RF Antenna Technology
享 元 科 技

SPECIFICATION

3G／4G LTE／5G NR
Chip Antenna

Model No.：UCCN101

1. General Description

1.1 Electrical Properties

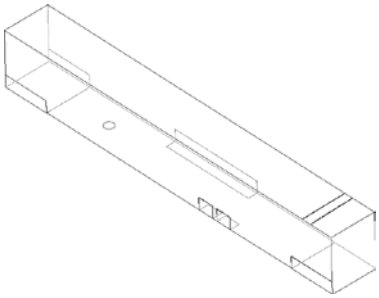
Parameter	Description					
Frequency Band	617~960/1710~2170/2300~2690/3300~4200/4400~5000/5150~5925 MHz					
Nominal Impedance	50 Ω					
Polarization	Linear					
V.S.W.R.	<5:1					
(MHz)	617~960	1710~2170	2300~2690	3300~4200	4400~5000	5150~5925
Efficiency (%)	63	78	62	61	48	37
Average Gain (dBi)	-2.1	-1.1	-2.2	-2.2	-3.4	-4.5
Peak Gain (dBi)	0.5	2.9	3	2.5	0.7	-1.3
※With 45 x 120 mm Evaluation Board & 45 x 13 mm Clearance Area						

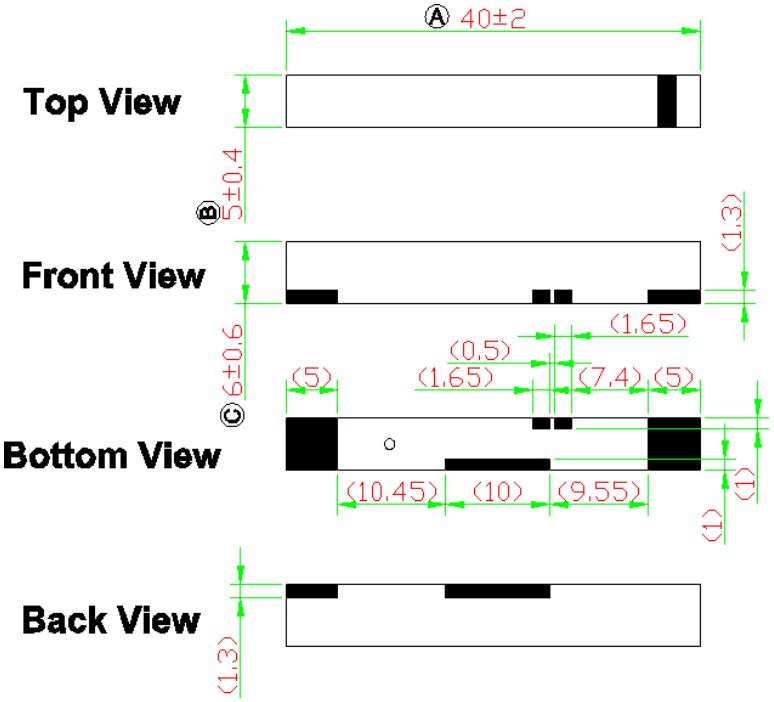
1.2 Mechanical Properties

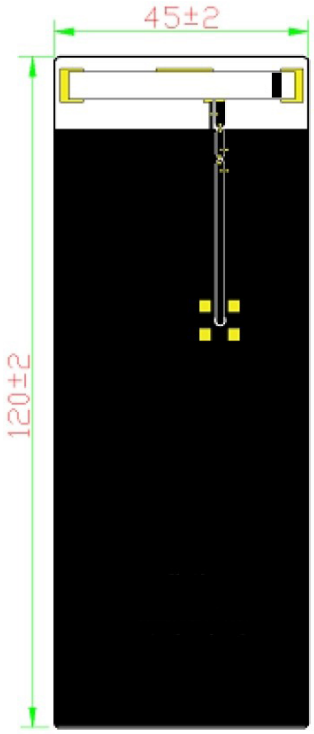
Parameter	Description
Dimensions	40*5*6 mm
Operating Temperature	-40°C~85°C
Storage Temperature (With Packing Sealed)	-5°C~40°C

