



# Antenna datasheet

COWSEN-002



# SPECIFICATION

## Shenzhen DreamLNK Technology Co., Ltd. 深圳市骏晔科技有限公司

### 915MHZ Spring Coil Antenna

### Product Specification

|                        |            |                           |            |
|------------------------|------------|---------------------------|------------|
| Client Name            |            | Frequency Band            | 915 MHz    |
| Wire Name              |            | Version                   | A1         |
| Customer's Part Number |            | DreamLNK's Part Number    | DL-T2-915  |
| RF Designer            | Peter Wang | RF Manager                | Knight Ai  |
| Structural Designer    |            | Structural Design Manager |            |
| Technical Director     |            | Date                      | 2017-05-22 |

Client confirmation:

Whether the product meets your requirements? ☐ OK ☐ NG

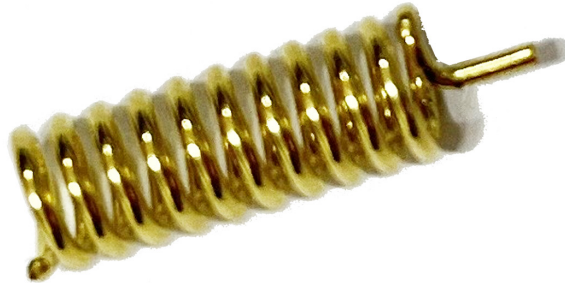
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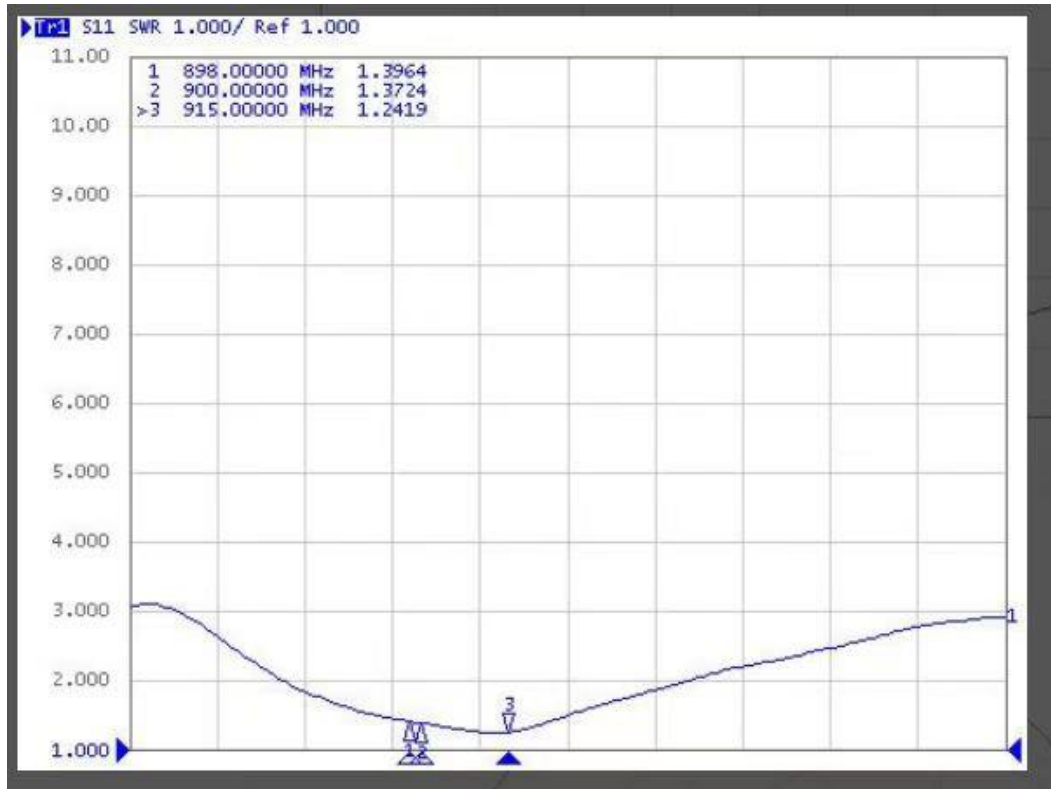
## 1. Photos



