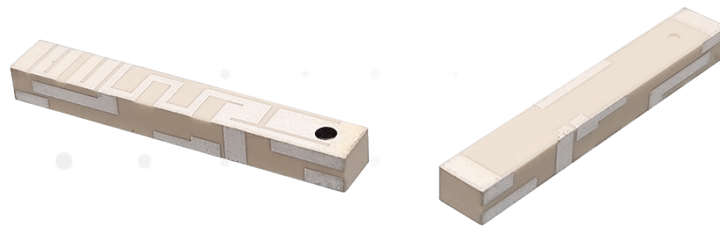




SPECIFICATION

2G / 3G / 4G LTE Chip Antenna



Model No. : UCCL02



1. General Description

1.1 Electrical Properties

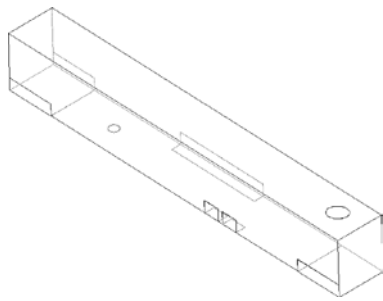
Parameter	Description				
Frequency Band	698~960/1710~2690 MHz				
Nominal Impedance	50 Ω				
Polarization	Linear				
V.S.W.R.	<3.5:1				
(MHz)	698~798	824~960	1710~2170	2300~2400	2490~2690
Efficiency (%)	54	58	55	75	65
Peak Gain (dBi)	1.3	1	2.6	4.4	4.2
※With 37 x 118.5 mm Evaluation Board & 37 x 11.4 mm Clearance Area					

1.2 Mechanical Properties

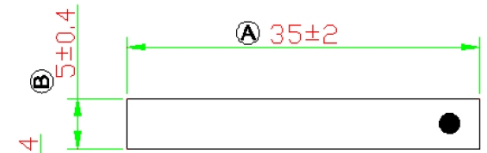
Parameter	Description
Dimensions	35*5*4 mm
Operating Temperature	-40°C~85°C
Storage Temperature (With Packing Sealed)	-5°C~40°C

2. Appearance

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



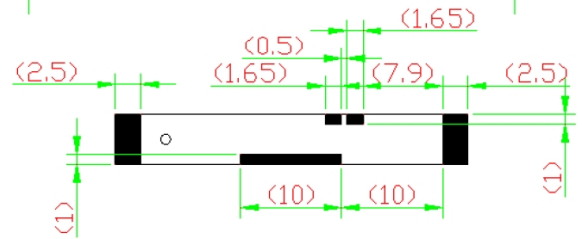
Top View



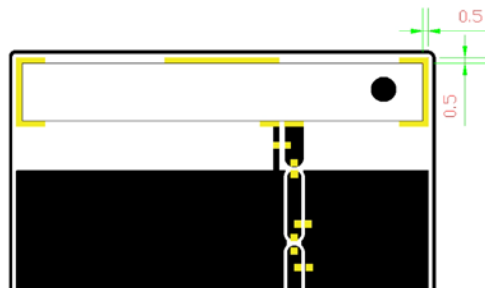
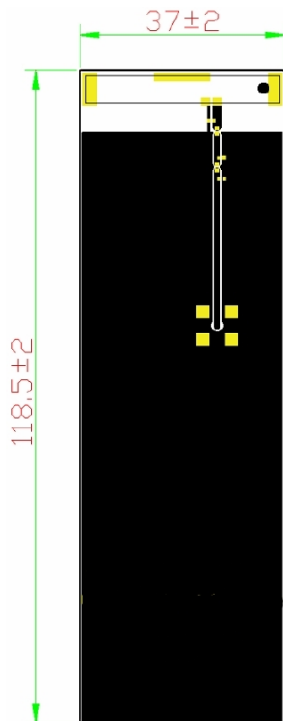
Front View



