



Antenna Approval Sheet

For

WIFI-PCB Antenna Project

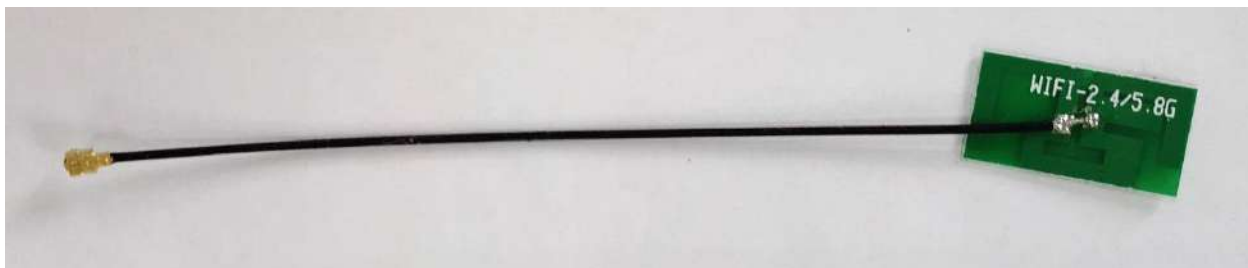
Customer	Love Shang Interactive	Project	WIFI-PCB Antenna
Band	WiFi 2.4GHZ/5GHZ/BT2.4GHZ		
ZC PN	AE001-PA-96		
Version	R:A	Data	2025-1-10

RF		ME	
Checked By			
Confirmed By			
Cust Confirm			



1. Summary of the DUT

Antenna Picture



2. Electrical Specification:

Antenna types	Built-in WIFI Antenna
Frequency	2400-2500 MHz, 5150-5350MHZ, 5725-5850MHZ
Impedance	50 Ω
VSWR	< 2.0
Peak Gain	2.4GHZ 1.73dbi, 5.1GHZ 4.31dbi, 5.8GHZ 4.45dbi
Efficiency	>35 %
Antenna Material	PCB+Coaxial line
Connector Type	1.13 MHF-1-Plug

3. Test Condition

3.1	TEST ITEM	TESTING INSTRUMENT	REMARK S
ACTIVE TEST	1. Antenna Gain 2. S.W.R 3. Return Loss 4. Radiation Pattern	1. Network analyzer (R&S ZVL6) 2. Network analyzer (HP 8753D)	

3.2 Matching Circuit The matching circuit was Default



4.1 RF Performance-WIFI Antenna

4.1.1 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)	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

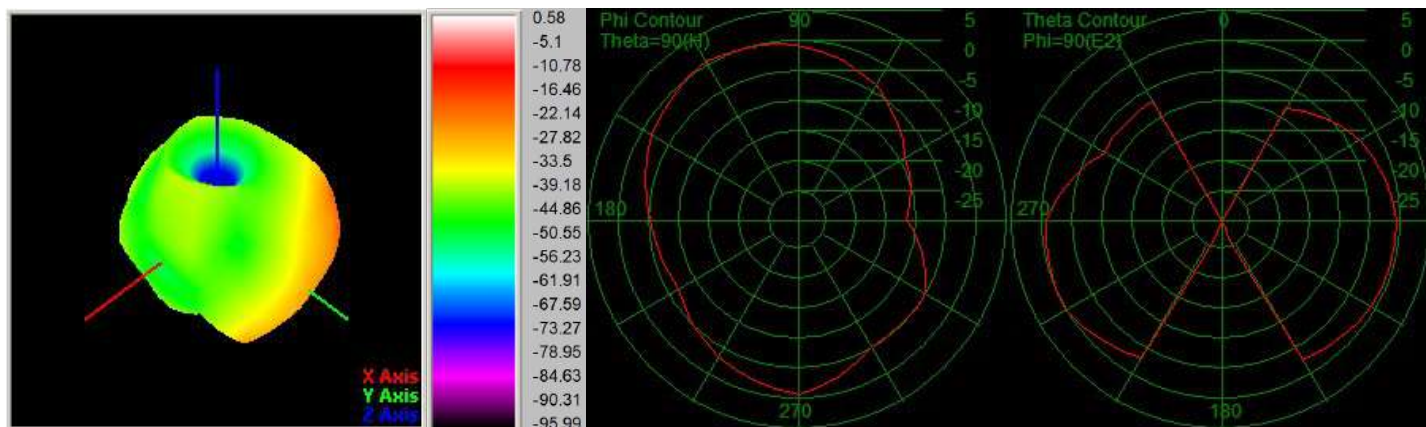
4.1.2 S Parameter

Frequency (MHz)	2400	2450	2480
Return Loss (dB)	-20.58	-22.74	-15.39
VSWR	1.63	1.28	1.81



