

Specification Sheet

for

045WIFI 2.4G Antenna

Customer Part Number: —

Company Part Number: SD-045WIFI 2.4-FPC

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Date: 2024.01.23

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1. Confirmation by Both Parties

1.1 Customer Confirmation

Department/Position	Signature	Date
Hardware / RF		
Structure		
Project Manager		
Business / Purchase		
Review		

1.2 Xianju Intelligent Confirmation

Department/Position	Signature	Date
Antenna Engineer		
Structural Engineer		
Project Manager		
QA		
Review		

2. General Information

2.1 Scope of Application

045WIFI 2.4G FPC Antenna

2.2 Operating Temperature

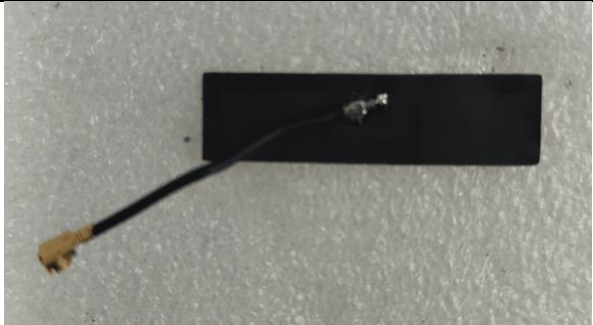
-20℃ to +65℃

2.3 Storage Temperature

-30℃ to +75℃

3. General Product Specifications

No.	Item	Details
1	Model	2.4GWIFI
2	Frequency Range	2400MHz-2500MHz
3	VSWR	≤ 2.0
4	Gain	2.0 dBi
5	Radiation Efficiency	≥ 50%
6	Impedance	50Ω
7	Antenna Type	Dipole
8	Antenna Form Factor	FPC + 1.13mm coaxial cable

9	Antenna Image	
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4.Detailed Product Specifications

4.1Structural Parameters

4.1.1Material Composition

No.	Material	Specification (mm)
1	FPC	32.9 × 8.8 mm, Black
2	Coaxial	Ø1.13mm, Length 40mm, Black

4.1.2 Appearance

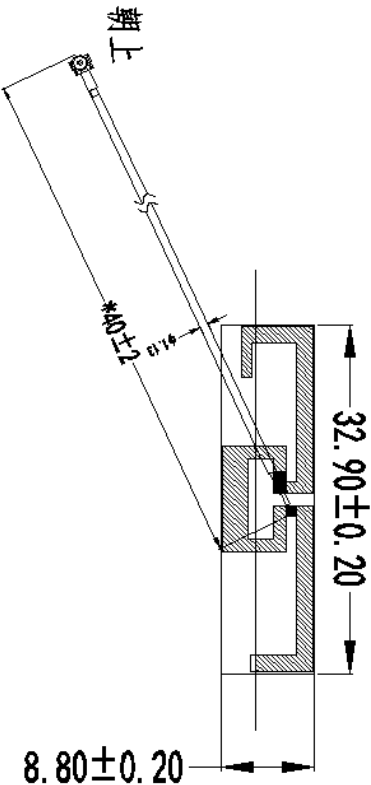
The product shall be free of scratches, stains, bumps, or other defects that significantly affect appearance.

4.1.3 Dimensional Reference

Refer to product engineering drawings.

REV	DESCRIPTION	DATE	APPD

TOLERANCE TABLE			
TOLERANCE	UNIT	MIN	MAX
±0.20	mm	0	0.20
±0.15	mm	0	0.15
±0.10	mm	0	0.10
±0.05	mm	0	0.05



- 技术要求:
1. 所有单位尺寸为mm.
2. 材料:
- 背胶: 3M300 9471;
- 基材: 一对半, 电解铜,
- 表面哑光黑油,
- 一代端子, 黑色线材.
3. 焊盘做聚铜, 抗氧化处理.
4. 所有尺寸标注前有*符号的为管控尺寸.

深圳市峰芯电子科技有限公司				名称			
比例 1:1				零件编号			
材料				045W1F1			
设计				审核			
审核				批准			
1				共1页			

制图:

审核:

