



Shenzhen Shuodian Electronic Technology Co.,Ltd

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SPECIFICATION

for

2.4G Copper Tube Antenna

Customer P/N

Our P/N

DSN-2.4G 铜管天线-150MM

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Date: 2026.02.28

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1. Mutual Confirmation

1.1 Customer Confirmation Signature

Customer:

Customer Dept./Position	Signature	Date
Hardware/RF		
Mechanical		
Project Manager		
Commercial/Procurement		
Reviewed by		

1.2 Shuodian Technology Confirmation Signature

Dept./Position	Signature	Date
Antenna Engineer		
Mechanical Engineer		
Project Manager		
QA		
Reviewed by		

2. General Information

2.1 Scope of Application



This specification applies only to the 2.4G copper tube antenna.

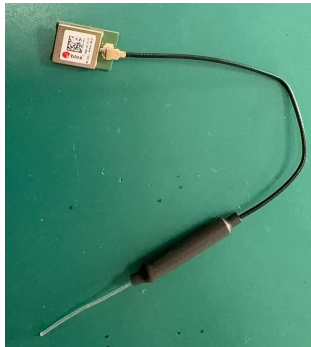
2.2 Operating Temperature Range

Operating temperature range of this product: -20 ~ +65 ° C

2.3 Storage Temperature Range

Storage temperature of this product: -30 ~ +75 ° C

3. General Product Specifications

NO .	ITEMS	DETAILS
1	Model	2.4G Copper Tube Antenna
2	Frequency Band	2400-2500MHz
3	VSWR	≤2.0
4	Impedance	50 Ω
5	Antenna Type	Monopole
6	Antenna Configuration	Coaxial cable + copper tube
7	Antenna Photo	

4. Product Specification Details

4.1 Product Structural Parameters

4.11 Product Material Composition:



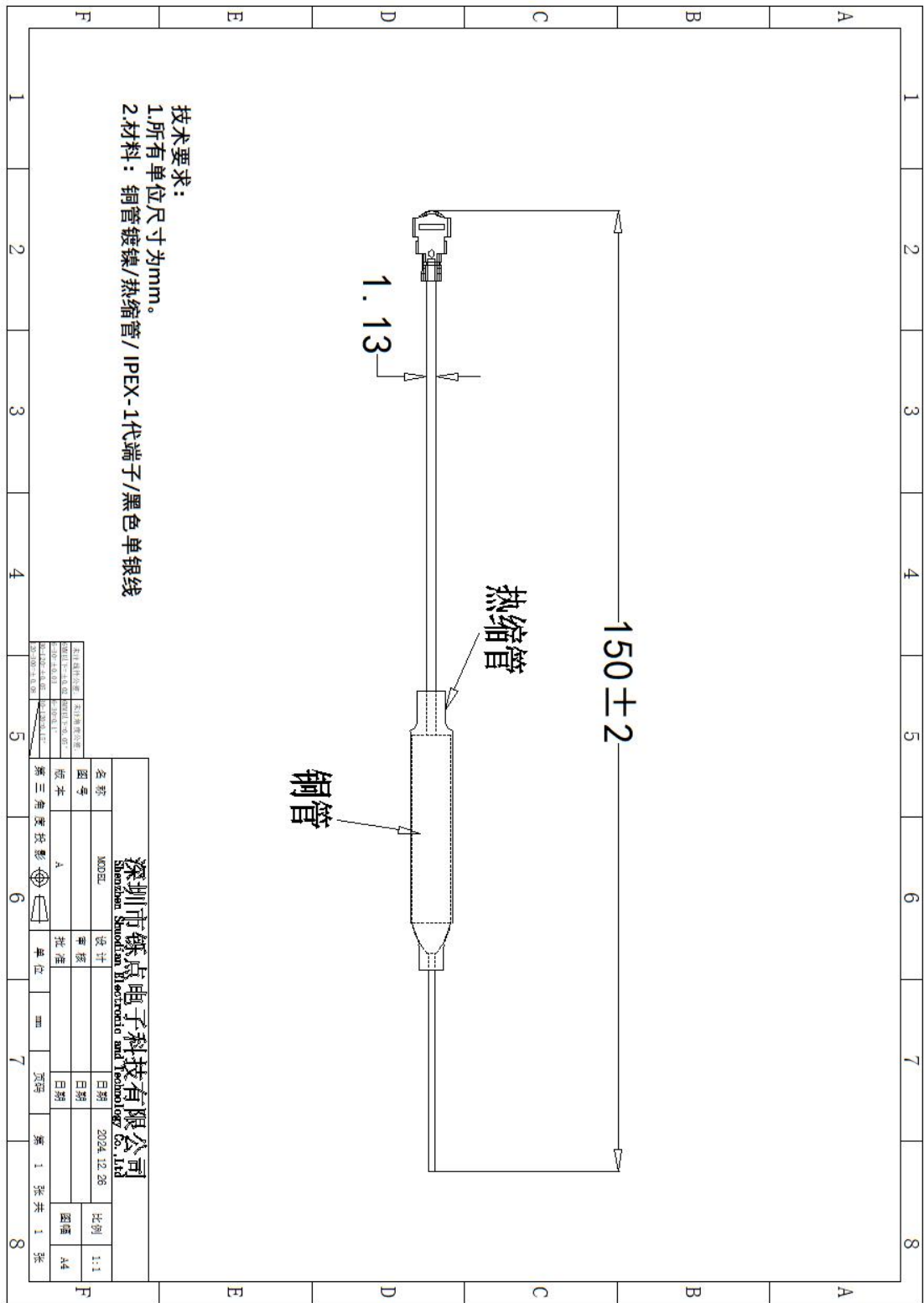
No.	Material	Specification (mm)
1	Copper tube (with black heat-shrink sleeve)	Φ4.4*24.5 Silver
2	Coaxial cable	Φ1.13 L=150 Black

