

SPECIFICATION FOR APPROVALS

CUSTOMER: _____

CUS PARTNO: _____

PARTNAME: _____ SPRING ANTENNA

TPTPART NO: _____ RT433-999W

REV: _____ 1.0

CUS STAMP:

DATE:

Purchasing Dept	Engineering Dept	Approval

Date: Aug 05, 2025

Engineering Dept	Sales Dept	Approval

Please return one specification or one copy of it with your chop and signature of approval and retain the others for your record. In the event of an order being placed for this part number before the chop and signed with specification (or copy) is returned and without special explanation, it will be assumed that full approval have been given.

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Spring antenna specification

1.Product pictures (refer photos)

2.Test parameters

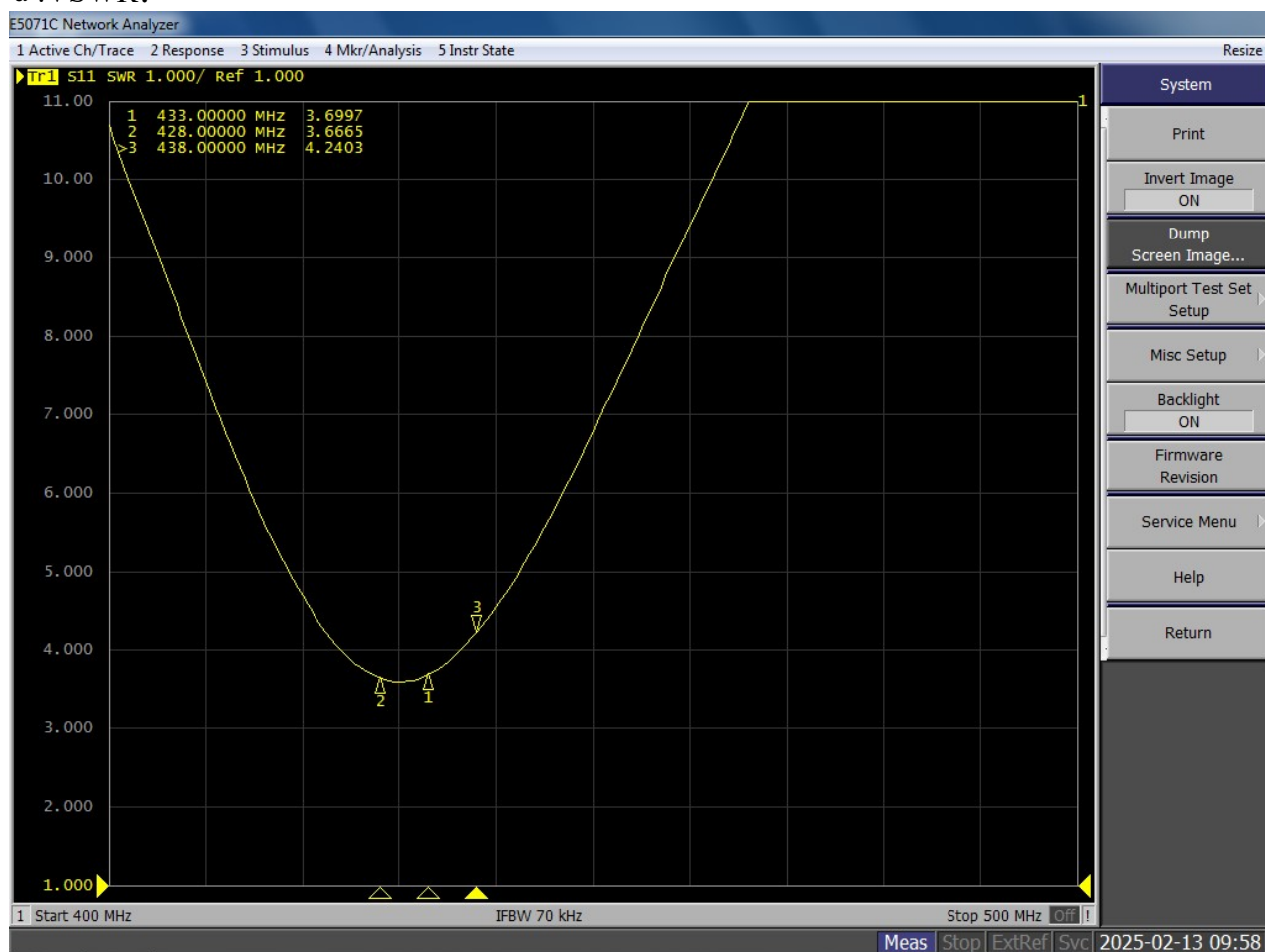
Name spring antenna (RT433-999W)		ModelType	
ELECTRICAL SPECTFICATIONS		MECHANICAL SPECTFICATIONS	
FrenquencyRange $433 \pm 5\text{MHz}$		Dimensions	Diameter $4.6*35.5\text{mm}$
Impedance	$50\ \Omega$	Connector	weld
VSWR	≤ 5.0	Radome Material	Carbon steel nickel-plated wire 0.6
Gain	-3.0dBi	Radome Color	Silver
Polarization	linear Vertical	WorkingTemperature	$-45^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Radiation	Omnidirectional	Limit Temperature	$-45^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Power	50W		

