

Shenzhen Xingtong Wireless Technology Co., Ltd.

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Shenzhen

Product Specification Sheet

Project Name: SA06

Product Name: SA06-BT Antenna

Product Part Number: SA06C08XT00

Prepared by	Reviewed by	Date
Huang Jiajun	Wu Yanlong	2024-10-14

Customer Confirmation:

Customer Name	Shenzhen Shengsida Communication Technology Co., Ltd.
Approved by	
Date	
Note	

Please sign and stamp this document and return one copy to our company for record-keeping. Thank you for your cooperation!

Shenzhen Xingtong Wireless Technology Co., Ltd.		Date	2024-10-14
		Version	A0
		Document Number	XT-YF-004
Product Name	SA06-BT Antenna	Product Number	SA06-APP-RA

1. Product Construction

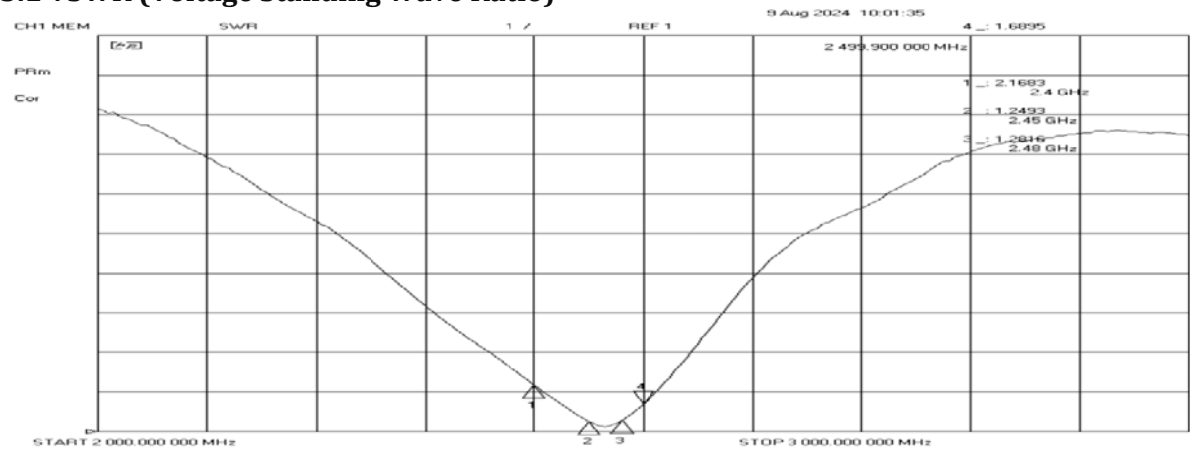
- **Antenna Material:** Copper tube + coaxial cable
- **Antenna Protective Covering:** Black heat shrink tubing
- **Antenna Dimensions:** 41.9 mm × 7 mm (Tolerance: ±2 mm)
- **Coaxial Cable Length:** N/A

2. Parameter Index

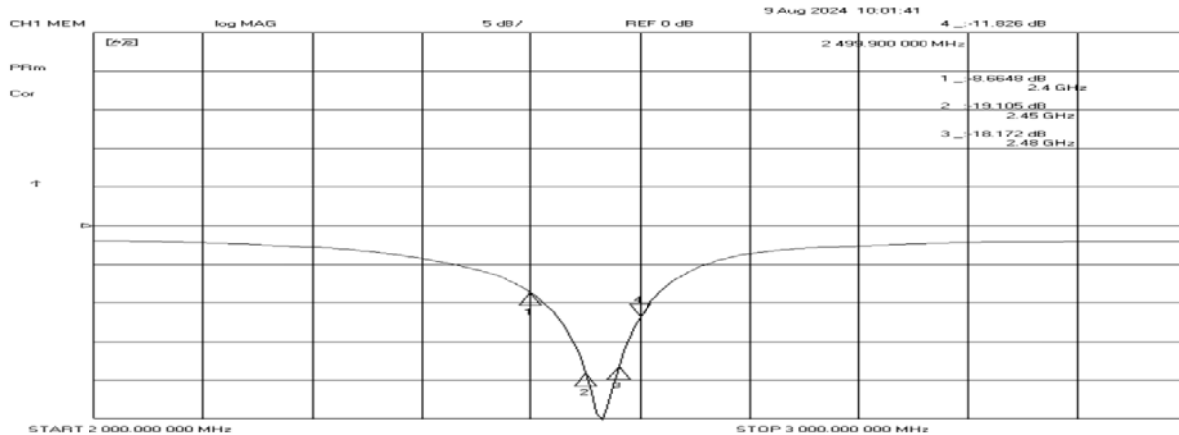
- **Application Scope:** Customer-supplied equipment
- **Operating Frequency:** 2400–2500 MHz
- **Impedance:** 50Ω
- **Voltage Standing Wave Ratio (VSWR):**<1.5
- **Antenna Gain:** ≤ -0.1 dBi
- **Polarization:** Vertical/Horizontal
- **Power Handling:** 10W
- **Mounting Method:** Direct pin connection

