



Specification for Approval

Customer: Chengchen

Part name: 433MHz Bent-leg spring antenna-L=20.5mm, Specifications:
0.6*OD4.0*14.8T*H14.8*L2.0*ARC2.45*L2.5*L9.2*Overall
Length21.74mm Material: Phosphor Bronze

Part No: BJL-TW43303

Customer Part No:

Customer confirmation		
Confirmation	check	Approver

Manufacturer recognition			
Sales	Drafters	check	Approver
Thank you for giving us the chance to approve samples. If you agree to pass them, please kindly send them back to us.			



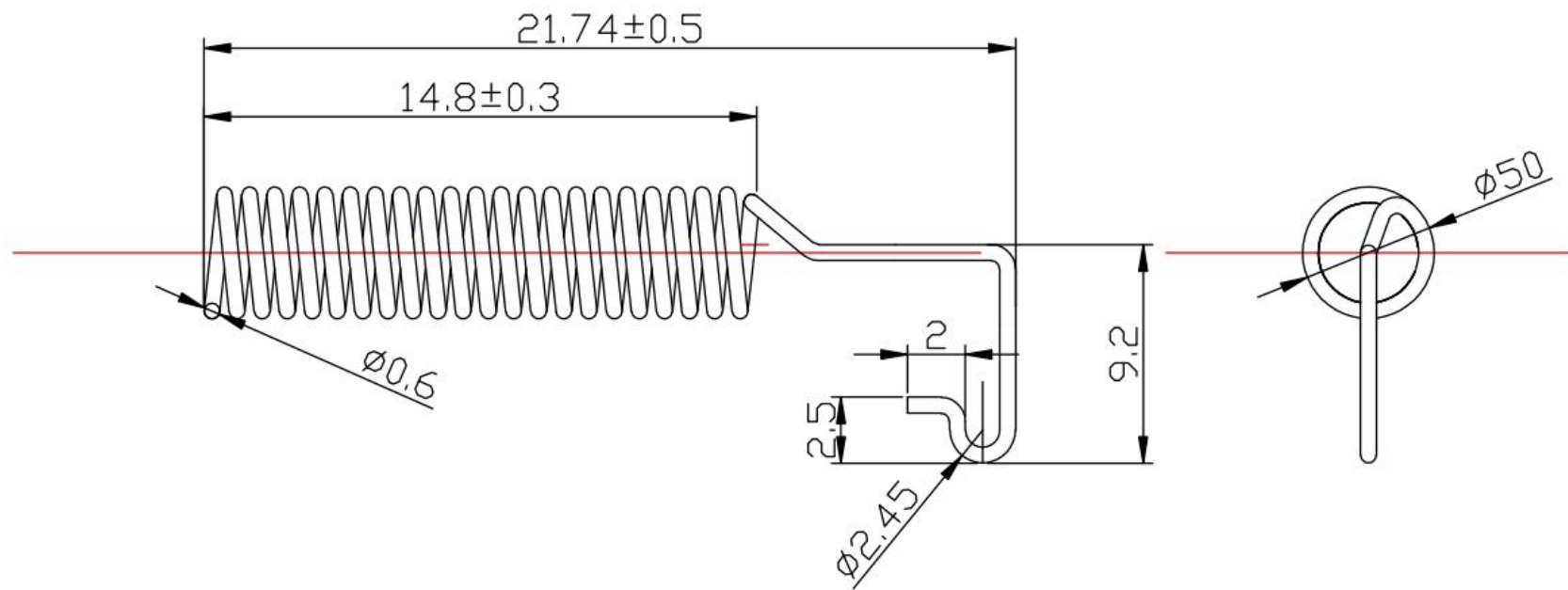
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Amendment record

Edition	Date	Engineer	Revised content
A0	2026-09-07	Zheng Shaojuan	New-built

1. Product Dimension Drawing



1. Product Appearance

External dimensions	0.6*4.0*14.8*9.2mm	Fixed form	Weld
Weight	/	Connector Model	/
Case color	Phosphor copper	Cable	/

3. Antenna Performance Parameters

Project	Characteristic	Unit
Frequency range	433	MHz
Output impedance	50	Ω
Standing wave ratio	≤ 2.0	—
Gain	-2.84	dBi
Polarization mode	Linear polarization	
Radiation direction	Omnidirectional	
Maximum input power	10	W
Working temperature	-40~+85	°C
Storage temperature	-40~+85	°C

