

Antenna Specification

2022/10/18

(1) Sample Antenna Description

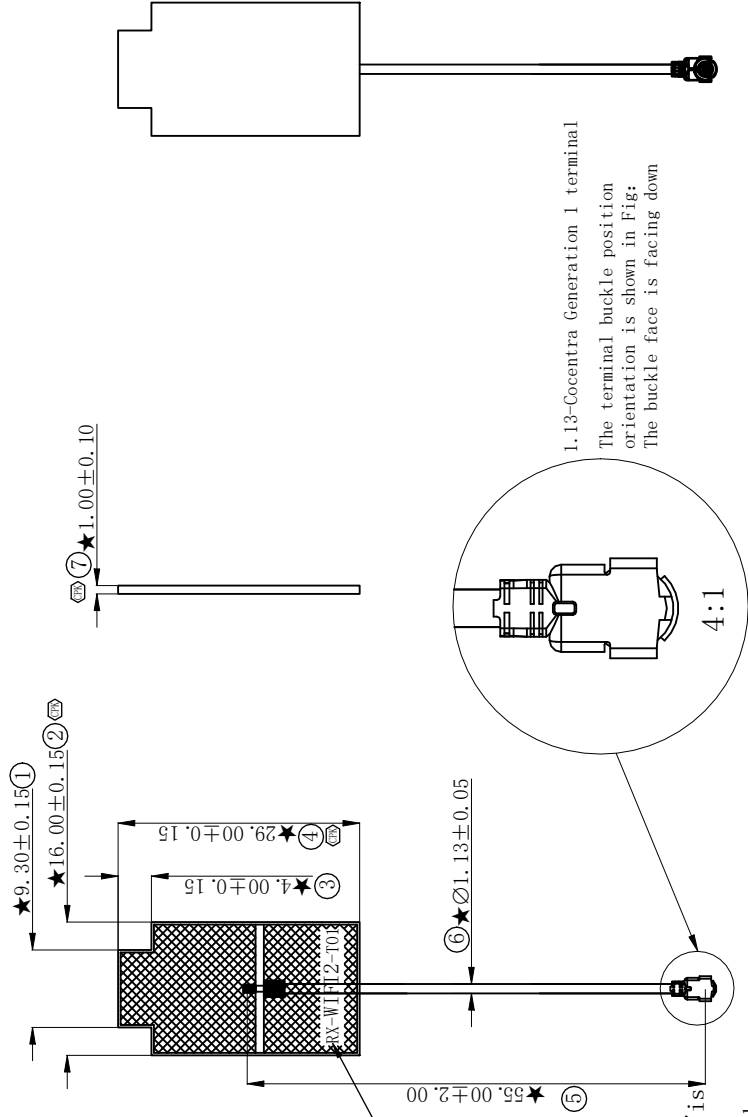
Antenna description	
Original model number	F066A3913910002
Category	Built-in antenna
Frequency band	2400MHz~2500MHz; 5150MHz~5850MHz
Shape	PCB+CABLE
Polarization	Line polarization
SWR	<1.2@2400MHz~2500MHz; <4.5@5150MHz~5850MHz
Efficiency	>25%@2400MHz~2500MHz; >16%@5150MHz~5850MHz
Max gain	0.46dBi @2400MHz~2500MHz; 1.72dBi @5150MHz~5850MHz
Pattern	See datasheet data for details
Connector type	Gen 1 connectors-COCENTRA
Connector property	Gen 1 connectors-COCENTRA
Active / Passive	Passive
Antenna size	29.0*16.0mm
Feeder type and size	Φ: 1.13mm Black cable, L=55mm
Feeder loss	Conventional loss
High and low temperatures	-40~80℃
Remarks	/

(2) Material Description

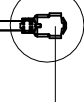
F066A3913910002_2400MHz~2500MHz&5150MHz~5850MHz-PCB-29.0*16.0mm
-55.0mm-Black cable-Built-in-Passive-24h

(3) Sample Antenna Diagram

Finished product diagram



Technical Requirements:

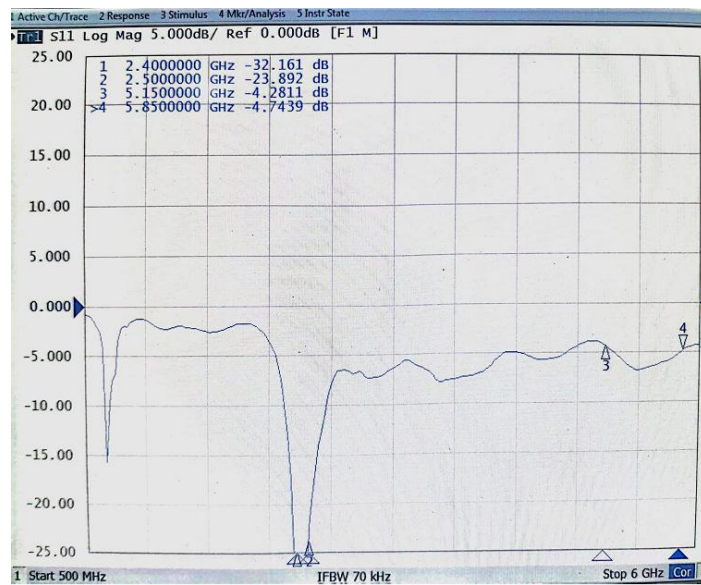
- 
1. " "★ The size is the key size, with "CPK" Need to do the size of the CPK, " () " is the actual size, "X" is the design change;
 2. The solder joints are required to be smooth without convex spikes, without virtual soldering, tin stacking, short circuit and other phenomena;
 3. Drawing dimensions are used to verify form factor functionality and assembly;
 4. Meet salt spray test/adhesion test and other related reliability tests, according to our internal RX-WI-QAC-014 reliability test standard, all materials are in line with our RX-WI-QAC-008 product environmental substance prohibition management standards.
 - Meet the RoHS2.0KReach environmental protection requirements, salt spray 24H.
 5. The packaging is packed in accordance with the packaging requirements provided by Ruixiang Engineering;
 6. This image is a trade secret and is restricted to designated individuals or organizations.
- It shall not be disclosed to any third party without permission.

2	cable	M066A3902910002	I. 13mm;Black plain coaxis;Cocentra Generation 1 terminal; 55mm				1
1	PCB	M066A3936910002	FR-4;single sided board;T=1mm;Green ink;Silk print white characters; pad OSP				1
No.	Name	Material No.	description				QTY
Machine kind		KA39	Design	Wu Li	Date	2022.10.18	
Name	KA39 WIFI antenna 2 finished product		R F	Xu Yanhua	Date	2022.10.18	
Part Number	F066A3913910002		Examine and verify	Wang Liang	Date	2022.10.18	
Edition	T01	Picture frame	A4	 KunShan Innowave Communication Technology CO., Ltd.			
Scale	FIT	The third perspective					
Unit	mm						
		5	6		7	8	

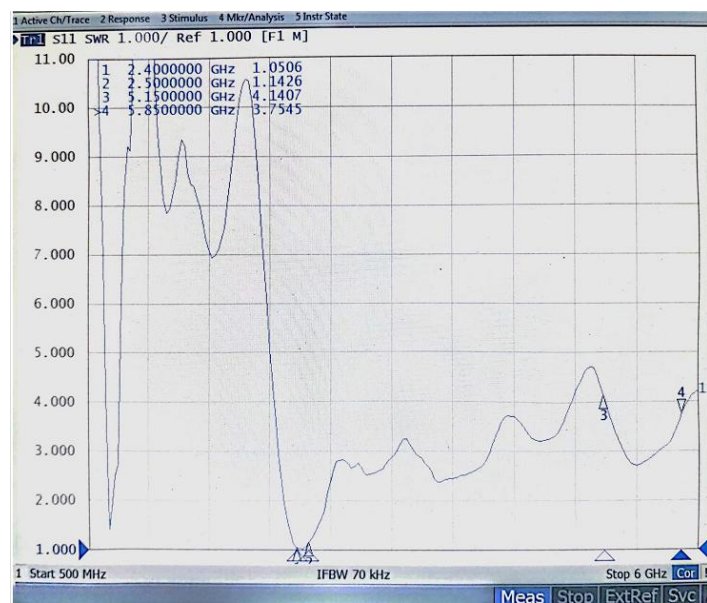
Table of limits		ANGLES	$\pm 1^\circ$
>200	± 0.20		
$100-200$	± 0.15		
$50-100$	± 0.12		
$10-50$	± 0.10		
$0-10$	± 0.05		