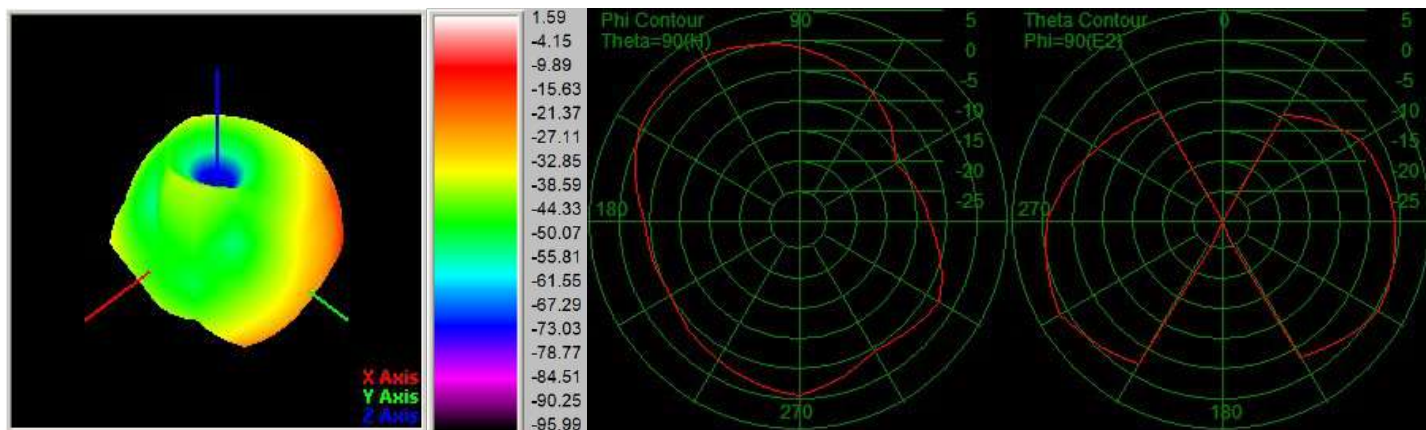


4.1.3 Radiation



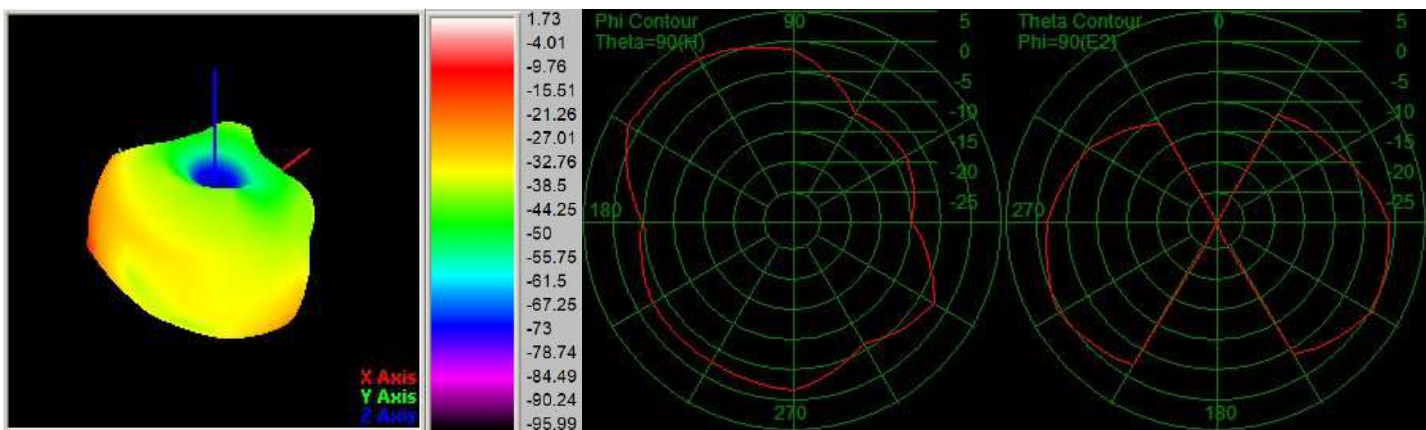
Passive -Freq2400.00MHZ

Gain:0.58(dBi)



