

Specification ACKNOWLEDGEMENT

Specification For Approval

Customer Name : _____

Specification description: Straight head small pepper antenna R - SMA internal thread internal needle
black straight head rubber sleeve
2.4G-L=50mm

Part name

BJL part number: BJL-JZ2403-050

Customer part number: _____

Customer confirmation		
Confirm	Verify check	Approver

Manufacturer recognition			
Sales Representative	Drafters	Verify check	Approver

Thank you for granting our company the opportunity to submit samples for approval. Should the samples be approved, please return this form to our company.

Thank you for giving us the chance to approve samples. If you agree to pass it, please kindly send it back to us.

Shenzhen Baijinlian Wireless Technology Co., Ltd.

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<http://www.bjlwireless.com>

Catalogue

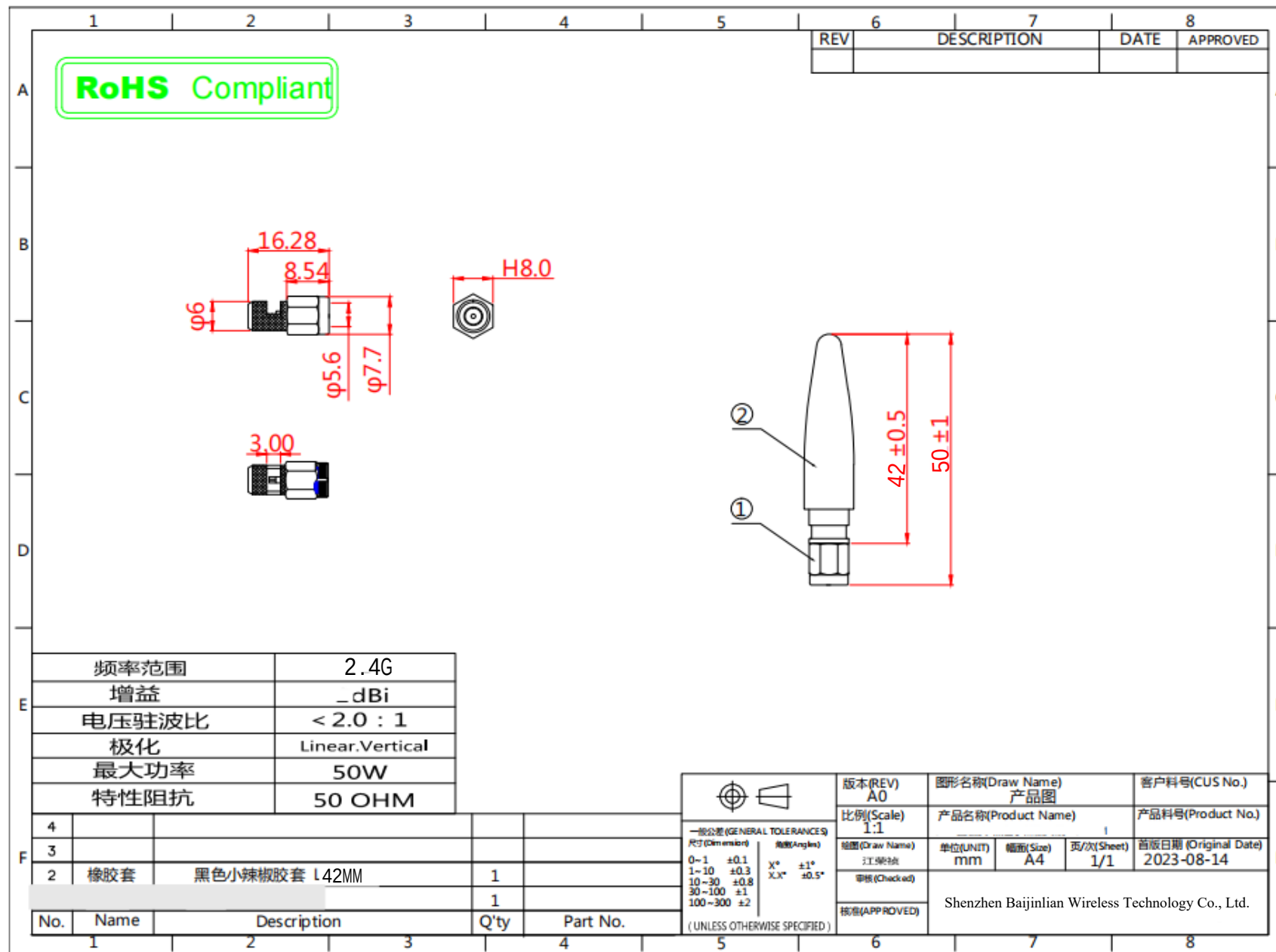
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Amendant Record

edition	date	engineer	revise content
A0	2024.08.01	Zhou Xihua	new-built

1. Product Size Diagram



2. Product Appearance

External dimensions	50mm	Fixed form	Helical fixation
Weight	$\leq 12.5\text{g}$	Connector model	R-SMA-ZJ
Shell color	Black	Cable	/