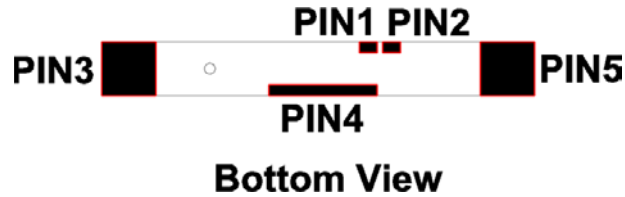
Bottom View



Back View



2.2 PIN Definitions



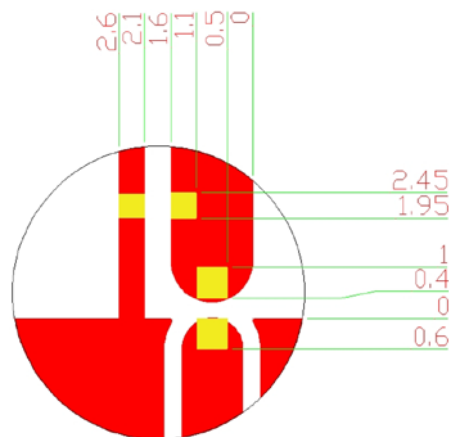
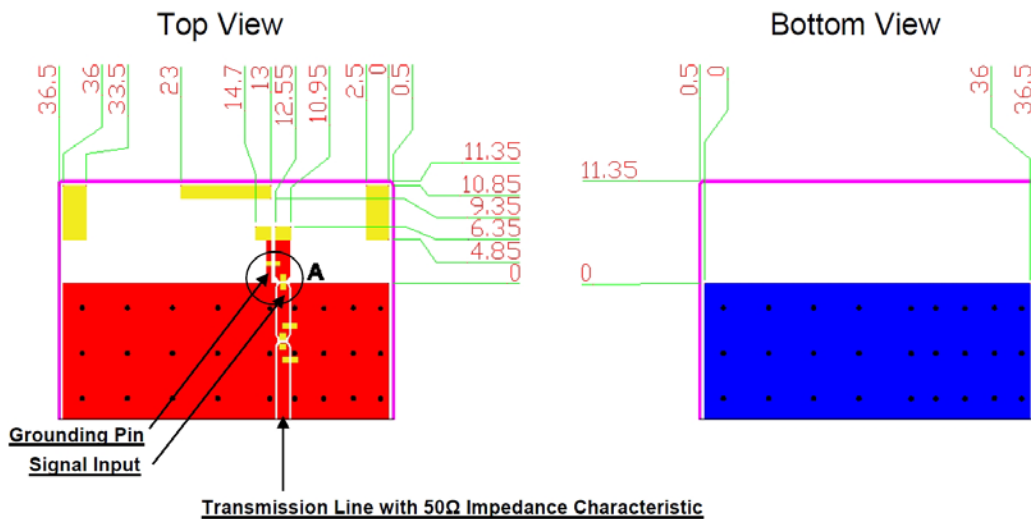
Item	PIN 1	PIN 2	PIN 3~5
Soldering Pad	Tuning / Ground	Signal	N/C

3. Layout Guide (Unit : mm)

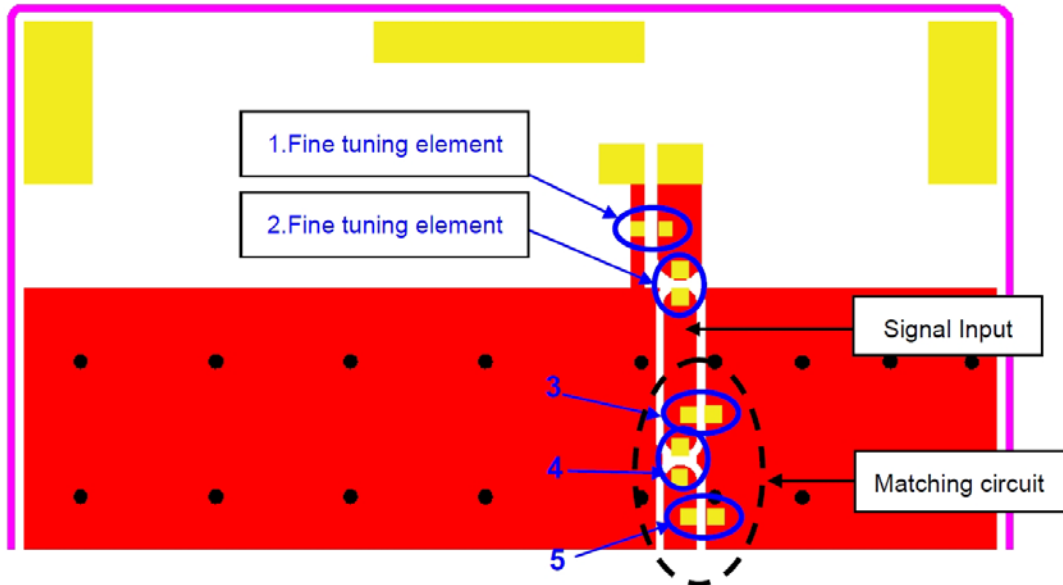
The solder land pattern (yellow marking areas) is shown as below.

Recommendation on matching circuit will be provided according to customer's installation conditions.

