

Shenzhen Chenxin Micro Technology Co., Ltd.

Cheng recognize **Book**

Customer Name: Changzhuo

Client Type: P20

Customer Part Number: 01.14.0043

Specifications: Built-in antennaAntenna/2.4G~5.8G-WiFi/3dBi/50ohm/FPC43.4*12mm/
RF1.13mm black coaxial cable L=170mm+Ipx1

Morning Letter Micro Material Number:

Confirm signature and seal					
Morning Letter Micro Confirmation			Customer confirmation		
Sample Preparation	Audit	approve	verify	Audit	approve
Chenxinwei signature and seal			Customer signature and seal		
date	2024-05-28		date	2024- -	

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2. Document Preparation/Revision/Abolition Record

Version	date	Create/revise content	Formulate	Approval	Remark
A1.0	2024.5.28	Sample sealing test output	Fan Lei	Qin Sulin	

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3. Directory

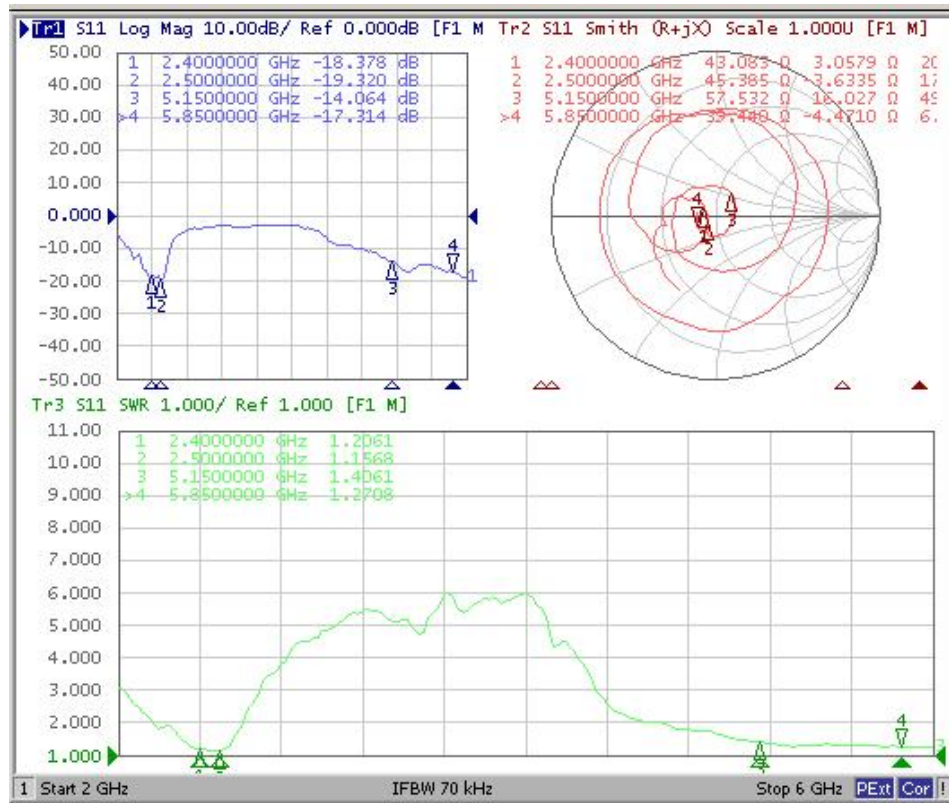
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Contact: Wang Jianguo (13424341872)

Technical drawing of a vertical rod assembly. The drawing shows a rod with a diameter of 1.13 and a length of 170 ± 3 . The rod is labeled "黑色" (Black). The rod is inserted into a rectangular block with a width of 12.0 ± 0.2 and a height of 43.4 ± 0.2 . The rod is secured by a nut and washer at the bottom. The label "I pex1" is located at the top of the rod.

5. Passive performance test parameters

S11



Fre(GHz)	2.4	2.5	5.15	5.85
ReeturnLoss	- 18.37	- 19.32	- 14.06	- 17.31
VSWR	1.20	1.15	1.40	1.27

