



Spring day Line specification recognition letter

Product specifications for approval

.Antenna frequency band: 433MHz

Version: The0

Date of production: 2024-

10-17

Number: FS-987 Machine Model: SF-DD

.Structure:		Radio frequency:	
Audit:		Approval:	
Customer's confirmation			
Customer review:		Customer's approval:	

Manufacturer:SEND COMMUNICATIONS TECHNOLOGY CO.,LTD

Address:Unit 106, Building B, Jiaxinyuan, No. 128, Longcheng Avenue, Shengping Community, Longcheng Street, Longgang District, Shenzhen

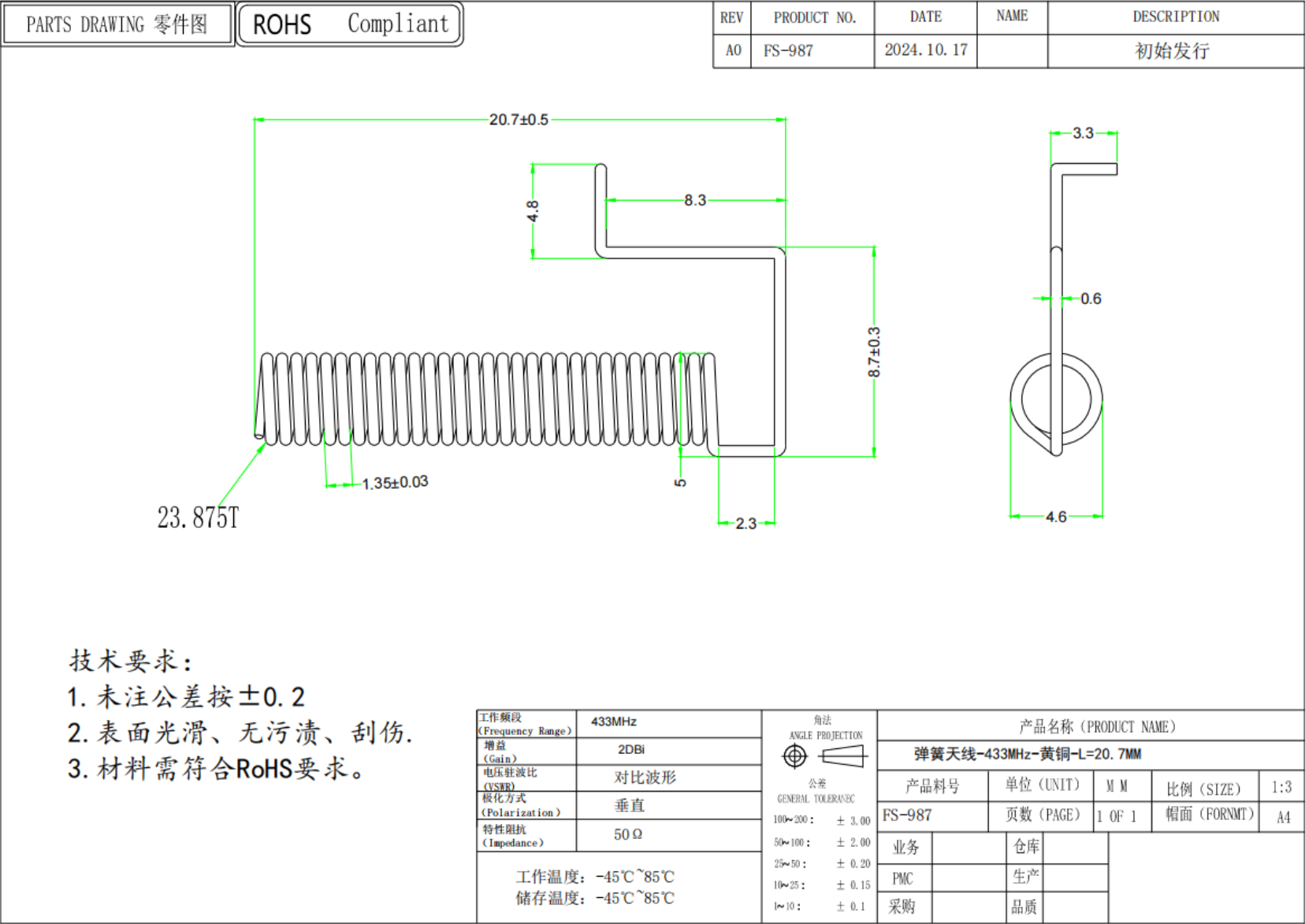


INDEX.

