

Data Sheet

Product : Plastic shell antenna

Date: Apr 18, 2023

Customer Applied model			
Customer			
Customer Part No.			
Product Description	WI-FI Antenna		
Supplier	saixun		
Supplier Part No.	SX-008-1401		
Customer	By designed	By Checked	By Approval

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Catalogue

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Revision History

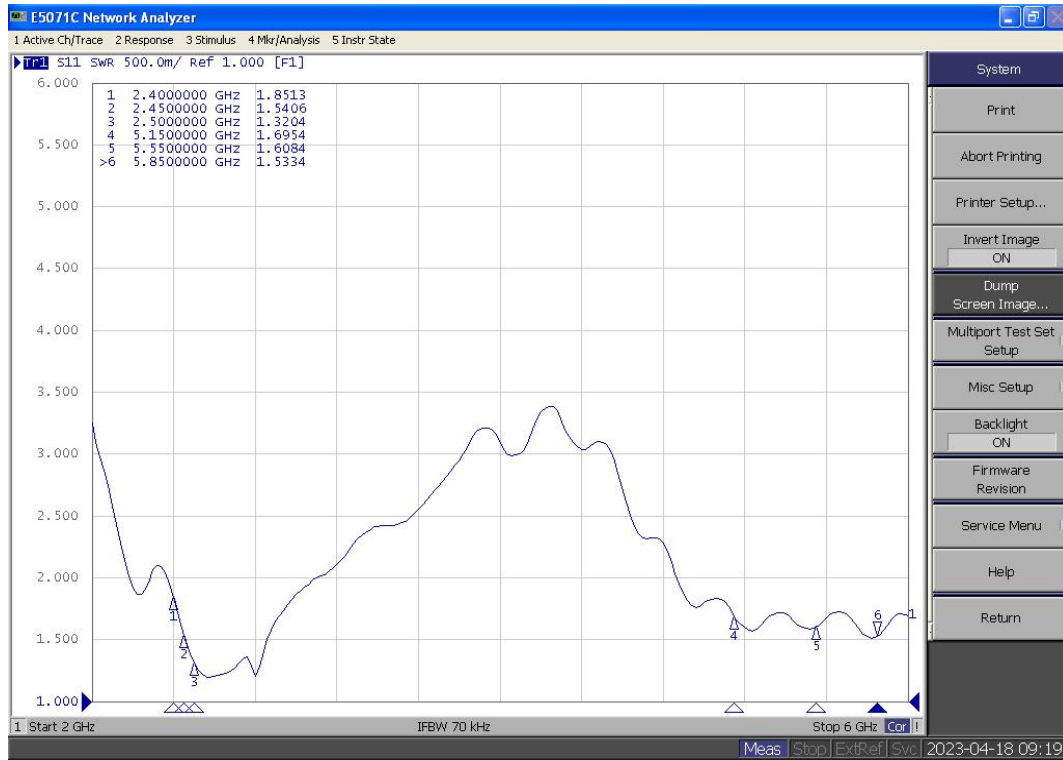
Revision No.	Originator	Description of changes	Date of changes
1	Yanhu Tuo	First document	Apr 18, 2023
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

1 General

Electrical Properties	
Frequency Band	2.4+5.8G WI-FI
Test Frequency	2.4-2.5/5.15-5.85GHz
VSWR	≤ 2.0
Efficiency	$\geq 35\% @ \geq 40\%$
Gain	≤ 2.0 dBi
Radiation Pattern	Omni-Directional
Polarization	V/H
Antenna Type	Dipole
Mechanical Properties	
Antenna Dimension	320 mm
Connector Type	I-PEX
Connector pull	1.5 Kg min
Cable Type	RF-1.13
Installation site	Machine inside
Fixed mode	Board end connector
Environment Properties	
Operational Temperature	-40°C ~ +85°C
Storage temperature	-30°C ~ +60°C

2 Test Data (only test the antenna separately)

2.1 Network Data (Return loss)

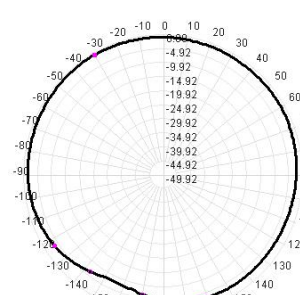
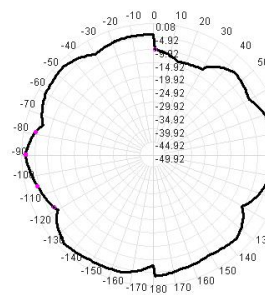
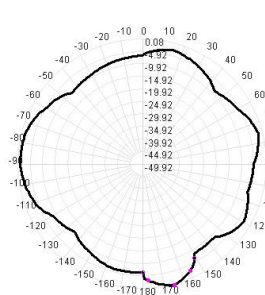
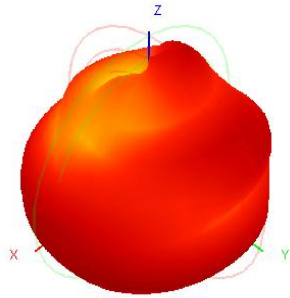