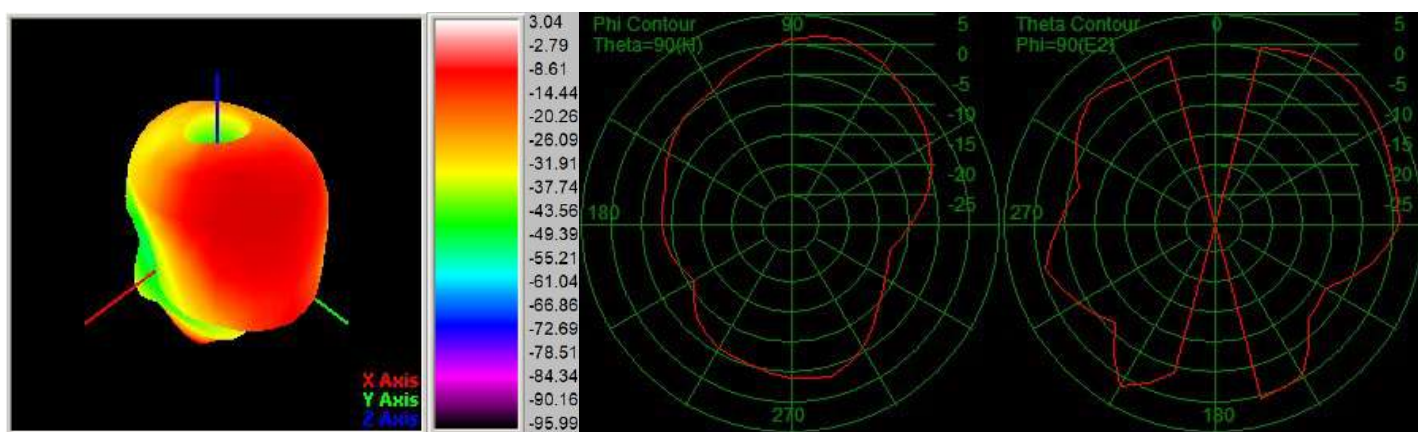
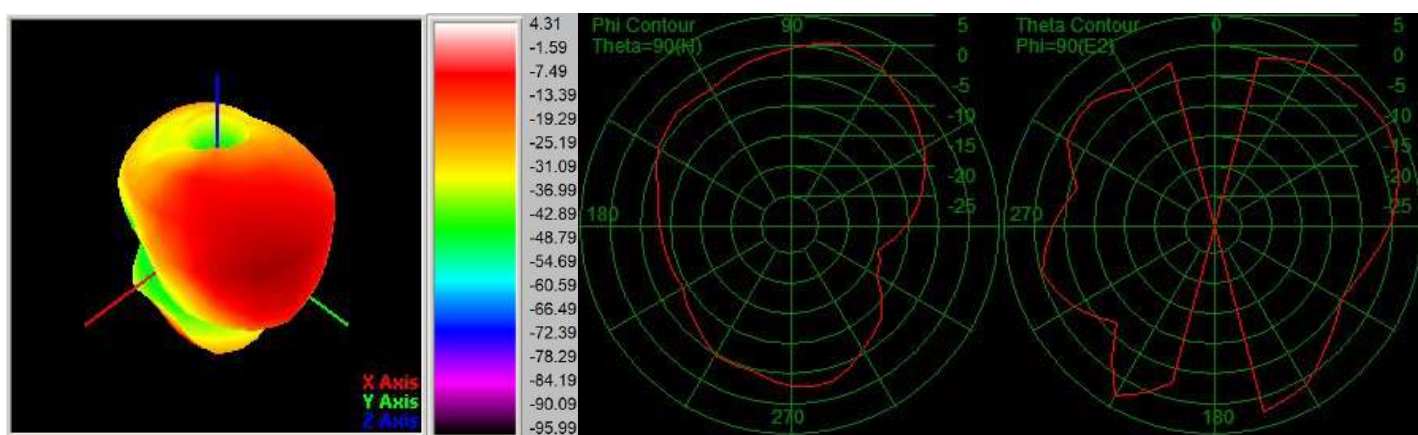
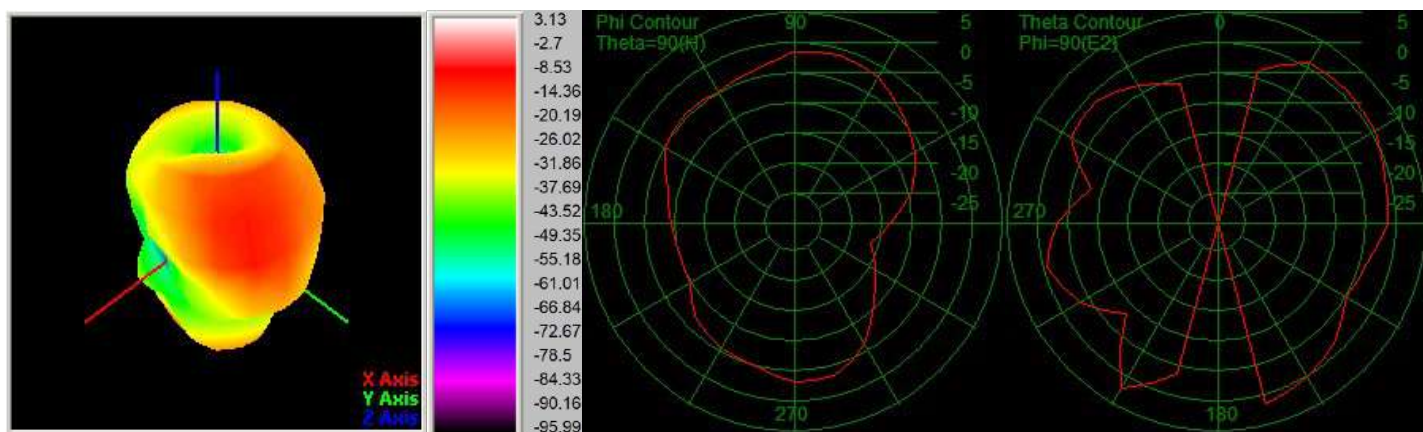
Passive -Freq2450.00MHZ

