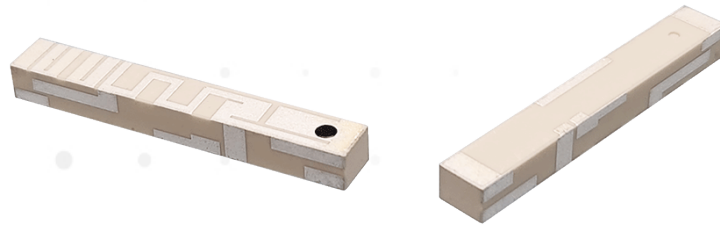




# SPECIFICATION

**2G / 3G / 4G LTE Chip Antenna**



**Model No. : UCCL02**



## 1. General Description

### 1.1 Electrical Properties

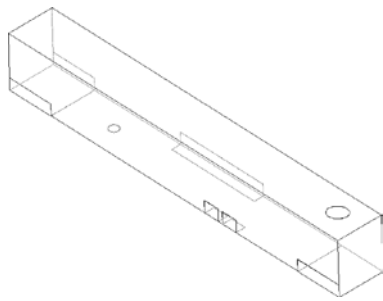
Parameter	Description				
Frequency Band	698~960/1710~2690 MHz				
Nominal Impedance	50 $\Omega$				
Polarization	Linear				
V.S.W.R	<3.5:1				
(MHz)	698~798	824~960	1710~2170	2300~2400	2490~2690
Efficiency	54 %	58 %	55 %	75 %	65 %
Peak Gain	1.3 dBi	1 dBi	2.6 dBi	4.4 dBi	4.2 dBi
※With 37 x 118.5 mm Evaluation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

### 1.2 Mechanical Properties

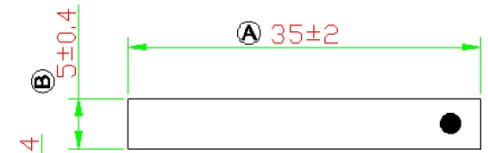
Parameter	Description
Dimension	35×5×4 mm
Operating Temperature	-40°C~85°C
Storage Temperature (With Packing Sealed)	-5°C~40°C

## 2. Appearance

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



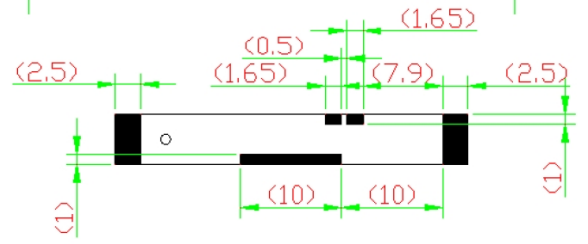
**Top View**



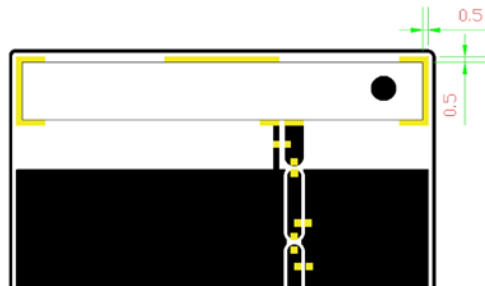
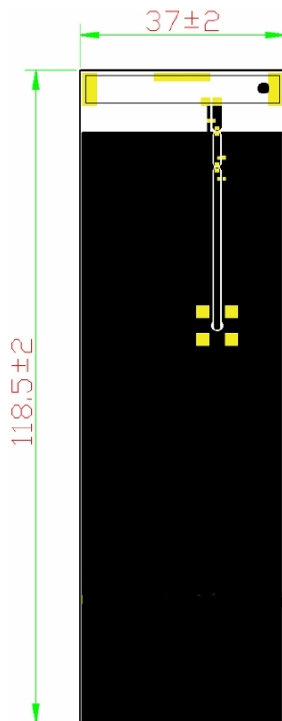
**Front View**