## 2. Parameters

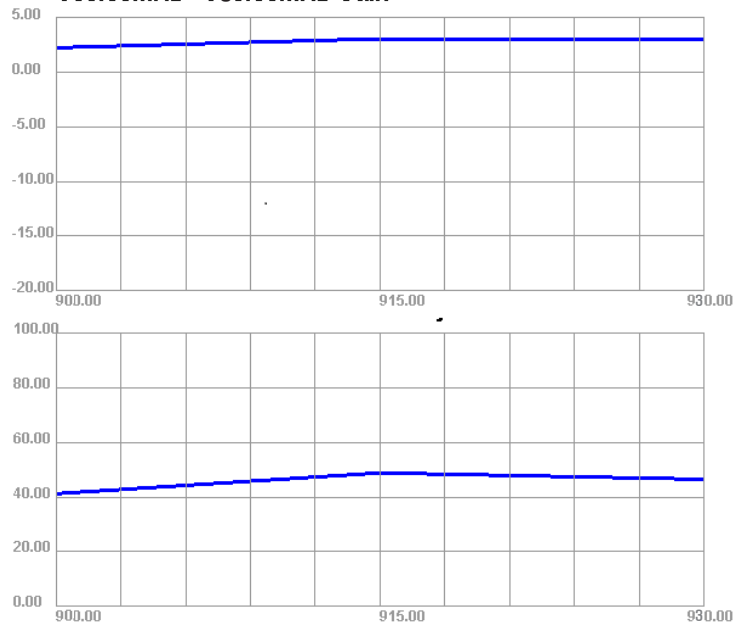
| Test parameters           |                       |                     |                 |
|---------------------------|-----------------------|---------------------|-----------------|
| Product Name              | 915Mhz Spring Antenna | Model No            | DL-T2-915       |
| Electrical Specifications |                       |                     |                 |
| Frequency Range           | 915MHz                | Polarization        | Vertical        |
| Input Impedance           | 50 $\Omega$           | Radiation direction | Omnidirectional |
| VSWR                      | $\leq 1.5$            | Power Capacity      | 10W             |
| Gain                      | 3.0 dBi               | Bandwidth           | /               |
| Mechanical Specifications |                       |                     |                 |
| Dimensions                | D5.5*17.5MM           | Color               | Gold            |
| Installation              | Welding on PCB        | Antenna Material    | Phosphor bronze |
| Relative Humidity         | 40-85%                | Storage Temperature | -30°C-+65°C     |
| Working Temperature       | -40°C-+85°C           |                     |                 |