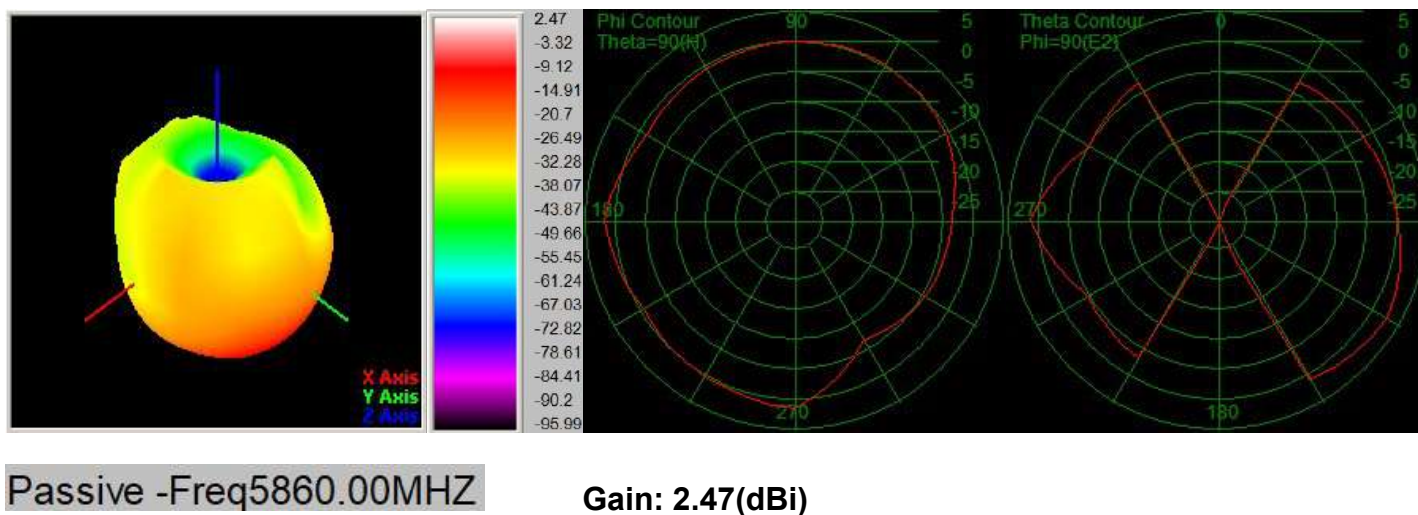
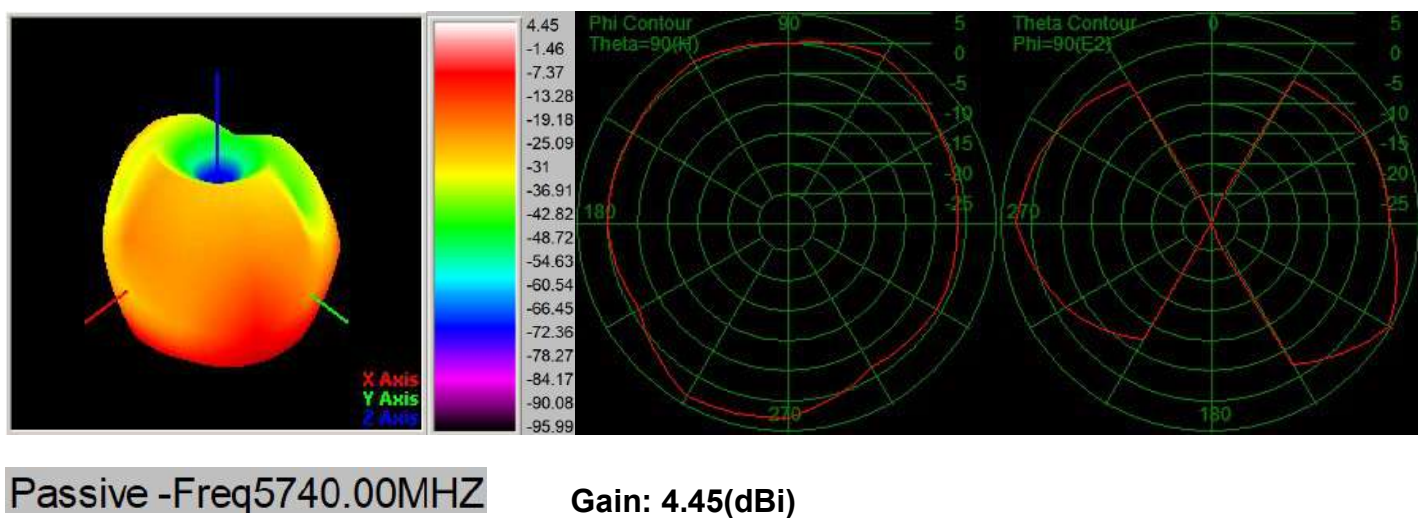
