



ShenZhen City FeiMin Technology CO., LTD.

SPECIFICATION FOR APPROVED

CUSTOMER: Shenzhen Zheyin Intelligent Technology Co., Ltd

PRODUCTS: Spring antenna

PART NO:

Spec. : FM-S2270-T30-TX

Data: 2025. 3. 13

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# ANTENNA SPECIFICATION

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## catalog

|                                           |   |
|-------------------------------------------|---|
| 1. Project Information .....              | 4 |
| 1.1. Appearance and Dimensions .....      | 4 |
| 2. Electrical Characteristics.....        | 5 |
| 2.1. Test Environment Conditions .....    | 5 |
| 2.2.Measurement method .....              | 5 |
| 2.2.1. Antenna Parameters.....            | 5 |
| 2. 2. 2. Antenna VSWR.....                | 6 |
| 2. 2. 3. Antenna Return loss.....         | 6 |
| 2. 3. Antenna passive test data.....      | 7 |
| 2. 3. 1. Test system.....                 | 7 |
| 2. 3. 2. Antenna efficiency and gain..... | 7 |
| 2. 3. 3. Antenna Radiation Pattern.....   | 8 |
| 3.Notes.....                              | 8 |
| 4.Product packaging specification .....   | 9 |



## ANTENNA SPECIFICATION

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### Revision history

| version | date      | condition     |
|---------|-----------|---------------|
| A1      | 2025-3-13 | First edition |
|         |           |               |
|         |           |               |

Changes:

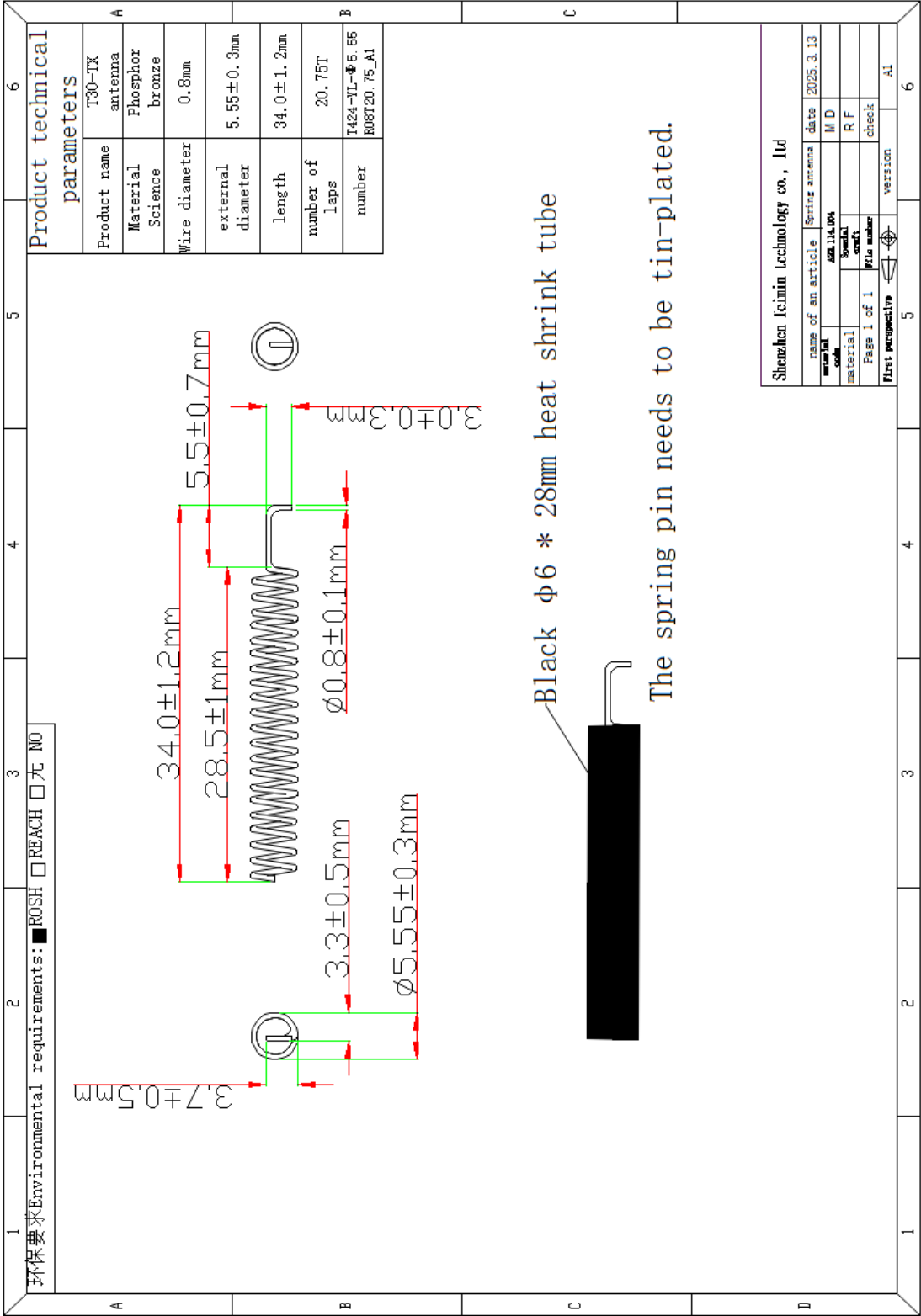
First change:

Before the change: (If necessary, please add corresponding pictures, and the details of the change should be clearly described here)

After the change: (If necessary, please add corresponding pictures, and the details of the change should be clearly described here)

1. Project Information

1.1. Appearance and Dimensions



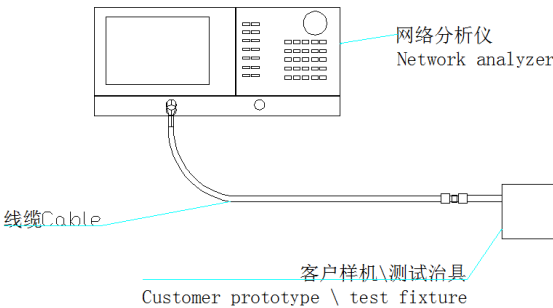
# ANTENNA SPECIFICATION

## 2. Electrical Characteristics

### 2.1. Test Environment Conditions

|             |                                  |
|-------------|----------------------------------|
| Temperature | Ordinary Temperature (5 to 35℃)  |
| Humidity    | Ordinary Humidity (25 to 85% RH) |

### 2.2.Measurement method



#### 2.2.1. Antenna Parameters

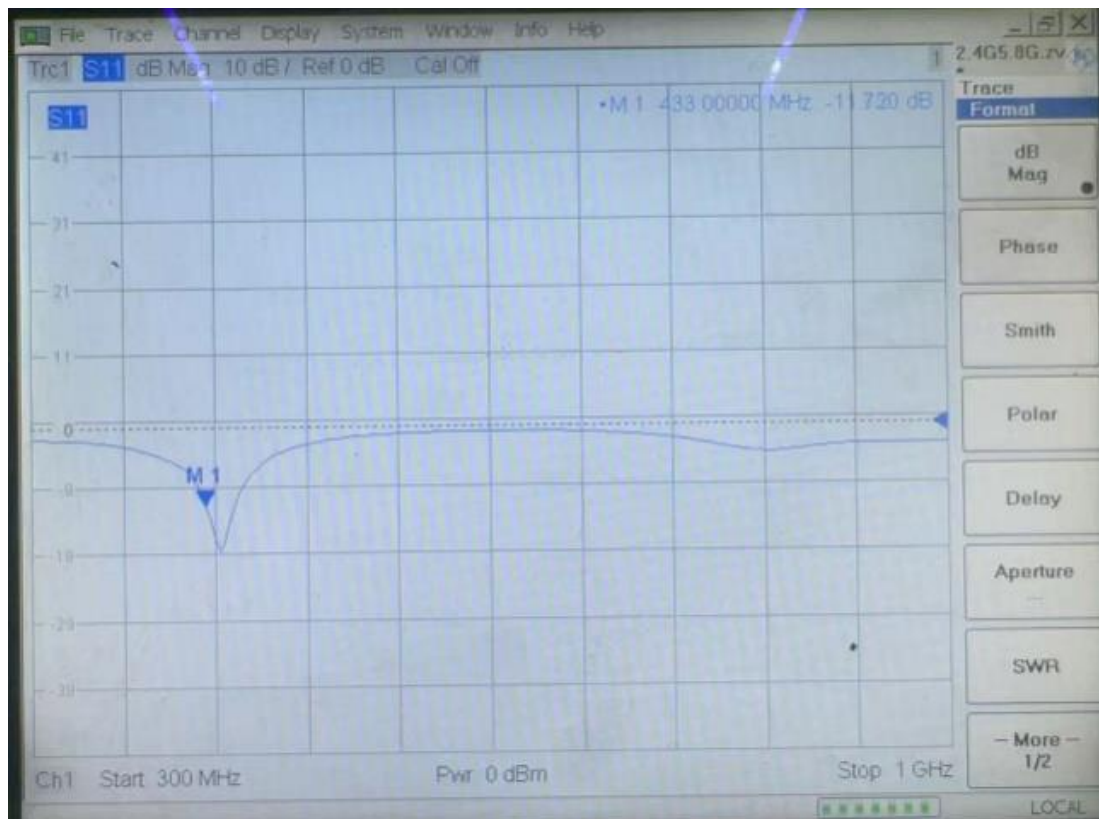
| Design Specifications | Typical                | Units |
|-----------------------|------------------------|-------|
| Antenna Type          | Spring antenna         |       |
| Frequency of work     | 433                    | MHz   |
| Antenna efficiency    | 25-30                  | %     |
| Ploriaztion           | Vertical polarization  |       |
| Antenna size          | As shown in Figure 1.1 | mm    |
| Radiation direction   | 360°                   |       |
| Impedance             | 50                     | Ohm   |
| Weight                | No requirements        |       |
| Operatin Temp         | -30-70                 | ℃     |
| Storing Temp          | -30-70                 | ℃     |

