



Shenzhen Shuodian Electronic Technology Co.,Ltd
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SPECIFICATION

for

2.4-5.8G FPC antenna

Customer No.

Product No.

SD-LH-2. 4-5. 8G-FPC-80MM

Author: XiaofengZeng Review: Liming

Release Date: 2026.05.23

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1. Bilateral Confirmation page

1.1 Customer signature

Customer:

Seapartment/post	Sign	Date
Hardware Engineer/RD		
Mechanical/MD		
Project Manager/PM		
Commercial/Puchasing		
Checker		

1.2 Signature of ShuoDian Technology company

Seapartment/post	Sign	Date
Antenna Engineer/RD		
Mechanical/MD		
Project Manager/PM		
QA		
Checker		



2. General

2.1 Scope of application

This specification is only applicable to 2.4G-5.8G WIFI antenna

2.2 Operating temperature range

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

2.3 Storage temperature range:

This product is stored at - 30 ~ + 75 °C

3. General product specifications

NO.	ITEMS	DETAILS
1	Type	2.4G-5.8G WIFI antenna
2	Operating Frequency Band	2400-2500MHz
3	VSWR	≤ 2.5
4	Impedance	50Ω
5	Antenna Type	Monopole
6	Antenna composition	FPC+CABLE
7	Entity Picture	



4. Specification Detials

4.1 Mechanical Properties

4.11 Product Composition:

No.	Material	Size (MM)
1	FPC	50*14 Black
2	CABLE	IPEX-1 ϕ 1.13 L=80 black

4.12 Apperance

Good appearance without scars 、 dirt、 protuberances, etc.

4.13 Antenna Picture and Structure Dimension

Productdrawings:

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REV	DESCRIPTION	DATE	APPD

Technical requirements:
1. All unit dimensions are in mm.
2. Materials:
Adhesive backing: 3M300, 0.05mm;
Base material: half and half, electrolytic copper.
Surface black oil, bare copper.
First generation terminal, black coaxial cable
3. The soldering pad is made of bare copper and treated with anti-oxidation treatment.
4. All dimensions marked with an * symbol are controlled dimensions.

Shenzhen Shuodian Electronic Technology Co., Ltd.										Name 24-58C	
Unit	Proportion	Material	General	Surface	Surface	Surface	Surface	Part	Part	Part	Part
mm	1:1		Processing	Processing	Processing	Processing	Processing	number	number	number	number
1	1	Design	Y	Draw	Y	RF	Y	Review	Y	Approve	Y
Mapping										Form	

GENERAL TOLERANCE			
DEVELOPMENT	ASSEMBLY	FINISH	FINISH
0	0	0	0
0.05	0.05	0.05	0.05
0.10	0.10	0.10	0.10
0.15	0.15	0.15	0.15
0.20	0.20	0.20	0.20
0.25	0.25	0.25	0.25
0.30	0.30	0.30	0.30
0.35	0.35	0.35	0.35
0.40	0.40	0.40	0.40
0.45	0.45	0.45	0.45
0.50	0.50	0.50	0.50
0.55	0.55	0.55	0.55
0.60	0.60	0.60	0.60
0.65	0.65	0.65	0.65
0.70	0.70	0.70	0.70
0.75	0.75	0.75	0.75
0.80	0.80	0.80	0.80
0.85	0.85	0.85	0.85
0.90	0.90	0.90	0.90
0.95	0.95	0.95	0.95
1.00	1.00	1.00	1.00