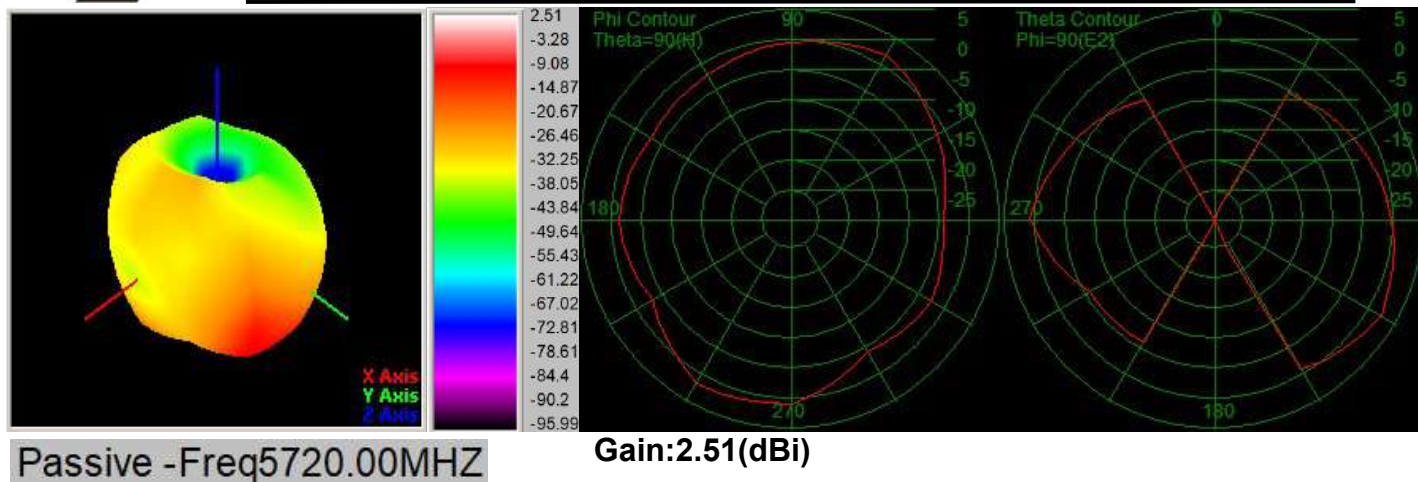
Gain: 1.59(dBi)