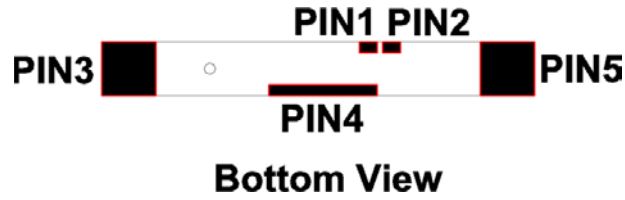
**Bottom View**



**Back View**



## 2.2 PIN Definitions



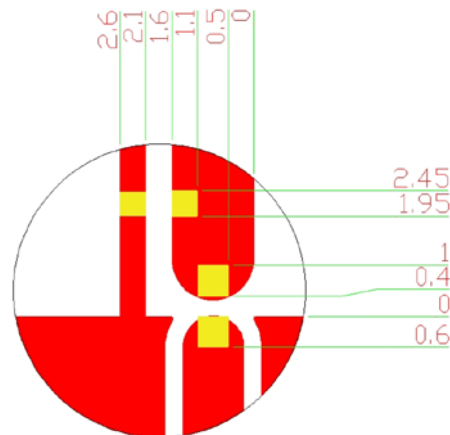
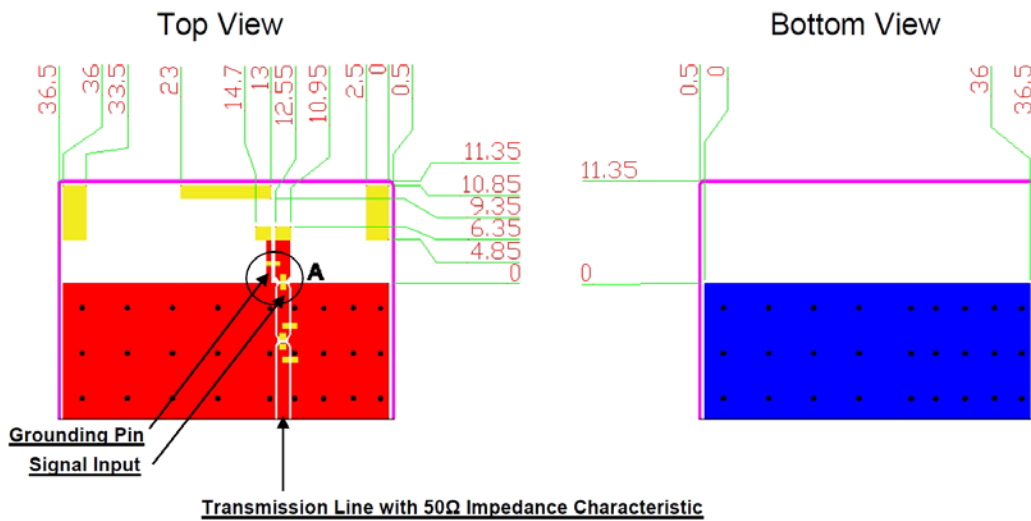
Item	PIN 1	PIN 2	PIN 3~5
Soldering Pad	Tuning / Ground	Signal	N/C

## 3. Layout Guide (Unit : mm)

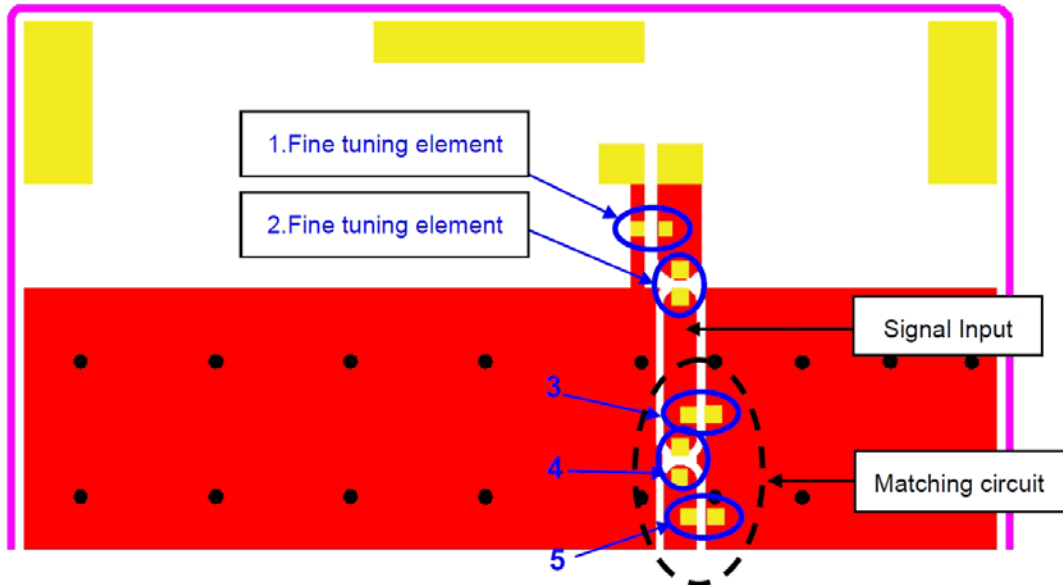
The solder land pattern (yellow marking areas) is shown as below.