3. Antenna S11 Performance

3.1 VSWR (Voltage Standing Wave Ratio)



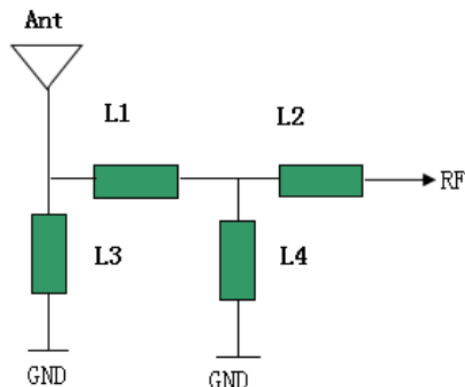
3.2 Return Loss



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4. Antenna Performance (OTA - Over-the-Air Testing)

4.1 Antenna Matching Recommendations

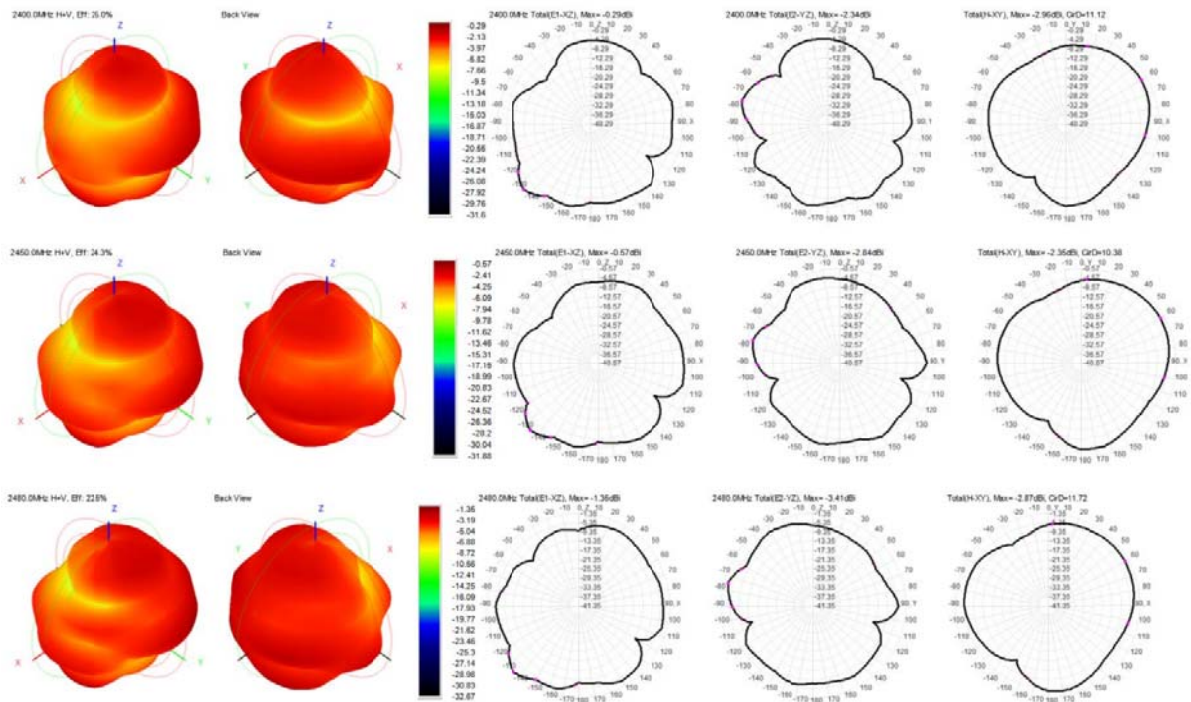


Antenna	
Element	Value
L1 (0201)	
L2 (0201)	
L3 (0201)	
L4 (0201)	
匹配无修改	

4.2 Antenna Efficiency and Gain Measurement (Measurement Equipment: Network Analyzer, Oscilloscope, Customer-Supplied Engineering Samples, Various Standard Cards, etc.)

Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-6.02	-6.06	-5.90	-5.95	-6.33	-6.15	-6.36	-6.66	-6.47	-6.91	-7.27
Gain (dBi)	-0.29	-0.22	-0.10	-0.12	-0.62	-0.57	-0.93	-1.28	-1.35	-1.89	-2.51
Efficiency (%)	24.99	24.78	25.73	25.41	23.30	24.26	23.10	21.58	22.52	20.39	18.73
Directivity (dB)	5.73	5.84	5.80	5.83	5.71	5.58	5.43	5.38	5.12	5.01	4.76
Peak Gain Position (Theta)	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00
Peak Gain Position (Phi)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Efficiency ThetaPol (%)	19.77	19.72	20.55	20.31	18.44	18.99	18.00	16.83	17.59	15.95	14.71
Efficiency PhiPol (%)	5.21	5.06	5.18	5.10	4.86	5.28	5.11	4.76	4.93	4.44	4.02
Upper Hem. Efficiency (%)	11.70	11.66	12.16	12.08	11.21	11.74	11.27	10.61	11.20	10.29	9.56
Lower Hem. Efficiency (%)	13.29	13.12	13.57	13.33	12.09	12.53	11.84	10.97	11.32	10.10	9.18

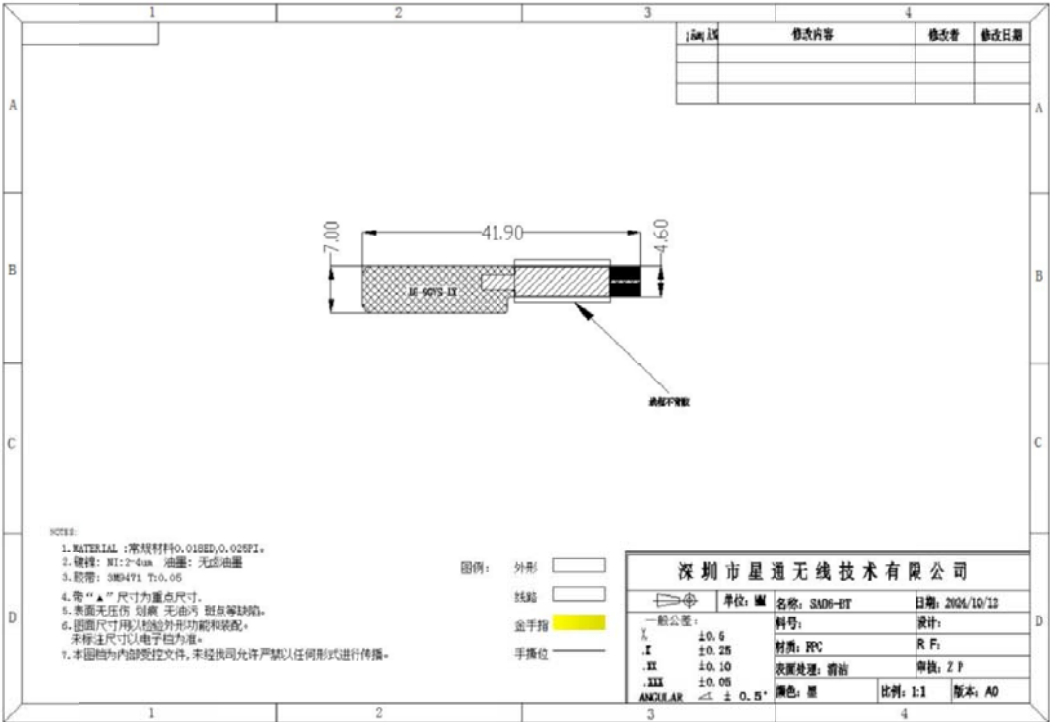
3D OTA Testing



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5. Attached Image

5.1 Finished Antenna Product Image



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6. Maintenance Verification

Test Item	Retention Force	Inspection Order No.
Product Name/Specification	SA06-BT Antenna	Test Quantity: 5 PCS
Test Date: 2024-10-12		Completion Date: 2024-10-14

Test/Inspection Equipment:

1. Tensile testing machine (tested 5 times as shown in the diagram).



Note: Testing must be conducted at a uniform speed; rapid testing is not allowed.

Project	Retention Force Between Terminal & Cable (≥0.6 kgf)				
Condition					
Test Count	1	2	3	4	5
Test Result (kgf)	0.6	0.7	0.7	0.9	0.7

Test/Inspection Result:☒ Passed

Test/Inspection Conclusion:☒ Pass ☐ Fail ☐ Not Determined

| Tested by: Zhu Yongjian | Reviewed by: Wu Yanlong |

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7. Reliability Testing

No.	Test Item	Test Conditions Test	Test Equipment	Test Results
1	Solder Resistance	288°C, 10s, no delamination or bubbling	Solder Pot	Ok
2	Solderability	245°C, 5s, smooth tin surface, solder coverage ≥95%	Solder Pot	Ok
3	Pull Force Test	N/A	Tensile Tester	Ok
4	Reverse Pull Force Test	N/A	Tensile Tester	Ok
5	Peel Strength (Protective Film)	≥0.35 kg/cm	Peel Strength Tester	Ok
6	Peel Strength (Copper Foil)	≥0.35 kg/cm	Peel Strength Tester	Ok
7	Hot Melt Adhesive Flow Rate	0.1~0.15	/	Ok

8. Important Notes

After unsealing the package, please carefully inspect the product for any damage. If any defects are found, please contact us immediately.