### 3. S11 DATA (VSWR, Return loss, Smith)

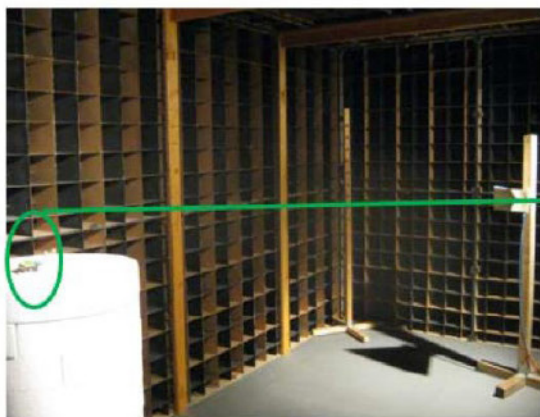
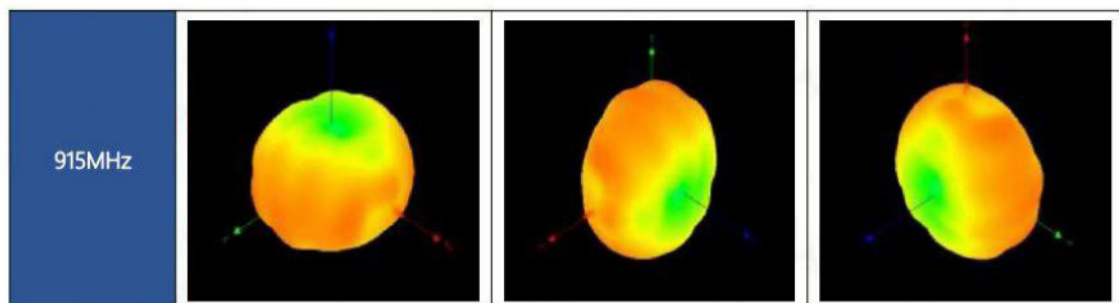
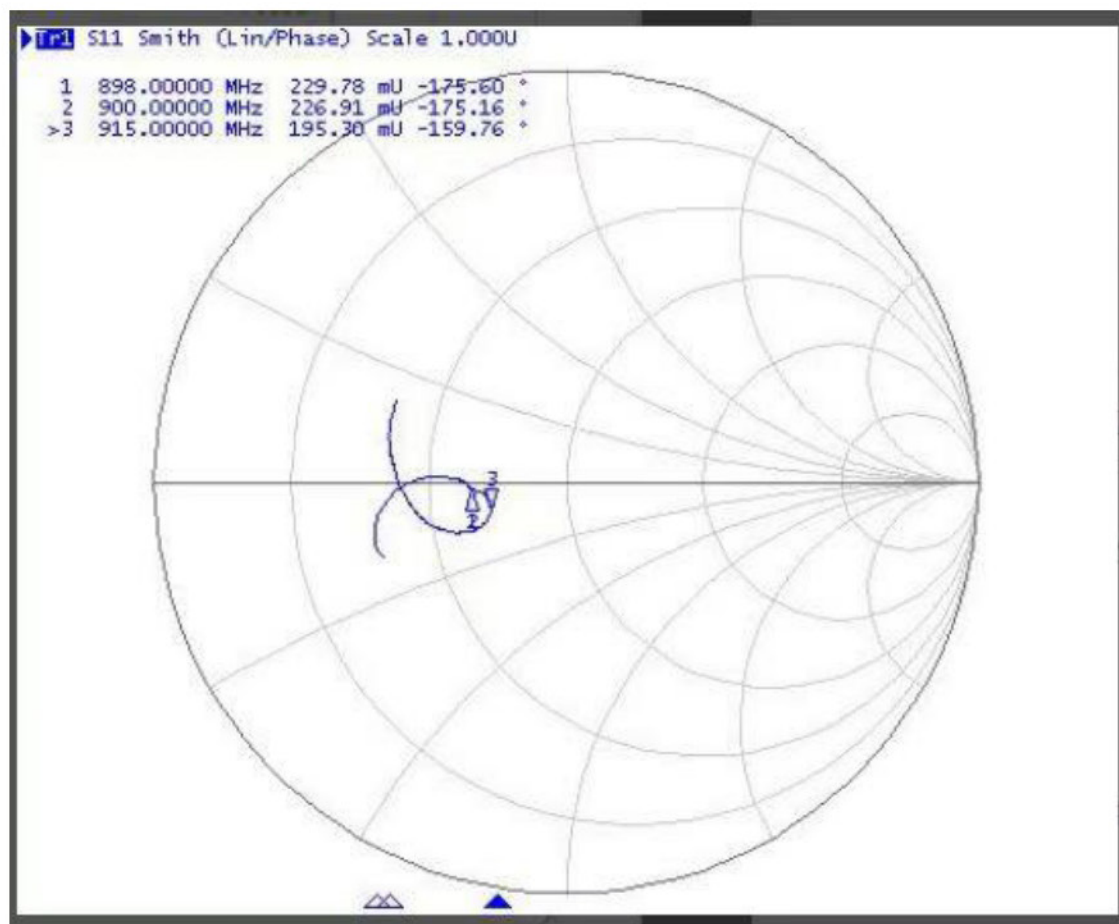


| Passive Test For 915 |          |           |            |            |          |          |          |          |                  |                 |           |           |
|----------------------|----------|-----------|------------|------------|----------|----------|----------|----------|------------------|-----------------|-----------|-----------|
| Freq (MHz)           | Effi (%) | Effi (dB) | Gain (dBi) | Gain (dEd) | UHIS (%) | DHIS (%) | Max (dB) | Min (dB) | irectivity (dBi) | Beamwidth (3dB) | AttH (dB) | AttV (dB) |
| 900                  | 55.26    | -2.45     | 2.72       | 0.52       | 10.946   | 45.562   | 2.72     | -17.89   | 3.81             | 30              | 40.53     | 40.65     |
| 915                  | 64.85    | -1.88     | 3          | 0.85       | 13.107   | 51.746   | 3        | -16.52   | 3.83             | 30              | 40.53     | 40.65     |
| 930                  | 54.78    | -2.61     | 2.65       | 0.5        | 10.886   | 43.895   | 2.65     | -18.37   | 3.76             | 30              | 40.3      | 40.57     |

