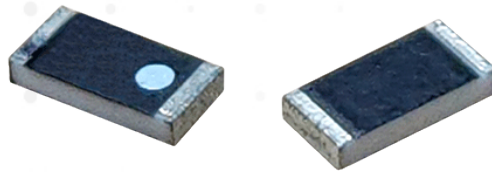




SPECIFICATION

GNSS Chip Antenna (GPS/GLONASS/BDS/GALILEO)



Model No. : CCCNA101



1. General Description

1.1 Electrical Properties

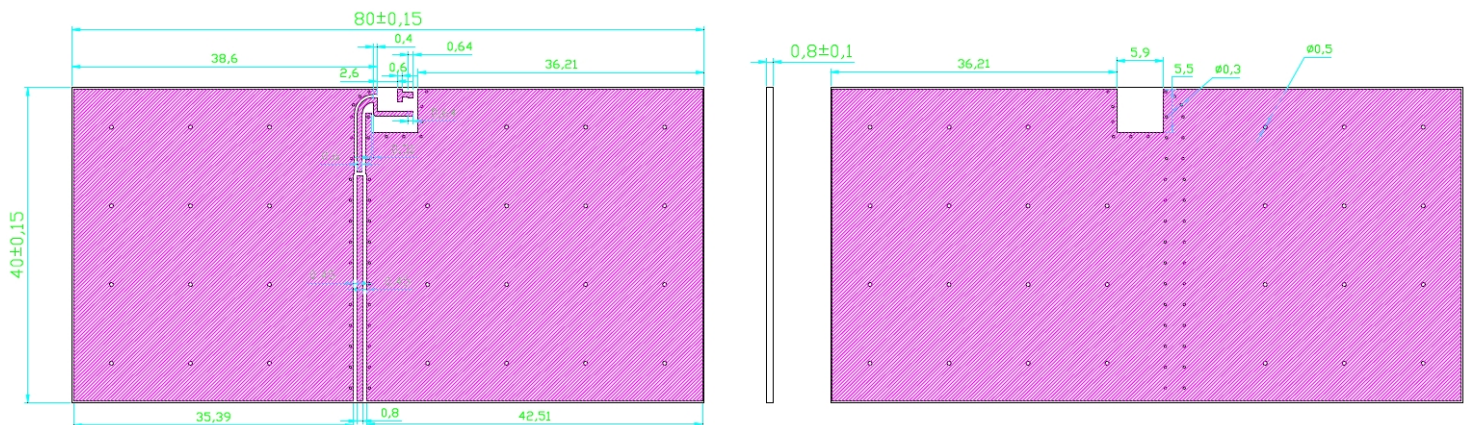
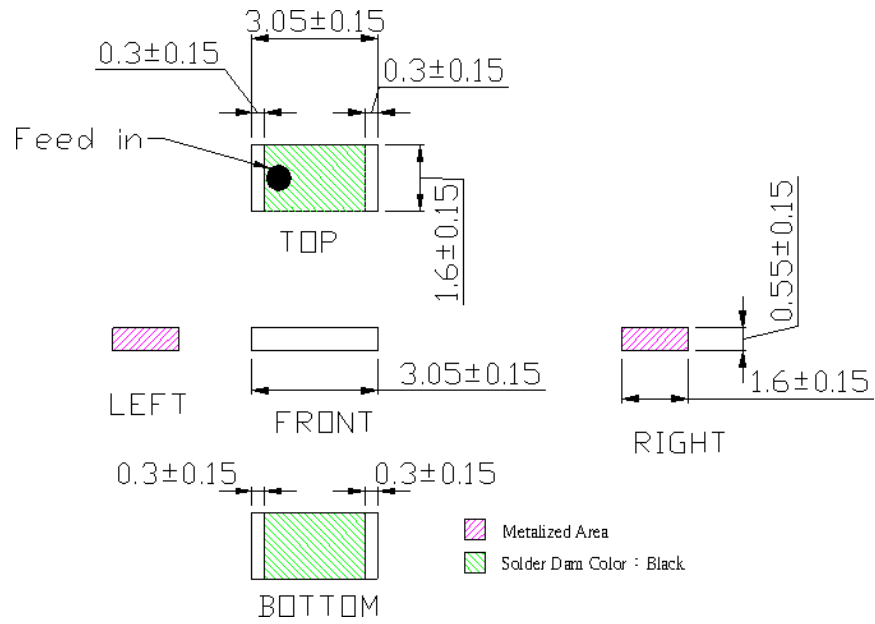
Parameter	Description		
Frequency Band	1561~1610 MHz		
Nominal Impedance	50 Ω		
Polarization	Linear		
V.S.W.R	< 2:1		
	1561 MHz	1575.42 MHz	1602 MHz
Efficiency	65.7 %	70.1 %	63.3 %
Average Gain	-1.8 dBi	-1.5 dBi	-2 dBi
Peak Gain	1.7 dBi	1.8 dBi	1.4 dBi
※With 80 x 40 mm Evaluation Board & 5.9 x 5.5 mm Clearance Area			