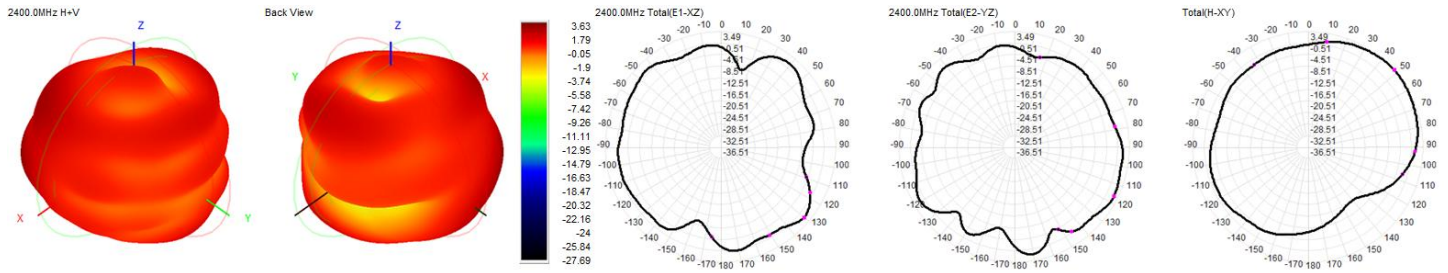
Efficiency, gain, directivity



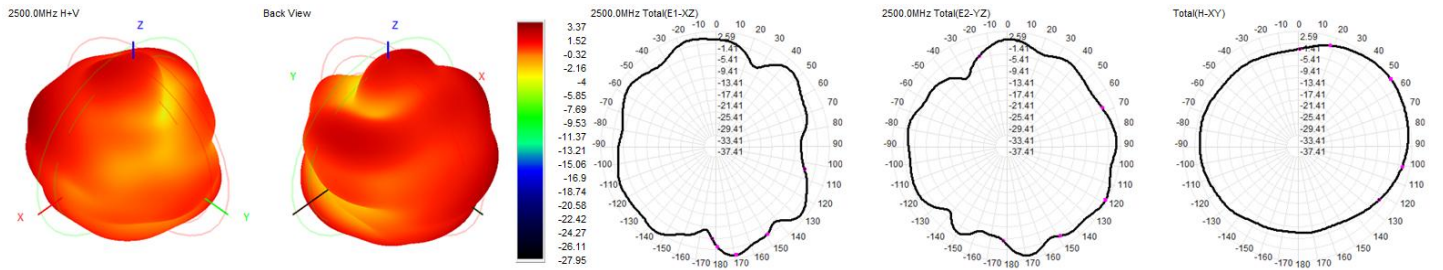
Frequency ID	1	3	5	7	9	11	12	14	16	18	20	22	24	26
Frequency (MHz)	2400.0	2420.0	2440.0	2460.0	2480.0	2500.0	5150.0	5250.0	5350.0	5450.0	5550.0	5650.0	5750.0	5850.0
Efficiency (dBi)	-1.19	-1.24	-1.59	-1.91	-2.08	-1.91	-1.46	-2.12	-2.08	-2.07	-1.93	-1.99	-2.41	-2.33
Gain (dBi)	3.63	3.09	2.46	3.03	3.34	3.37	5.71	4.89	4.18	4.94	4.89	4.69	4.46	3.86
Efficiency (%)	76.10	75.23	69.38	64.36	61.95	64.44	71.47	61.44	61.99	62.05	64.15	63.27	57.42	58.53
Directivity (dB)	4.82	4.32	4.05	4.95	5.42	5.27	7.17	7.00	6.26	7.02	6.82	6.68	6.87	6.18
Peak Gain Position (Theta)	87.00	87.00	118.00	118.00	118.00	118.00	71.00	73.00	70.00	70.00	70.00	68.00	71.00	66.00
Peak Gain Position (Phi)	313.00	307.00	313.00	315.00	307.00	301.00	58.00	51.00	81.00	67.00	63.00	70.00	73.00	101.00
Efficiency ThetaPol (%)	16.53	15.45	13.71	11.87	11.30	13.02	41.43	34.86	35.15	36.29	38.22	35.33	33.16	32.66
Efficiency PhiPol (%)	59.56	59.79	55.67	52.48	50.66	51.42	30.05	26.58	26.84	25.76	25.92	27.94	24.26	25.87
Upper Hem. Efficiency (%)	36.38	35.70	32.41	29.31	27.99	29.50	44.48	37.08	35.98	38.08	38.40	36.80	33.30	33.78
Lower Hem. Efficiency (%)	39.72	39.53	36.97	35.05	33.96	34.94	26.99	24.36	26.01	23.97	25.75	26.47	24.11	24.76

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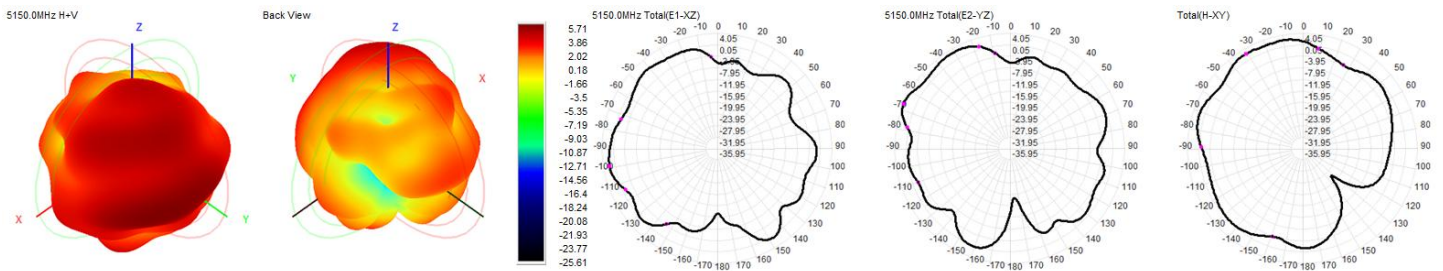
Radiation Patterns at 2.4GHz