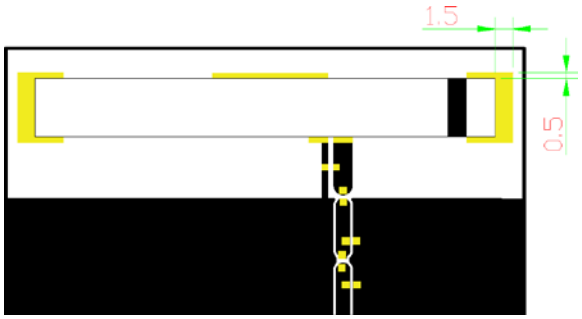
2. Appearance

2.1 Dimensions Of Antenna And Evaluation Board (Unit：mm)

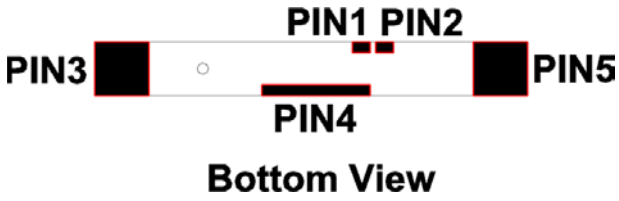








2.2 PIN Definitions

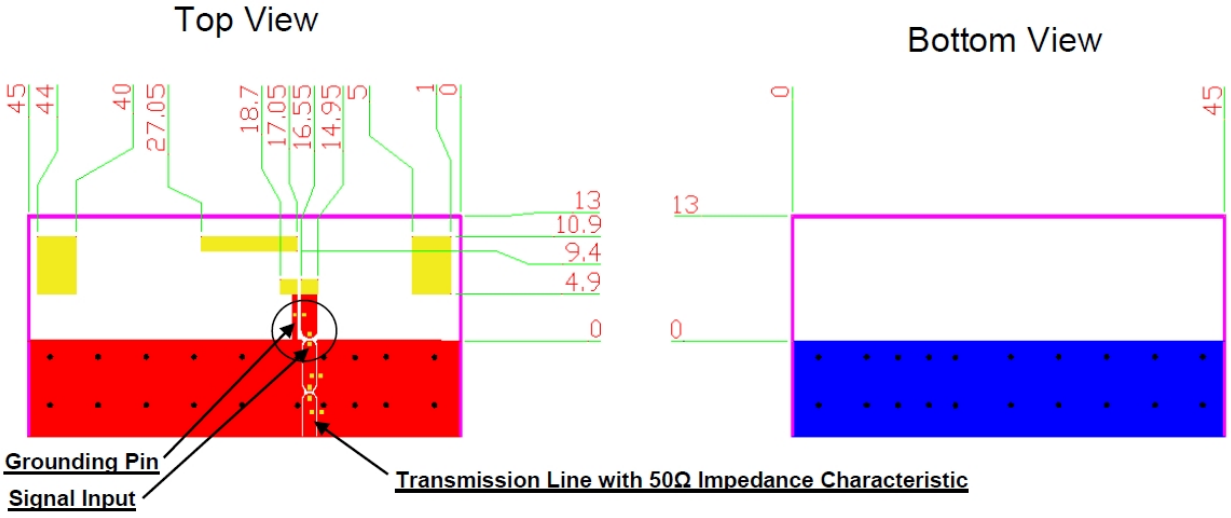


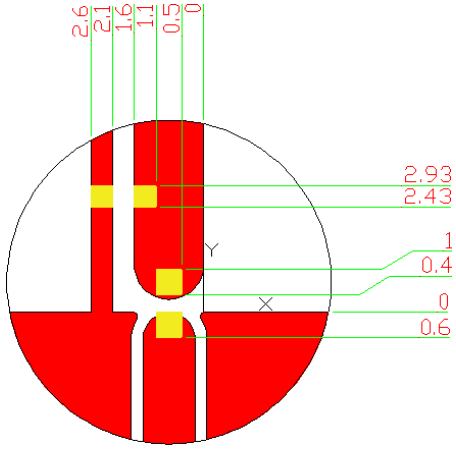
Item	PIN 1	PIN 2	PIN 3~5
Soldering Pad	Tuning / Ground	Signal	Fixing

3. Layout Guide (Unit：mm)

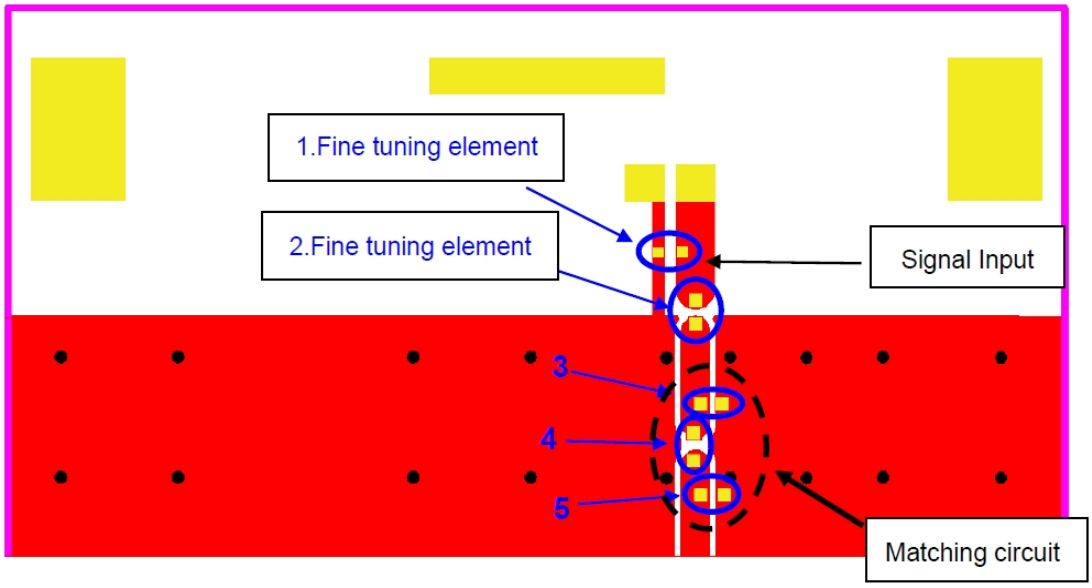
The solder land pattern (yellow marking areas) is shown as below.
Recommendation on matching circuit will be provided according to customer's installation conditions.