Passive -Freq2500.00MHZ

Gain: 1.73(dBi)







4.2 RF Performance-BT Antenna

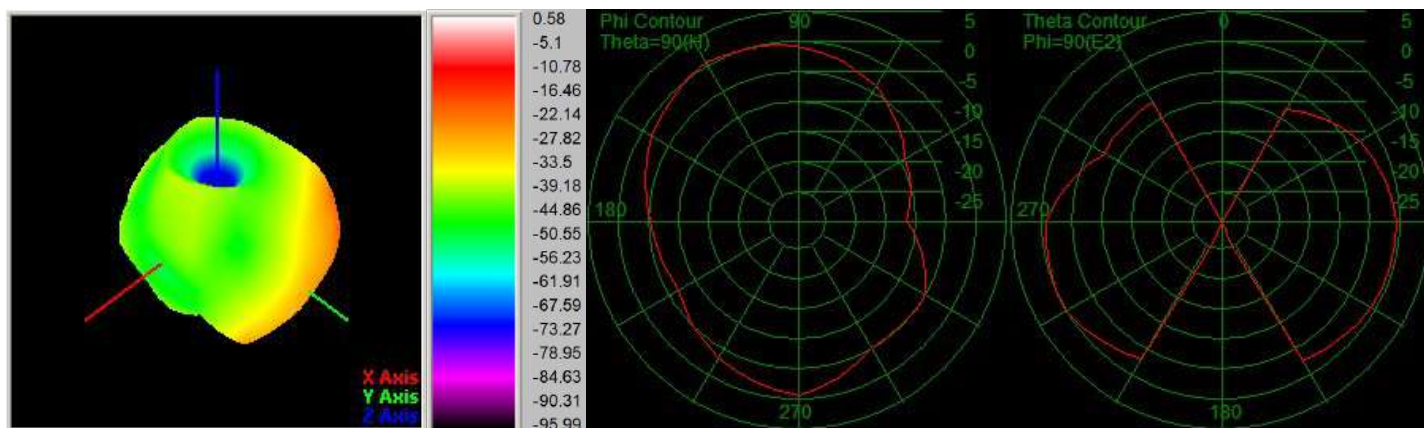
4.2.1 Passive parameters

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

4.2.2 S Parameter

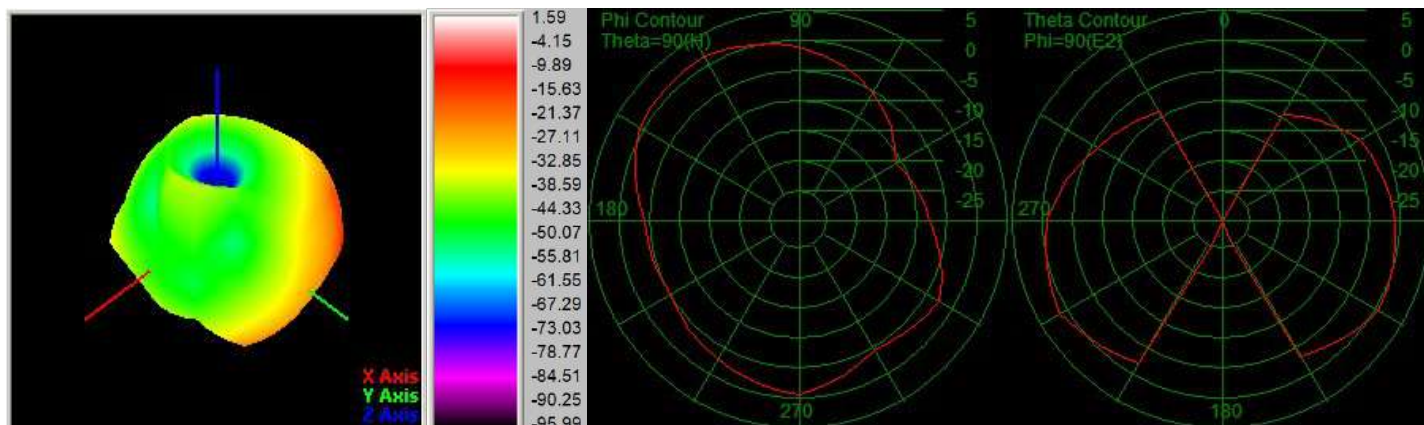
Frequency (MHz)	2400	2450	2480
VSWR	1.63	1.28	1.81