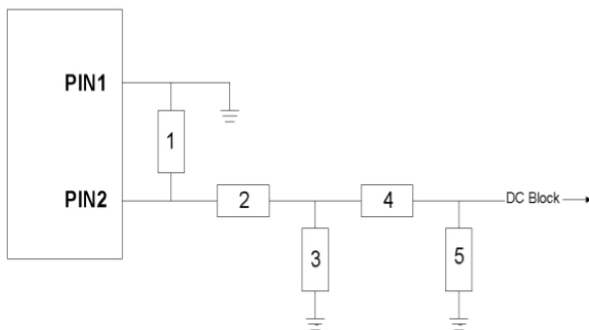
With 37 x 118.5 mm Evaluation Board



4. Frequency Tuning And Matching Circuit



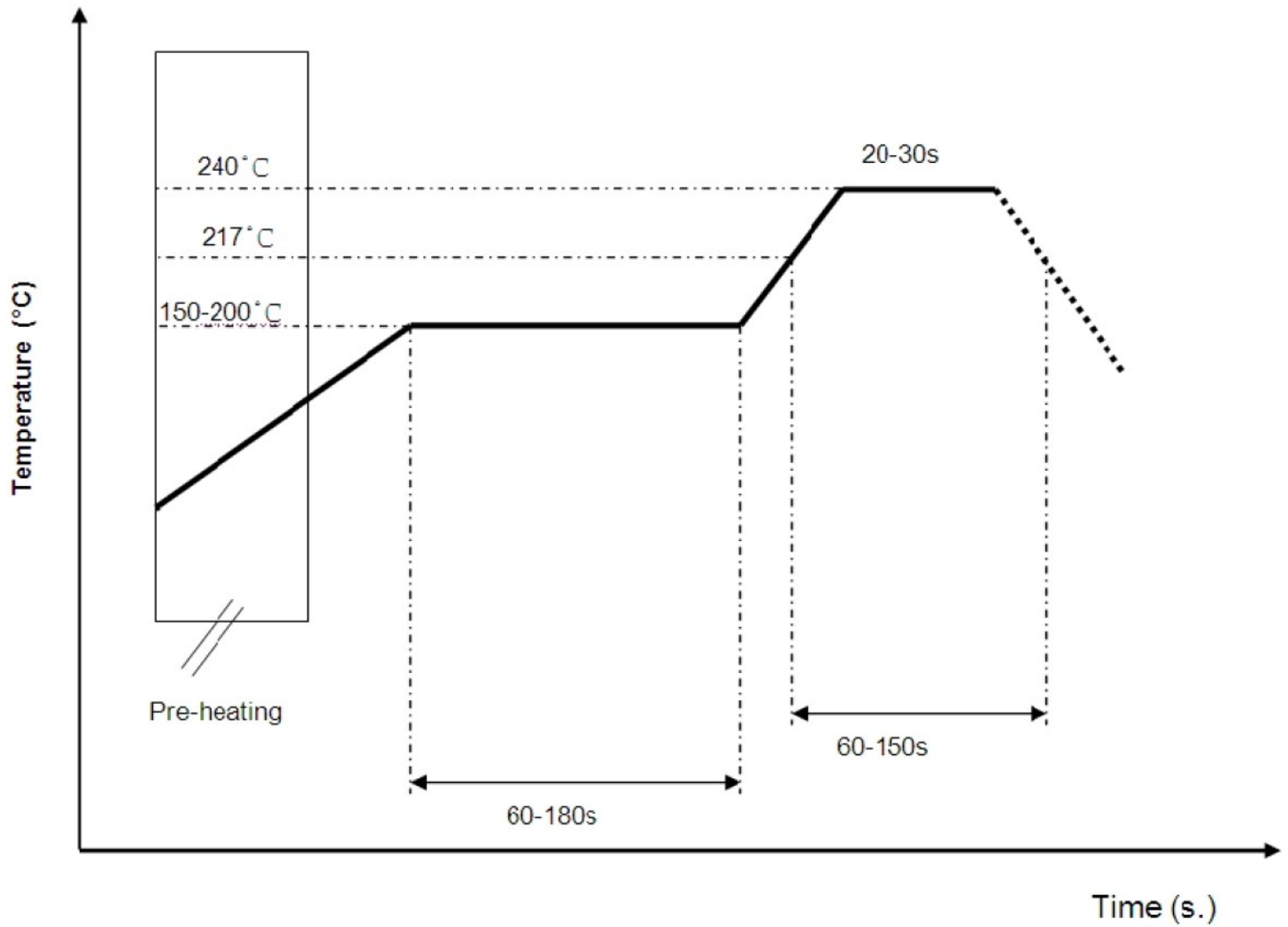
With the following recommended values of matching and tuning components, the covering frequency bands will be about 698~960 & 1710~2690 MHz at our standard 37x118.5 mm evaluation board.