日期: 14

4. 2Electrical Performance Test Data

4. 2. 1Test Environment & Equipment

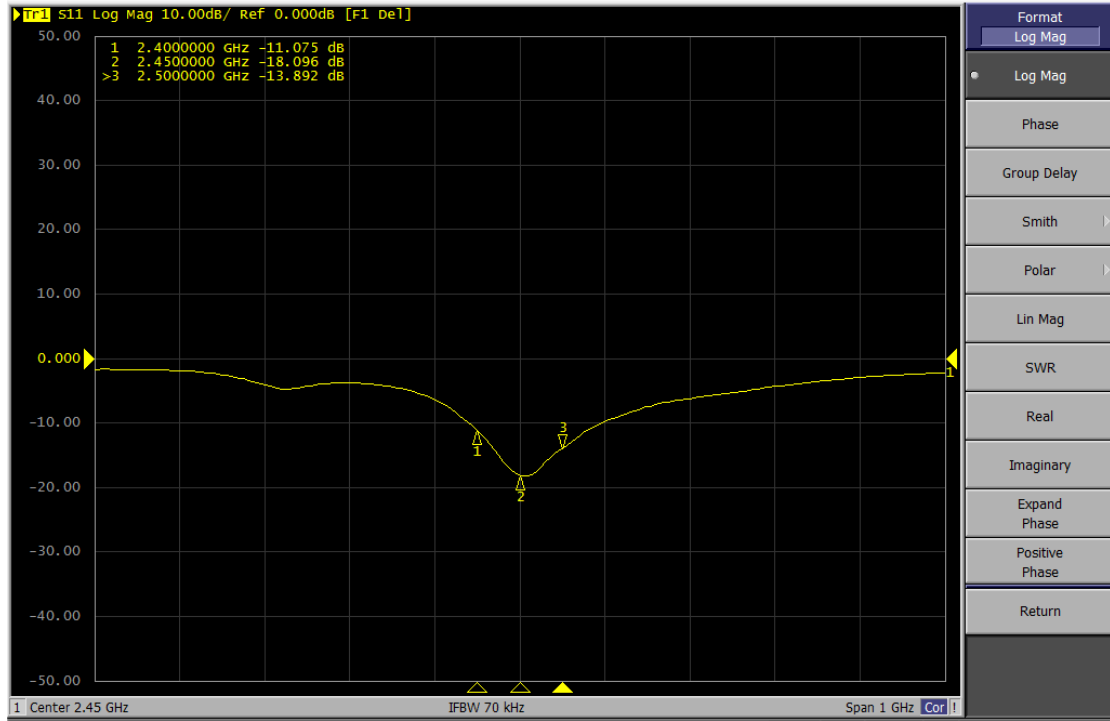
• Temperature: 10℃ to 30℃ • Relative Humidity: ≤80% (at +40℃) • Atmospheric Pressure: 750mmHg ± 30mmHg	Test Instruments: • Network Analyzer: KEYSIGHT E5071C • Multi-probe Microwave Anechoic Chamber
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4. 2. 2 Antenna Return Loss (S11) and VSWR

Marker (MHZ)	2400	2450	2500
Returnloss	-11	-18	-13.8
VSWR	1.7	1.3	1.5

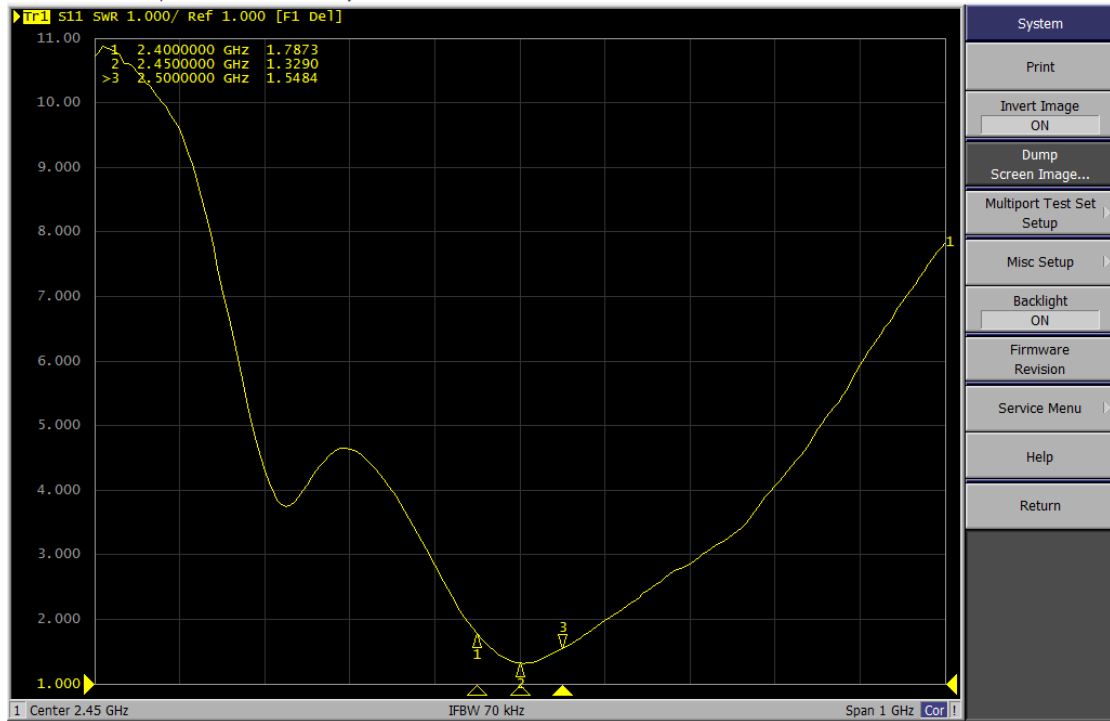
E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State