With 45 x 120 mm Evaluation Board

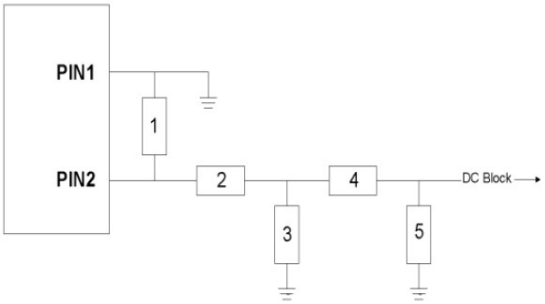




4. Frequency Tuning And Matching Circuit



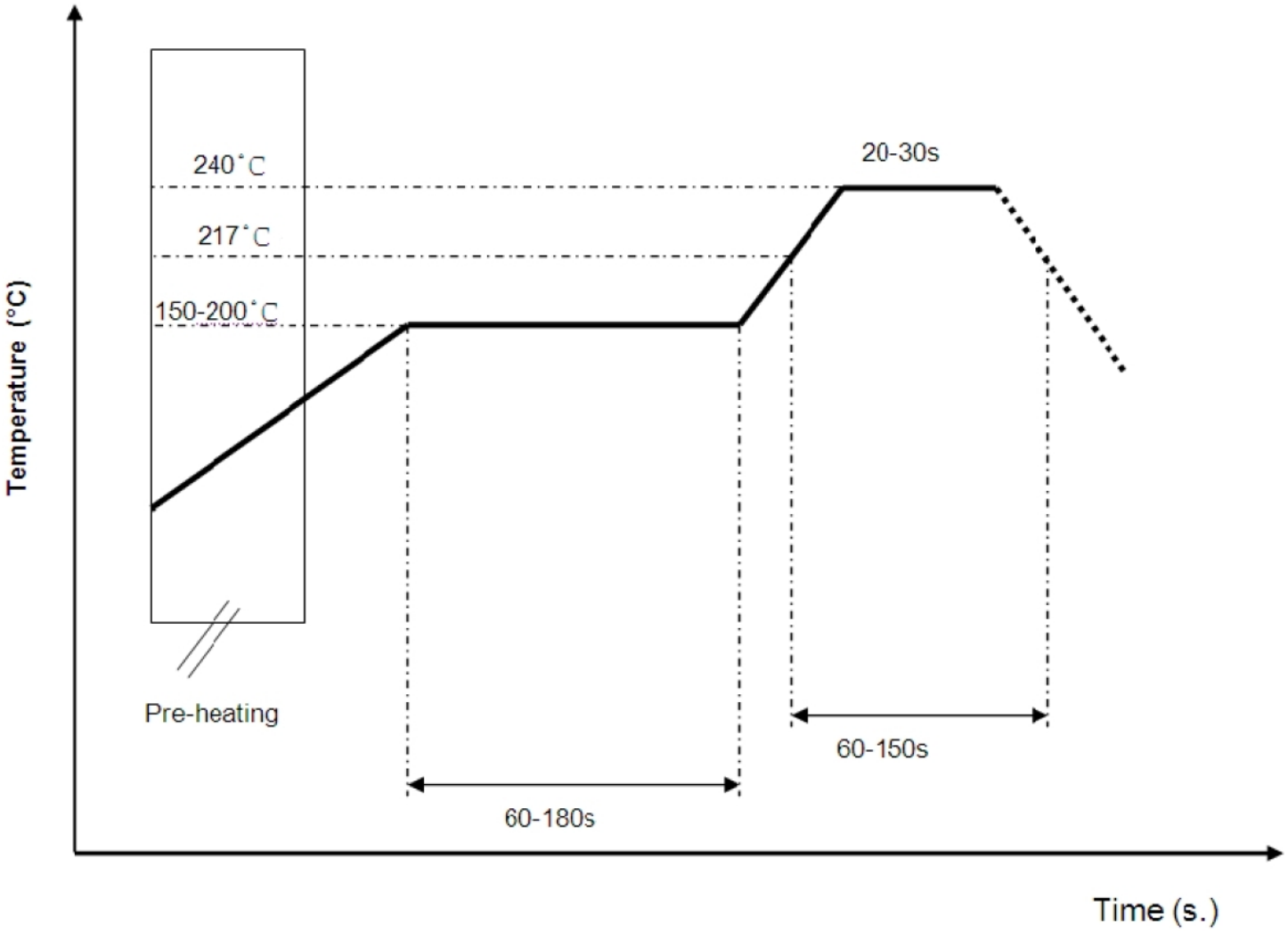
With the following recommended values of matching and tuning components, the covering frequency bands will be about 617~960 , 1710~2690 , 3300~5000 & 5150~5925 MHz at our standard 45x120 mm evaluation board.



System Matching Circuit Component			
Location	Description	Vendor	Tolerance
1 Fine tuning element	6.8 nH (0402)	MURATA	±0.1 nH
2 Fine tuning element	6.8 pF (0402)	MURATA	±0.05 pF
3	N/C	-	-
4	0Ω (0402)	-	-
5	N/C	-	-

※These are typical reference values which may need to be changed when circuit boards or part vendors are different.