4.12 Appearance

The product shall have a good appearance, without scratches, sweat stains, bulges or other serious cosmetic defects.

4.13 Structural Dimensions

Product Drawing:





4.2 Product Electrical Performance Test Data

4. 21 Test Environment and Instruments

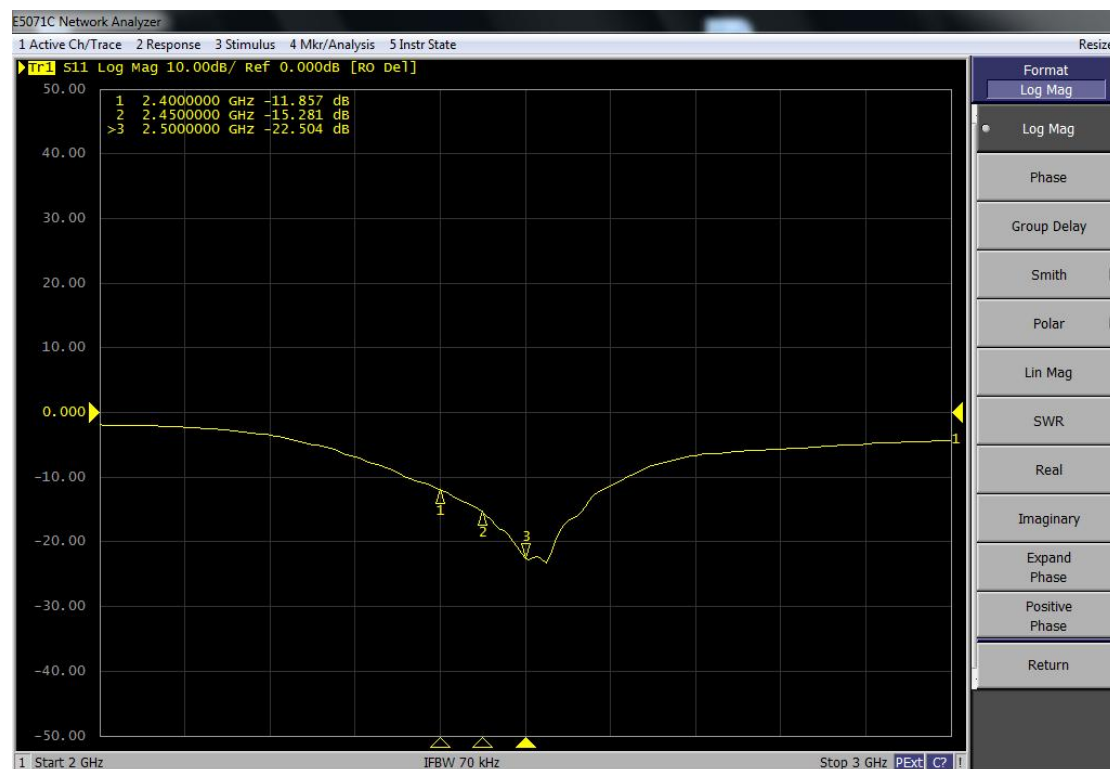
Test Environment:	Test Equipment:
Temperature: 10℃ ~ +30℃	Network Analyzer
Relative Humidity:≤80% (at +40℃)	KEYSIGHT E5071C
Atmospheric Pressure: 750 mmHg ±30 mmHg	Multi-probe Fully Anechoic Chamber