3. Environmental Experiment

Environmental Test Report

4.1 High and Low Temperature Constant Humidity Test

P / N	BJL-TW43303		Product Name & Specifications	Spring antenna
Test item	High-temperature, low-temperature, and constant-humidity tests			
Detection device	Constant Temperature and Humidity Test Chamber		Test Quantity	10PCS
Acceptance standard	1. The metal surface coating shall be free from any defects such as detachment, cracks, or wrinkling; the non-metallic parts shall not exhibit any signs of discoloration, cracks, deformation, or delamination.			
Experiment Title	Test item	Ask	Experimental method	Result Determination
Hot test	Temperature (°C) Test sample temperature–time (h); Test duration (h) Recovery time(h)	85±3 1 2 1	Test procedure: a) Place the specimen into the test chamber, then set the high-temperature chamber temperature to 85°° C ± 3°° C, and monitor the duration. b) After the test, place the sample at room temperature for 1 hour before performing routine testing.	Qualified
Cold test	Temperature (°C) Test sample temperature – Time (h) – Test duration (h) Recovery time(h)	-40±3 1 2 1	Test procedure: a)Place the specimen into the test chamber, then set the low-temperature chamber temperature to-40°C ± 3°C and monitor the time. b) After the test, place the sample at room temperature for 1 hour, then perform routine testing.	Qualified
Steady-state damp heat test	Temperature (°C) Relative humidity(%) Test duration (h)	+40±3 90-95 21	a) Place the specimen into the test chamber, then set the chamber temperature to +40°C ±3°C and the humidity to 90-95%; monitor the duration of the test.	Qualified



	Recovery time(h)	1	b) After the test, place the sample at room temperature for 1 hour, then perform routine testing.	
Inspector: Lu Xiaojun		Reviewed by: Wang Hongkun	Approved by: Xiao Tianfang	

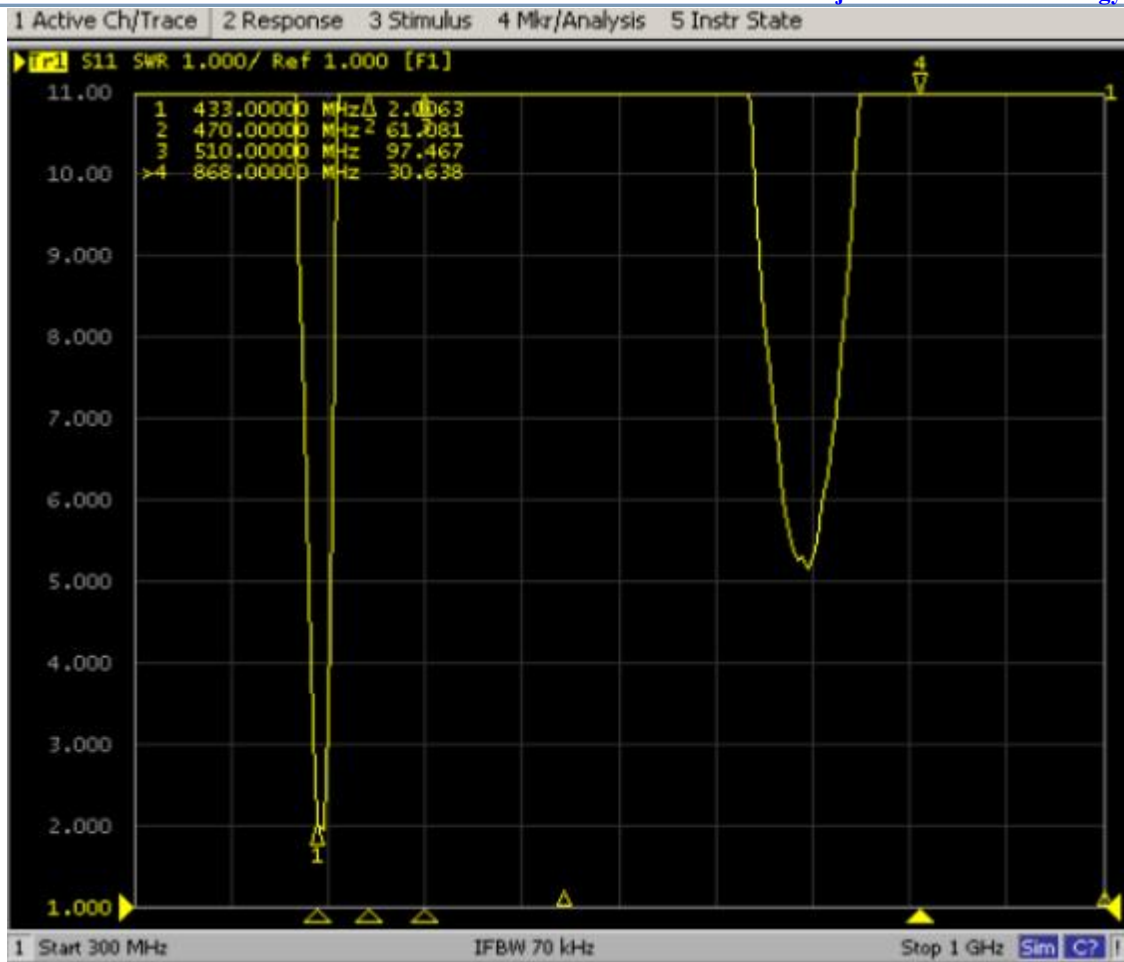
4.2 Free-Fall Test

P / N	BJL-TW43303		Product Name & Specifications	Spring antenna
Test item	Free-fall test			
Detection device	1 MiGao Desktop		Test Quantity	10PCS
Acceptance standard	1. When dropped from a height of 1 meter, the product shall not exhibit any detachment, cracks, or other defects, nor shall it show any deformation in its appearance.			
Experiment Title	Test item	Ask	Experimental method	Result Determination
Free-fall test	Fall height: 1000 mm	Both sides dropped twice.	Test procedure: a) The test specimen shall be dropped from a height of 1000 mm; after the test, a routine inspection shall be performed.	Qualified
Inspector: Lu Xiaojun		Reviewed by: Wang Hongkun	Approved by: Xiao Tianfang	

