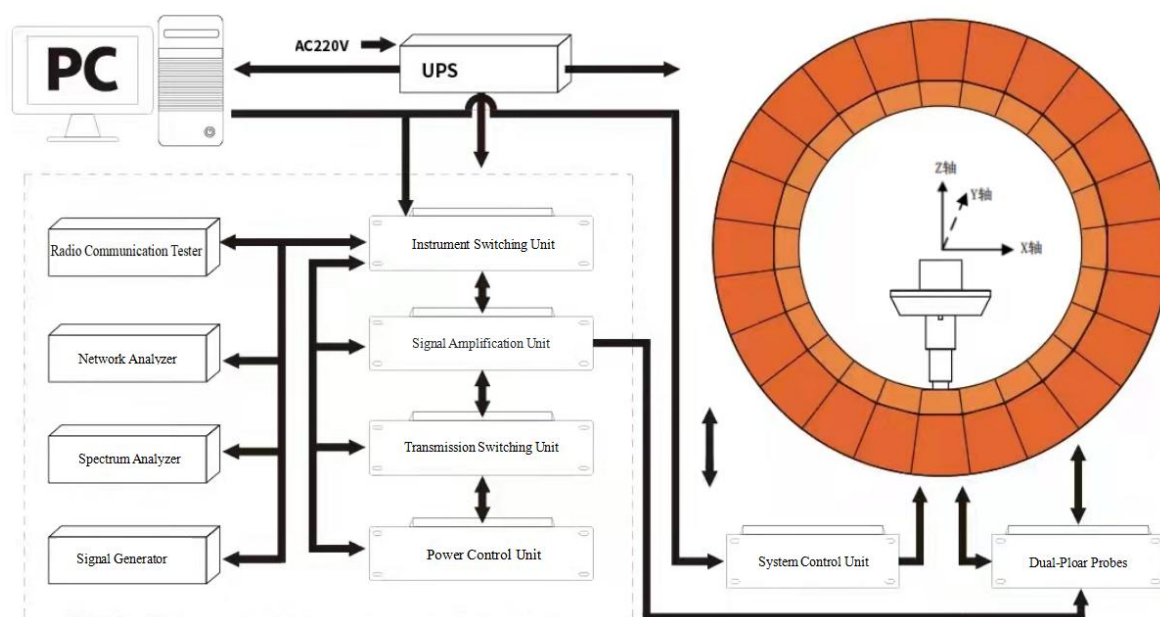
### 2.1 Test Environment

|                            |       |
|----------------------------|-------|
| Temperature (°C)           | 25    |
| Humidity (%RH)             | 60    |
| Atmospheric Pressure (kPa) | 100.5 |

### 2.2 Test Equipment

|                 |                                      |
|-----------------|--------------------------------------|
| Test System     | TEM 24 Multi-probe Microwave Chamber |
| Test Instrument | Agilent E5071B                       |