(4) Test Report

4.1 S11:



SWR :



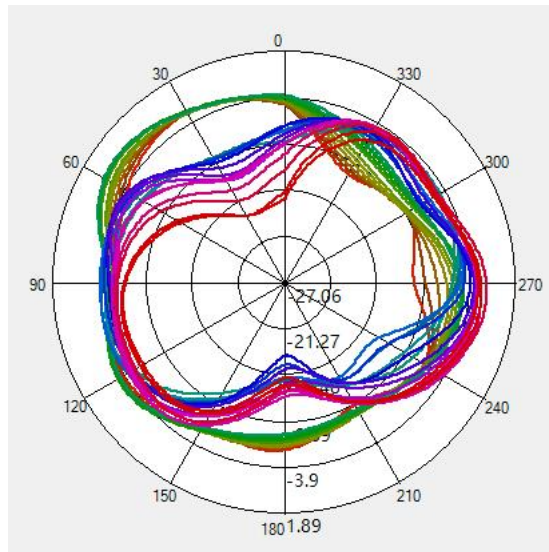
4.2 Directional diagram:

Test environment diagram:

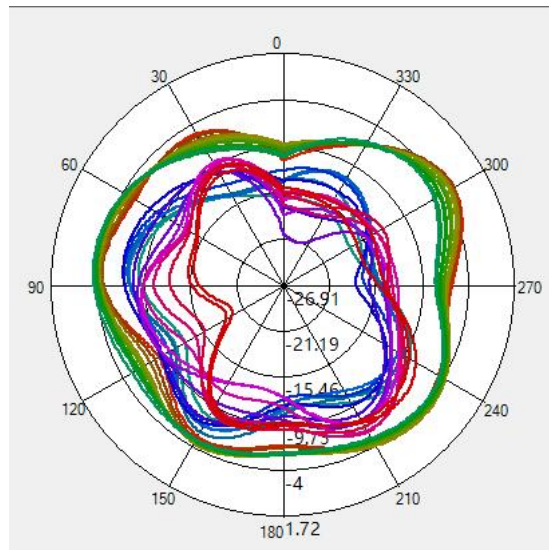


2D Pattern (The gain units are all dBi in Fig) :

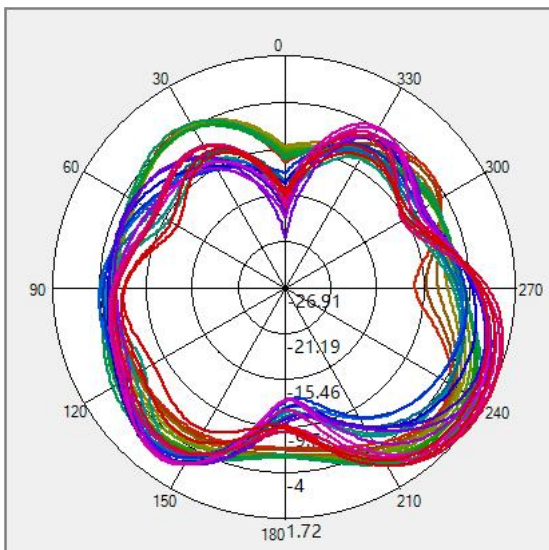
T=90:



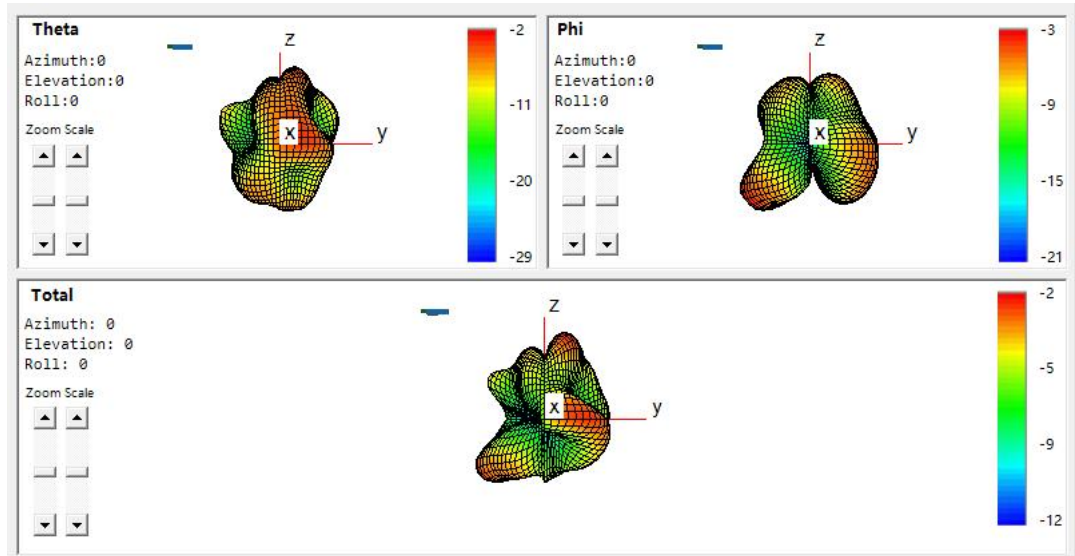
P=0:



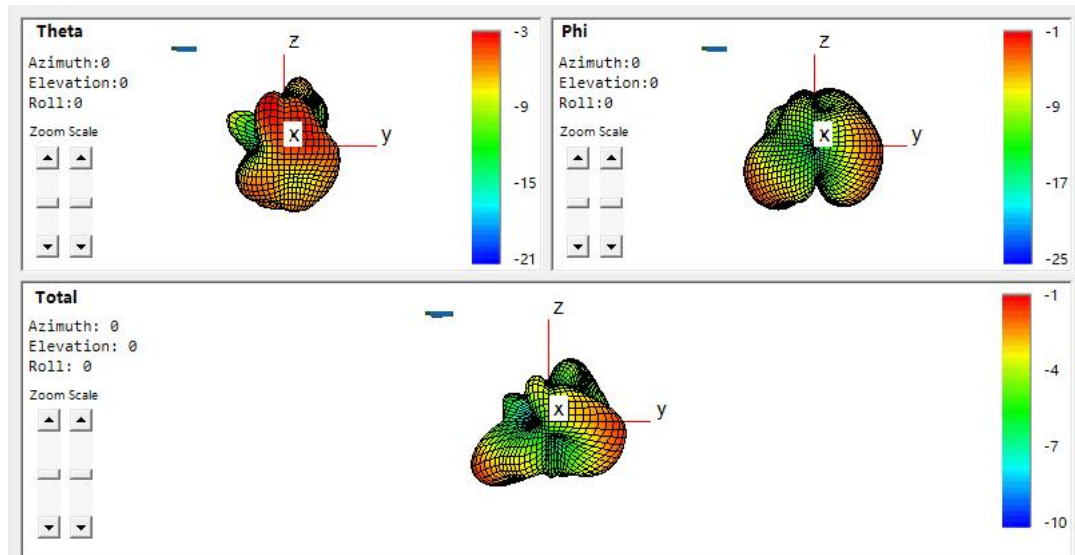
P=90:



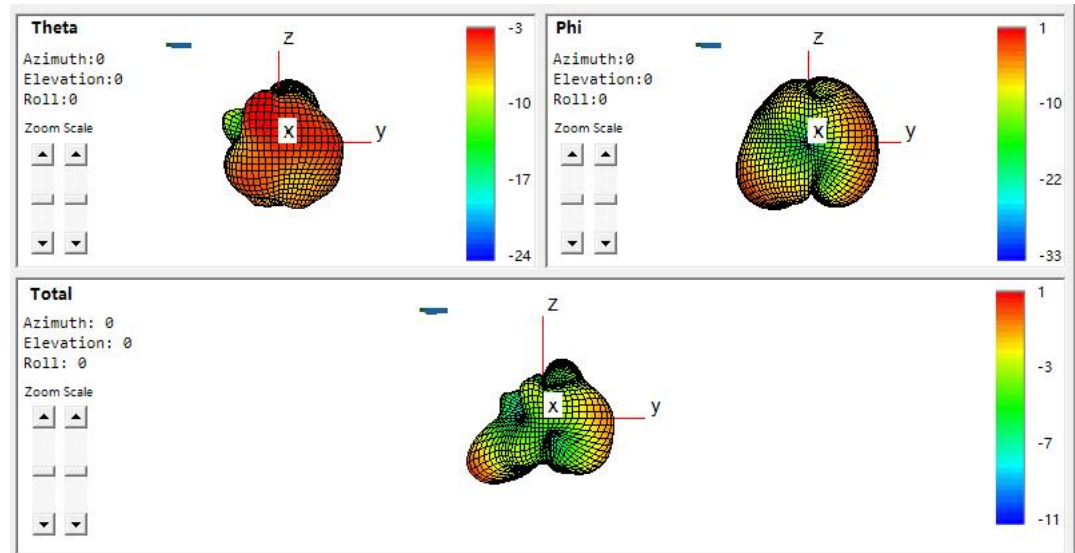
3D Pattern:
2400MHz:



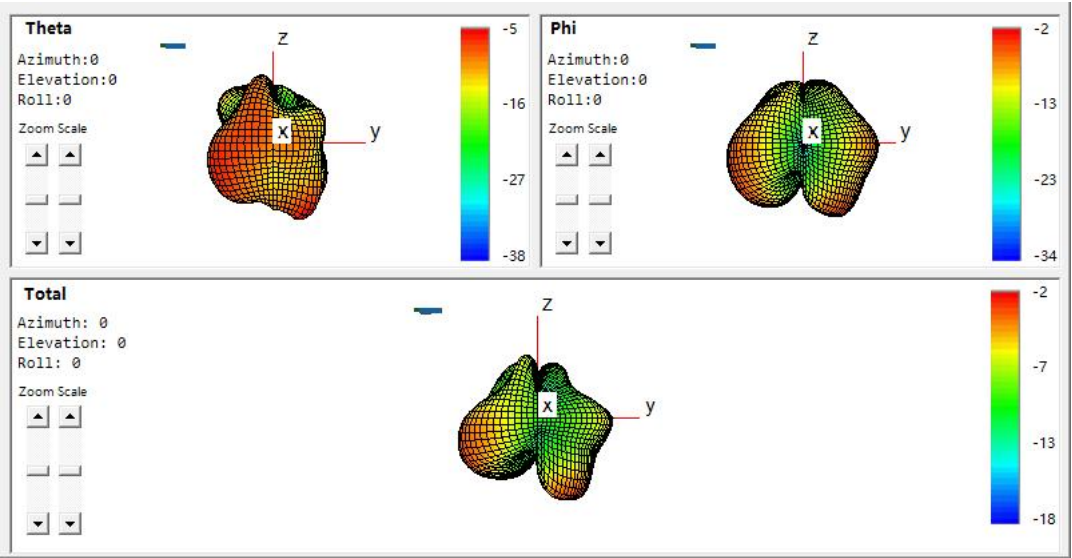
2450MHz:



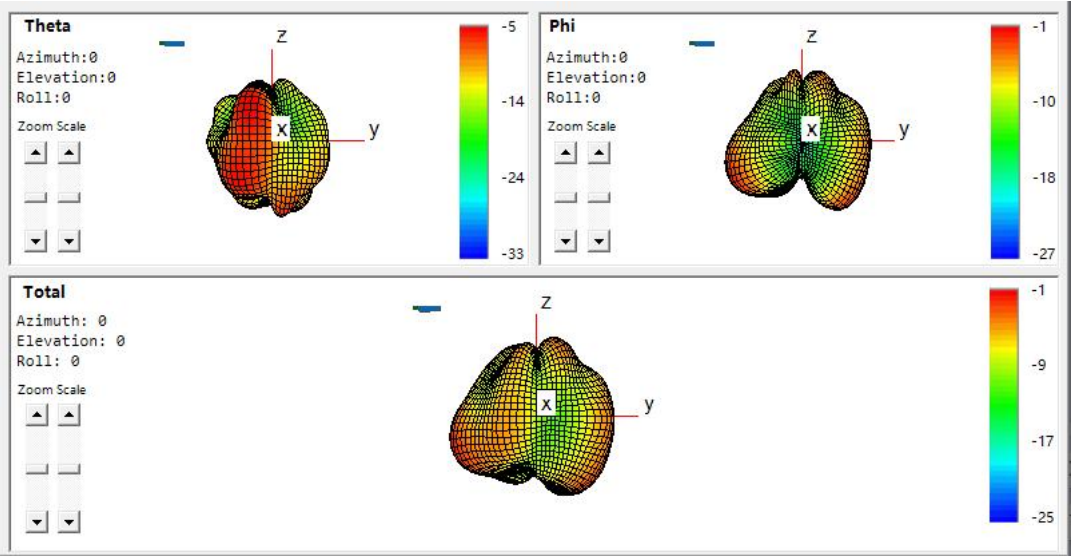
2500MHz:



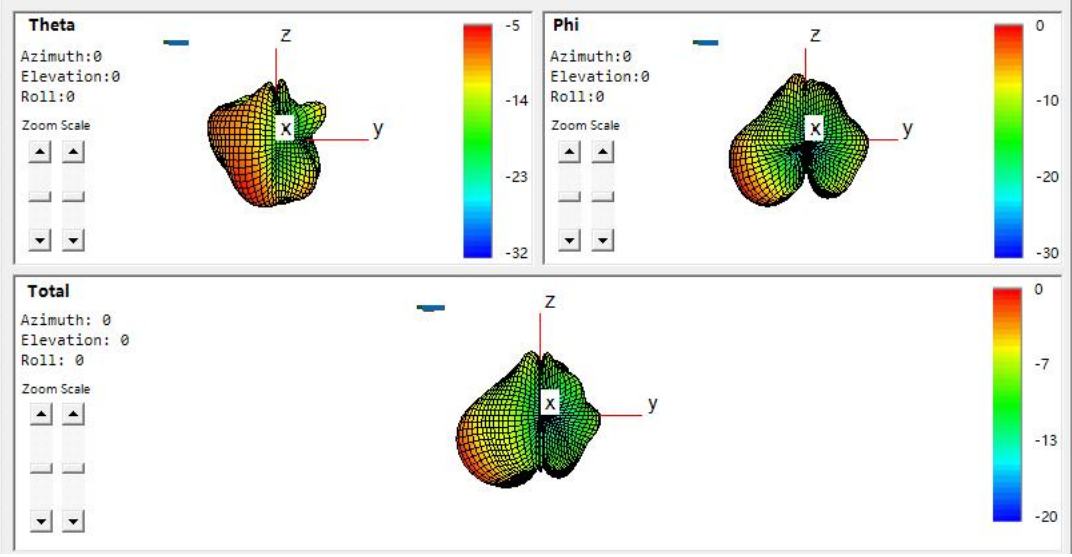
5150MHz:



5450MHz:



5850MHz:



4.3 Efficiency & Gain

Passive test data:

Freq (MHz)	Effi (dB)	Effi (%)	Gain (dBi)
2400	-5.43	28.66	-2.42
2410	-5.24	29.94	-2.41
2420	-5.12	30.78	-2.37
2430	-4.92	32.23	-2.19
2440	-4.88	32.50	-1.79
2450	-4.77	33.32	-1.25
2460	-4.50	35.45	-0.79
2470	-4.54	35.17	-0.71
2480	-4.43	36.02	-0.38
2490	-4.50	35.51	-0.14
2500	-4.21	37.90	0.46
5150	-7.74	16.83	-2.65
5200	-7.22	18.95	-2.44
5250	-6.97	20.09	-3.04
5300	-7.12	19.41	-2.67
5350	-7.22	18.98	-2.59
5400	-6.80	20.90	-2.03
5450	-6.64	21.69	-1.05
5500	-6.41	22.84	0.10
5550	-6.48	22.48	-0.36
5600	-6.12	24.43	0.32
5650	-5.76	26.55	1.15
5700	-6.02	24.98	1.51
5750	-5.99	25.21	1.72
5800	-6.77	21.04	0.78
5850	-7.42	18.12	-0.16