1.2 Mechanical Properties

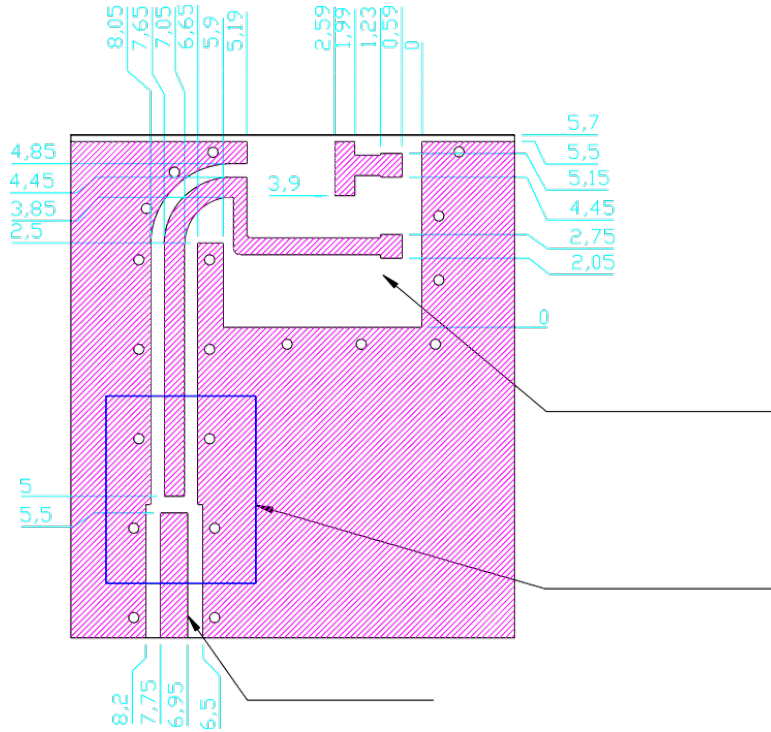
Parameter	Description
Dimension	3.05×1.6×0.55 mm
Operating Temperature	-40°C~85°C
Storage Temperature (With Packing Sealed)	-40°C~85°C

2. Appearance

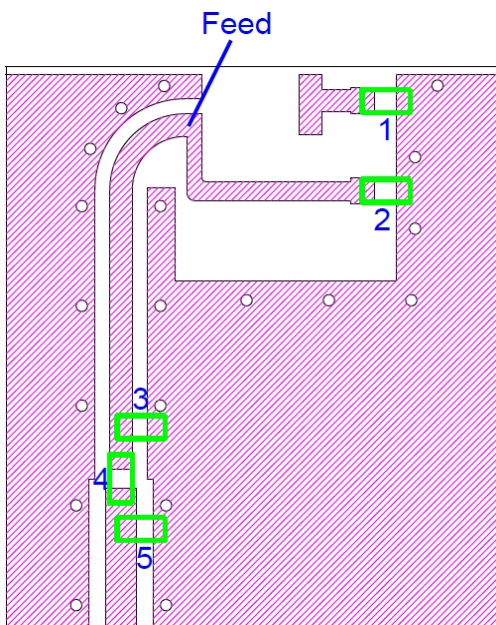
Dimensions Of Antenna And Evaluation Board (Unit : mm)