1)	Cover.....	1
2)	Catalogue.....	2
3)	2D drawings.....	
Three		
4)	Product specification parameters.....	4
5)	Test report of passive waveform loss value.....	5-7
6)	Environmental test report	8-9

Modify the record

Edition	Date	Engineer	Modify the content
A0.	October 17, 2024		



Product Feature Specification Table

I. Basic characteristics of the product:

Product type:Spring Antenna-433MHz-Brass-L=20.7MM	
DESCRIPTION	VALUE.
Working frequency band	433MHz
Characteristic impedance	50 Ω
Voltage standing wave ratio	Compare sample waveforms
Increase	2DBi.
Conductive resistance	0.5 Ω
Insulation resistance	Three0 Ω
DC voltage	300 Volts
Power	1 W
Connector model	/
Working temperature	-45℃~+85℃
Storage temperature	-45℃~+85℃

1.Small sizeUmmmaryEssentials:

This report to account for the measurement setup and result of the Antenna. The measurement setup includes s-parameter,The measured data for Antenna are presented and analysis.

This report is used to illustrate the results of the standard antenna, which includes the return loss value, which is the data representation and analysis of the standard antenna.

2. S-P.ArameterMedium size EasurementSmall size

Parameter'sStandard:

A. Reflection coefficient Reflection coefficient:

.(A) Instrument(Deconer): Network Analyzer(Network Analysis Discussion) .

(B) SetupSet up:

(1) Calibrate the Network Analyzer by one port calibration using O.S.L. calibration kits.

The calibration of the instrument is carried out through the OSL calibration kit.

(2) Connect the antenna under test to the Network Analyzer.

Connect the antenna to be tested to the network analysis.

(3) Measure the S11(reflection coefficient) shown in Fig. 1.

Standard S11.As shown in Figure 1.

(4) Generally, the S11 is less than -10dB to ensure the 90%VSWR 2.0:1 Power into antenna and only less Than 10% power back to system.

Generally speaking,S11.Less than-10 dBVSWR is less than 2.0:1 to ensure 90% of the power is converted into an antenna and only less than.Ten% of the power reflection back system.