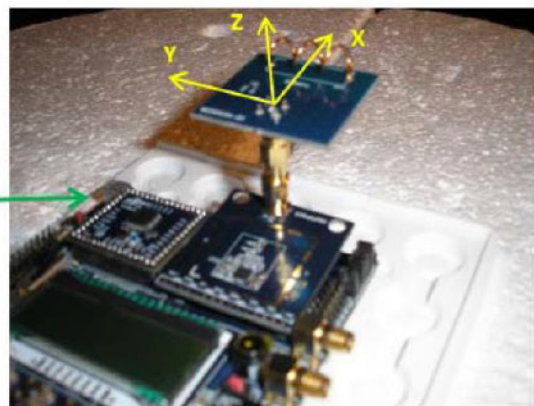
900.00MHz - 930.00MHz Gain



| Application Information |              |
|-------------------------|--------------|
| 04Version               | 5.247.353    |
| TotalTime               | 4m 44s 232ms |
| AdditionalInfor         | NULL         |



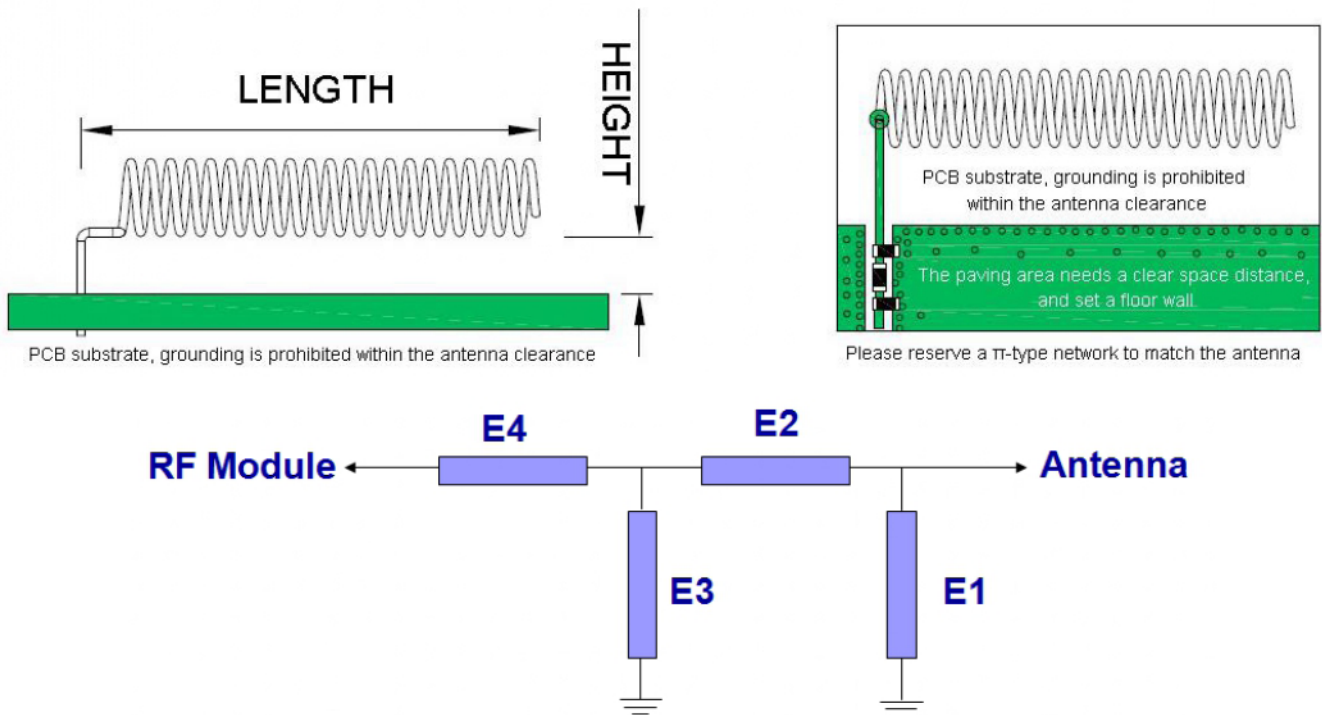
Anechoic Chamber Testing



XYZ direction test

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## 4. Application & Design Guidance