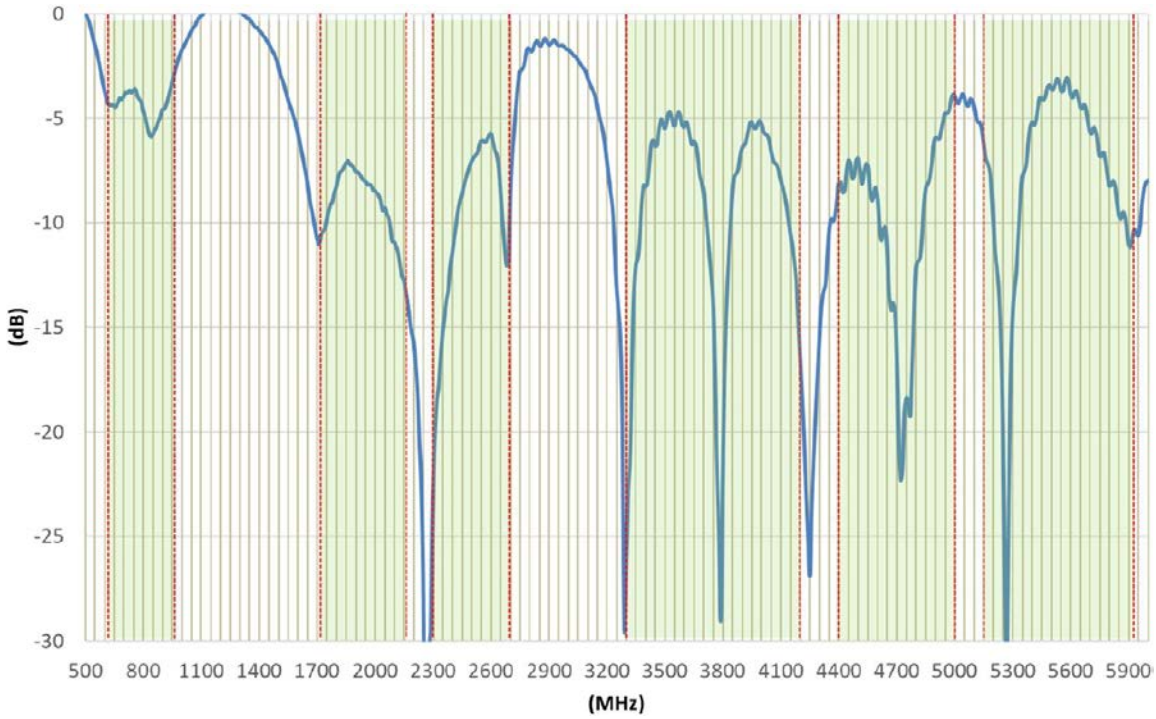
5. Soldering Conditions



※Recommended solder paste alloy : SAC305(Sn96.5/Ag3/Cu0.5) Lead free solder paste.