3. Layout Guide (Unit : mm)



4. Matching Circuit



Matching Circuit Component	
NO.	Description
1	2pF
2	1pF
3	3.3pF
4	0omn
5	N/A



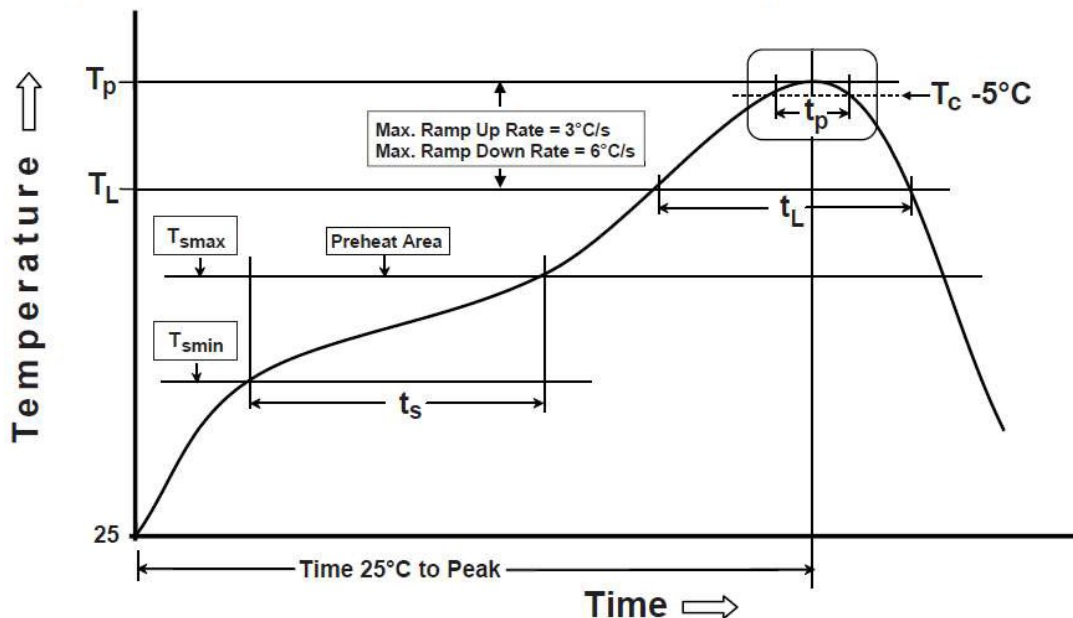
5. Soldering Conditions

The product can be assembled following Pb-free assembly. According to the Standard **IPC/JEDEC J-STD-020C**, the temperature profile suggested is as follow :

Phase	Profile features	Pb-Free Assembly (SnAgCu)
PREHEAT	-Temperature Min(T_{smin}) -Temperature Max(T_{smax}) -Time(t_s) form (T_{smin} to T_{smax})	150°C 200°C 60~120 seconds
RAMP-UP	Avg. Ramp-up Rate (T_{smax} to TP)	3°C/second max.
REFLOW	-Temperature(T_L) -Total Time above T_L (t_L)	217°C 30~100 seconds
PEAK	-Temperature(T_P) -Time(t_p)	260°C 10 seconds
RAMP-DOWN	Rate	6°C/second max.
Time from 25°C to Peak Temperature		8 minutes max.
Composition of solder paste		Sn 96.5/ Ag 3/Cu 0.5
Solder Paste Model		SHENMAO PF606-P26

Note : All the temperature measure point is on top surface of the component, if temperature over recommend, it will make component surface peeling or damage.

The graphic shows temperature profile for component assembly process in reflow ovens





Soldering With Iron:

Temperature 270 ± 10 °C.