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

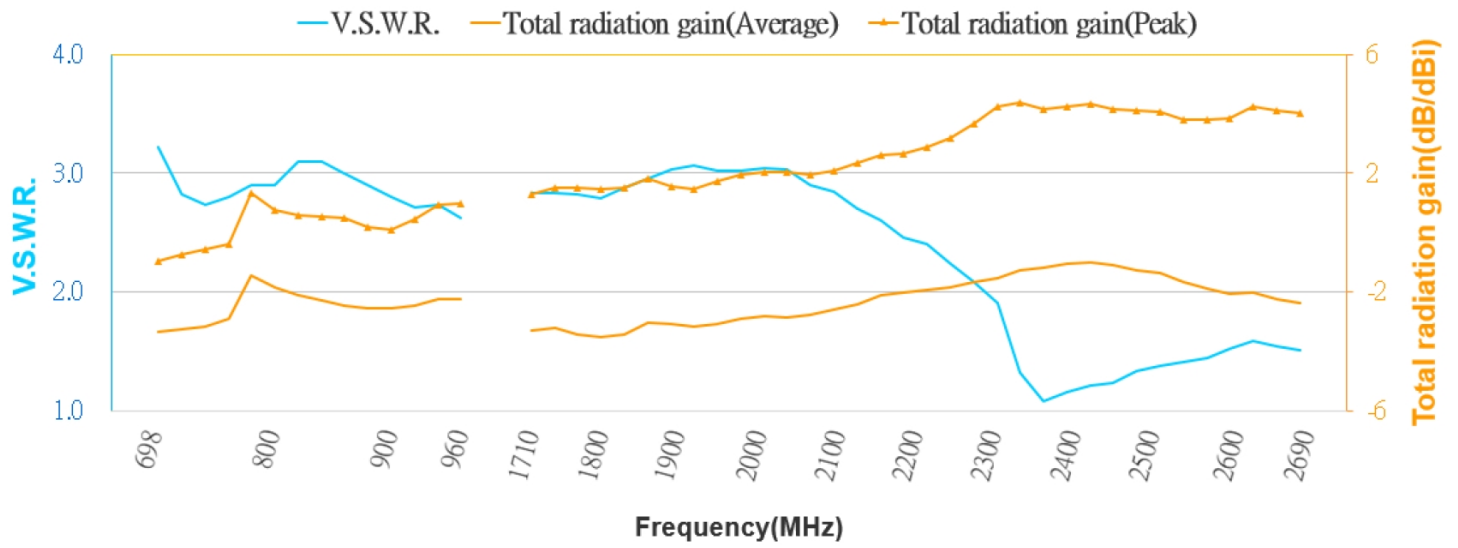


※Recommended solder paste alloy : SAC305(Sn96.5/Ag3/Cu0.5) Lead free solder paste.



6. Performance

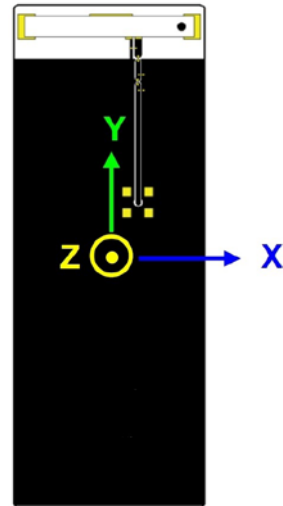
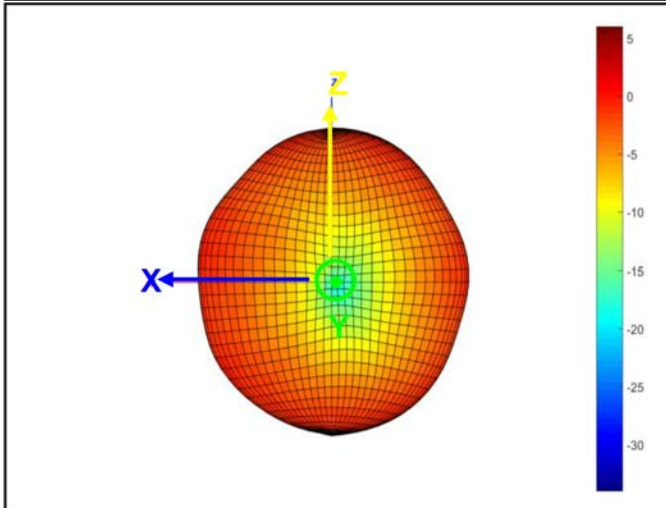
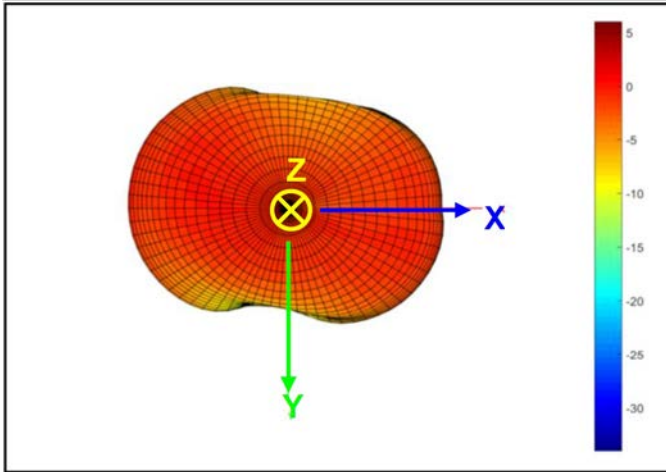
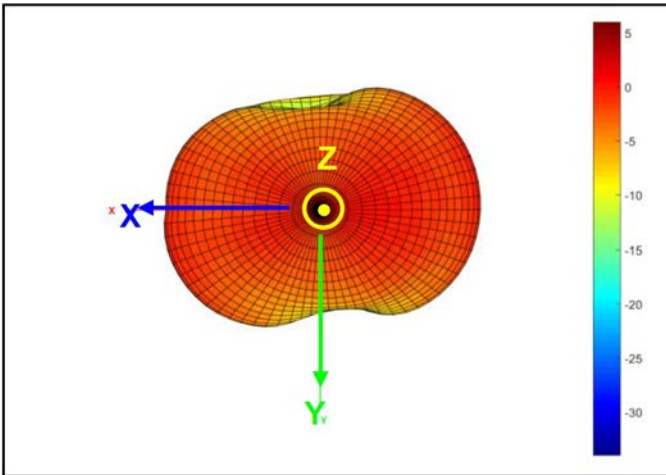
6.1 V.S.W.R. , Average Gain , Peak Gain