6. Performance

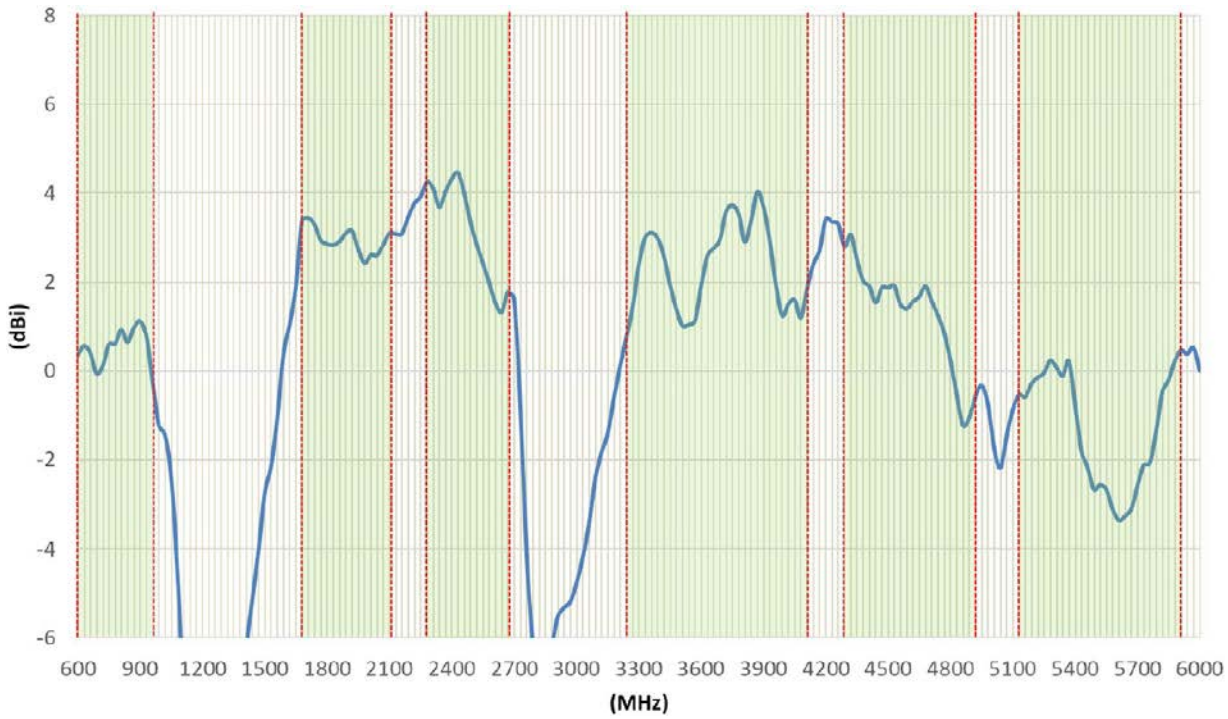
6.1 Return Loss



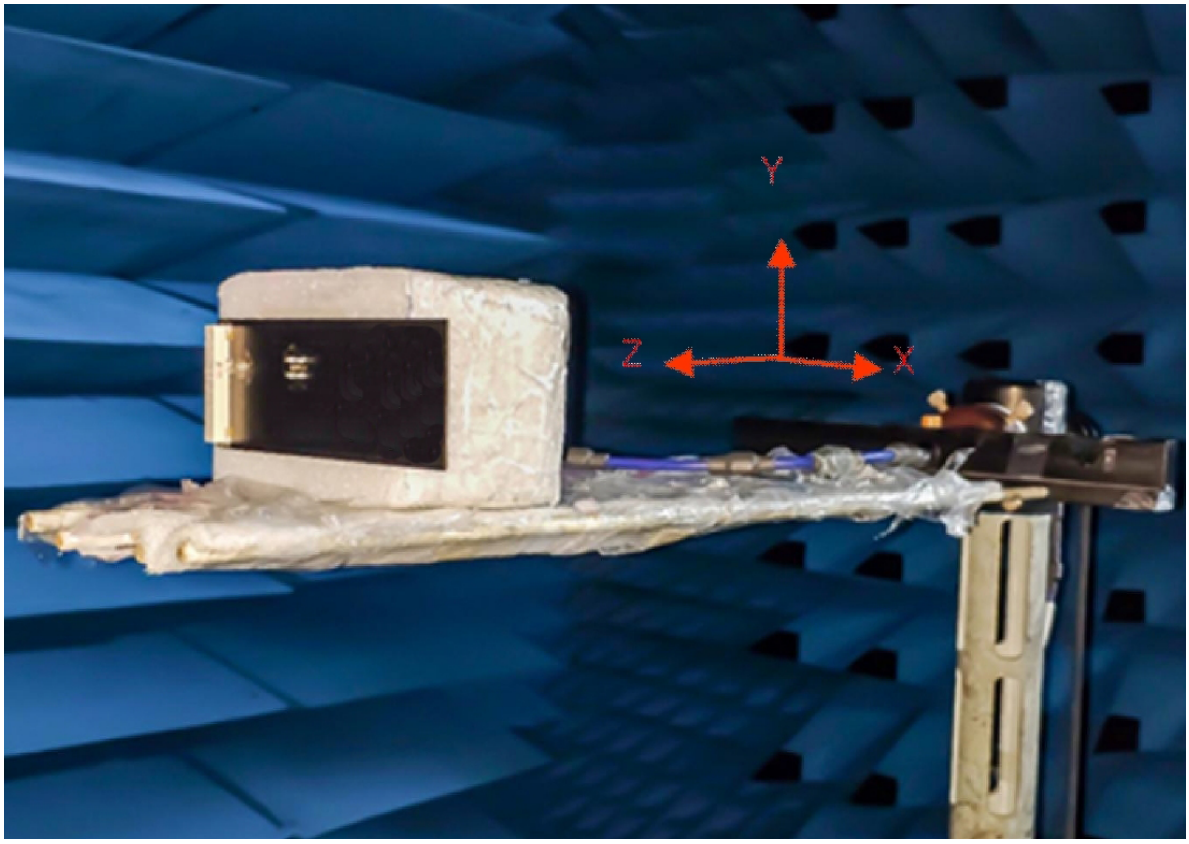
6.2 Efficiency

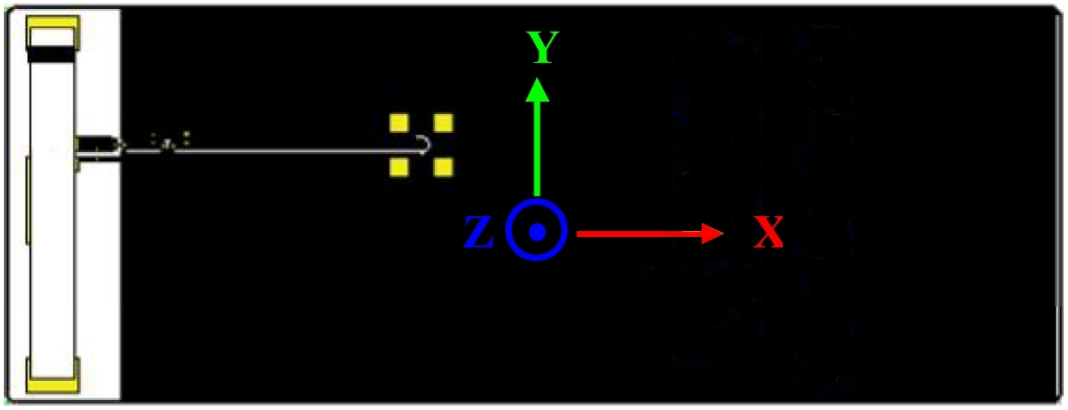
6.3 Average Gain

6.4 Peak Gain