E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

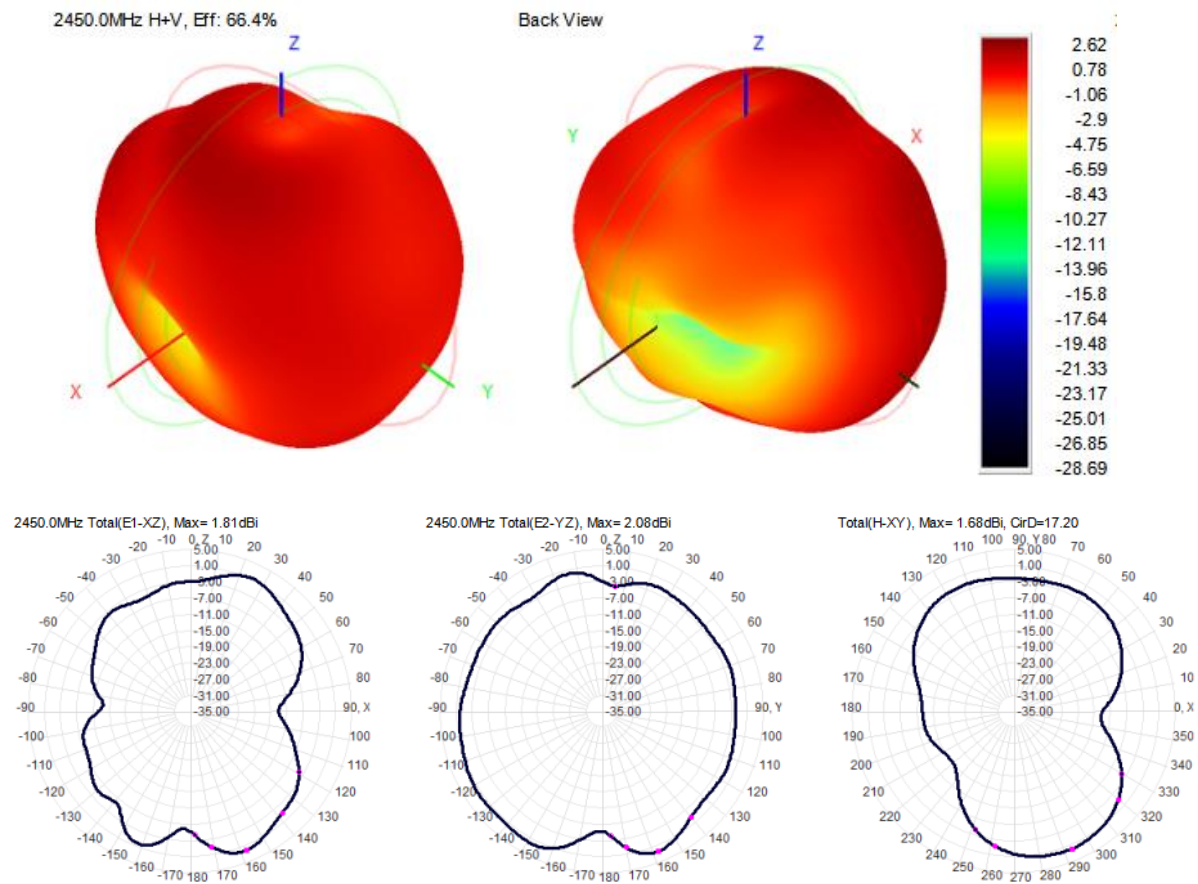


4.2.3 Antenna Gain and Efficiency

Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	2.66	2.89	3.00	2.60	2.71	2.62	2.90	2.82	2.72	3.07	3.35
Efficient (%)	54.93	56.05	60.10	60.95	66.79	66.42	68.93	67.32	68.18	69.37	70.22

4.2.4 Antenna Radiation Pattern

2450MHZ



5. Product Packaging Method

Packaging: Zip-lock bags :
Quantity: 200 pcs per bag

6. 文档履历

Document No.	
Release Date	2024/01/23
Author	Hungjie
Review	WH

Revised History

Date	Version	Revised Record
2024/01/23	1.00	New Project