2.2 Gain and Efficiency

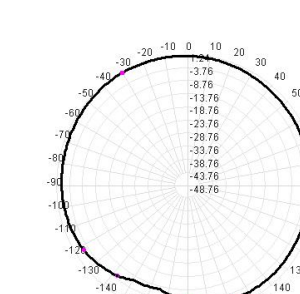
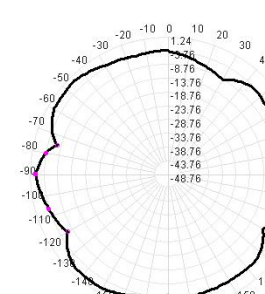
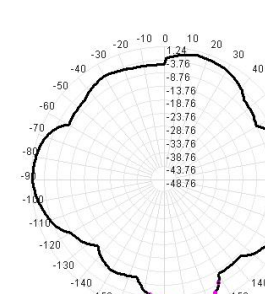
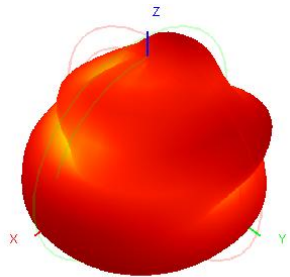
Frequency ID	1	2	3	4	5	6
Frequency (MHz)	2400.0	2450.0	2500.0	5150.0	5500.0	5850.0
Efficiency (dBi)	-4.54	-3.27	-3.17	-3.90	-3.00	-2.81
Gain (dBi)	0.26	1.30	1.49	-0.29	0.46	0.79
Efficiency (%)	35.13	47.11	48.23	40.72	50.15	52.31

2.3 Radiation pattern

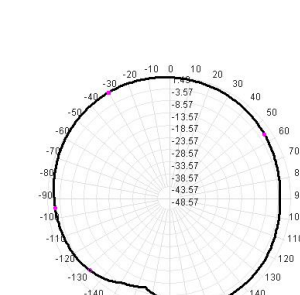
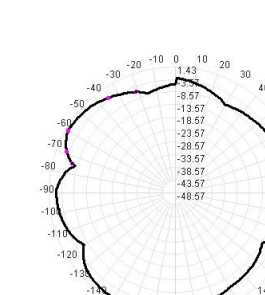
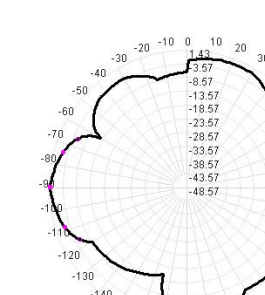
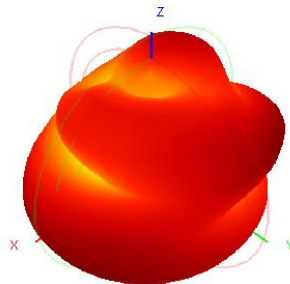
2400.0MHz H+V, Eff: 35.1% 2400.0MHz Total(E1-XZ), Max= 0.08dBi 2400.0MHz Total(E2-YZ), Max= -1.47dBi Total(H-XY), Max= -0.62dBi, CirD=7.50



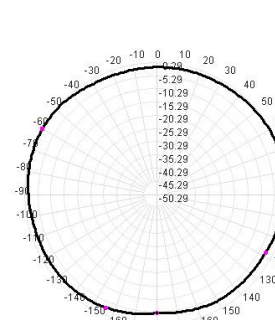
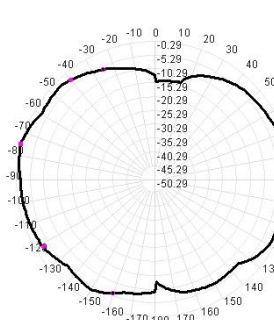
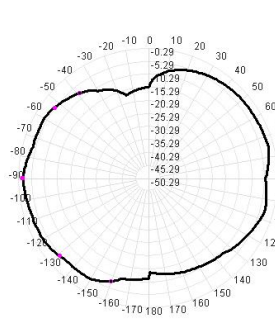
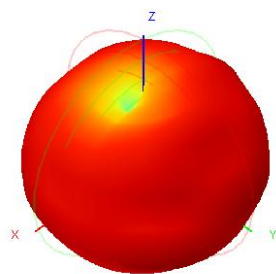
2450.0MHz H+V, Eff: 47.1% 2450.0MHz Total(E1-XZ), Max= 1.24dBi 2450.0MHz Total(E2-YZ), Max= -0.76dBi Total(H-XY), Max= 0.85dBi, CirD=8.69