4.3 Salt Spray Test

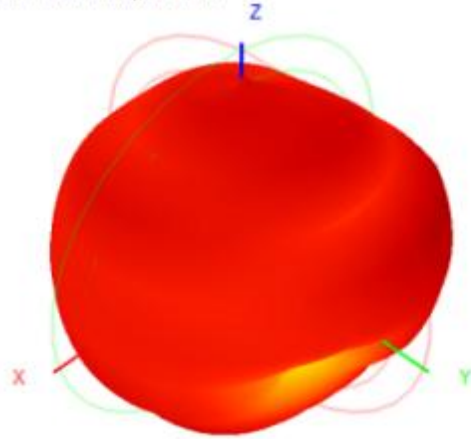
P/N	BJL-TW43303		Product Name & Specifications	Spring antenna
Test item	Salt spray test			
Detection device	Salt Spray Test Machine		Test Quantity	10PCS
Acceptance standard	1. The metal surface coating is free from detachment; the appearance shows no signs of rusting, corrosion, oxidation, or other adverse conditions.			
Experiment Title	Test item	Ask	Experimental method	Result Determination
Salt spray test	1. NaCl concentration: 2. air pressure: 3. PHprice: 4. Spray volume: 5. Saline solution test temperature setting a. Laboratory temperature: b. Pressure tank temperature: 6. Testing time:	40—60g/1kg 1. $0 \pm 0.01 \text{ kgf/m}^2$ 6. 5—7.2 1.0—2.0ml/80c/h. 35±1℃ 47±1℃ 24H	Test procedure: a) Set the salt spray test machine to the relevant test conditions. b) Place the sample into the salt spray test chamber and leave it there for 24 hours. After the test, rinse the sample with clean water, visually inspect its appearance, and perform a routine inspection.	Qualified
Inspector: Lu Xiaojun		Reviewed by: Wang Hongkun	Approved by: Xiao Tianfang	

5. Antenna Performance Test

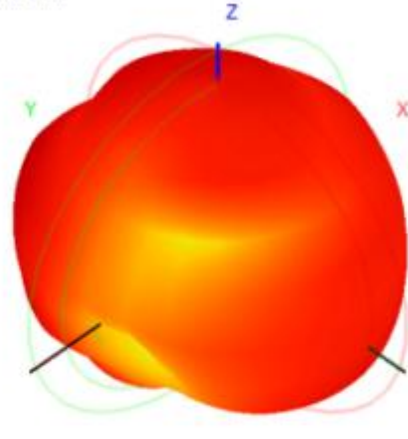


序号	频率(MHz)	增益 (dBi)	效率 (%)
1	400.0	-7.51	12.84
2	405.0	-6.68	13.43
3	410.0	-6.01	14.06
4	415.0	-5.20	14.90
5	420.0	-4.28	15.95
6	425.0	-3.28	16.65
7	430.0	-2.84	17.13
8	435.0	-3.49	16.77
9	440.0	-4.22	15.64
10	445.0	-5.58	14.23
11	450.0	-7.38	12.90
12	455.0	-9.41	11.99
13	460.0	-11.47	11.34
14	465.0	-13.34	10.95
15	470.0	-14.85	10.70
16	475.0	-16.06	10.51
17	480.0	-16.96	10.40
18	485.0	-17.95	10.32
19	490.0	-18.97	10.25
20	495.0	-20.01	10.20
21	500.0	-20.89	10.15

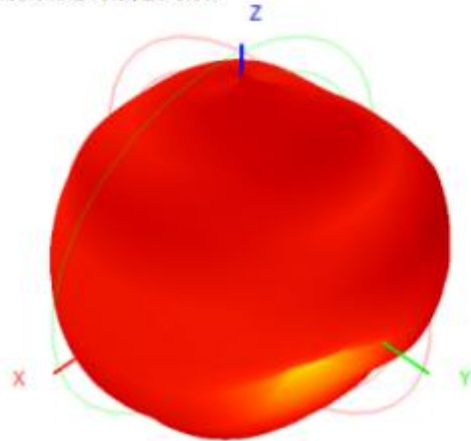
430.0MHz Total, Eff: 7.1%



Back View



435.0MHz Total, Eff: 6.8%



Back View