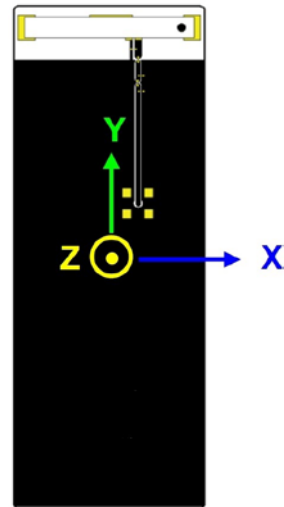
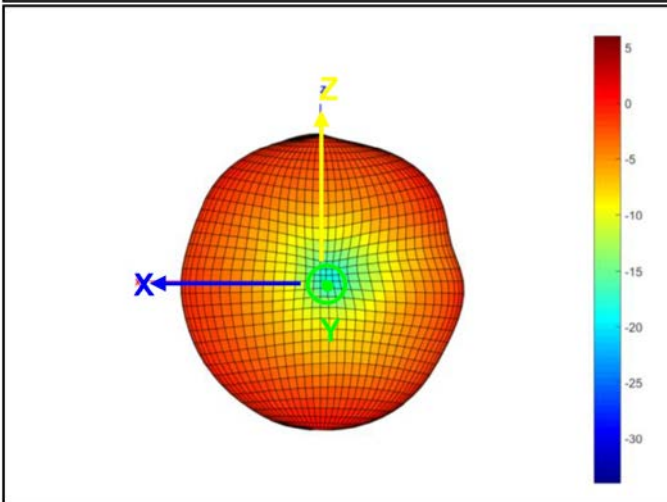
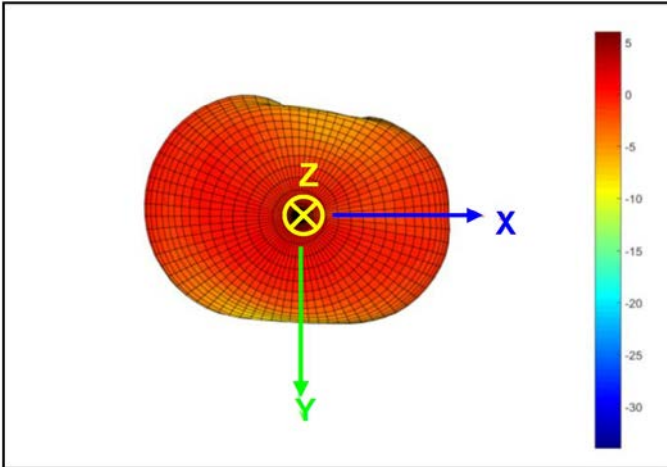
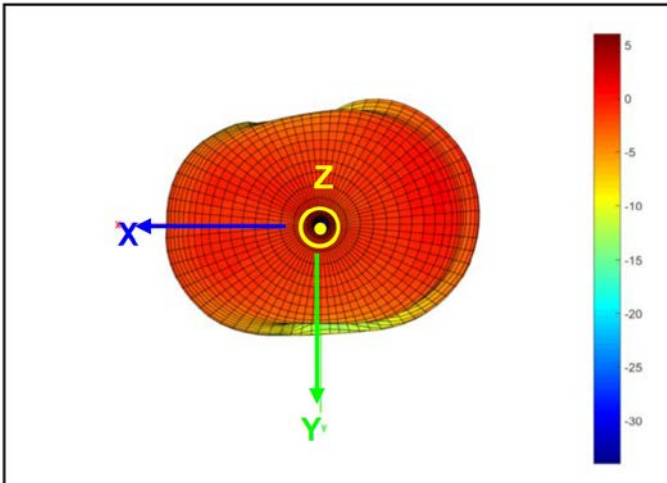
6.2 3D Radiation Pattern