**Note:** The antenna design process needs to combine the product shape and structure, the position of the RF module signal input and output interface, and the position of the interference source inside the product to determine the position, angle, distance from the floor, and height from the PCB substrate.

Please reserve a  $\pi$ -type network to match the antenna. When debugging the antenna, be sure to provide a complete product shell and internal PCBA function board, calculate the external interference source and parasitic capacitance into the matching, so that the antenna can achieve the best performance indicators and work efficiency.

The PCB trace of the matching network refers to the 0.5mm line width, and the grounding on both sides of the network refers to the 0.35mm spacing to maintain good impedance characteristics.

If you have any questions, please send PCB documents to this e-mail [support@dreamlnk.com](mailto:support@dreamlnk.com)

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## 5. Environmental reliability experiment report

| Item                                    | Test condition                                                                                                                                                                                                                                          | Specification                                                                         |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Storage environment                     | Tested temperature, humidity and air pressure as following without specifying:<br>1. The temperature is -30 °C ~ + 80 °C<br>2. Relative humidity is 45% -85%<br>3. The air pressure is 86kpa-106kpa                                                     | The electrical mechanical performance is normal                                       |
| High and low temperature test           | Perform 5 cycles between 70 °C and 40 °C, then check the appearance quality, under normal conditions 1-2H                                                                                                                                               | The size should meet the requirements for mechanical and electrical performance       |
| Resistant to constant heat and humidity | Test Relative humidity: 95 ± 3%, Test temperature: 40 °C. After continuous 2H running, take out the sample, and measure its electrical properties within 5 minutes, put the sample in a normal condition for another 1-2H, check the appearance quality | The size should meet the standard, and meet for mechanical and electrical performance |
| Vibration test                          | Vibration frequency range 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M / S, frequency of sweeping cycle: 30 times                                                                                                             | Normal electrical and mechanical performance                                          |
| Drop test                               | 1M high-altitude free fall 3 times, in the direction of mutually perpendicular axes                                                                                                                                                                     | Normal electrical and mechanical performance                                          |

## 6. Contact us

### Shenzhen DreamLnk Technology Co., Ltd

★ Data collection, Smart home, Internet of Things applications, Wireless remote control technology, Remote active RFID, Antennas ★

**Office Add.:** 602-603, Unit C, Zone A, Huameiju Business Center, Xihu Rd., Bao'an District, Shenzhen, Guangdong Province, China

**Factory Add.:** Huazhi Innovation Valley, No. 7 Yuhua Street, 138 Industrial Zone, Tangxia Town, Dongguan, Guangdong Province, China