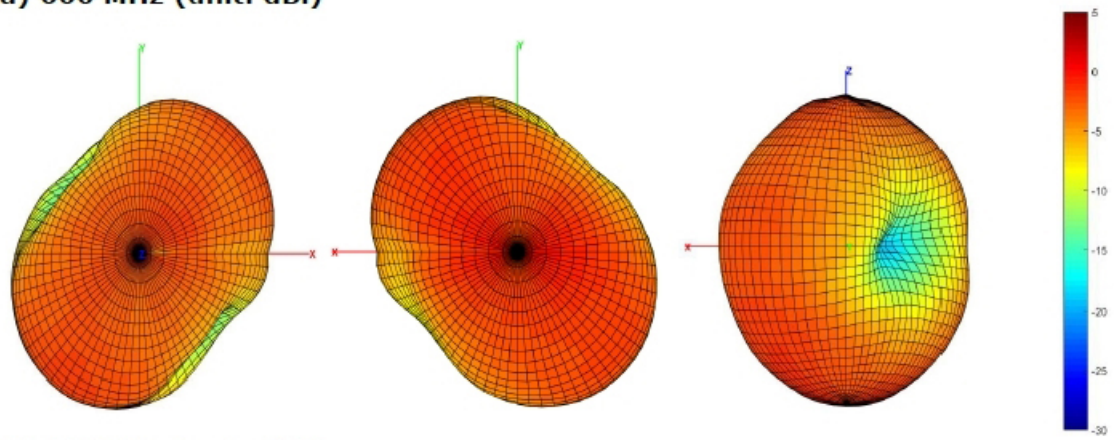


6.5 3D Radiation Pattern

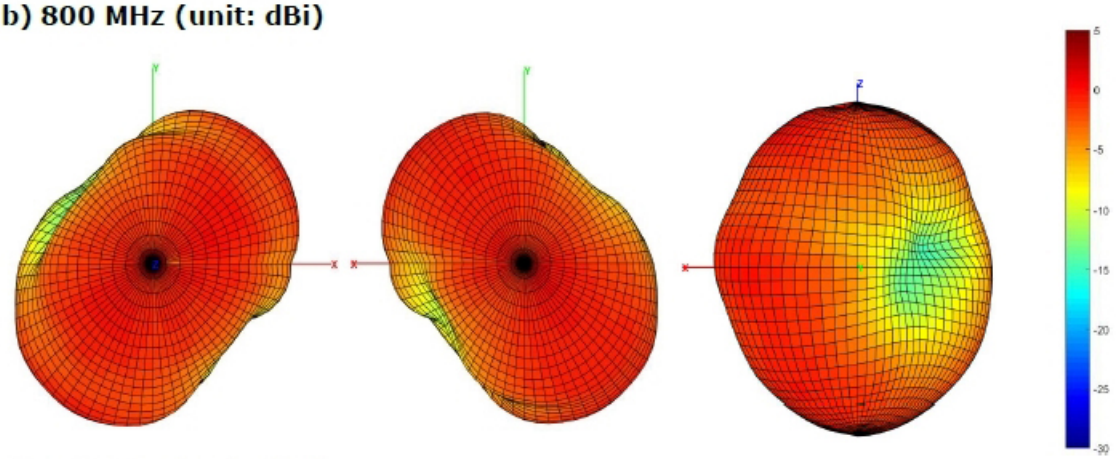




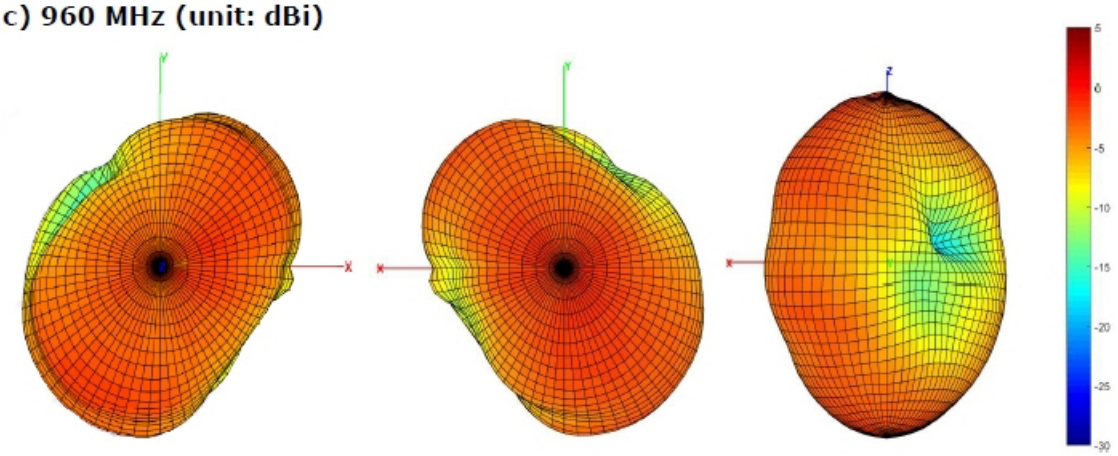
a) 660 MHz (unit: dBi)



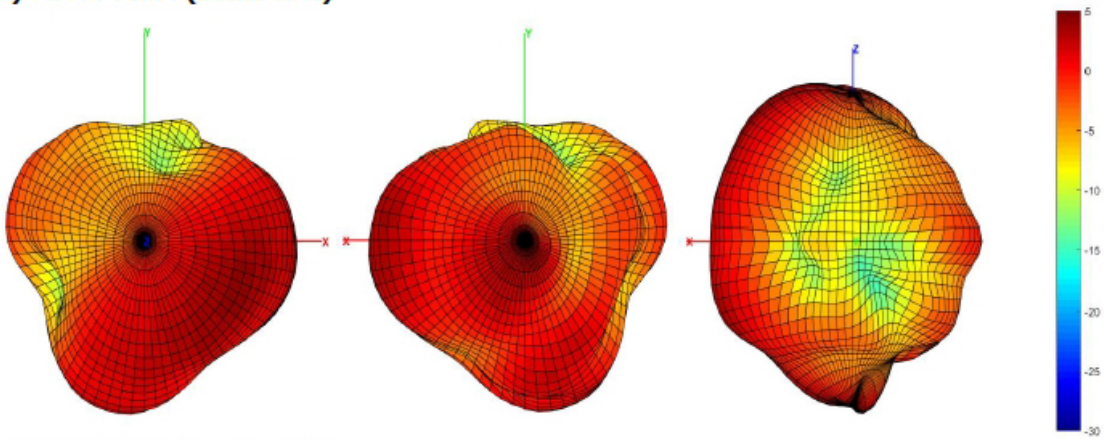
b) 800 MHz (unit: dBi)



