



Antenna Approval Sheet

For
C100 Project

Customer	EKEN INNOVA TION	Project	C100
Band	WiFi 2.4GHZ/5GHZ		
ZC PN	AC031-CA-93		
Version	R:A	Data	2025-4-8

RF		ME	
Checked By			
Confirmed By			
Cust Confirm			



1.Manufacturer information

Company name: Shenzhen Zhongcheng communication products Co., Ltd

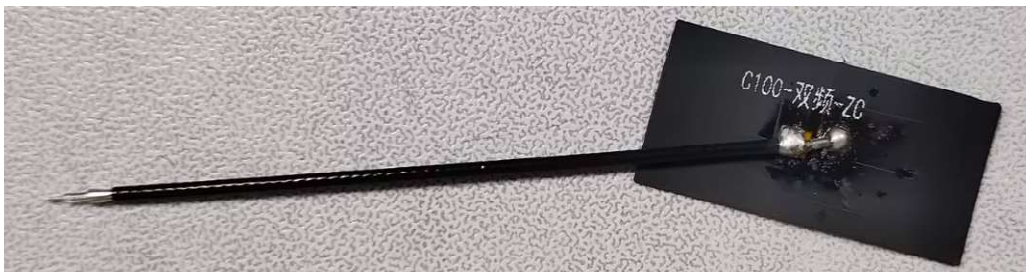
Address: 5th floor, building C, Huafeng Industrial Zone, Liuxian Road, 71 District, Bao' an, Shenzhen

2. Summary of the DUT

C100 Picture



Antenna Picture



3. Electrical Specification:

Antenna types	Built-in WIFI Antenna
Frequency	2400-2500 MHz, 5150-5350MHZ, 5725-5850MHz
Impedance	50 Ω
VSWR	< 2.0
Gain	2.4GHZ 1.73dbi, 5.1GHZ 4.31dbi, 5.5GHZ 3.97, 5.8GHZ 4.45dbi
Antenna Material	FPCB+Coaxial Cable
Connector Type	Soldering



4. Test Condition

4.1	TEST ITEM	TESTING INSTRUMENT	REMARKS
PASSIVE TEST	1.Radiation Pattern 2.Antenna Gain 3. Return Loss 4. S.W.R	1.Satimo SG24(3D) 2. Agilent 8960 E5515C 3. R&S ZVL6	

4.2Antenna installation diagram:



5. RF Performance

5.1 Passive parameters

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	0.58	0.66	1.1	1.02	1.17	1.59	0.72	0.08	0.72	1.19	1.73
Freq. (MHz)	5150	5170	5190	5210	5230	5250	5270	5290	5310	5330	5350
Gain (dBi)	3.13	3.45	3.56	4.11	4.31	4.21	4.1	3.82	3.28	3.19	3.04
Freq. (MHz)	5475	5500	5525	5550	5575	5600	5625	5650	5675	5700	
Gain (dBi)	2.18	2.66	3.51	3.23	3.43	3.97	3.28	3.19	2.68	2.29	
Freq. (MHz)	5720	5740	5760	5780	5800	5820	5840	5860	5880		
Gain (dBi)	2.51	4.45	3.32	4.18	2.54	4.01	1.41	2.47	1.09		