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

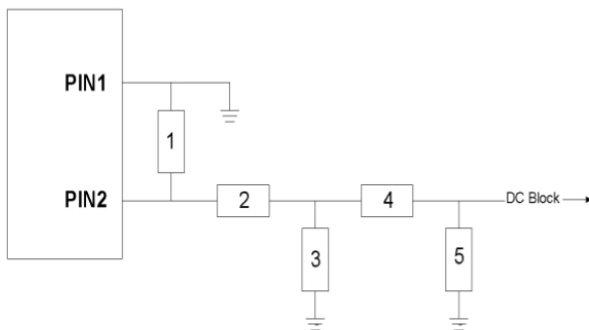
### With 37 x 118.5 mm Evaluation Board



## 4. Frequency Tuning And Matching Circuit



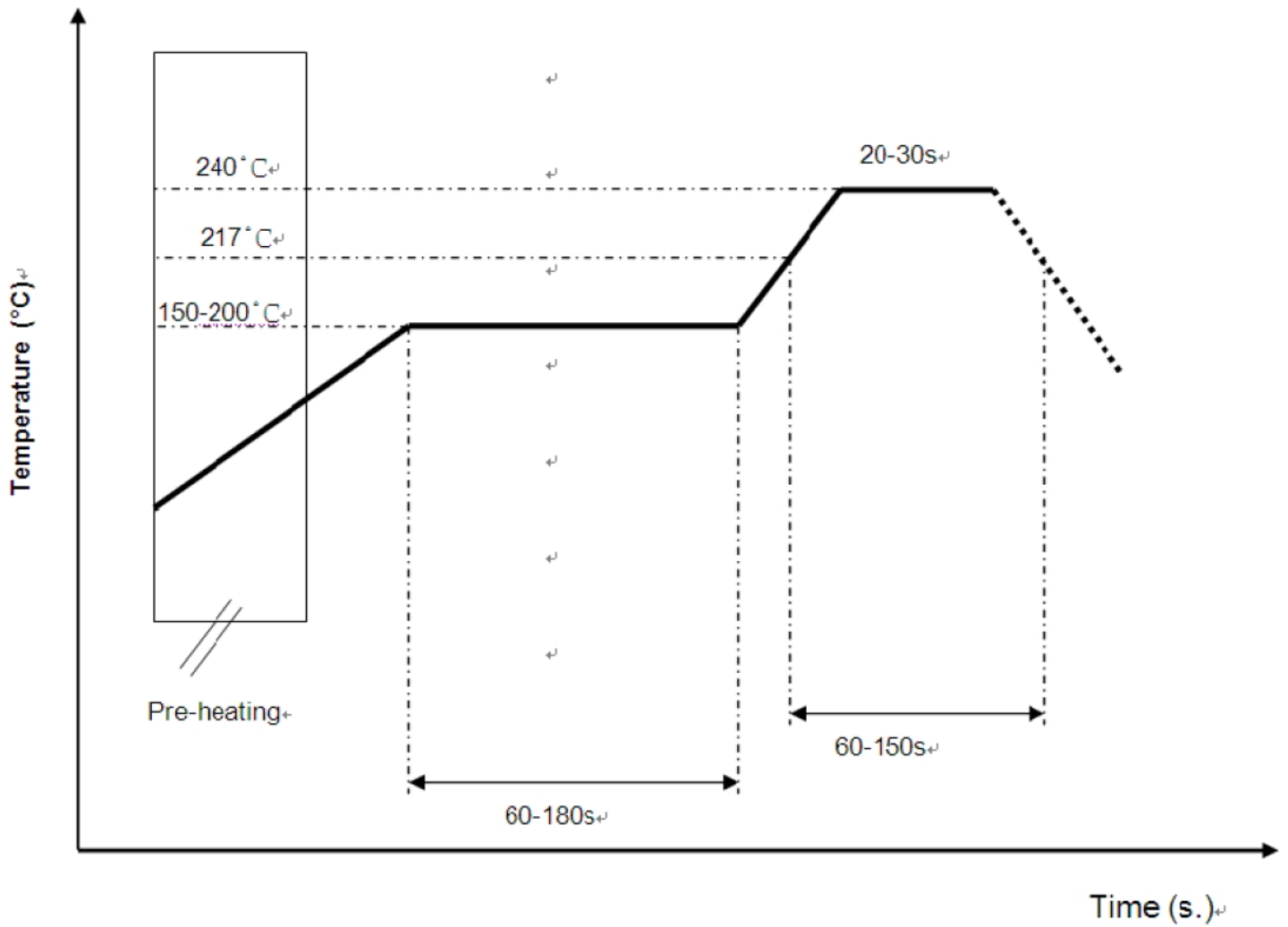
With the following recommended values of matching and tuning components, the covering frequency bands will be about 698~960 & 1710~2690 MHz at our standard 37x118.5 mm evaluation board.