4.2.3 Radiation



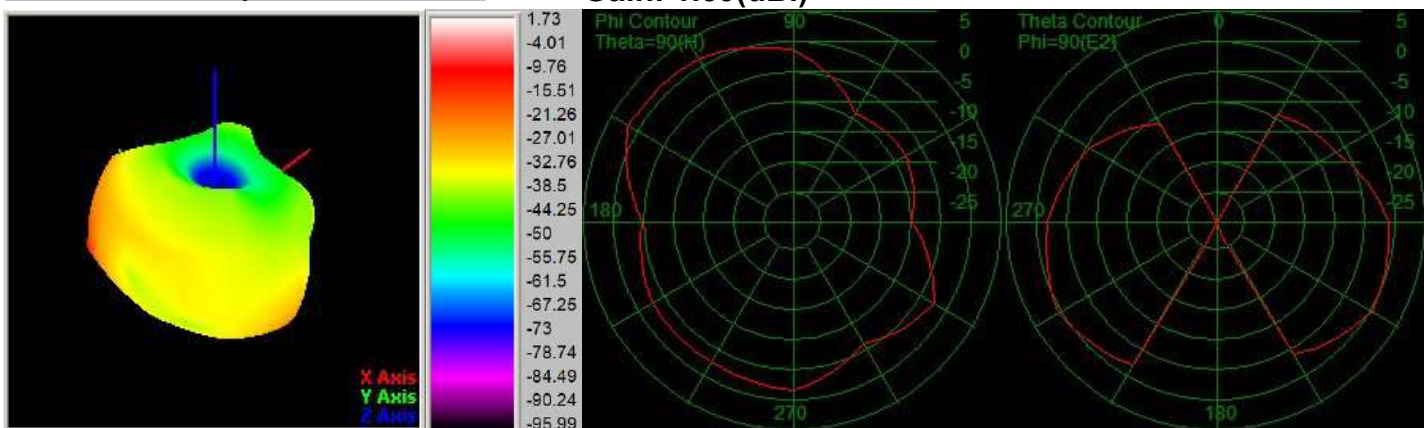
Passive -Freq2400.00MHZ

Gain:0.58(dBi)



Passive -Freq2450.00MHZ

Gain: 1.59(dBi)



Passive -Freq2500.00MHZ

Gain: 1.73(dBi)



5. ME Drawing for the antenna

1		2		3		4	
61-E7S-SF				REV	Description of change	BY	DATE
				T: A	New drawings	GUO	2025-1-14

First generation connectors

25.00±0.3

13.00±0.3

Ø1.13

12000±2

Tin solder

Back adhesive

Technical note:

1. The total length of the coaxial cable is 120mm.
2. Can not burn FPC, can not cause PCB deformation, wrinkle, indentation.
3. Stripping wire can not be deformed or broken.
4. Add "φ" size as the important dimensions, add "0" as the reference dimension.

NO.	Product Name	Part NO.	Material	Color
2	Cable	T13-117	TC+EP	
1	PCB	AE001-BA-13	FR4	

General Tolerance		Unit: mm	
X	±0.5	NAME:	Antenna
.X	±0.25	PART NO.	AE001-PA-96-7A
.XX	±0.10	MATERIAL:	
.XXX	±0.05	SURFACE:	
ANGULAR	±1°	SCALE:	1.5:1

DATE:	2025-1-14
CHKD:	
APPD:	
REV:	T: A