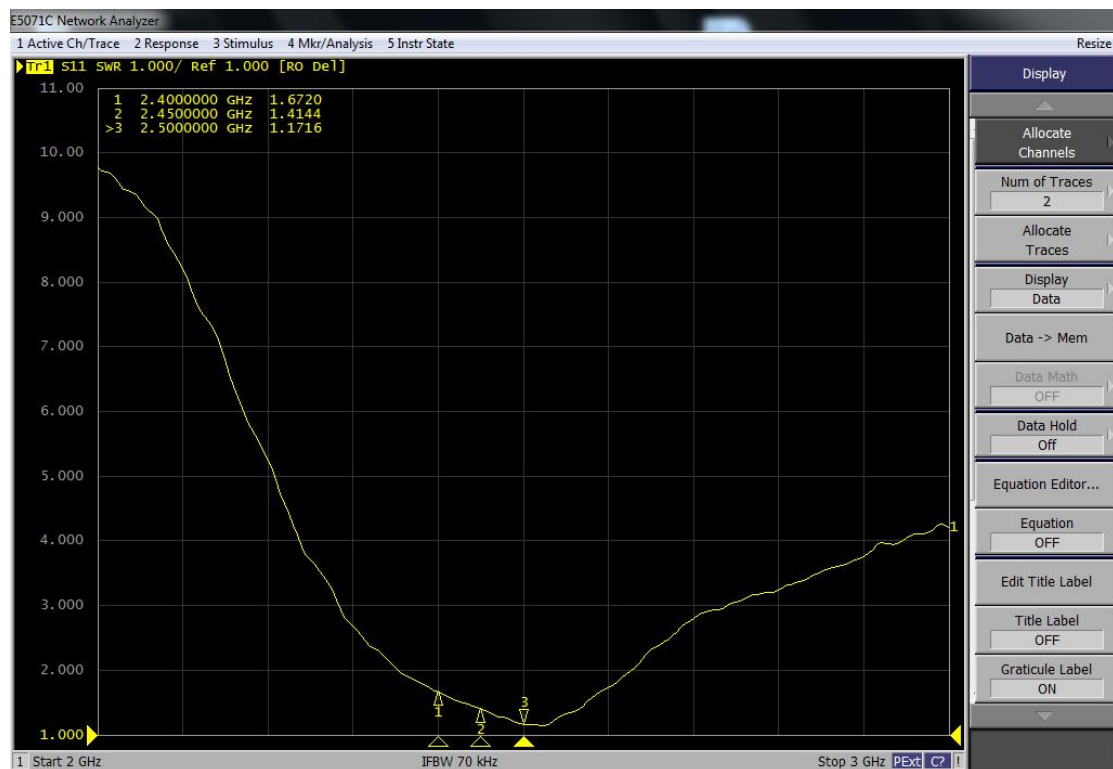
4. 22 Product Electrical Performance Test Data:

4.22.1 S11 Plot of the Product:

Full-size S11 Data:

Marker (MHz)	2400	2450	2500
Return Loss	-11.85	-15.28	-22.50
VSWR	1.67	1.41	1.17





Full-size Gain, Efficiency and Radiation Patterns

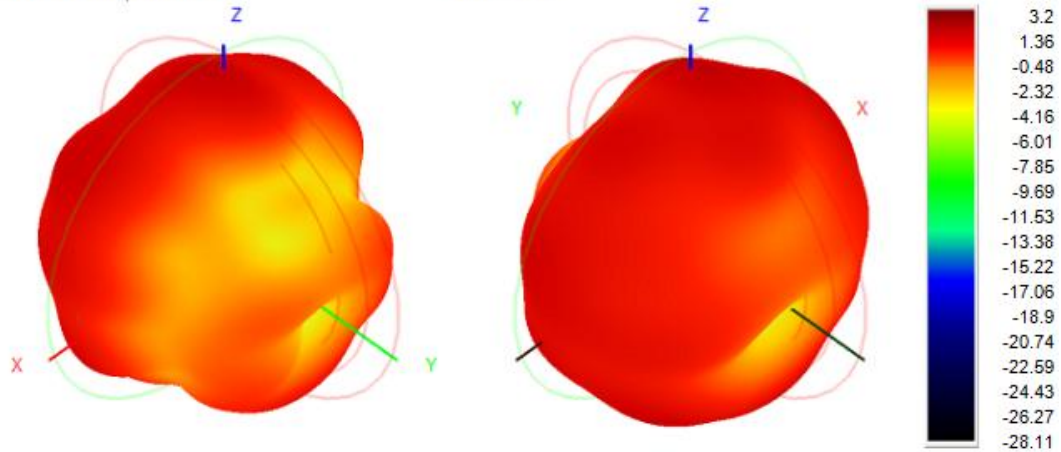
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	3.58	3.33	2.96	2.83	2.92	3.20	3.51	3.71	3.61	3.83	3.89
Efficiency (%)	51.15	52.73	53.29	55.56	57.54	59.68	61.55	62.93	62.16	63.53	62.28

2450 MHz Radiation Patterns:

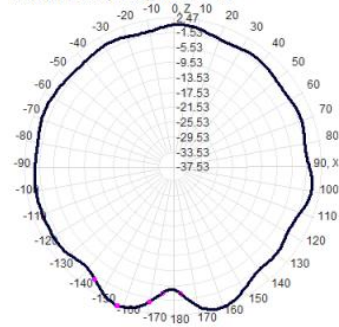


2450.0MHz H+V, Eff: 59.7%

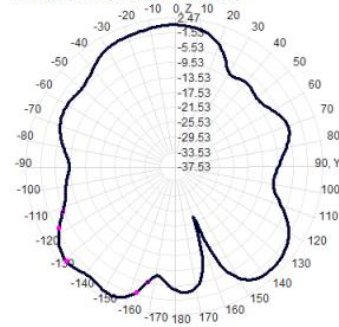
Back View



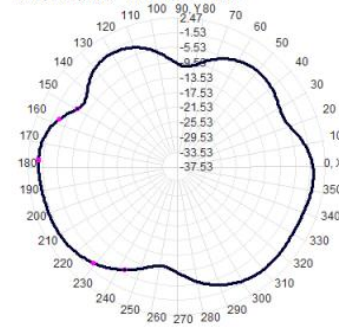
2450.0MHz Total(E1-XZ), Max= 2.47dBi



2450.0MHz Total(E2-YZ), Max= 0.91dBi



Total(H+V), Max= -0.36dBi, CirD=10.30





5. Product Packaging

Packaging:

Self-sealing bag, 200 pcs per bag.

6. Document History

Document No.	
Release Date	2026/02/26
Author	Hungjie
Reviewed by	WH

Document Revision History

Revised History

Date	Version	Revised Record
2026/02/26	1.00	New Project