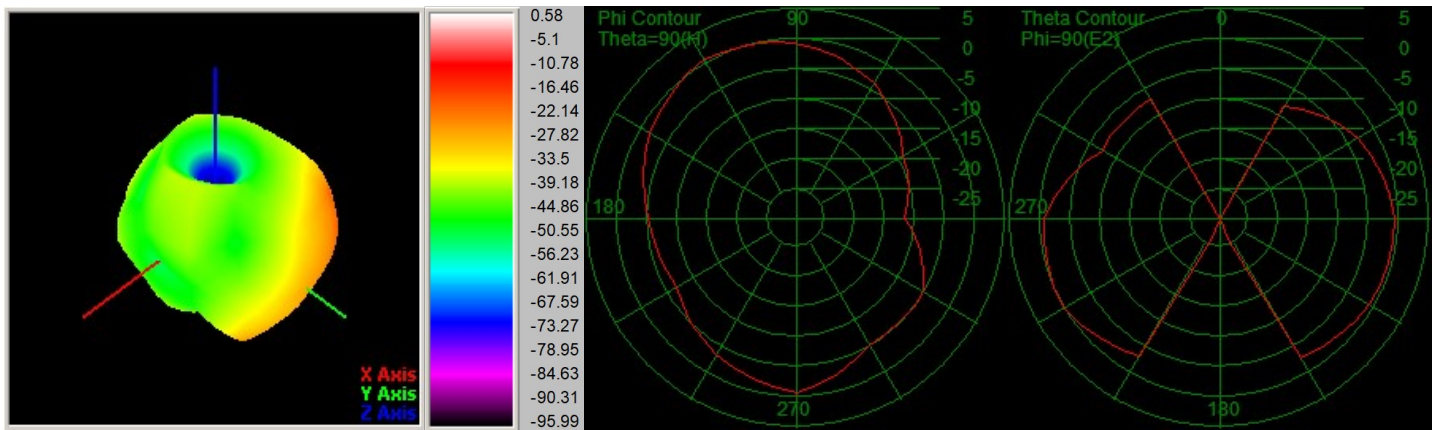
5.2 S Parameter

Frequency (MHz)	2400	2450	2480	5180	5725	5875
Return Loss (dB)	-13.25	-20.67	-13.92	-10.36	-17.56	-17.17
VSWR	1.5	1.27	1.6	1.89	1.28	1.33