**TEL.:** +86-755-29369047

**FAX:** +86-755-27844601

**Mobile:** +86 13760215716

**Wechat:** wsj\_james

**E-mail:** [james@dreamlnk.com](mailto:james@dreamlnk.com)

**Web:** [www.iot-rf.com](http://www.iot-rf.com)

COWSEN-003/COWTAG



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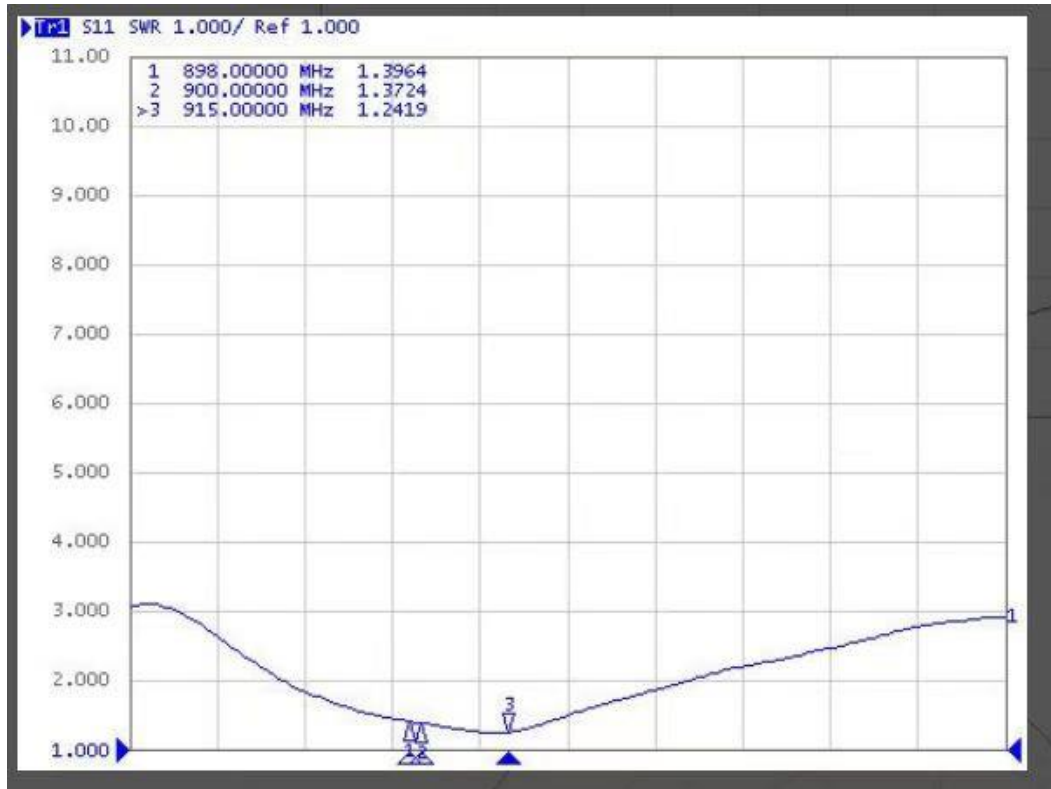