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

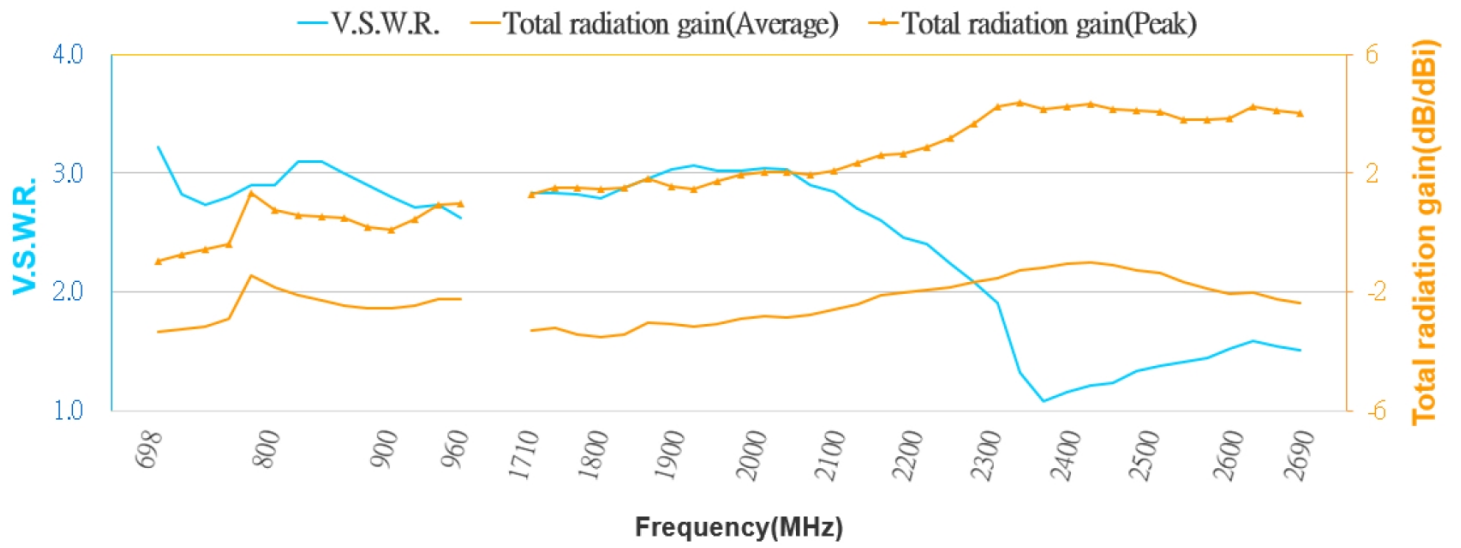


※Recommended solder paste alloy : SAC305(Sn96.5/Ag3/Cu0.5) Lead free solder paste.



## 6. Performance

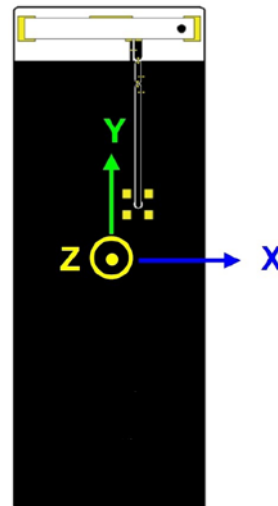
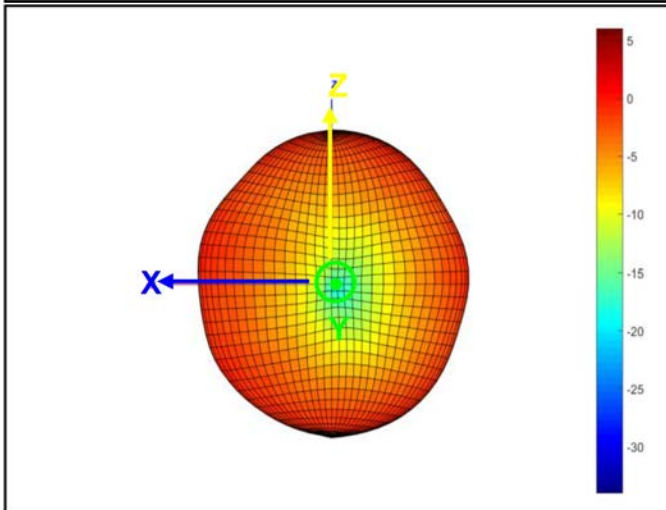
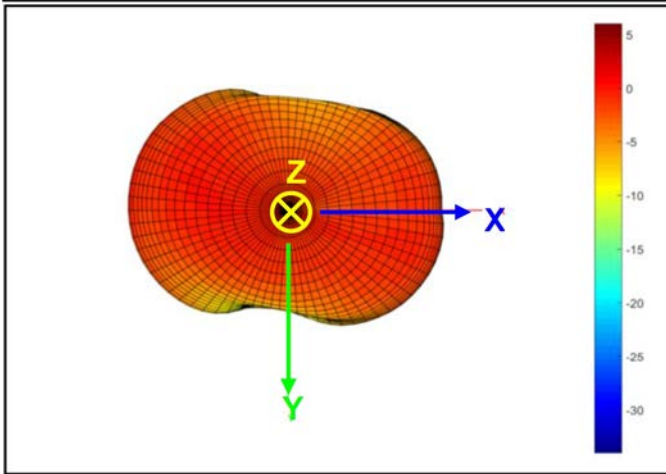
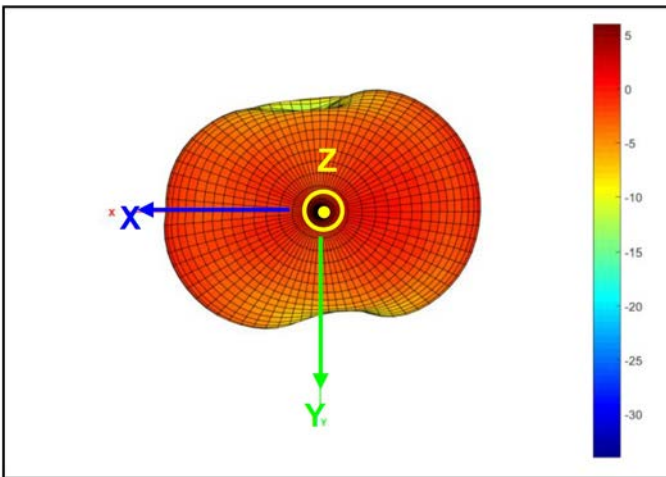
### 6.1 V.S.W.R. , Average Gain , Peak Gain