698~798 MHz

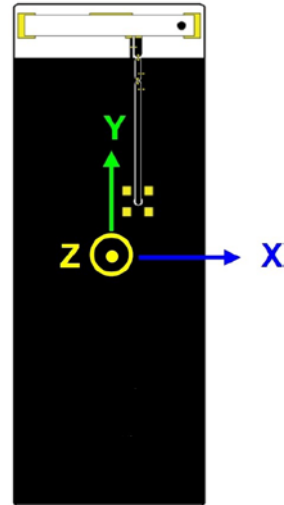
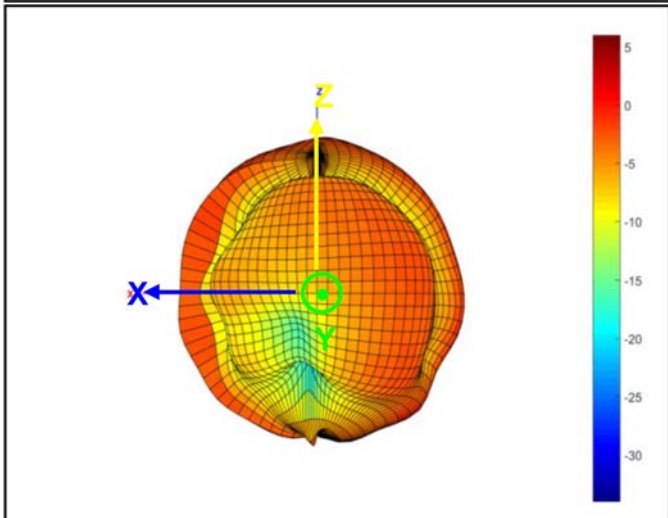
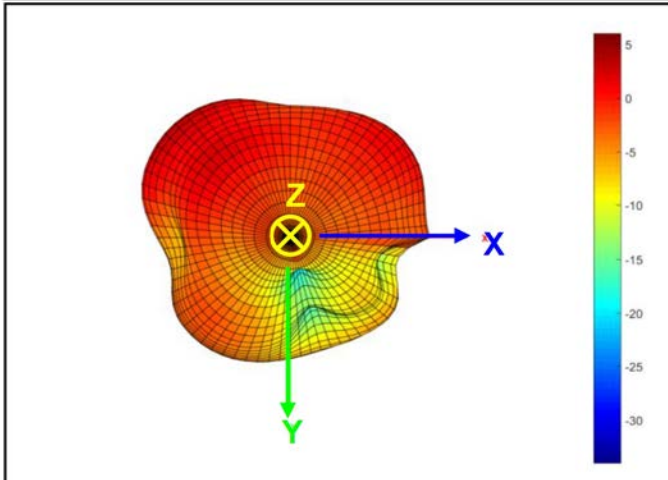
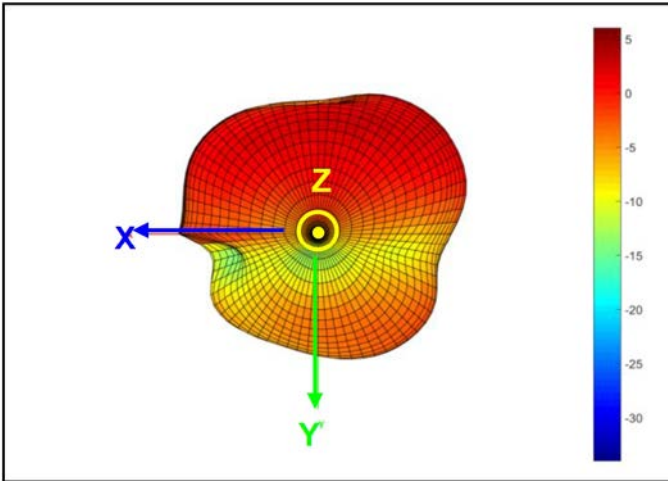
3D Gain Pattern @ 748 MHz (Unit : dBi)