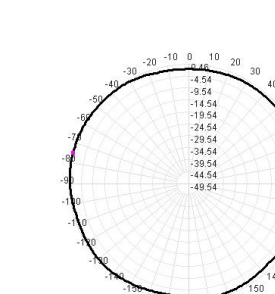
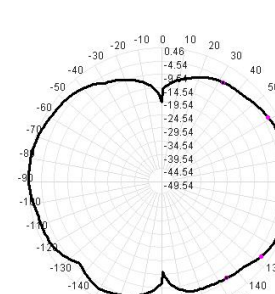
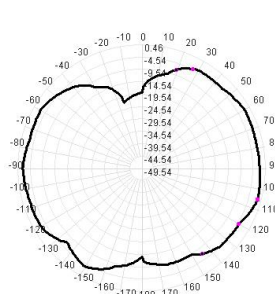
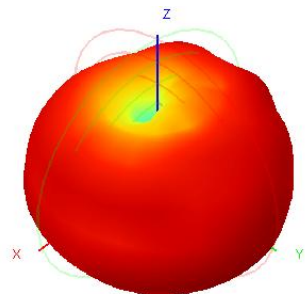
2500.0MHz H+V, Eff: 48.2% 2500.0MHz Total(E1-XZ), Max= 1.05dBi 2500.0MHz Total(E2-YZ), Max= 0.47dBi 2500.0MHz Total(E2-YZ), Max= 0.47dBi



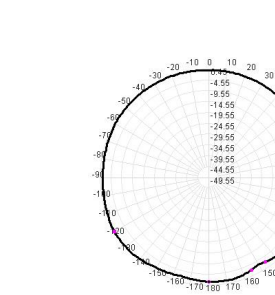
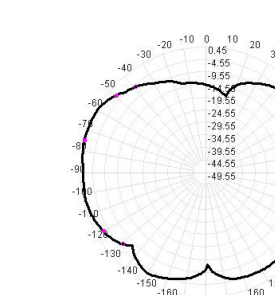
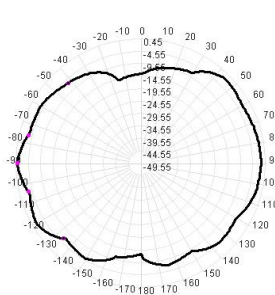
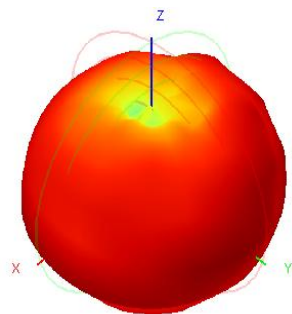
5150.0MHz H+V, Eff: 40.7% 5150.0MHz Total(E1-XZ), Max= -2.05dBi 5150.0MHz Total(E2-YZ), Max= -0.29dBi Total(H-XY), Max= -0.42dBi, CirD=4.99



5500.0MHz H+V, Eff: 50.2% 5500.0MHz Total(E1-XZ), Max= -1.33dBi 5500.0MHz Total(E2-YZ), Max= 0.13dBi Total(H-XY), Max= 0.46dBi, CirD=2.73



5850.0MHz H+V, Eff: 52.3% 5850.0MHz Total(E1-XZ), Max= -0.13dBi 5850.0MHz Total(E2-YZ), Max= 0.32dBi Total(H-XY), Max= 0.45dBi, CirD=3.75



3 Mechanical Drawings

Engineering Design Change Record			
DATE	REV	ECR	Change Content and Description
Apr 18,2023	A		NEW Issuance

320±0.5

40±0.5

12.0

IPX

WIFI Antenna

SF-006-131

NOTE:

1. Mark Size as Key Size,Unmarked dimensions, measured in 2D .

2.Impedance :50Ω

Frequency Range :2.4~5.8 GHz

3.All materials and processes conform to RoHS

4.All products are 100% qualified factory test.

5.Ensure that the soldering area is firm and aesthetically beautiful.

6.Control the deflection ,tension,and appearance of terminals.

NO.	DESCRIPTION	PN	REMARK	GENERAL TOLERANCE TABLE				UNIT	MM	PART NAME	WIFI NAME
				LINEAR	TOLERANCE	ANGULAR	TOLERANCE				
3	FPC,40.0*12.0mm	SF-006-131	Black	DIVISION	TOLERANCE	DIVISION	TOLERANCE	SCALE	1:1	VEDNER PNO.	SX-008-1401
2	COAXIAL CABLE,1.13mm,Gray	NA	-----	0-10	±0.06	0-5°	±0.5°	DRAWING			
1	MHF 1-IPLEX For 1.13cable	20278-13	or Equivalent level substitute	10-50	±0.1	5-20°	±1°	CHECKED			
				50-80	±0.15	20-90°	±1.5°	APPROVED			
				>80	±0.2	THIRD ANGLE PROJECTION					

苏州赛讯通讯科技有限公司

SUZHOU SAIXUN Communication Technology Co., Ltd.

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