## 6.2 3D Radiation Pattern

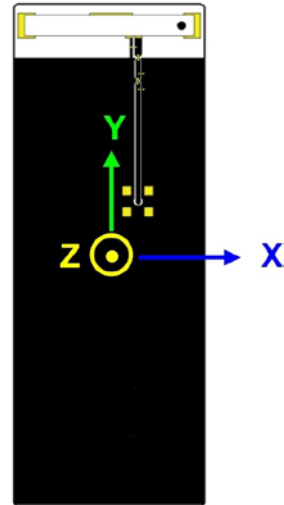
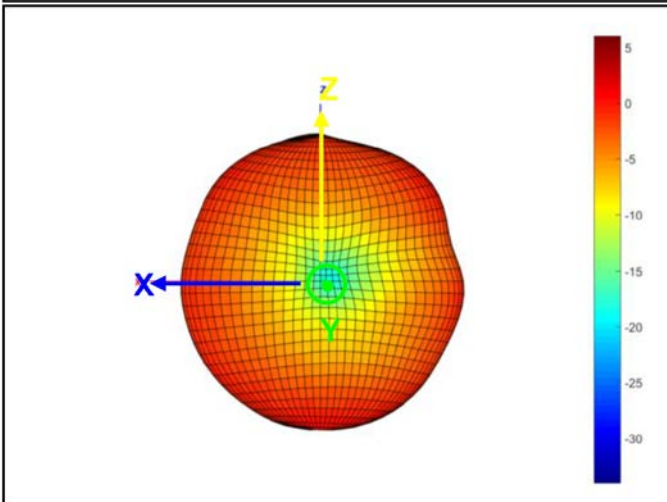
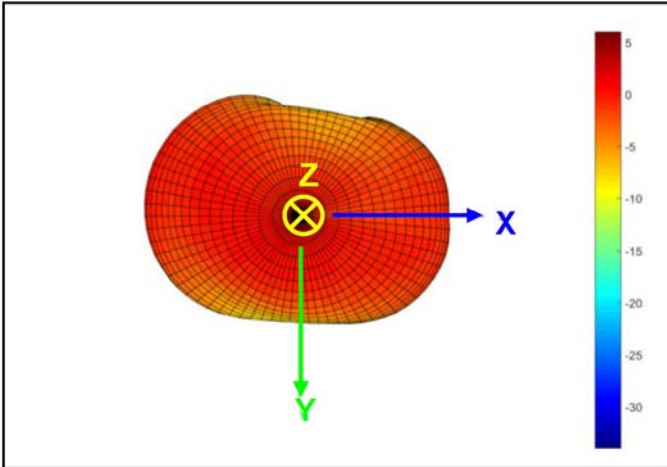
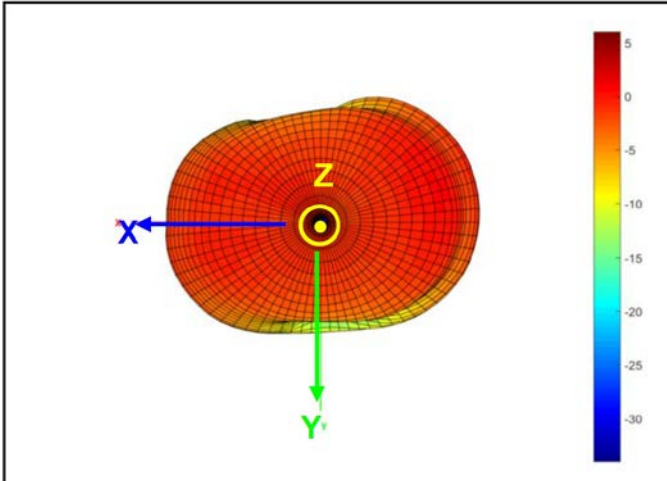
698~798 MHz