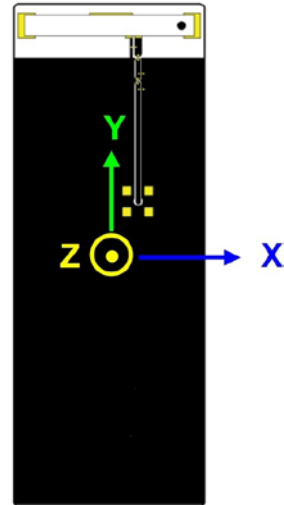
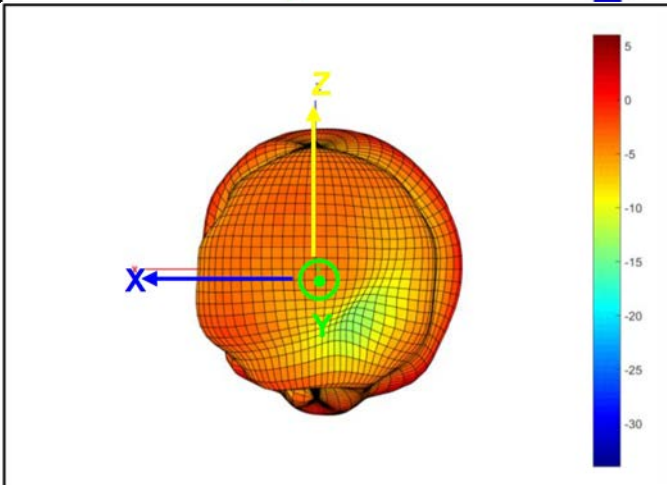
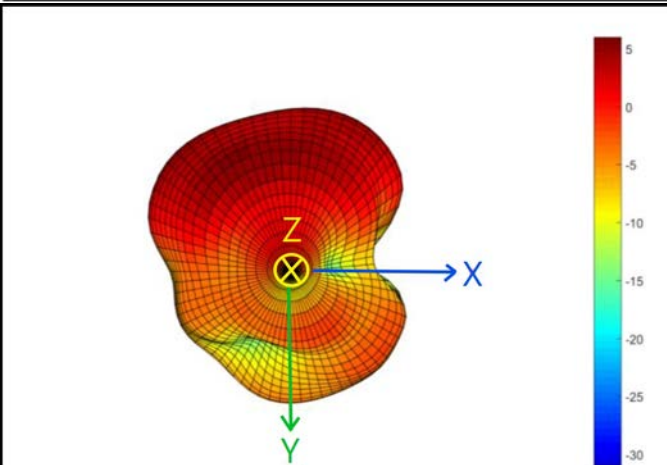
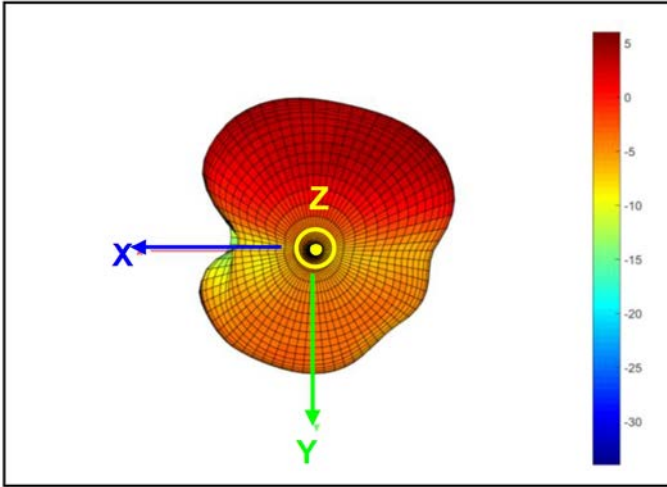
824~960 MHz
3D Gain Pattern @ 890 MHz (Unit : dBi)



