



ShenZhen City FeiMin Technology CO.,LTD.

SPECIFICATION FOR APPROVED

CUSTOMER: Shenzhen Papani Pet Products Co., Ltd.

PRODUCTS: Spring antenna

PART NO:

Spec. : FM-S2270-T30-TX

Data: 2025. 3. 13

SUPPLIER		
PREPARED BY	CHECKED BY	APPROVED BY
YuanChen	YuanChen	YuanChen

CUSTOMER		
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REMARK:Please send us one(or copy)of this approval with stamp after accepting,other copies filed by the customer.

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ANTENNA SPECIFICATION

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

Revision history

version	date	condition
A1	2025-3-13	First edition

Changes:

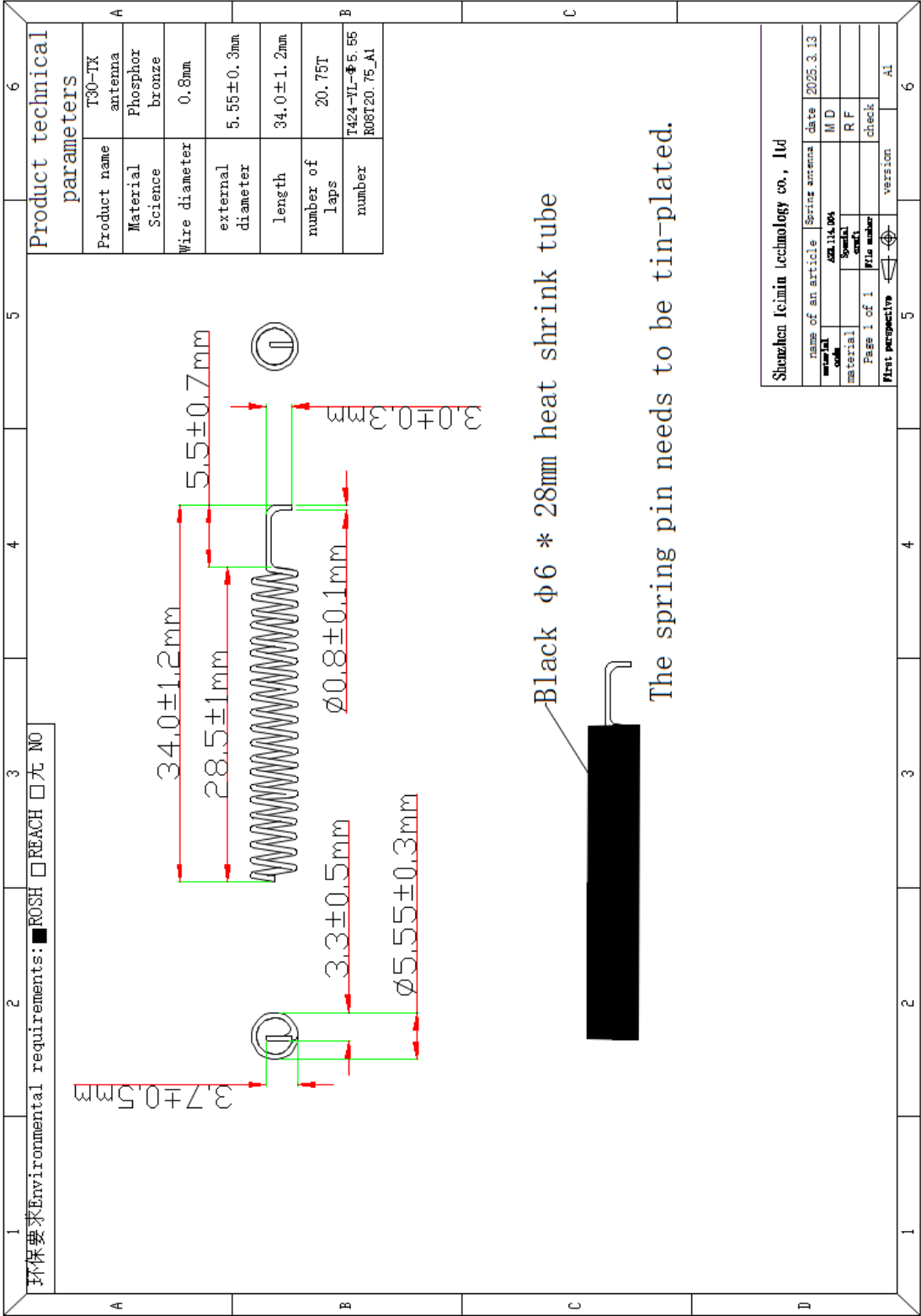
First change:

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

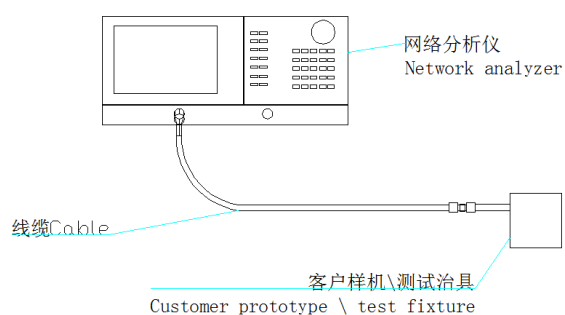


2. Electrical Characteristics

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

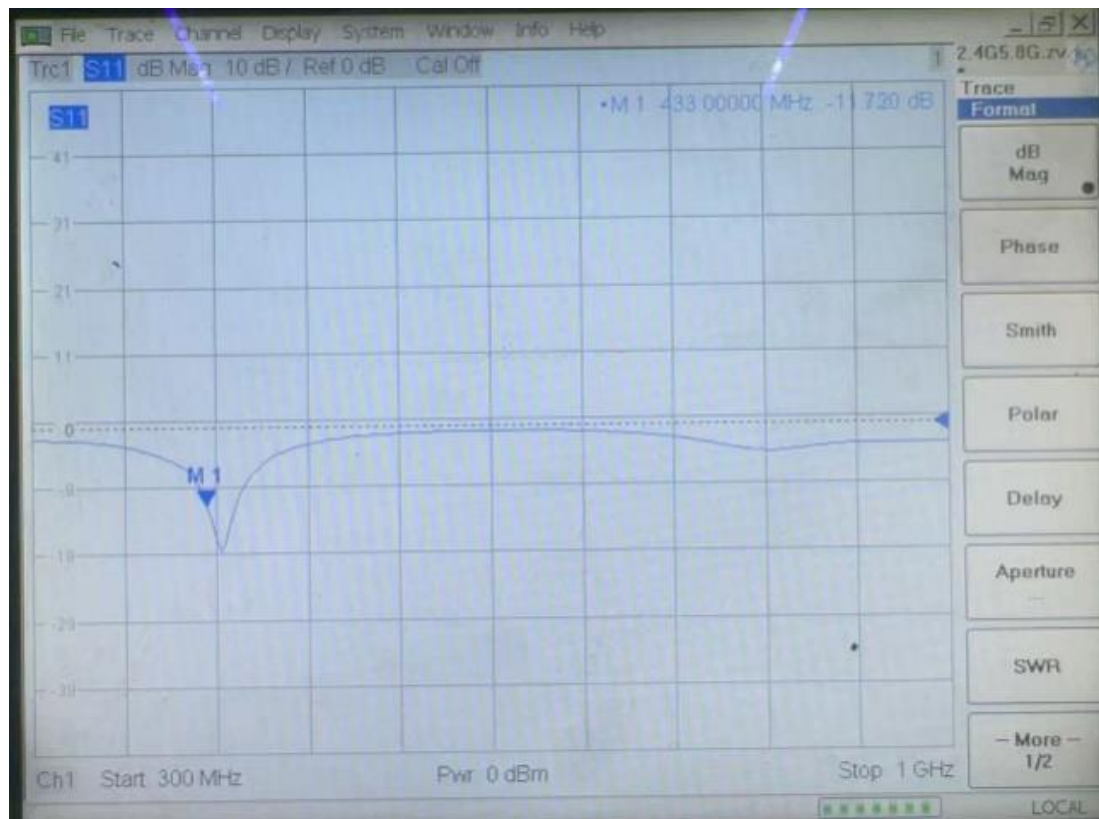
Design Specifications	Typical	Units
Antenna Type	Spring antenna	
Frequency of work	433	MHz
Antenna efficiency	25-30	%
Ploriaztion	Vertical polarization	
Antenna size	As shown in Figure 1.1	mm
Radiation direction	360°	
Impedance	50	Ohm
Weight	No requirements	
Operatin Temp	-30-70	℃
Storing Temp	-30-70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