4.2 Electric Performance

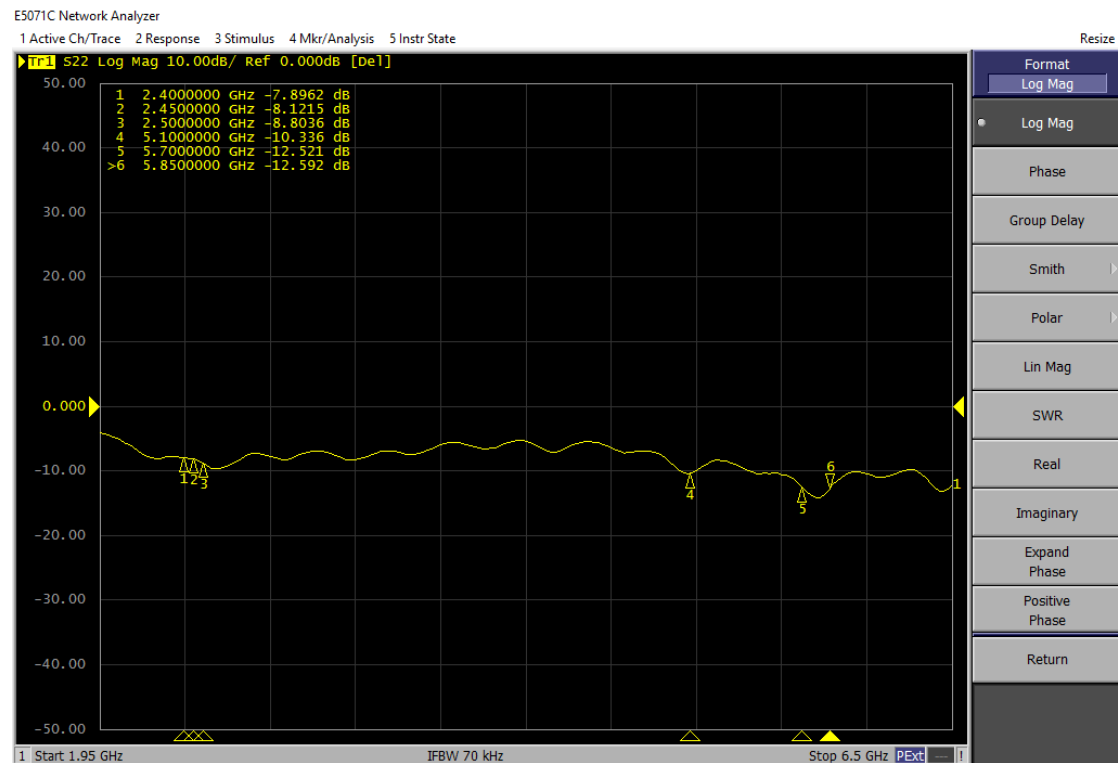
4.21 Test condition

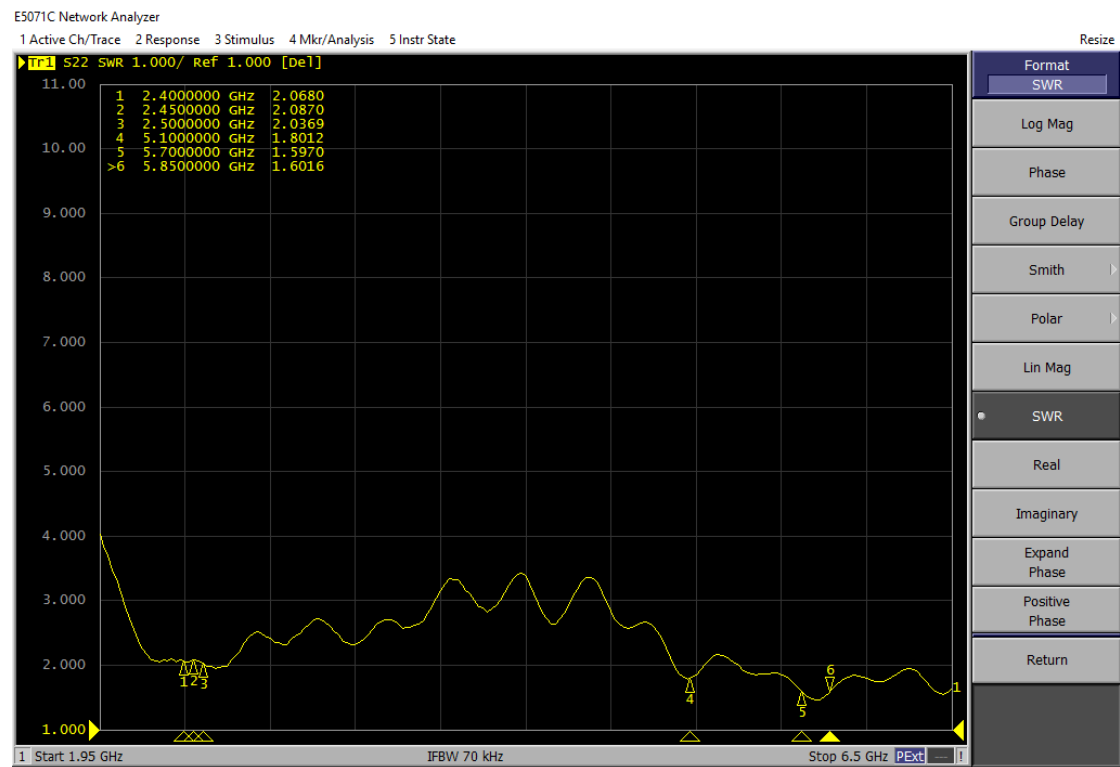
Environment:	Equipment:
Temperature: 10℃——+30℃	Network Analyzer: KEYSIGHT E5071C
Humidity: ≤80% (+40℃)	Multi-probe microwave anechoic
Atmospher: 750mmkg±30mmkg	chamber

4.22 Test Data for Electrical Performance:

4.22.1 S11 of the Antenna:

Marker	2400MHz	2500MHz	5700Mhz	5850Mhz
Returnloss	-7.89	-8.80	-12.52	-12.59
VSWR	2.03	2.08	1.59	1.60





4. 22. 2 Passive gain、 efficiency and Radiation Pattern:

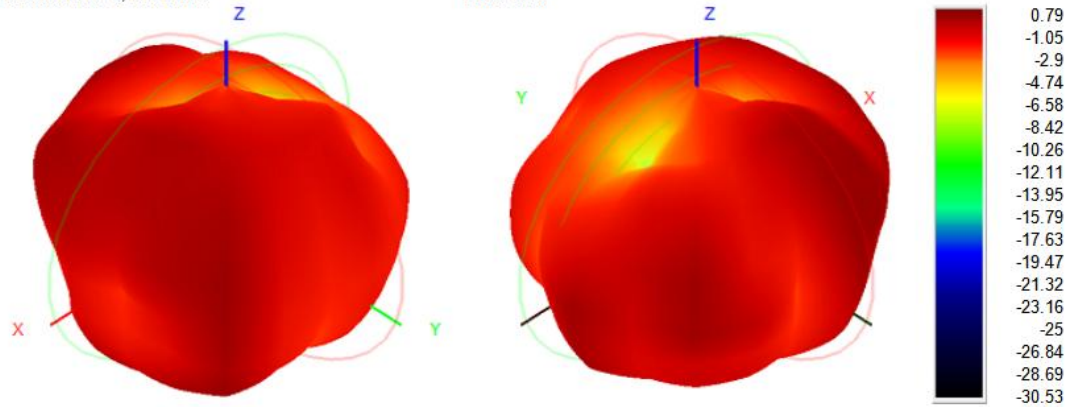
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	0.79	50.53
2450	1.50	51.55
2500	1.60	50.35
5000	2.79	46.97
5800	1.46	41.13
5900	1.34	41.63