3. Antenna Performance Parameters

Project	Characteristic	Unit
Frequency range	2400-2500	MHz
Output impedance	50	Ω
Standing-wave ratio	Contrast waveforms	——
Gain	3.71	dBi
Polarization mode	Vertical polarization	
Radiation direction	Omnidirectional	
Maximum input power	5	W
Working temperature	$-40\sim+75$	$^{\circ}\text{C}$
Storage temperature	$-40\sim+75$	$^{\circ}\text{C}$

4. Cable Head Specifications

Materials and Coatings

Order number	Part name	Material quality	Cladding material	Remarks
1	Inner conductor	Yellow metal	Gold-plating	
2	Dielectric	Polytetrafluoroethylene PTFE		
3	Monoblock	Yellow metal	Dichloromethane	

Behaviour of Electricity

Order number	Surveillance project	Qualification	Remarks
1	Characteristic impedance	$50\ \Omega$	
2	Temperature range	$-55\sim+155^{\circ}\text{C}$	
3	Frequency range	$0\sim 3\text{GHz}$	
4	Dielectric withstand voltage	1000V (rms)	
5	Contact resistance	Inner conductor $\leq 3\text{m}\Omega$, outer conductor $\leq 2\text{m}\Omega$	
6	Insulation resistance	$\geq 5000\text{M}\ \Omega$	
7	Voltage standing-wave ratio	≤ 1.25 (Soft cable)	

5. Environmental Experiment

Environmental Test Report

5.1 High and Low Temperature Constant Humidity Test

P / N	BJL-JZ4G03-50		Product Name and Specifications	Small pepper antenna	
Test item	High Temperature, Low Temperature, and Constant Humidity Testing				
Detection device	Constant temperature and humidity test chamber		Number of tests	5PCS	
Acceptance standard	1. The metal surface coating should be free from peeling, cracking, wrinkling and other defects; the non-metallic parts should not have discoloration, cracking, deformation, decoupling and other phenomena.				
Test name	Test item	Ask	Experimental method		Result determination
Hot test	Temperature (°C)	75±3	Test procedure :		Qualified
	Test Sample Temperature	1	a) The test piece is placed into the test chamber, then the temperature of the high-temperature chamber is adjusted to 75°C ± 3°C, and the monitoring time is recorded.		
	Time (h) Test Duration (h)	2	b) After the test, the sample was placed at room temperature for 1 hour, followed by routine inspection.		
	Recovery time (h)	1			
Cold test	Temperature (°C)	-40±3	Test procedure :		Qualified
	Test Sample Temperature	1	a) The test piece is placed into the test chamber, and the temperature of the low-temperature chamber is adjusted to -40°C±3°C, with monitoring time.		
	Time (h) Test Duration (h)	2	b) After the test, the samples were placed at room temperature for 1 hour and then subjected to routine inspection.		
	Recovery time (h)	1			
Steady-state damp heat test	Temperature (°C)	+40±3	a) The test piece is placed into the test chamber, then the temperature of the test chamber is adjusted to +40°C±3°C, and the humidity is set at 90-95%. The monitoring time is recorded.		Qualified
	Relative humidity (%)	90-95	b) After the test, the samples were placed at room temperature for 1 hour and then subjected to routine inspection.		
	Duration of trial (h)	21			
	Recovery time (h)	1			
Inspector: Lu Xiaojun Review: Wang Hongkun Approved by: Xiao Tianfang					

5.2 Free Drop Test

P / N	BJL-JZ4G03-50		Product Name and Specifications	Small pepper antenna
Test item	Free drop test			
Detection device	1 Migao Desktop		Number of tests	5PCS
Acceptance standard	1. When dropped from a height of 1 meter, the product showed no detachment, cracks, or other defects, and its appearance remained undistorted.			
Test name	Test item	Ask	Experimental method	Result determination
Free fall Test	Fall height: 1000mm	2 drops on both sides	Test procedure : a) The test piece will be dropped from a height of 1000mm, and the routine inspection will be carried out after the test.	Qualified
Inspector: Lu Xiaojun Review: Wang Hongkun Approved by: Xiao Tianfang				

5.3 Salt Spray Test

P / N	BJL-JZ4G03-50		Product Name and Specifications	Small pepper antenna
Test item	Salt spray test			
Detection device	Salt spray tester		Number of tests	5PCS
Acceptance standard	1. The coating on the metal surface is not peeled off; there is no rust, corrosion, oxidation or other adverse phenomena on the appearance.			