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

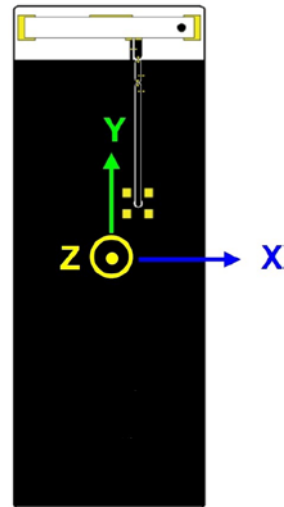
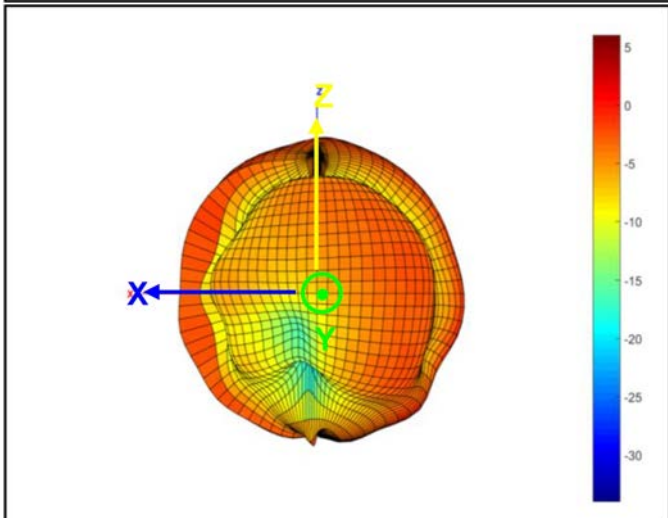
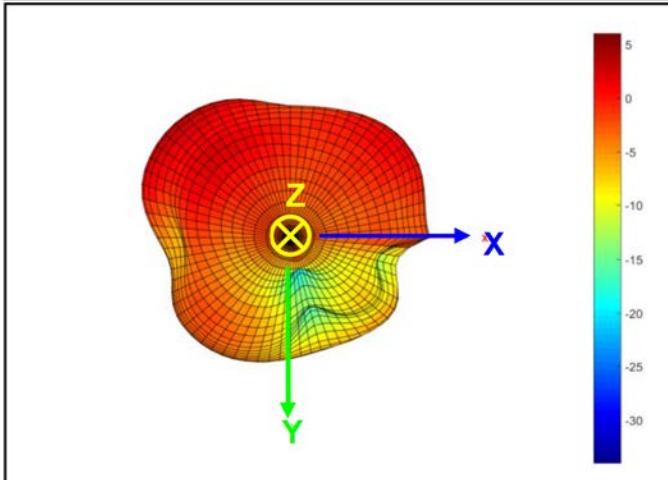
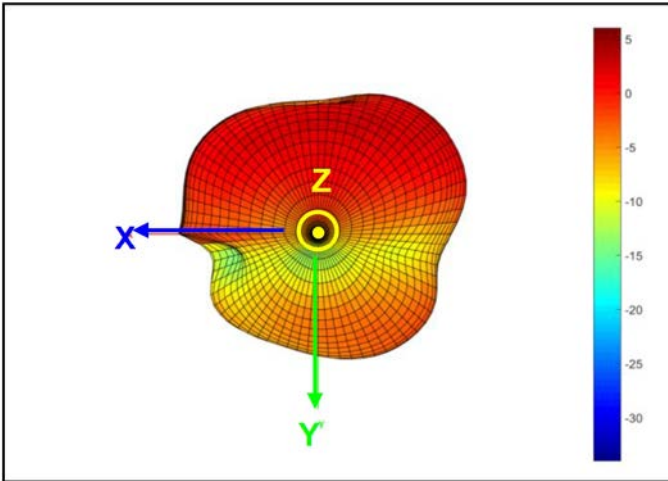