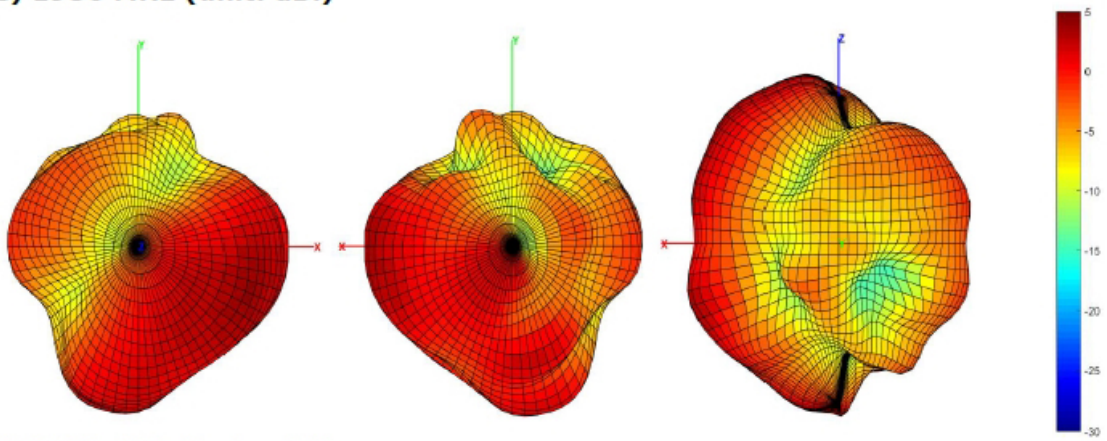
c) 960 MHz (unit: dBi)



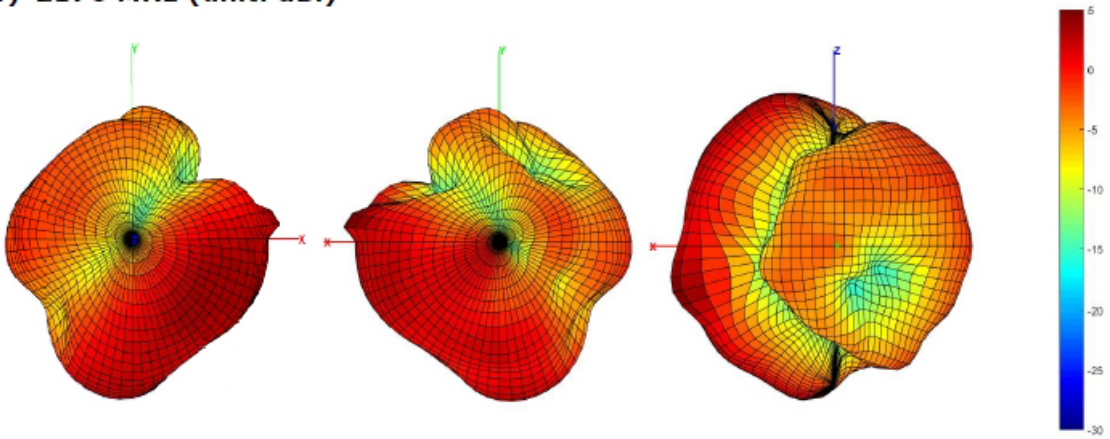
d) 1710 MHz (unit: dBi)



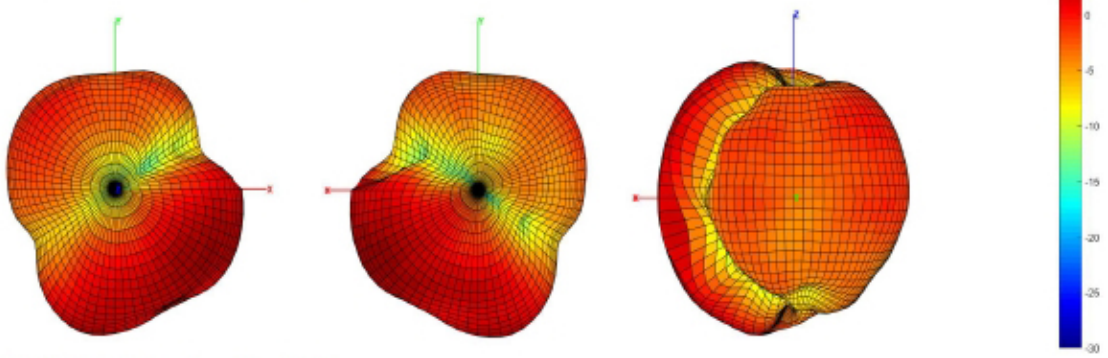
e) 1950 MHz (unit: dBi)