## ANTENNA SPECIFICATION

### 2.2.2. Antenna VSWR



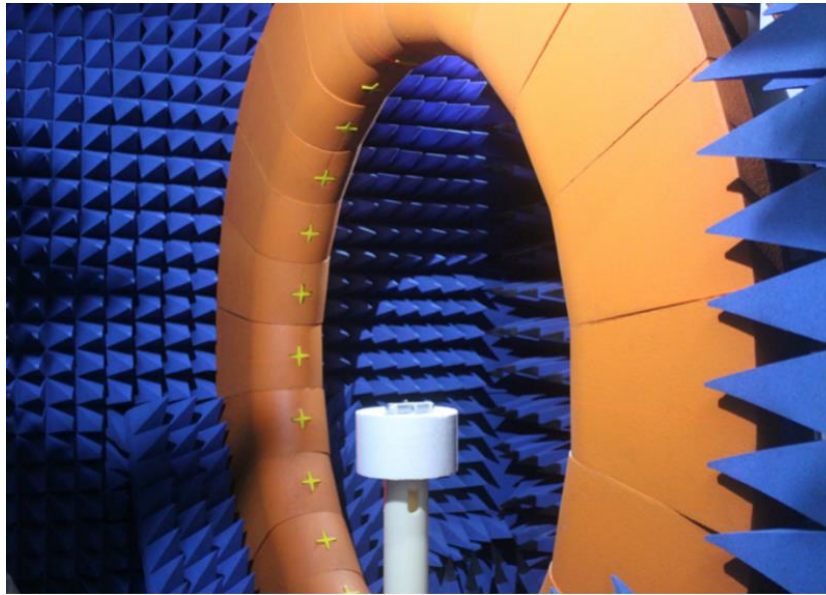
### 2.2.3. Antenna Return loss



## ANTENNA SPECIFICATION

### 2.3. Antenna passive test data

#### 2.3.1. Test system



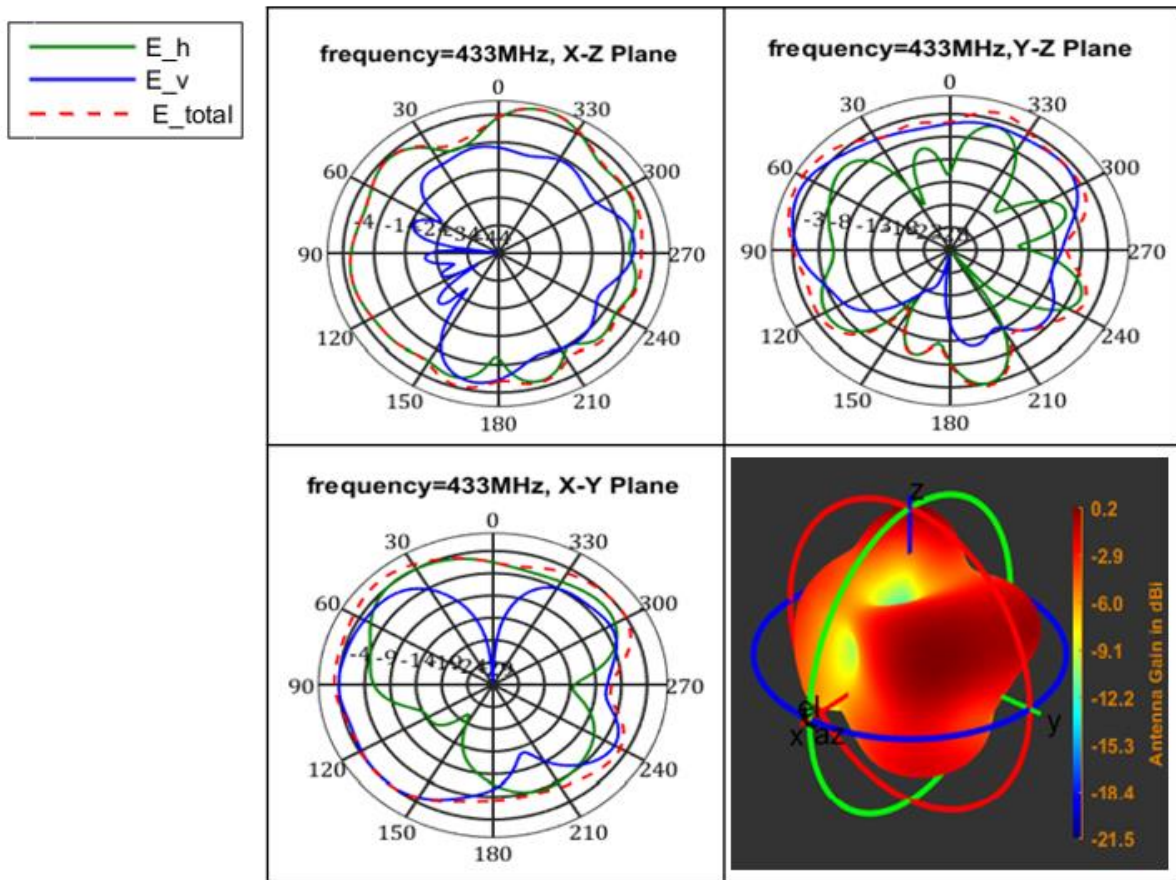
Shenzhen Feimin Technology Co., Ltd. (24-probe OTA microwave darkroom)

#### 2.3.2. Antenna efficiency and gain

| Freq(MHz) | Efficiency (%) | <u>Gian(dBi)</u> |
|-----------|----------------|------------------|
| 418       | 26.68          | -2.08            |
| 421       | 27.76          | -1.59            |
| 424       | 28.02          | -0.72            |
| 427       | 28.50          | -0.66            |
| 430       | 29.82          | 0.12             |
| 433       | 29.73          | 0.17             |
| 436       | 29.43          | 0.18             |
| 439       | 28.74          | -0.58            |
| 442       | 27.92          | -0.52            |
| 445       | 28.96          | -1.44            |
| 448       | 27.78          | -1.82            |
| 451       | 27.60          | -1.90            |

## ANTENNA SPECIFICATION

### 2.3.3. Antenna Radiation Pattern



### 3. Notes

①. When installing, be careful not to be too close to the metal parts to avoid affecting the antenna performance. ②. This antenna is only suitable for this type of machine. The position of the antenna cannot be changed at will, and it is not our business' responsibility if it is used on other machines that results in poor results. ③. The data used in this acknowledgment (e.g., antenna efficiency, gain, etc.) are data obtained from laboratory tests of the acknowledgement project / antenna in Shenzhen Fei Min Technology Co., Ltd.

# ANTENNA SPECIFICATION

## 4.Product packaging specification

**Product name: Spring antenna**

### 1、Labeling requirements

The inner label is 7CM long and 4CM wide

The outer label is 7CM long, about 5CM

