



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		
ACCEPTED BY	CHECKED BY	APPROVED BY

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

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Revision history

version	date	condition
A1	2025-3-13	First edition

Changes:

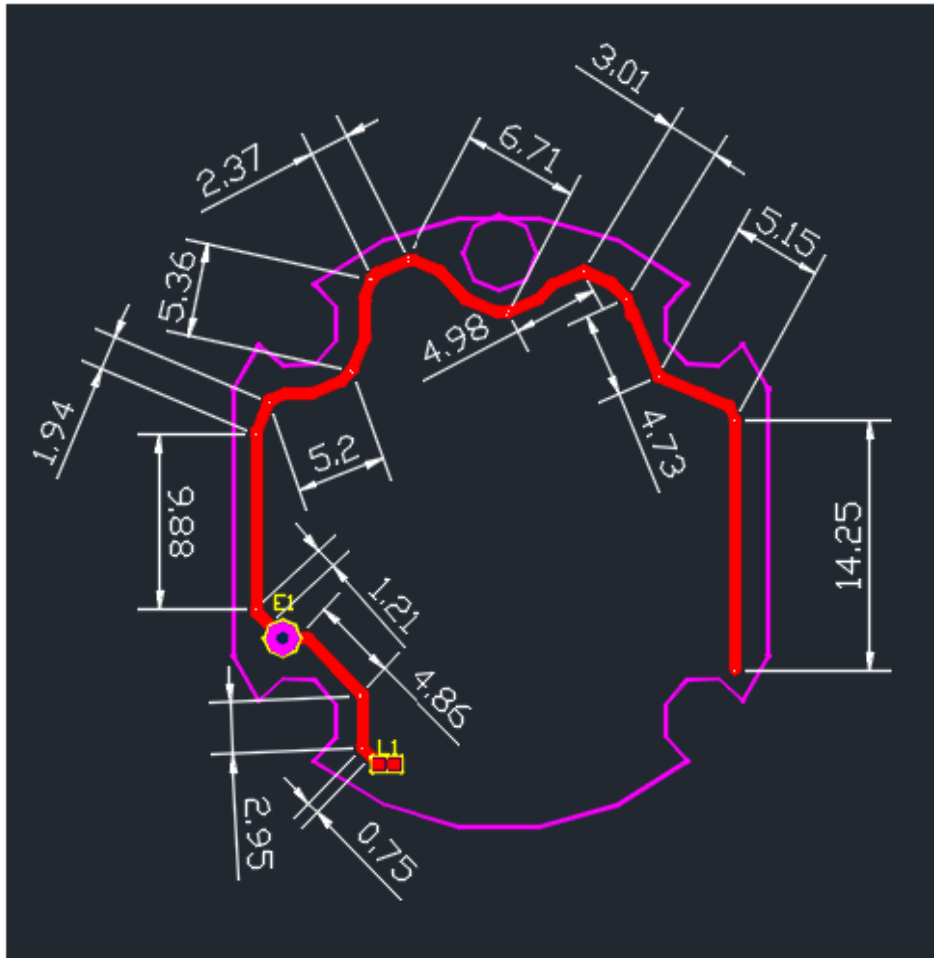
First change:

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 (mm)