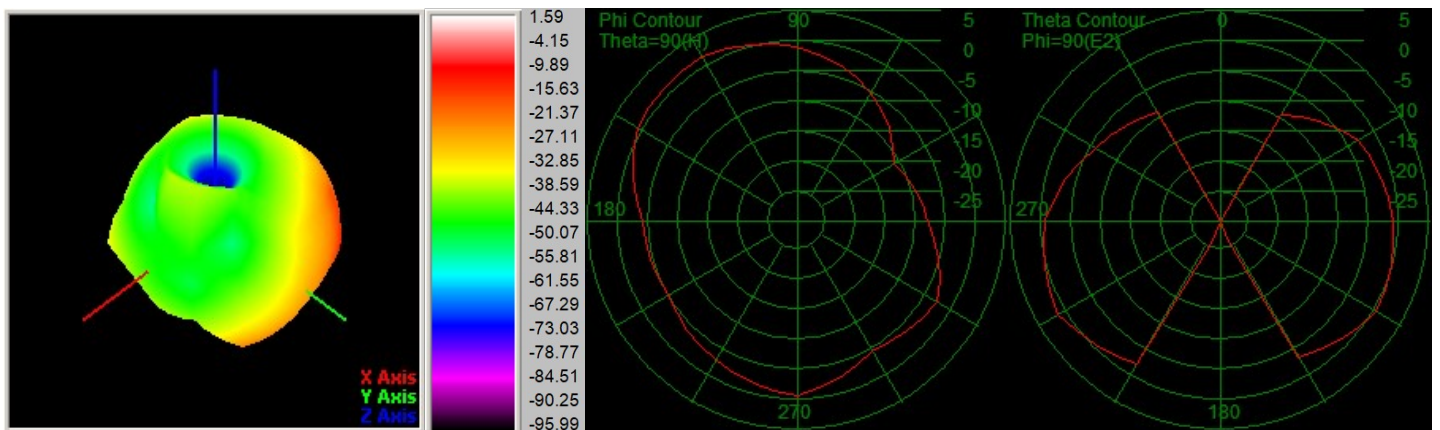


5.3 Radiation



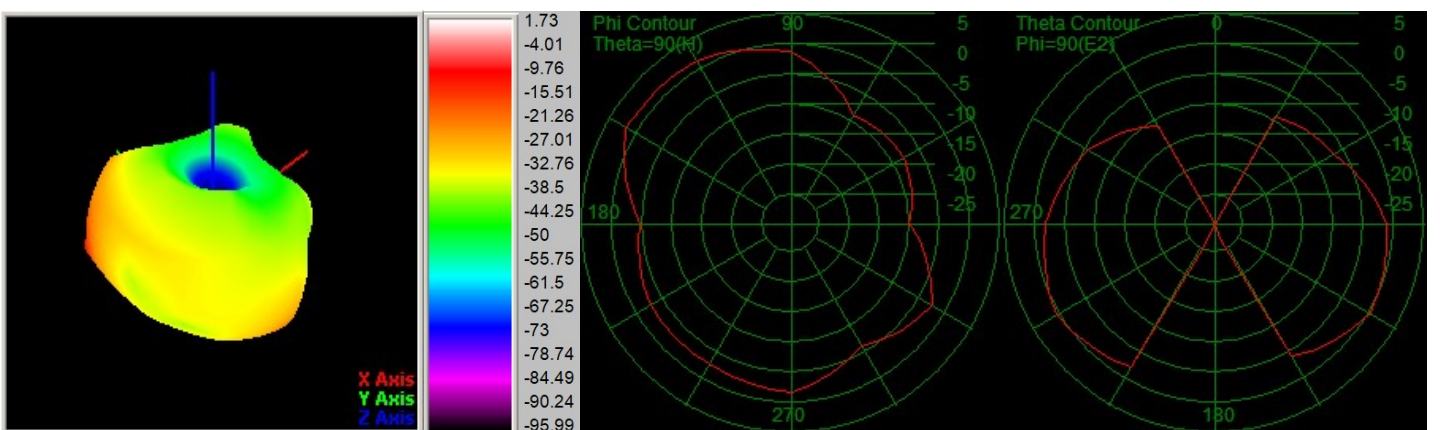
Passive -Freq2400.00MHZ

Gain:0.58(dBi)



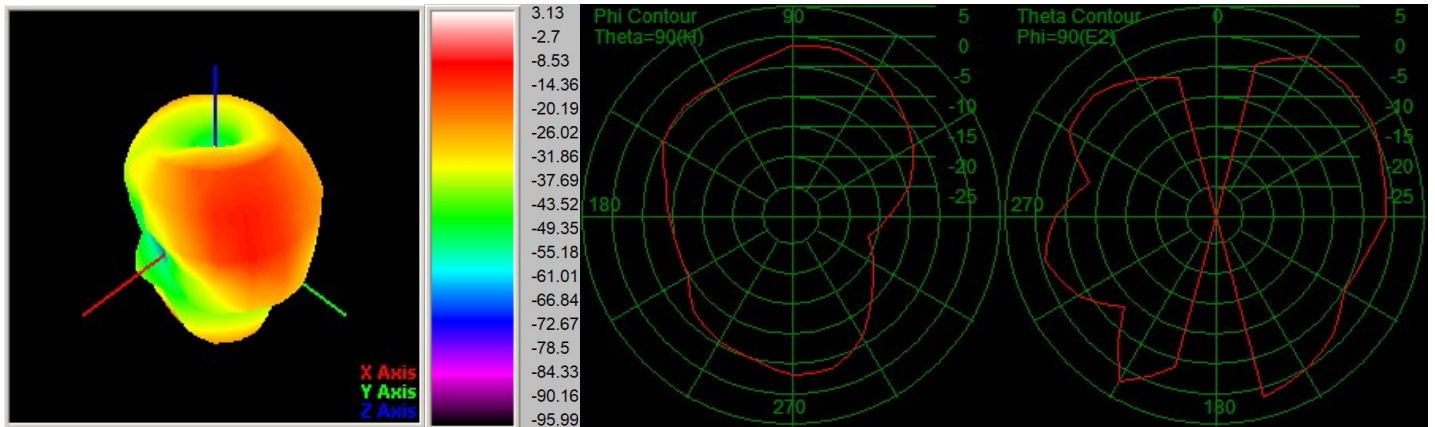
Passive -Freq2450.00MHZ

Gain: 1.59(dBi)