|                 |                                      |
|-----------------|--------------------------------------|
| supplier        | Shenzhen Feimin Technology Co., Ltd. |
| product name    | *****                                |
| Material coding | *****                                |
| Specifications  | *****                                |
| quantity        | ***PCS                               |

|                     |                                      |              |       |
|---------------------|--------------------------------------|--------------|-------|
| client's name       |                                      |              |       |
| supplier            | Shenzhen Feimin Technology Co., Ltd. |              |       |
| Order number        | *****                                |              |       |
| Material coding     | *****                                |              |       |
| Specification model | *****                                | product name | ***** |
| quantity            | *****PCS                             | QC:          |       |
| spare parts         | ***PCS                               | Notes        |       |

### 2、Packing process

Job description:

1. The product \_\_PCS is packed in PE open pockets, and the inner label is affixed to each pouch; Put the \_\_ small bag into the big PE sealing tape bag, except the tail number and spare parts.
2. Each box contains \_\_ large bags of products, and the boxes are sealed with adhesive tape in the shape of "I".
3. Paste the outer label on the upper right corner of the box, and there must be no missing or wrong filling.

### 3、Precautions

When packing the box, please pay attention to lay the antenna flat and avoid serious shaking after sealing. If the whole box is not filled, it needs to be filled with foam to avoid transportation Circumstances that caused product defects in the process.