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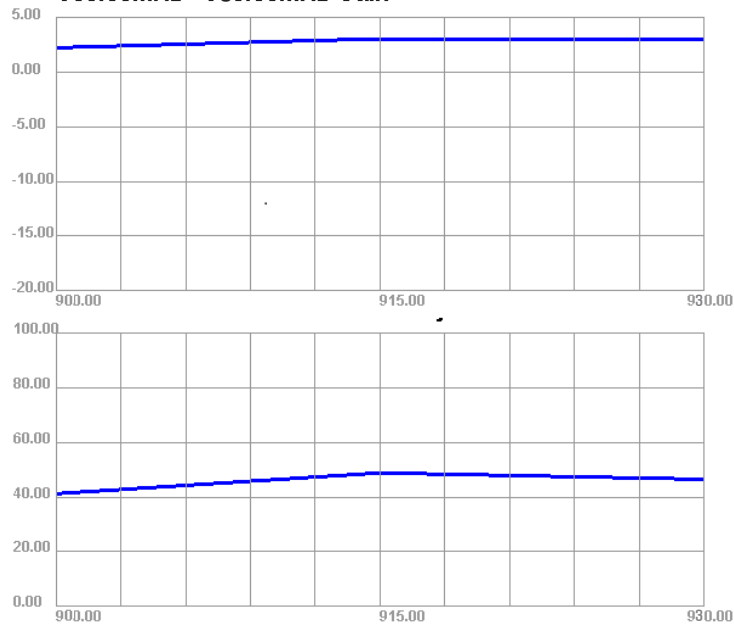
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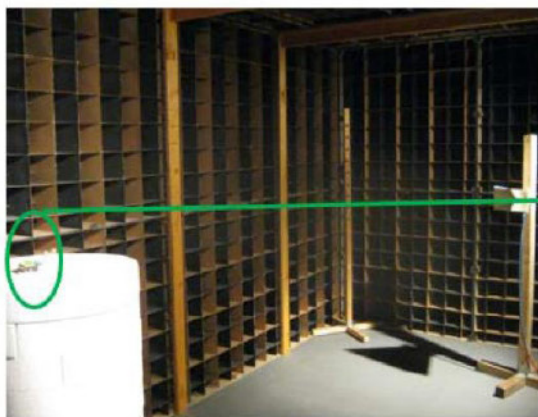
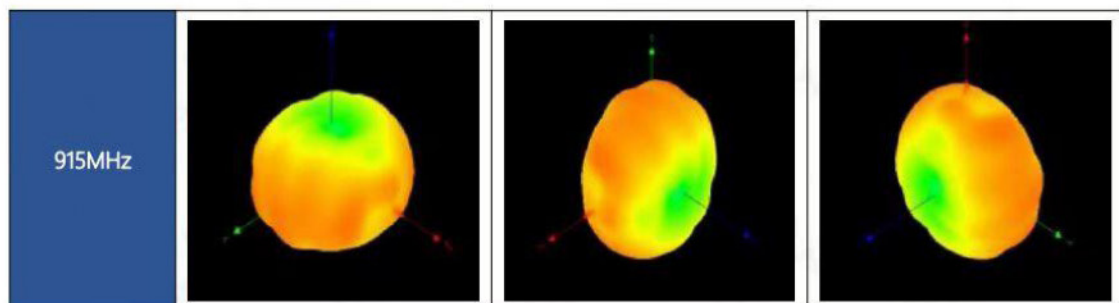
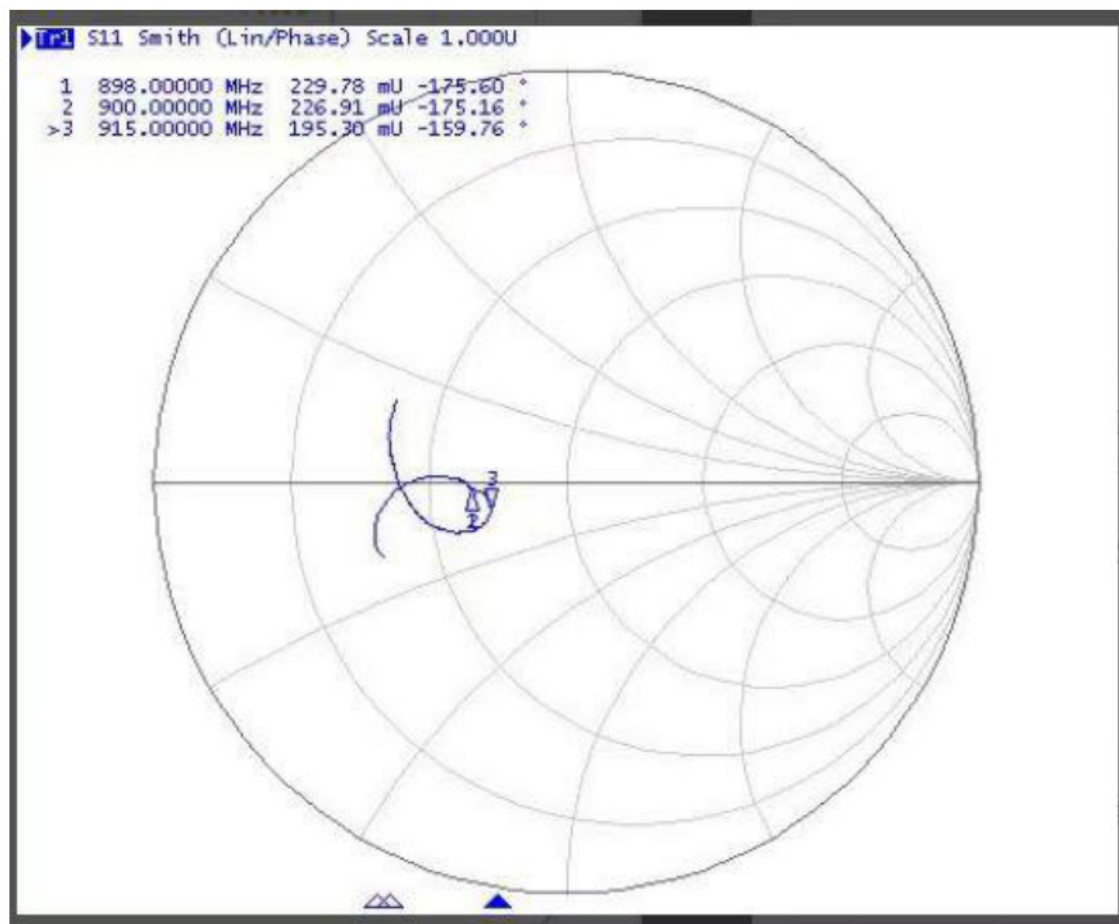