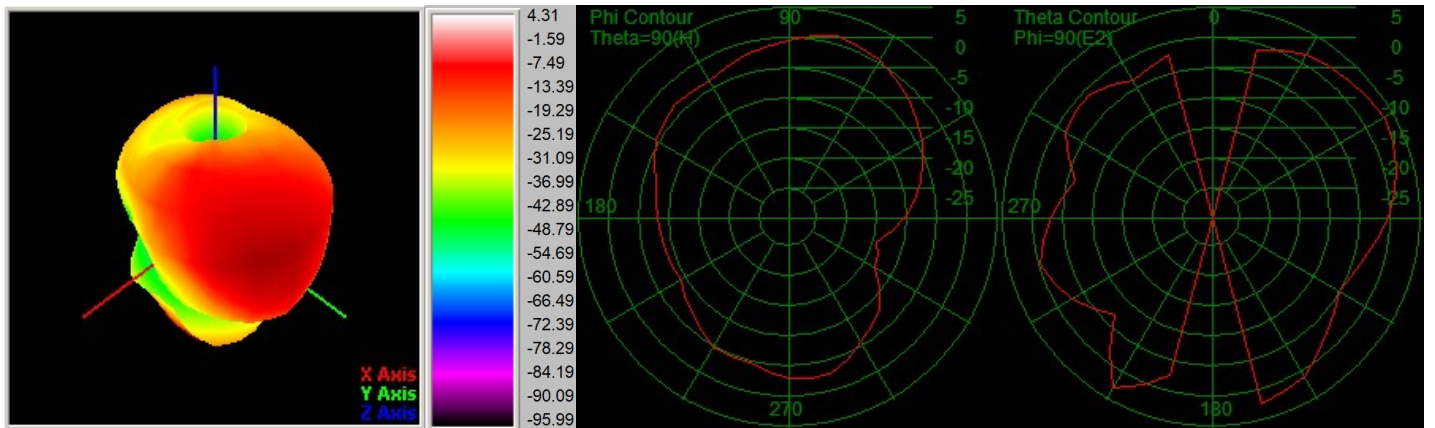
Passive -Freq2500.00MHZ

Gain: 1.73(dBi)



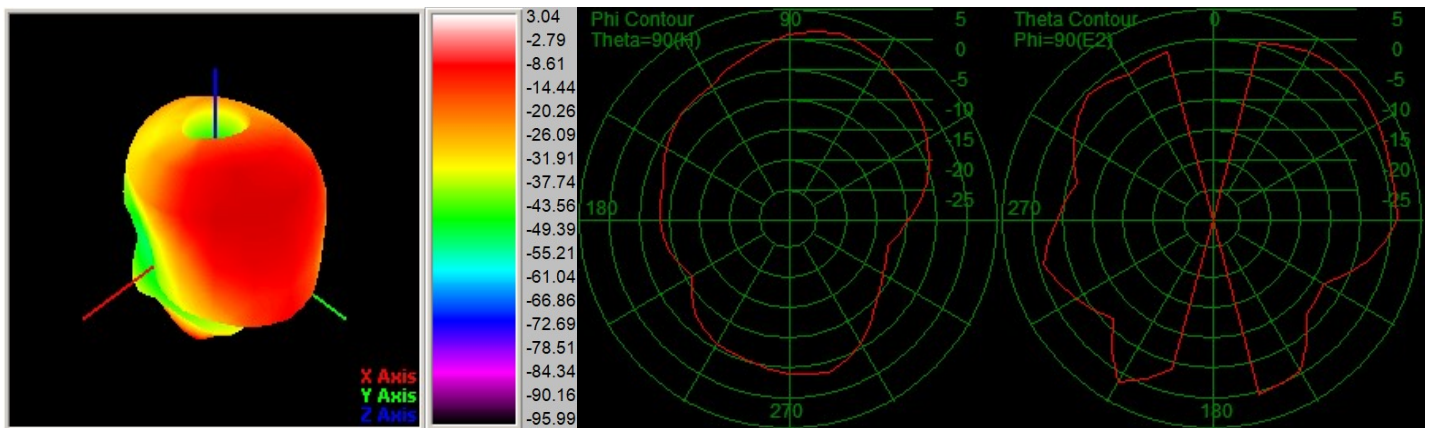
Passive -Freq5150.00MHZ

Gain: 3.13(dBi)