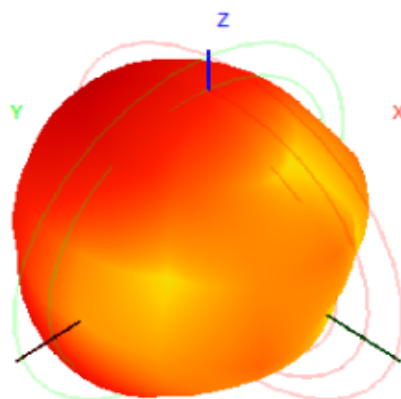
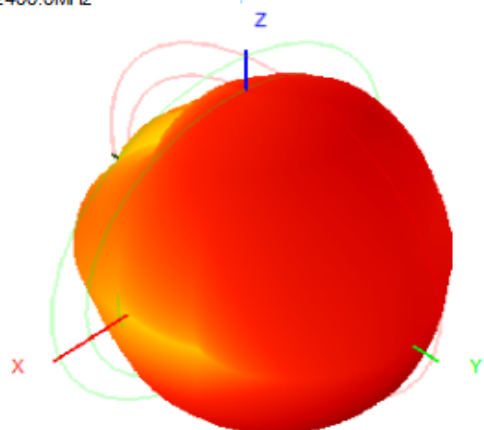
Test name	Test item	Ask	Experimental method	Result determination
Salt spray test	1. NaCl potency : 2. air pressure : 3. PH price : 4. Spray volume: 5. Saltwater test temperature settings a. Laboratory temperature: b. Pressure tank temperature: 6. testing time :	40-60g/1kg $1.0 \pm 0.01 \text{ kgf m}^2$ 6.5-7.2 1.0-2.0ml/80c/h。 $35 \pm 1^\circ\text{C}$ $47 \pm 1^\circ\text{C}$ 24h	Test procedure : a) Set up the salt spray test machine to the relevant test conditions. b) Place the test specimen into the salt spray tester and expose it for 24 hours. After the test, rinse with clean water, visually inspect the appearance of the test specimen, and perform routine inspection.	Qualified
Inspector: Lu Xiaojun Review: Wang Hongkun Approved by: Xiao Tianfang				

6. Antenna Performance Test

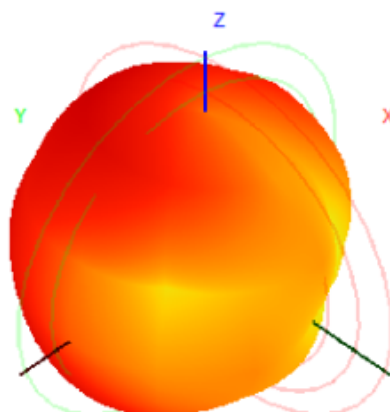
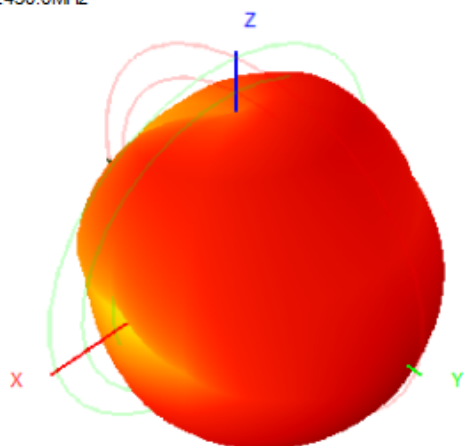
Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1	2400.0	2.59	42.21
2	2410.0	2.68	43.41
3	2420.0	3.70	41.00
4	2430.0	3.20	45.31
5	2440.0	3.71	46.63
6	2450.0	3.51	47.02
7	2460.0	3.17	46.62
8	2470.0	3.64	48.94
9	2480.0	3.62	47.03
10	2490.0	3.18	46.90
11	2500.0	3.36	47.40



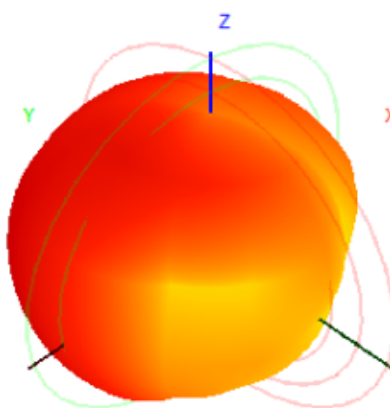
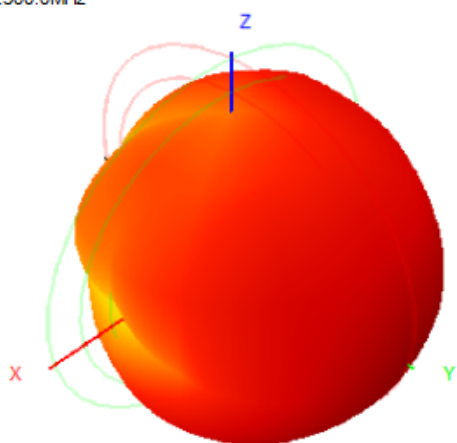
2400.0MHz



2450.0MHz



2500.0MHz



7. Product Photos