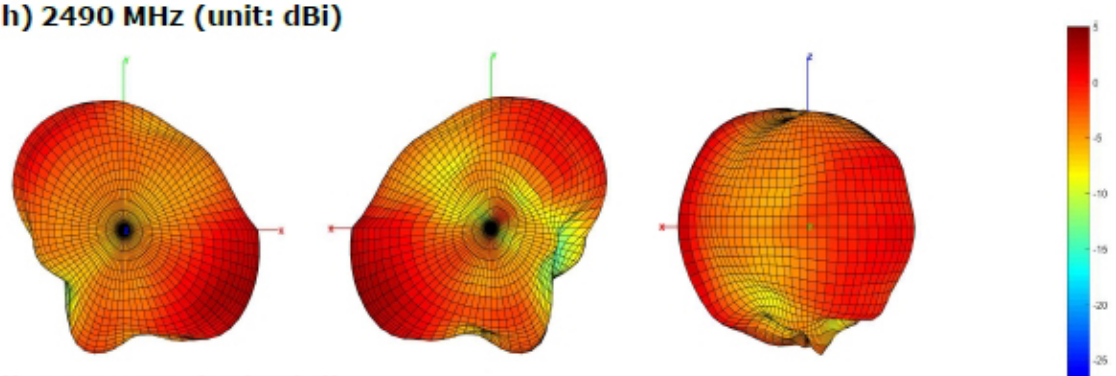
f) 2170 MHz (unit: dBi)



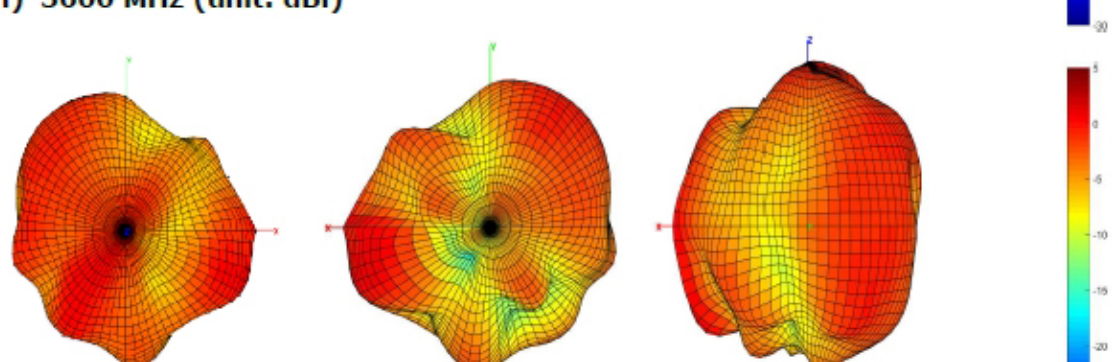
g) 2340 MHz (unit: dBi)



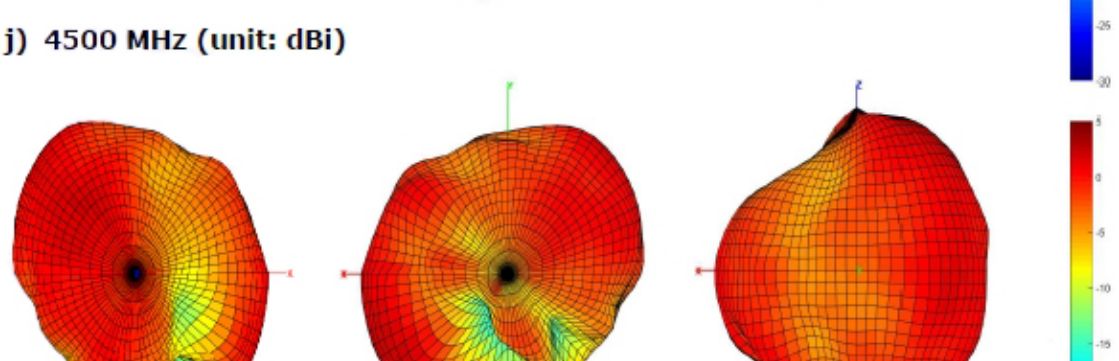
h) 2490 MHz (unit: dBi)



i) 3600 MHz (unit: dBi)

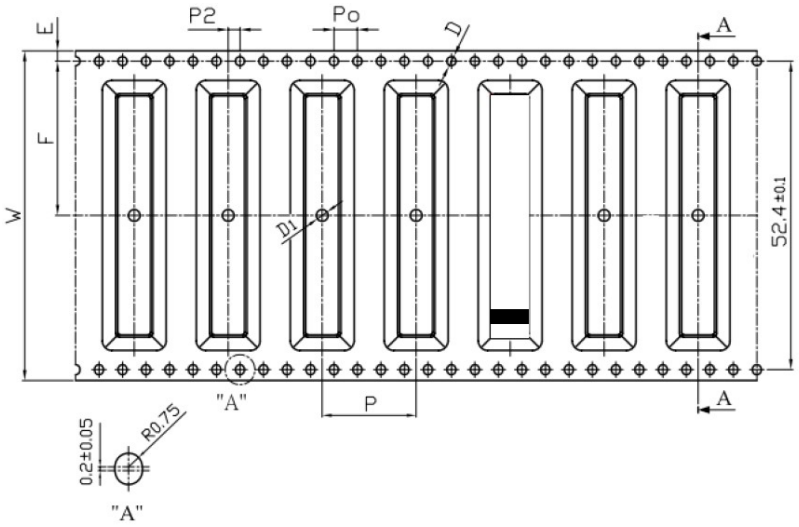


j) 4500 MHz (unit: dBi)



7. Packing

- Tape：



Feature	Specifications	Tolerances
W	56.00	±0.30
P	16.00	±0.10
E	1.75	±0.10
F	26.20	±0.15
P2	2.00	±0.15
D	1.50	+0.10 -0.00
D1	2.00	±0.10
Po	4.00	±0.10
10Po	40.00	±0.20

- Reel：600 pcs