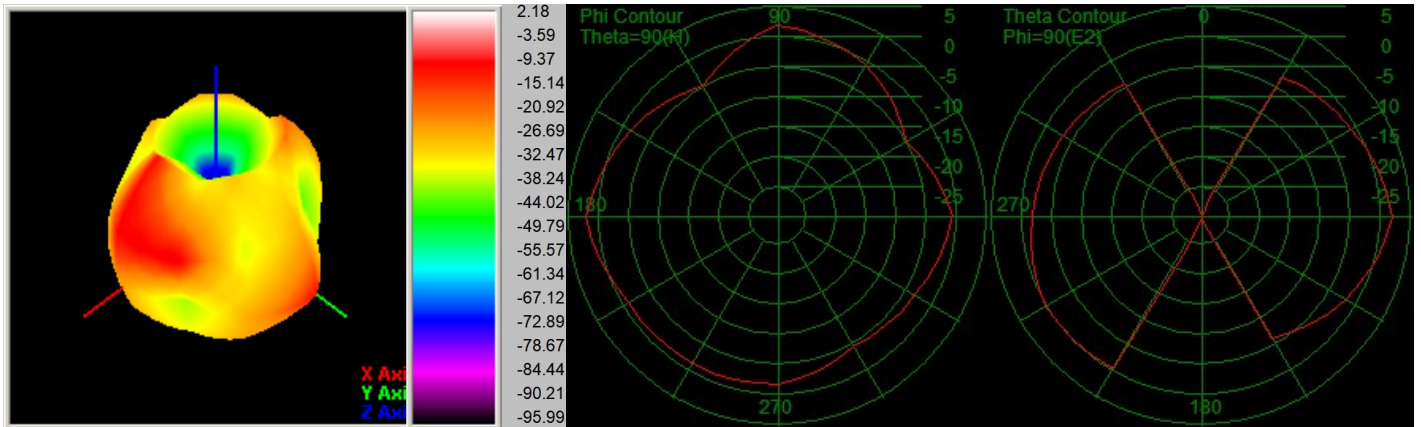
Passive -Freq5230.00MHZ

Gain: 4.31(dBi)



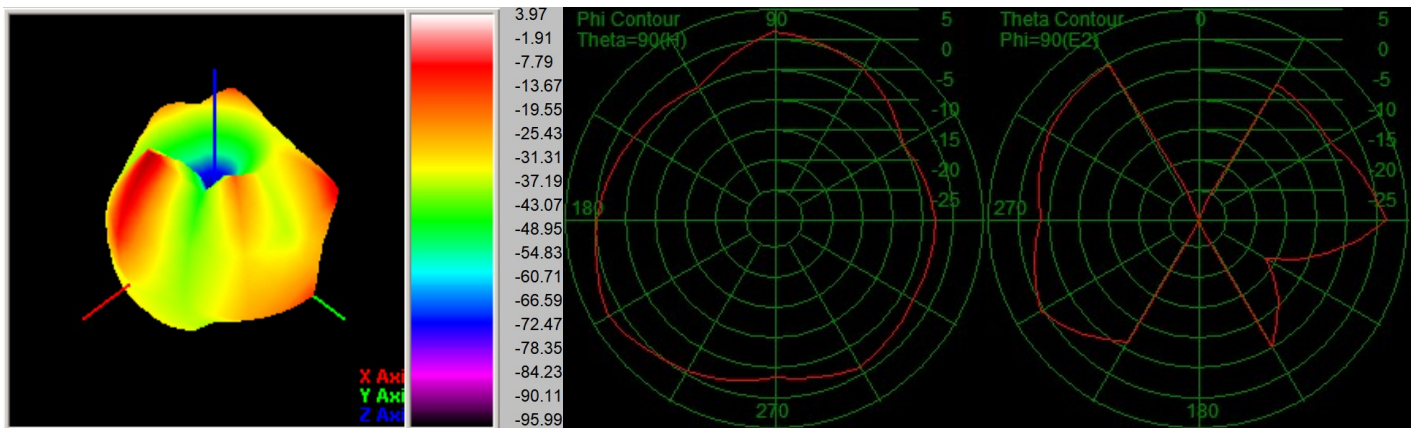
Passive -Freq5350.00MHZ

Gain: 3.04(dBi)