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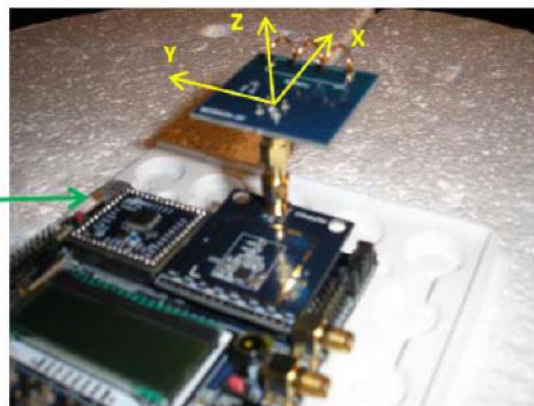
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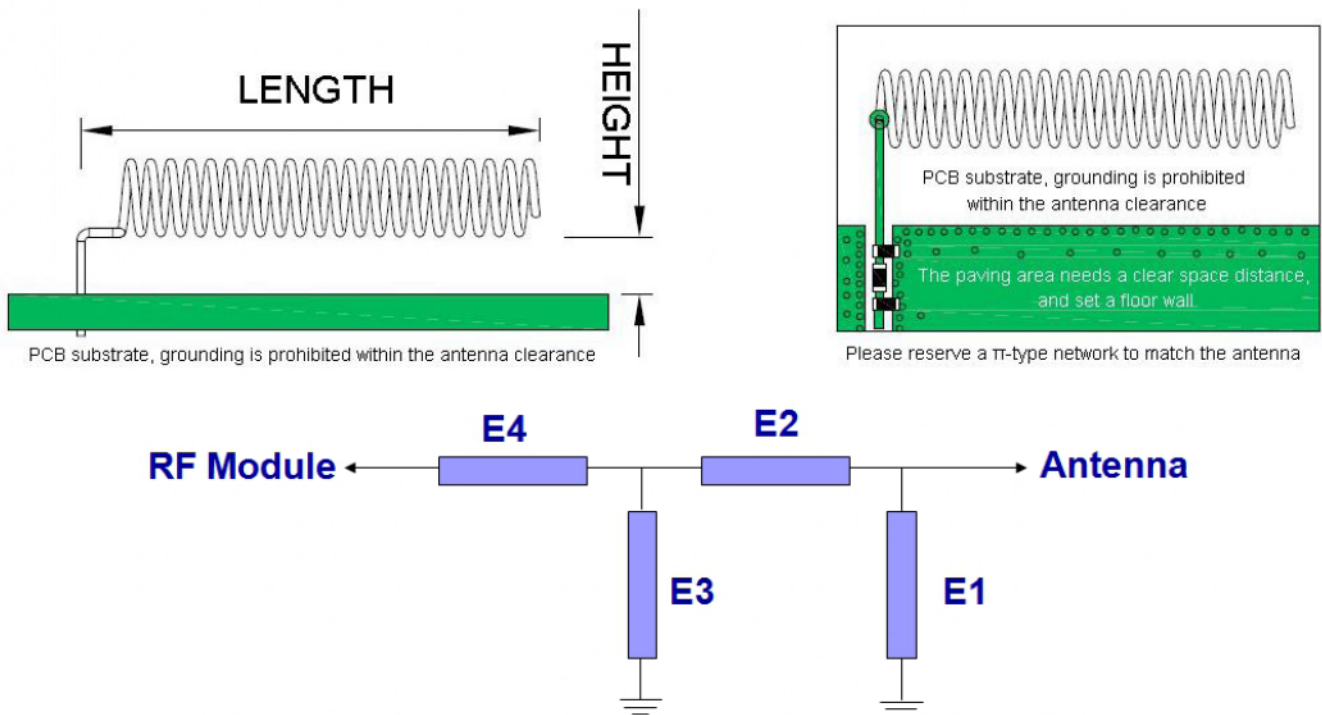
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