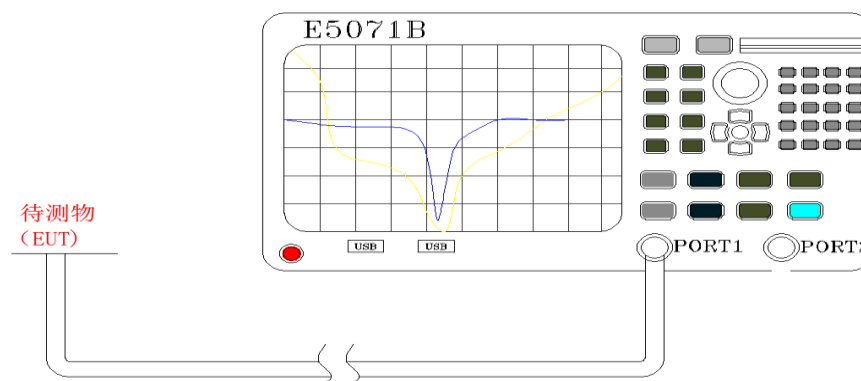


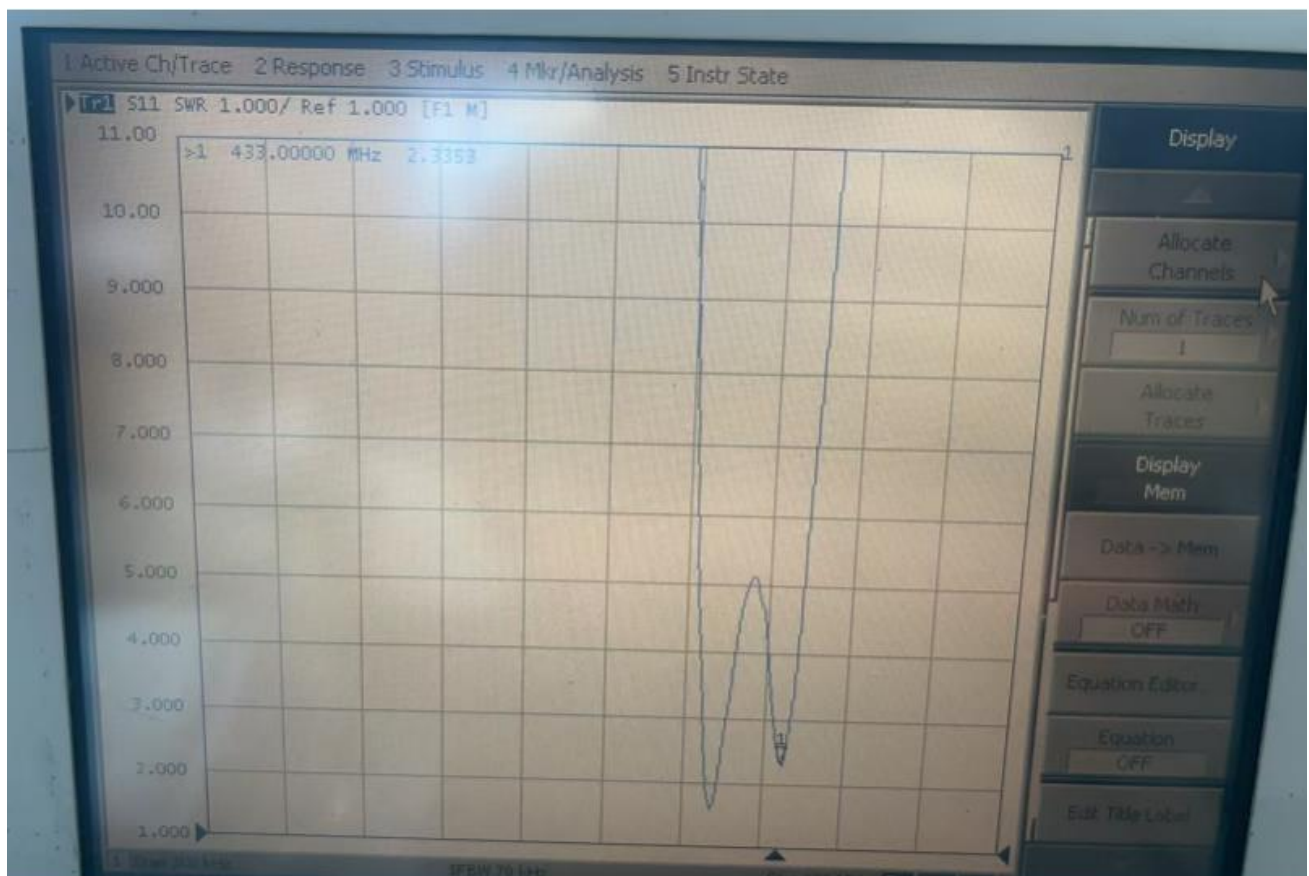
Fig.1 Antenna measured in Network AnalyzerPicture1Antenna Measurement Network Analyzer

3. S-Parameter Measurement Result Standard results of S parameter:

S-Parameter.Test data S-parameter standard data:

FrequencyMegahertz Working frequency band	433
Standard lossDB value	2.33

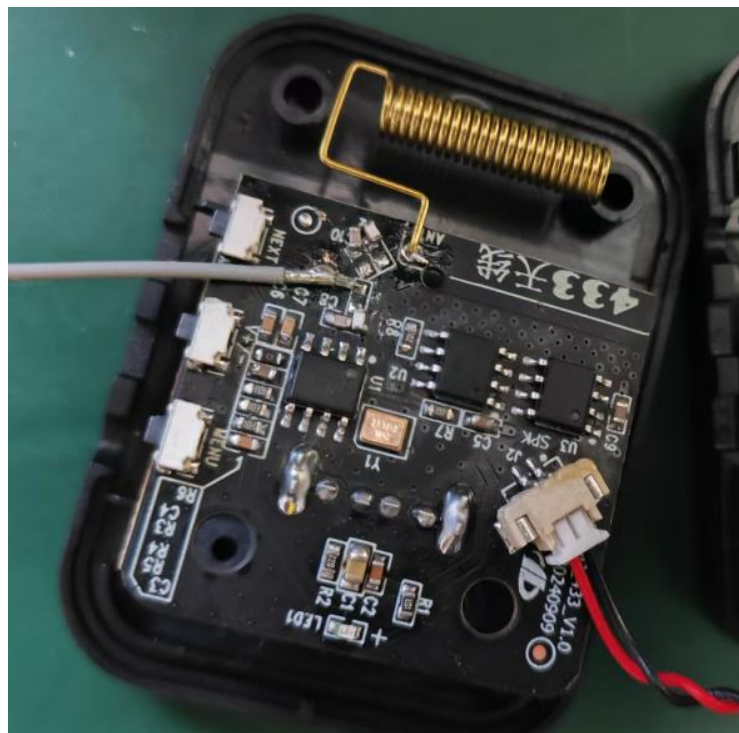
S-ParameterTest image S-parameter standard picture:



The appearance of the machine:



Antenna welding position:



Environmental test requirements

Order	Test items	Test methods and conditions	Test equipment	Test results
1	Temperature and humidity test	Refer to EIA 364-31 Method 3, Test Condition A The purpose of this test program is to use the detailed standard test method. Product, they are evaluated by the influence of high humidity and heat, which affects the performance of materials. Requirements: Temperature: 85°C Moisture content: 90~95% (R.H) Time: 72 hours	K. SON INS THS-A4L-150.	Qualified
2	Low-temperature test	Refer to the electronic test specification: The measured sample should be placed in a lasting in the temperature environment, its temperature is set at -45°C Demand: Time: Trapped	K. SON INS THS-A4L-150.	Qualified
Three	High temperature test	Refer to the electronic test specification: The measured sample should be placed in a lasting in the temperature environment, its temperature is set at 85°C. Demand : Time: Trapped	K. SON INS THS-A4L-150.	Qualified
4	Cold and heat shock	Refer to the electronic test specification: The measured sample should be placed in a fixed environment, and its temperature should be set to -45~85°C. Requirements: More than 8 hours. (30 Minute/Come next in order, 12 cycles)	K. SON INS THS-A4L-150.	Qualified

5	Salt spray test	Refer to the electronic test specification: The measured sample should be placed in a fixed environment under its requirements: NaCL concentration: 40-60g/1Kg PH value: 6.5-7.2 Test time: .24 hours	Salt spray testing machine	Qualified
		1. Gold-plated products are not allowed to have rust and peeling. Two. Other nickel-plated, tin-plated and galvanized products shall not have more than two rust points on the same axis or surface.		

Mechanical test requirements

Order	Test items	Test methods and conditions	Test equipment	Test results
1	Vibration test	Test condition A The purpose of this test program is to use the detailed standard test method. Product, they are from Move or move, affect the performance of the material to evaluate.	Vibration tester	Qualified
		Requirements: Vibration range: 10-55HZ Displacement amplitude: 0.35mm ACCELERATION AMPLitude: 50.0M/S Number of sweep cycles: 30 times		
2	Drop test	Refer to the electronic test specification: The measured sample should be placed at	Drop test jig	Qualified

		a certain height, the height should be set to 1M, and it should fall freely 3 times in the direction of 6 faces.		
		Demand: After the drop test, the mechanical characteristics of the product are normal.		
Three	Trasin test	Refer to the electronic test specification: After fixing the object under test with the jig and applying force in the opposite direction with a certain force, the product assembly must not fall off.	Tensil test machine	.Qualified
		Requirements: 1.The product assembly must not be removed. Two. Minimum tensile force: 1.2KG		

Note: Electronically carry out the above mechanical and environmental parameter tests before research and development and trial production.