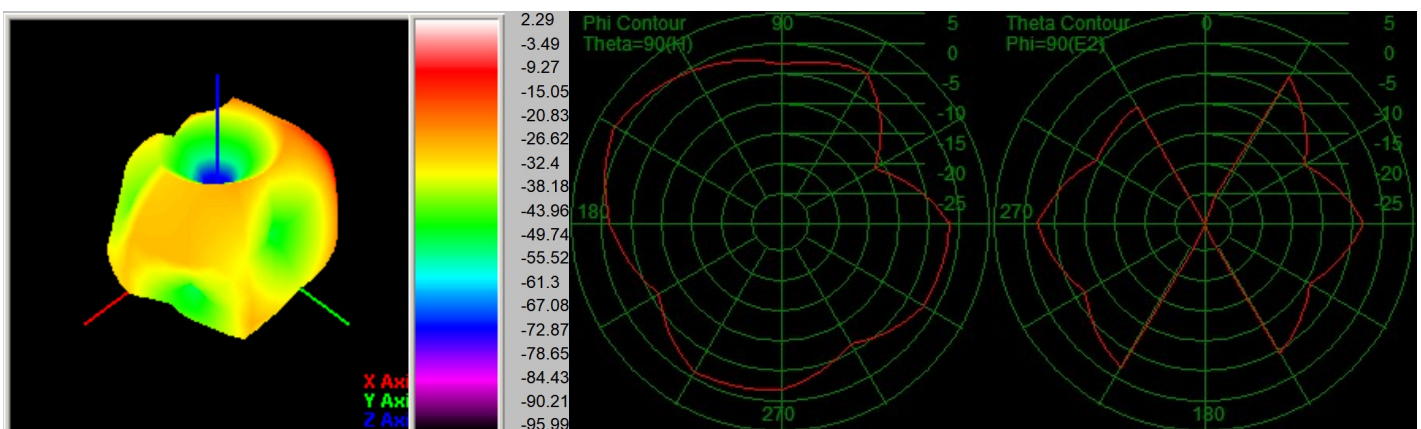
Passive -Freq5475.00MHZ

Gain: 2.18(dBi)



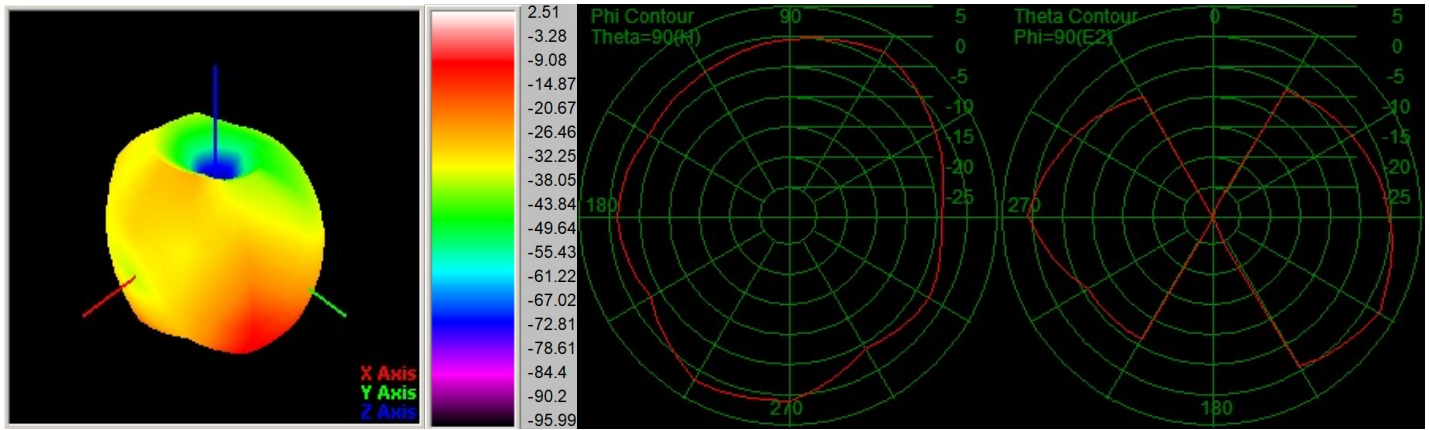
Passive -Freq5600.00MHZ

Gain: 3.97(dBi)