**824~960 MHz**  
3D Gain Pattern @ 890 MHz (Unit : dBi)

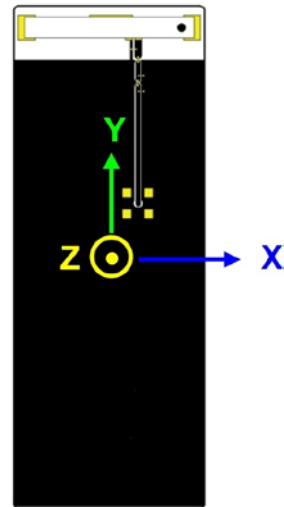
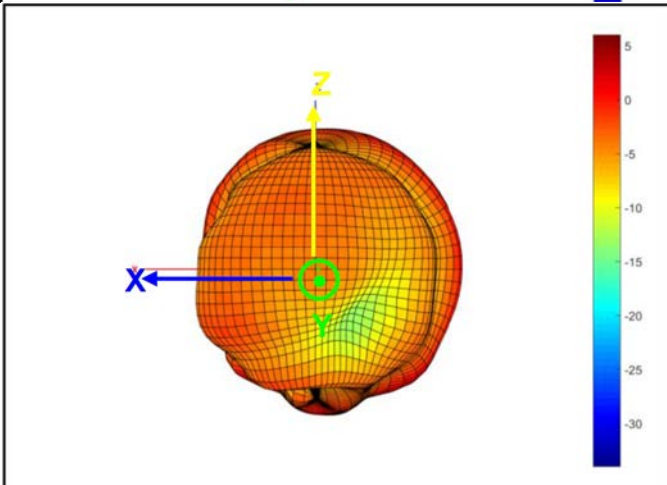
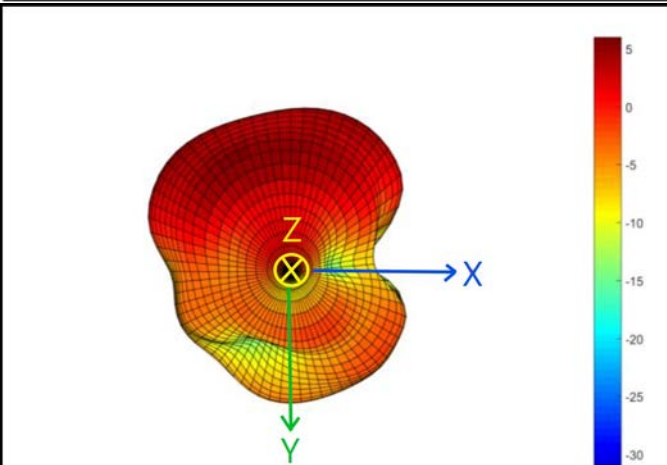
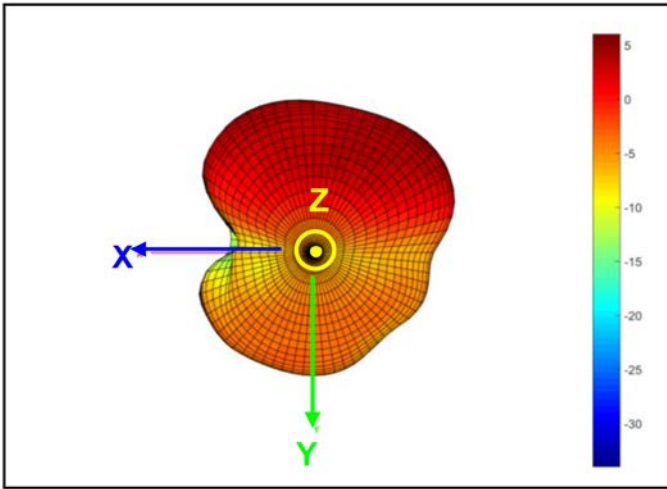