### 2.3 Test Principle



---

## 3. Test Results

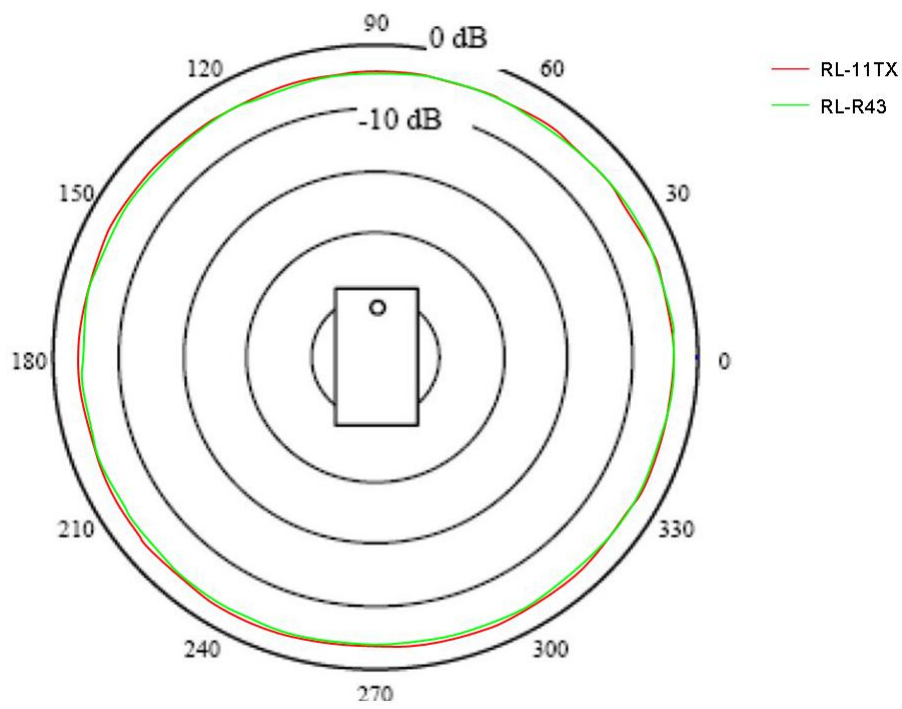
### 3.1 Gain and Efficiency

| Frequency (MHz) | Peak Gain (dBi) | Efficiency (%) |
|-----------------|-----------------|----------------|
| 433             | 2               | 44.36          |

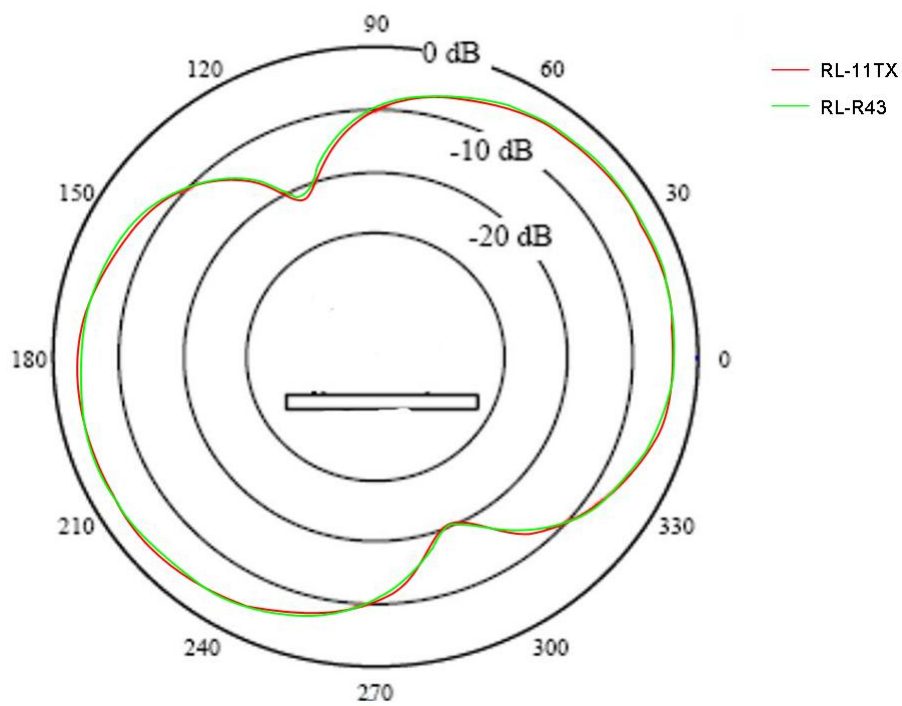
---

## 3.2 Radiation Pattern

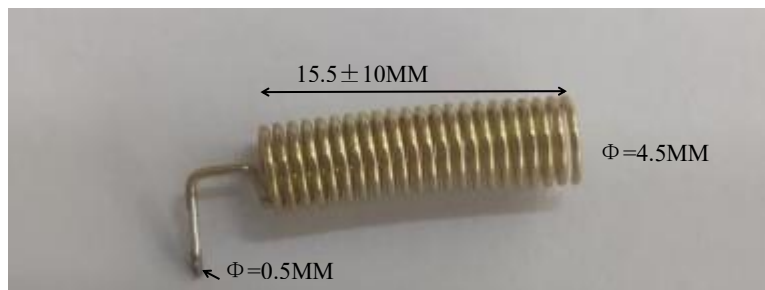
**Phi 0**



**Phi 90**



## 4. Antenna Dimensions



---

## 5.EUT Photo



## 6.Test Setup Photo