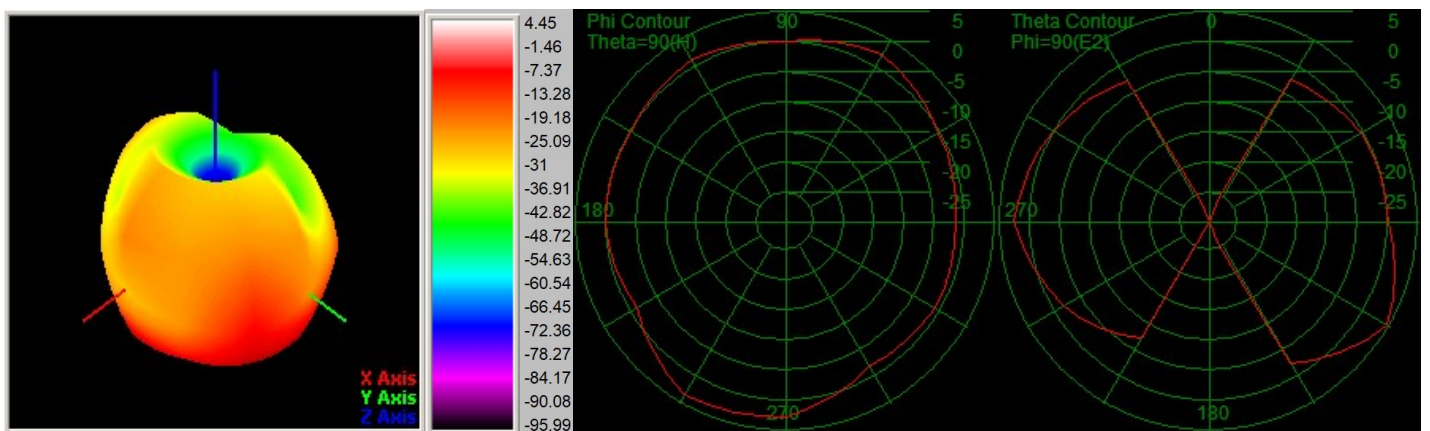
Passive -Freq5700.00MHZ

Gain: 2.29(dBi)



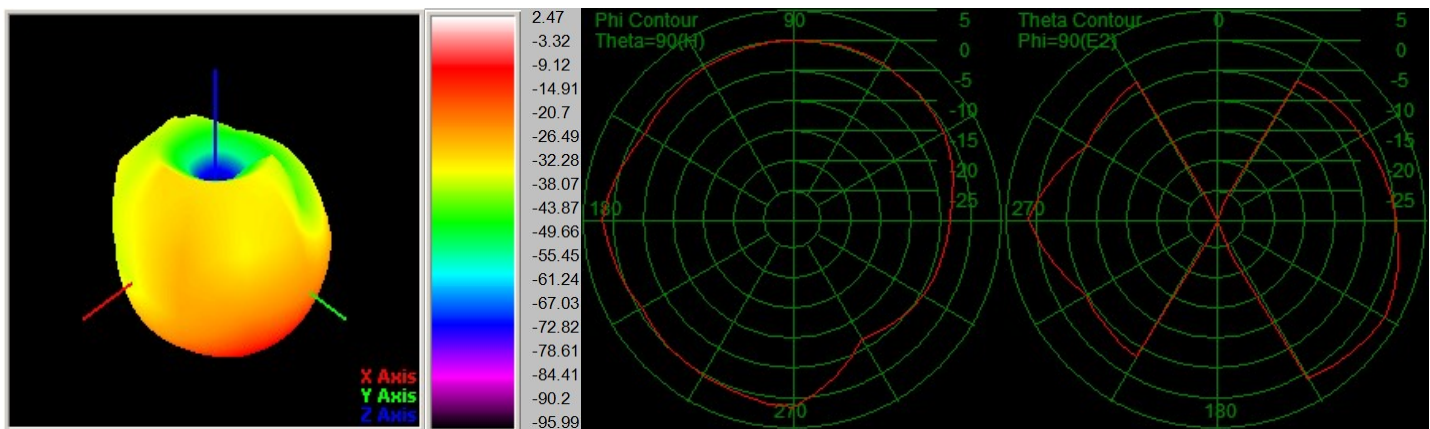
Passive -Freq5720.00MHZ

Gain:2.51(dBi)



Passive -Freq5740.00MHZ

Gain: 4.45(dBi)



Passive -Freq5860.00MHZ

Gain: 2.47(dBi)



Technical note:

1. The total length of the coaxial cable is 61 mm.
2. Can not burn PFC, can not cause PFC deformation, wrinkle, indentation,
3. Stripping wire can not be deformed or broken.
4. Add "x" size as the important dimensions, add "O" as the reference dimension.

REV	Description of change	BY	DATE
T.A	New drawings	GUO	2025-04-08

NO.	Product Name	Part NO.	Material	Color
1	Cable	T12-147	TC-FEP	Black
2	PFC	AC031-FA-13	PI	—

NAME:	Antenna	DATE:	2025-04-08
PART NO.	AC031-CA-93-TA	DRWN:	
MATERIAL:		CHKD:	
SURFACE:		APPD:	
COLOR:		SCALE:	2:1
		REV:	T.A