**1710~2170 MHz**  
3D Gain Pattern @ 1950 MHz (Unit : dBi)

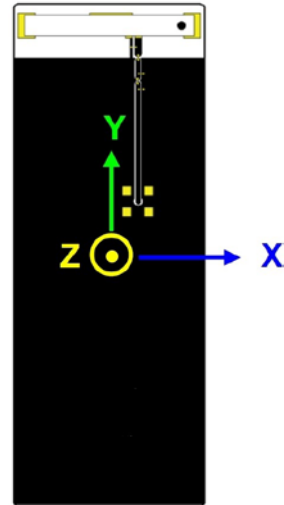
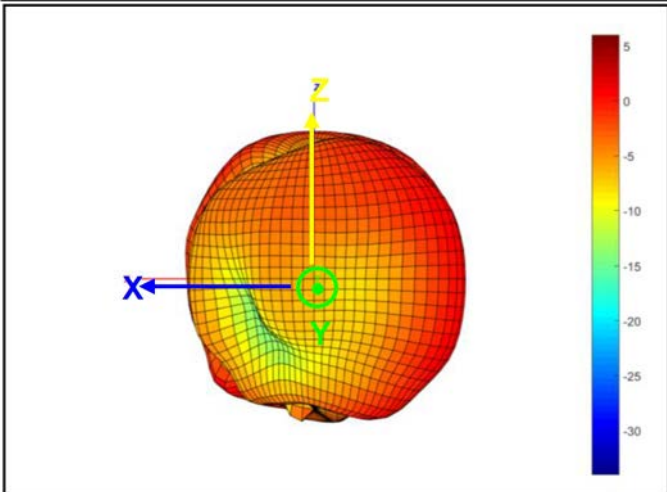
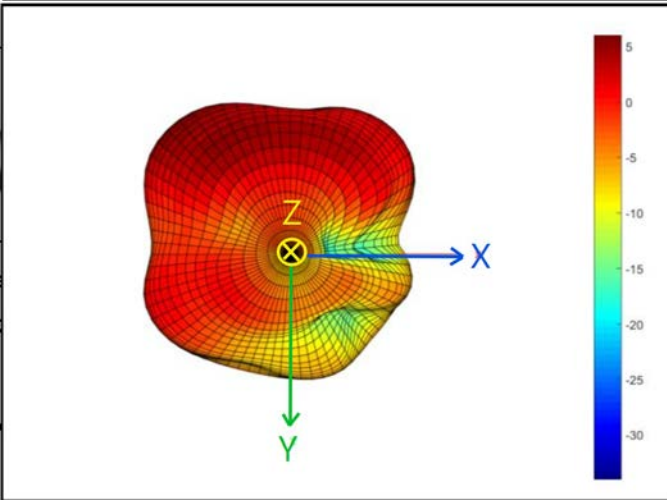
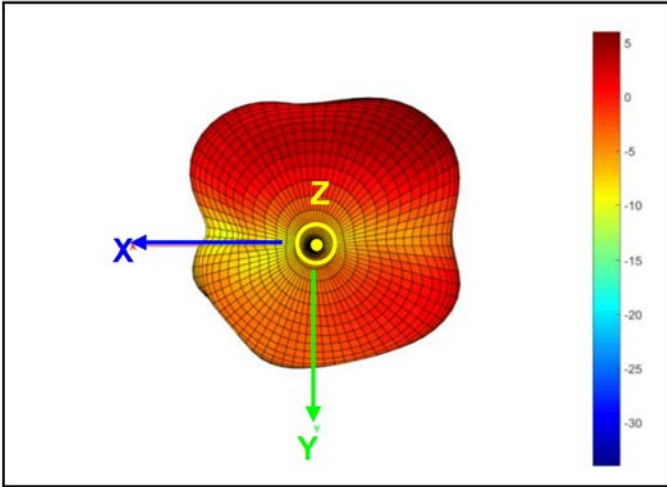


### 2300~2400 MHz

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

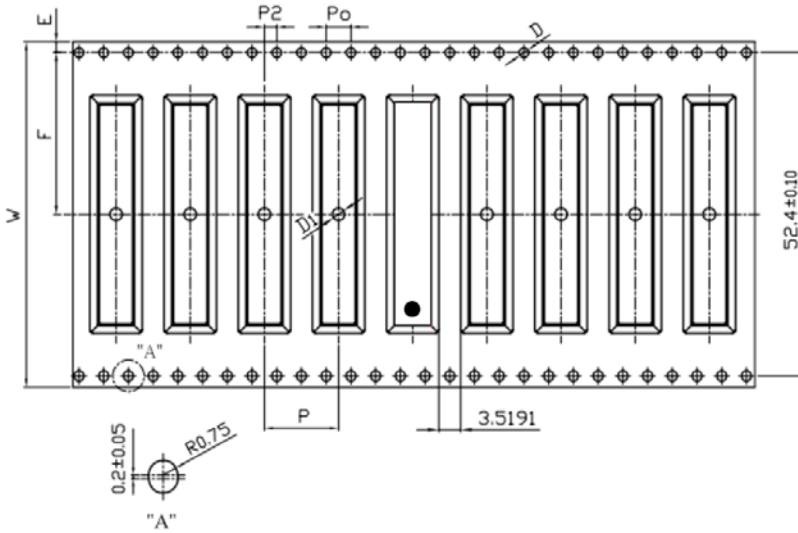


**2490~2690 MHz**  
3D Gain Pattern @ 2590 MHz (Unit : dBi)



## 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