4. 22. 3 Radiation Pattern



2400.0MHz H+V, Eff. 50.5%

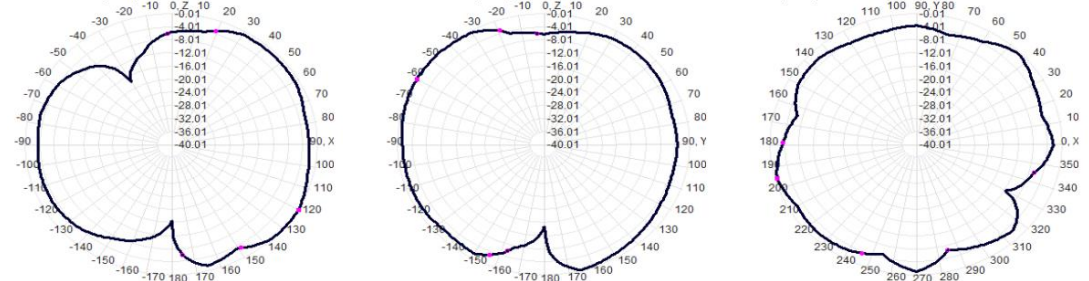
Back View



2400.0MHz Total(E1-XZ), Max= -0.12dBi

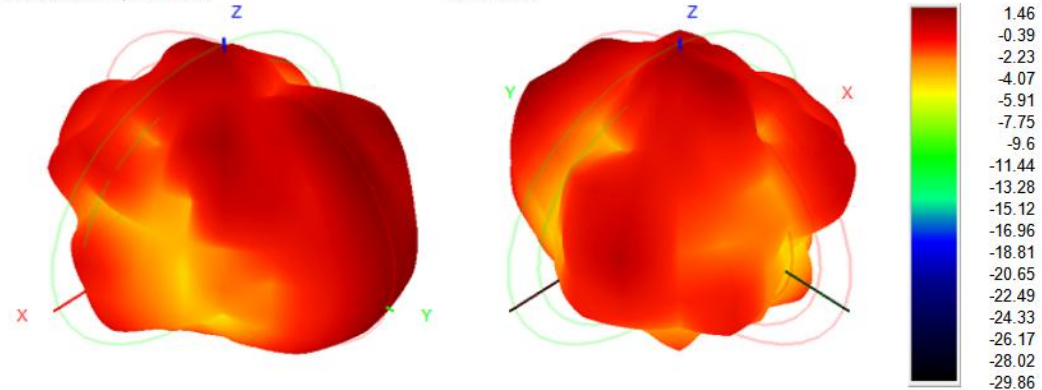
2400.0MHz Total(E2-YZ), Max= -0.01dBi

Total(H-XY), Max= -0.67dBi, CirD=11.27



5800.0MHz H+V, Eff. 41.1%

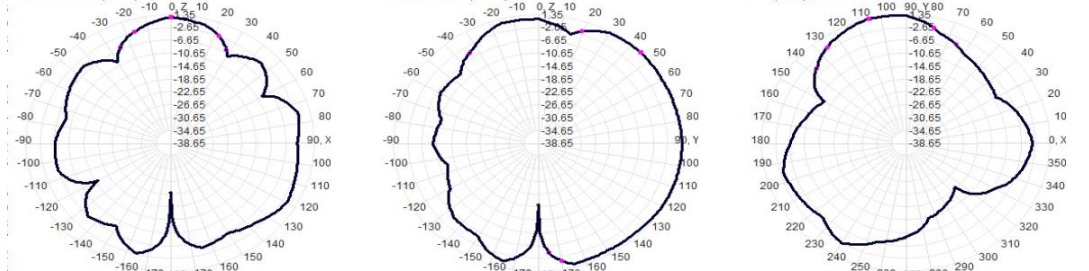
Back View



5800.0MHz Total(E1-XZ), Max= 0.51dBi

5800.0MHz Total(E2-YZ), Max= 1.35dBi

Total(H-XY), Max= 1.32dBi, CirD=20.92





5. Product Packaging

Manner of packing:

Packed in self sealed bags, 200 pcs each.

6. Document Resume

Document No.	
Release Date	2026/05/23
Author	XiofengZeng
Review	LiMing

Revised History

Date	Version	Revised Record
2026/05/23	1.00	New Project