3. The antenna test environment

test macro:	SY-16M /MPS4843 multi-probe OTA Antenna measurement system
testing environment :	temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$
testing equipment:	Agilent 5071C Agilent 8960 network analyzer Agilent CMW500 4G network analyzer

4. Antenna Passive Parameters:

a .VSWR:



5.. Product characteristics

1. First use high-quality carbon steel plated nickel wire, self-decay is small;
2. Stable performance, long service life
3. Good standing wave in the band.

6、Reliability testing

a、Environmental experiment

High and low temperature and humidity testreport						
test project	High temperature, low temperature and constant humidity test					
name	Spring antenna (RT433-999W)			date	2025.08.05	
device	Constant temperature and humidity test box network analyzer			Quantity	5PCS	
Inspectin standards	1. There are no defects such as peeling off, cracks, wrinkles, etc. on the metal surface; non-metal parts must not have defects such as discoloration, cracking, deformation, degumming. 2. The electrical test meets the design requirements; the voltage standing wave ratio test is satisfactory.					
Test name		request	experiment method	Actual test data	result	
					sample	Assessm ent result
High temperature test	Temperature (℃) Test sample temperature stabilization time (H) Test duration (h) Recovery time (h)	+85±3 1 2 1	9 according to GB2423. 1-89 Method	+87 1.2 2.3 1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified
Low temperature test	Temperature (℃) Test sample temperature stabilization time (h) Test duration (h) Recovery time (h)	-45±3 1 2 1	8th in accordance with GB2423. 1-89 Method	-46 1.2 2.4 1.1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified
Constant Damp Heat Test	Temper ature (℃) Relative	+40±2 90-95 21	According to GB2423. 3-93 Section 5	+42 92 22	1	qualified
					2	qualified
					3	qualified

	humidity (%)	1	Method	1.1	4	qualified
	Test duration (h) Recovery time (h)				5	qualified

b. Salt spray test

Salt fog test report				
Test item	Salt spray test			
Name	Spring antenna (RT433-999W)		date of observation	2025.08.05
Device name	Salt spray corrosion test box		Test quantity	5 PCS
Test method	The test samples were put into the modulated salt solution test chamber and salt spray corrosion chamber for continuous spray test			
Salt solution concentration	52g/L	PH Value of Salt Solution: 6.5-7.2		Test cycle: 24h
Actual test data	55g/L	PH Value of Salt Solution: 6.8		Test cycle: 26h
Test standard	Tests were carried out according to GB/T10125 "Artificial Atmosphere Corrosion Test and Salt Spray Test"; Results According to GB/T6461-2002 "Metal and other inorganic coatings on metal substrates after corrosion test are samples and specimens"			
Test result				
NO	Corrosion resistance grade	Actual test data	Assessment result	Remarks
1	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
2	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
3	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
4	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
5	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	