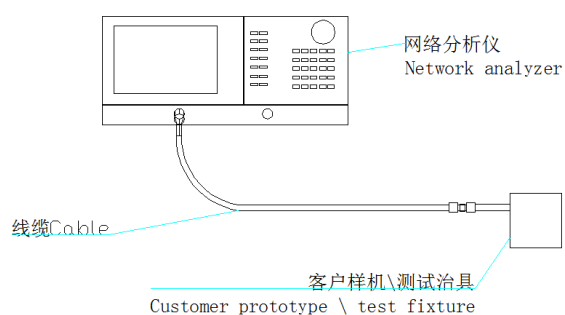


2. Electrical Characteristics

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

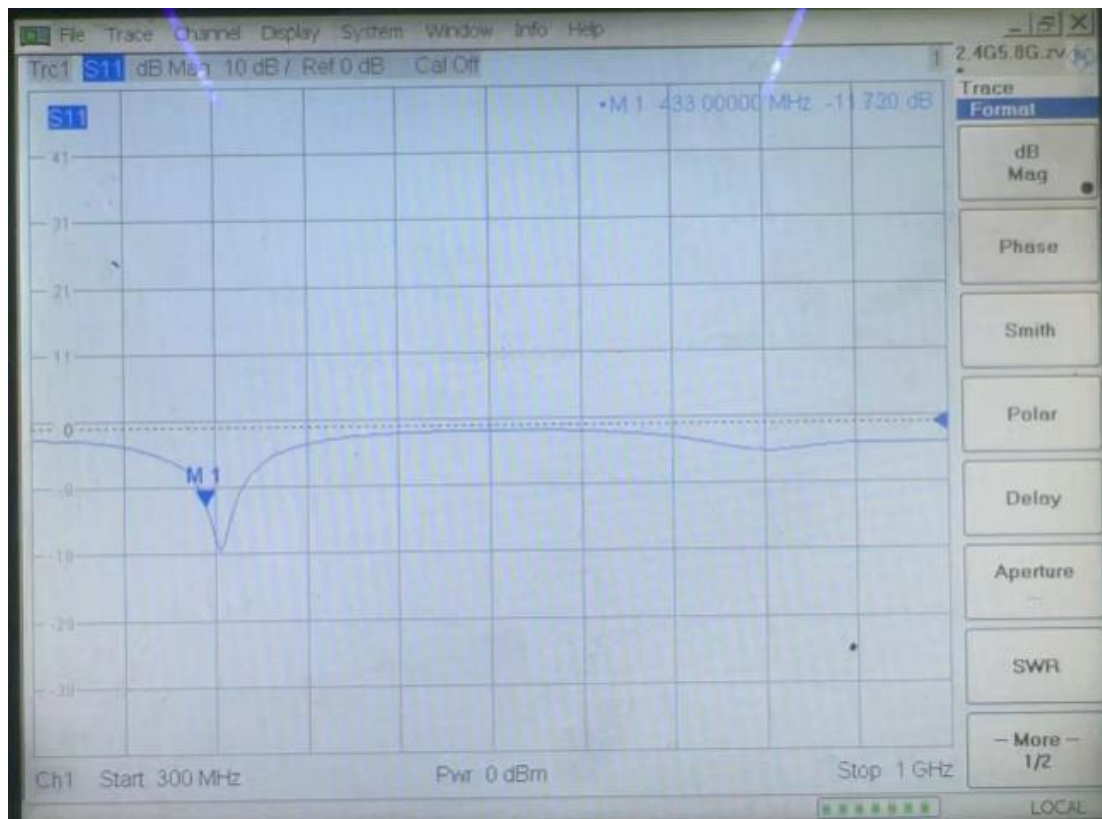
Design Specifications	Typical	Units
Antenna Type	Spring antenna	
Frequency of work	433	MHz
Antenna efficiency	25-30	%
Ploriaztion	Vertical polarization	
Antenna size	As shown in Figure 1.1	mm
Radiation direction	360°	
Impedance	50	Ohm
Weight	No requirements	
Operatin Temp	-30-70	℃
Storing Temp	-30-70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