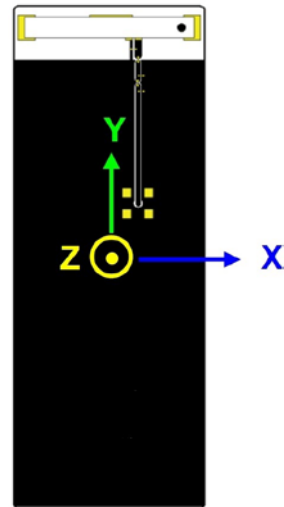
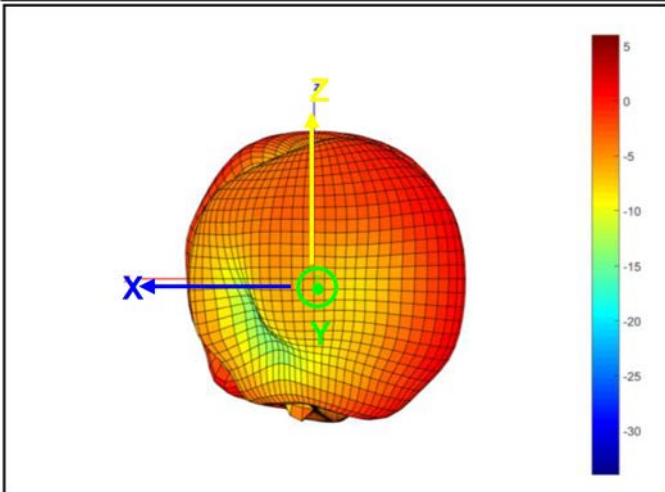
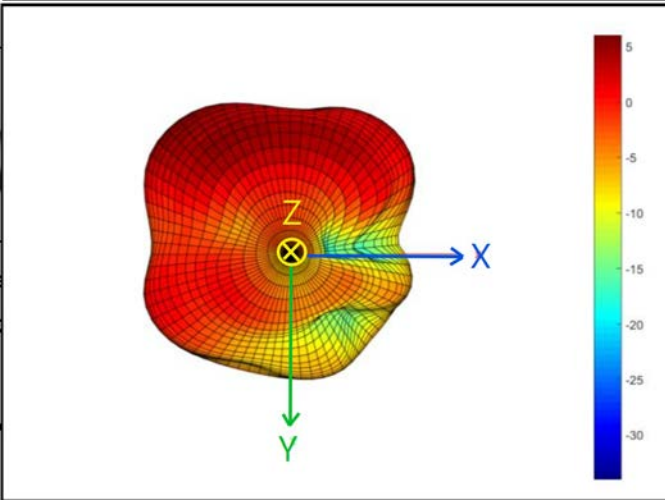
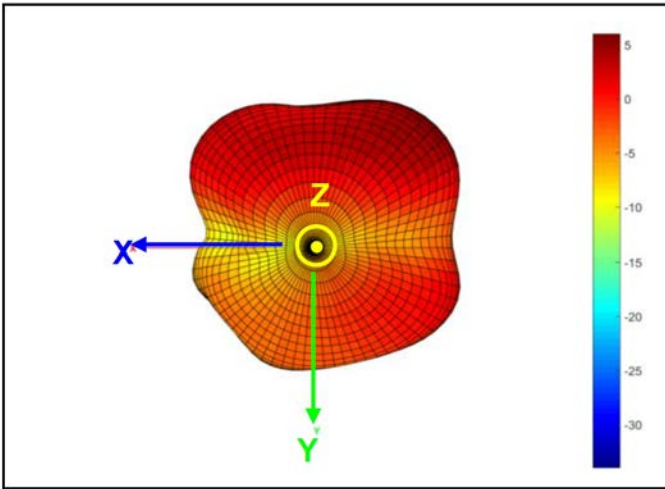
1710~2170 MHz
3D Gain Pattern @ 1950 MHz (Unit : dBi)



2300~2400 MHz
3D Gain Pattern @ 2350 MHz (Unit : dBi)

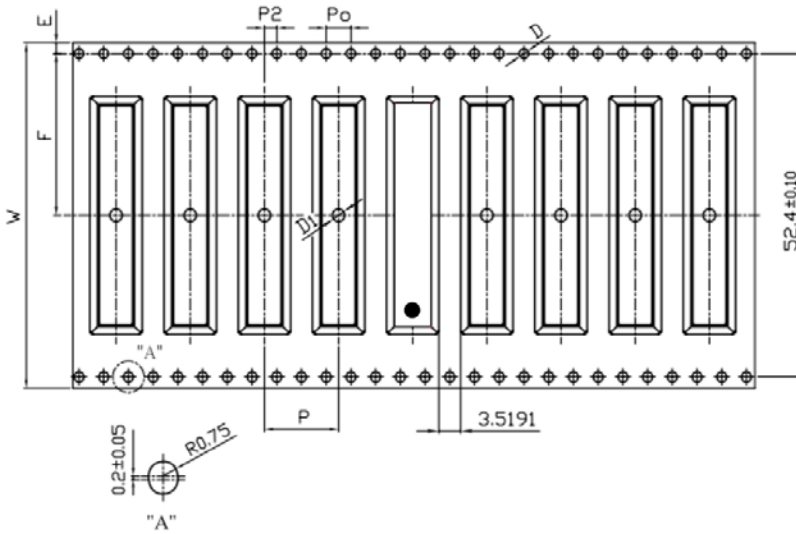


2490~2690 MHz
3D Gain Pattern @ 2590 MHz (Unit : dBi)



7. Packing

- Tape :



Feature	Specifications	Tolerances
W	56.00	±0.30
P	12.00	±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 : 1,000 pcs