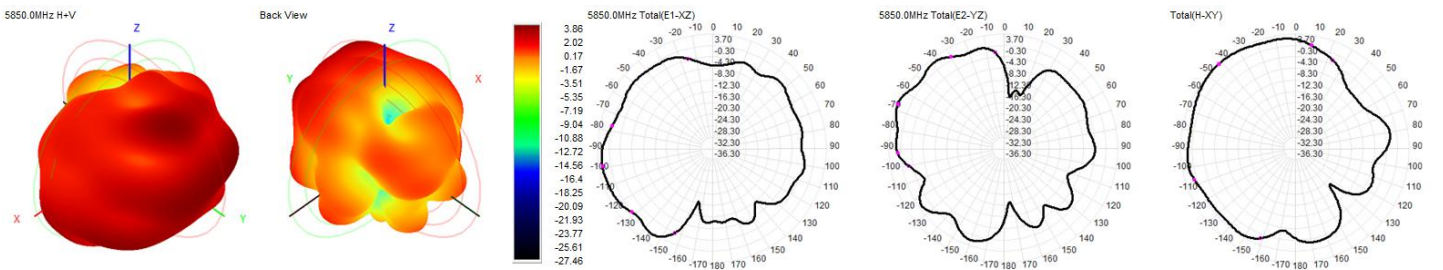
Radiation Patterns at 2.5GHz



Radiation Patterns at 5.15GHz



Radiation Patterns at 5.85GHz



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6. Electrical performance parameters

Electrical parameters		
Frequency range		2.4-2.5GHz /5.15-5.85GHz
Input Impedance		50Ω
VSWR		<2.0
Gain	2.4GHz	3 dBi
	5.8GHz	3 dBi
Polarization		Cross polarization
Radiation direction		Omnidirectional
Connector Model		lpex1
Mechanical parameters		
Line length		170mm
Sustainability		/
Coaxial Cable		Black 1.13mm
Salt spray test		
Environmental parameters		
Operating temperature		- 40~85°C

7. Reliability test report

7.1. Constant temperature and humidity test

Test/Test Project	Constant temperature and humidity test	Inspection order number
Product Name/Specifications	2.4G/5.8G-FPC RF1.13mmLine, Line Length170mm	Number of trials: 5PCS
Inspection date:2024-04-15		Completion Date:2024-04-16
Test/inspection equipment: 1.Programmable constant temperature and humidity test chamber 2.8753ESNetwork Analyzer		
Test/inspection conditions: 1.constant temperature-40Test at °C12H 2. +65°65~70%RH test 12H,commontwenty fourHour;		
Test results		
Criteria: 11. The metal surface should be free of cracks, wrinkles, separation, etc.; the non-metallic parts should not have discoloration, cracking, deformation, degumming, etc.; 2, electrical test meets standard requirements; voltage standing wave ratio test is qualified		
Test/inspection judgment:	-qualified	- Failed - No judgment
test:	Audit:	

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7.2. High and low temperature thermal shock

Test/Test Project	High and low temperature thermal shock	Inspection order number
Product Name/Specifications	2.4G/5.8G-FPC RF1.13mmLine, Line Length170mm	Number of trials: 5PCS
Inspection date:2024-04-15		Completion Date:2024-04-16
Test/inspection equipment: 1.High and low temperature alternating damp heat 2.8753ESNetwork Analyzer		
Test/inspection conditions: - 40°C (2H)---interval80°C (2H),6Cycles, totaltwenty fourHour;		
Test results		
Criteria: 31. The metal surface coating should not peel off, crack, wrinkle, separate, etc.; the non-metallic part should not change color, crack, deform, debond, etc.; 4, electrical tests meet the standards; voltage standing wave ratio tests pass.		
Test/inspection judgment:	-qualified	- Failed - No judgment
test:	Audit:	

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8. Packaging specifications

Product Number:											
Specifications: <u>Built-in antennaAntenna/2.4G~5.8G-WiFi/3dBi/50ohm/FPC43.4*12mm/RF1.13mmBlack coaxial cable</u> <u>L=170mm+lpex1</u>											
1. Labeling requirements											
Inner label length45Width70						Outer label length45Width70					
Demand side						Demand side					
Supplier		Shenzhen Chenxin Micro Technology Co., Ltd.				Supplier		Shenzhen Chenxin Micro Technology Co., Ltd.			
Customer order number						Customer order number					
Customer Part Number						Customer Part Number					
Material Code						Material Code					
Product name Specifications			Inspector				Product name Specifications			Inspector	
Quantity/Unit			Production Date				Quantity/Unit			Production Date	
Remark								Remark			
2. Packing requirements											
1. Inner packaging											
product											
100PCS											
5000PCS											
2. Outer packaging											
Note:											