ANTENNA SPECIFICATION

2.2.2. Antenna VSWR



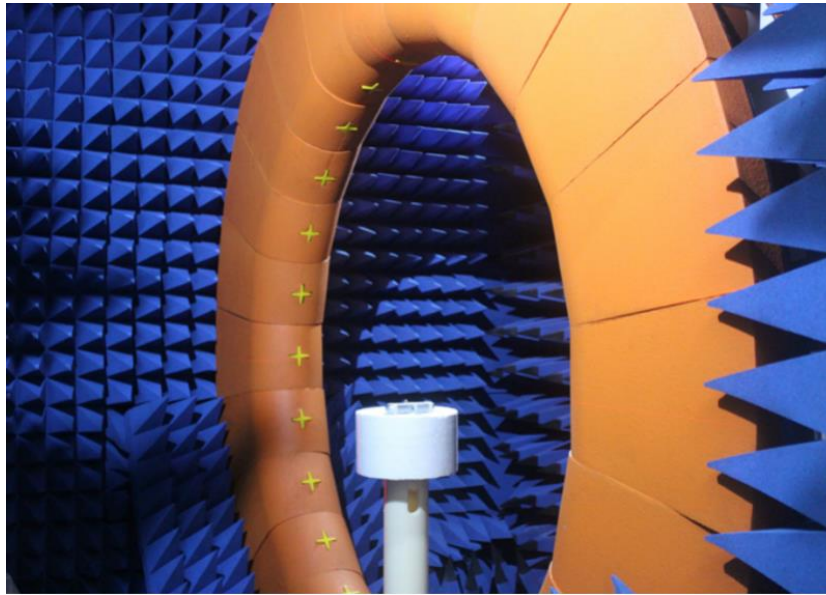
2.2.3. Antenna Return loss



ANTENNA SPECIFICATION

2.3. Antenna passive test data

2.3.1. Test system



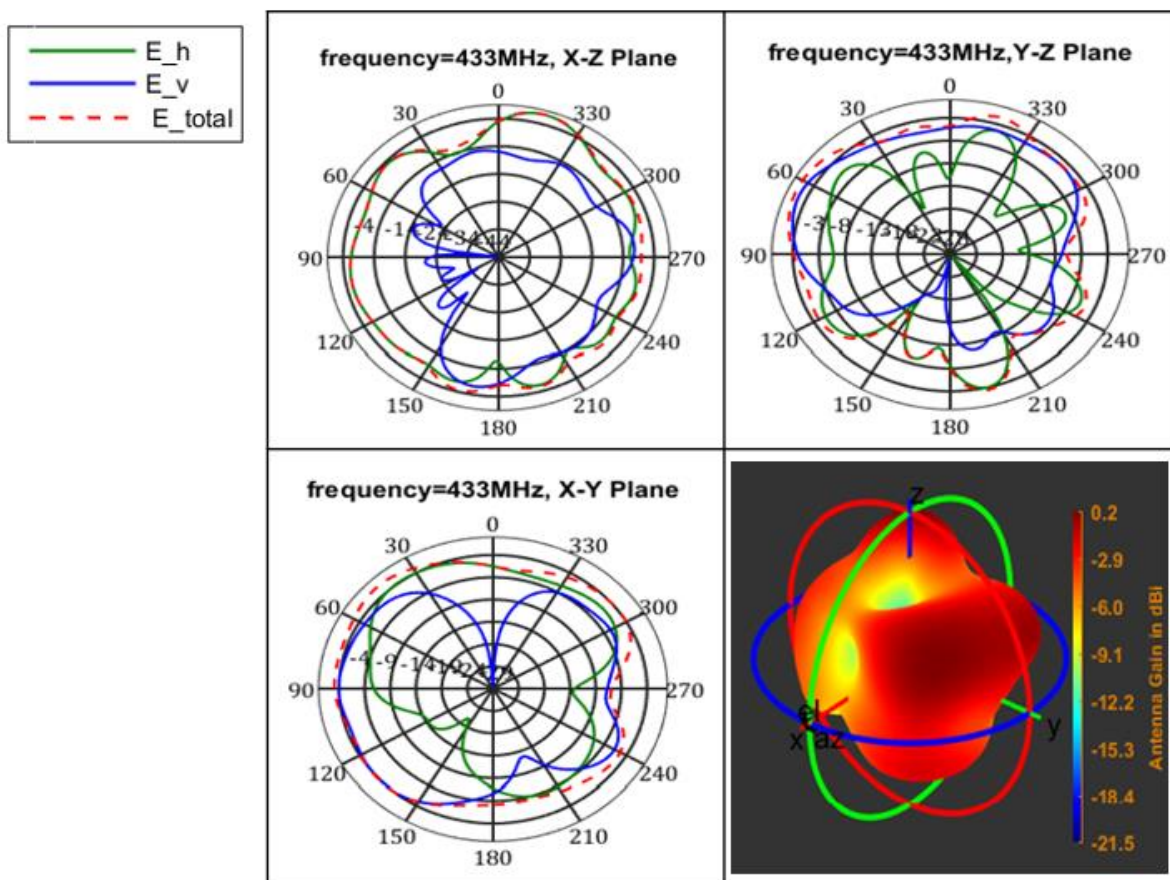
Shenzhen Feimin Technology Co., Ltd. (24-probe OTA microwave darkroom)

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.

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:

- 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.
- Each box contains __ large bags of products, and the boxes are sealed with adhesive tape in the shape of "I".
- 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.