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2.2.2. Antenna VSWR



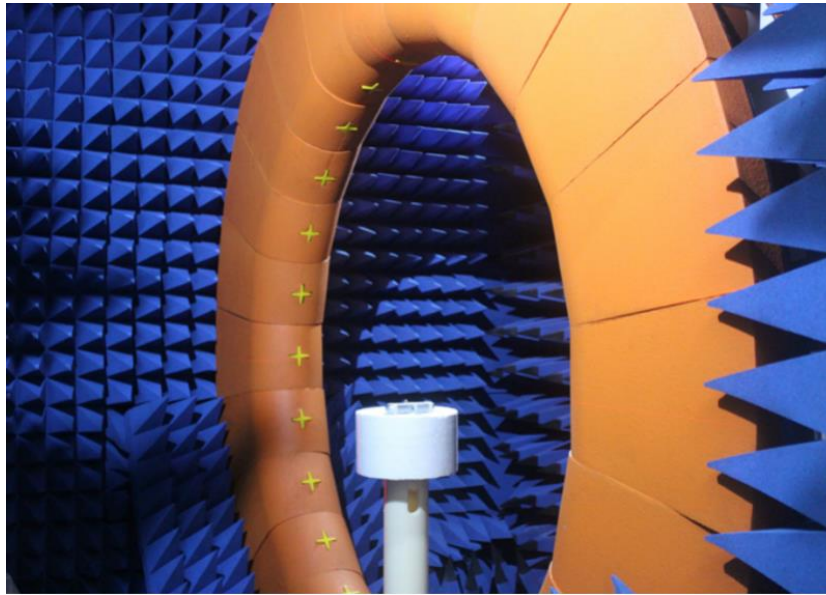
2.2.3. Antenna Return loss



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2.3. Antenna passive test data

2.3.1. Test system



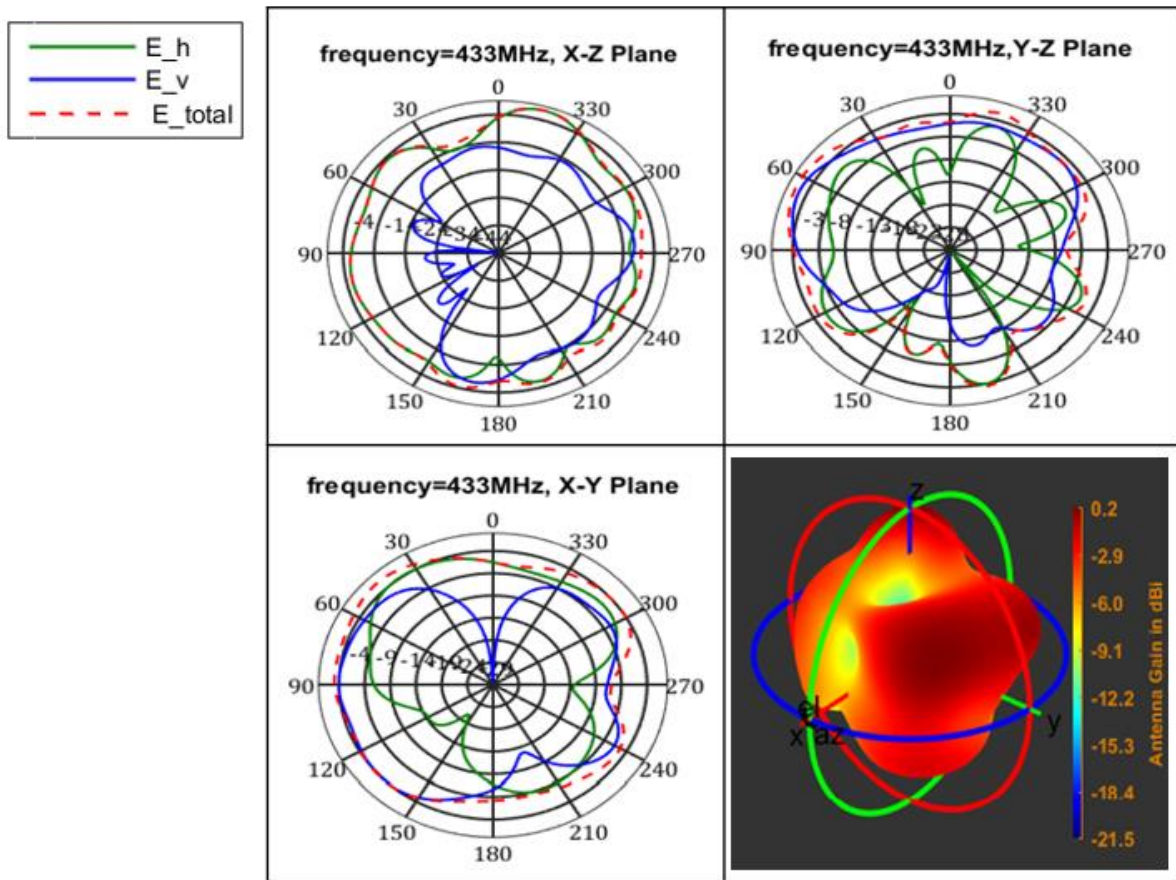
Shenzhen Feimin Technology Co., Ltd. (24-probe OTA microwave darkroom)

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

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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.