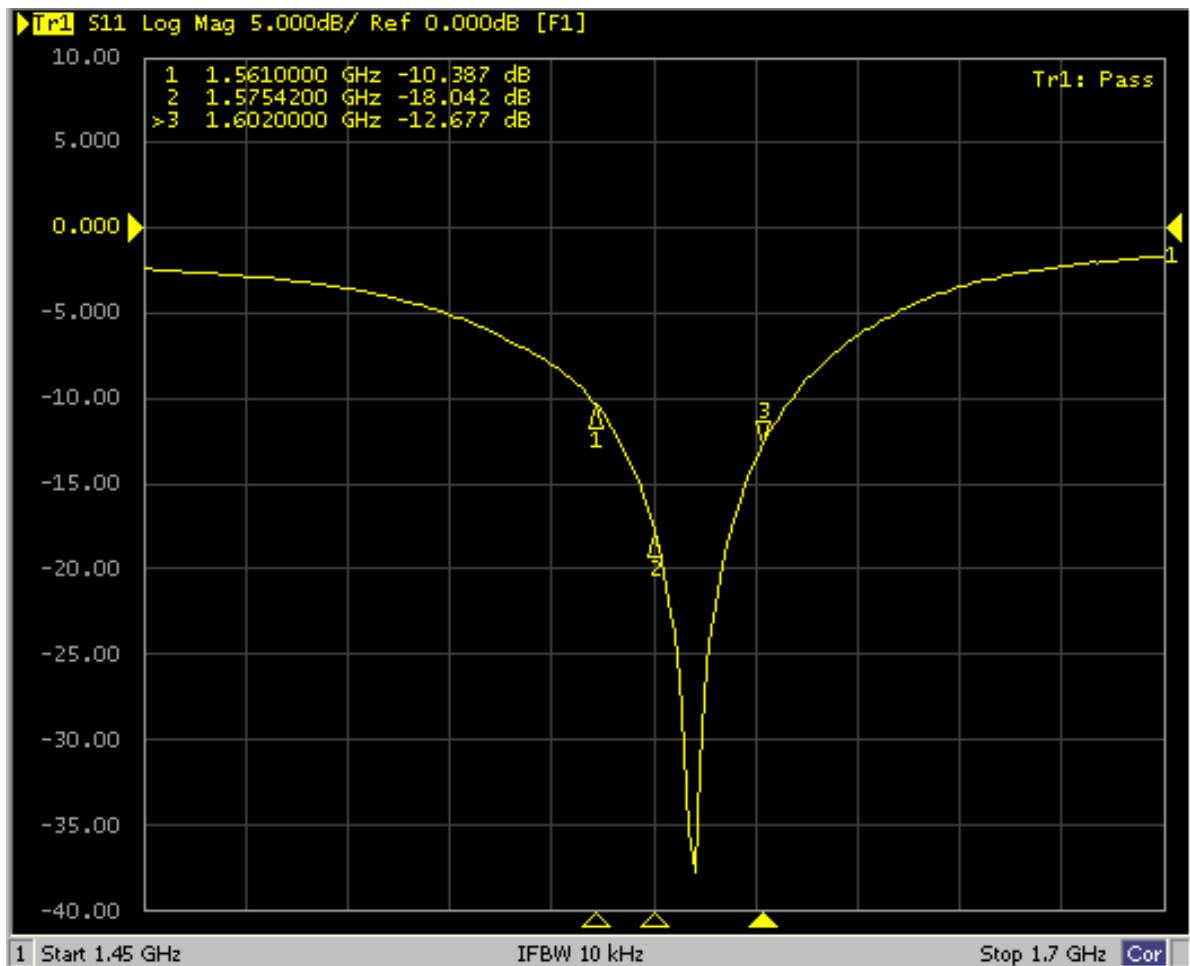
Apply preheating at 120°C for 2-3 minutes.

Finish soldering for each terminal within 3 seconds, if soldering iron over temperature 270 ± 10 °C or 3 seconds, it will make component surface peeling or damage.

Soldering iron can not leakage of electricity.

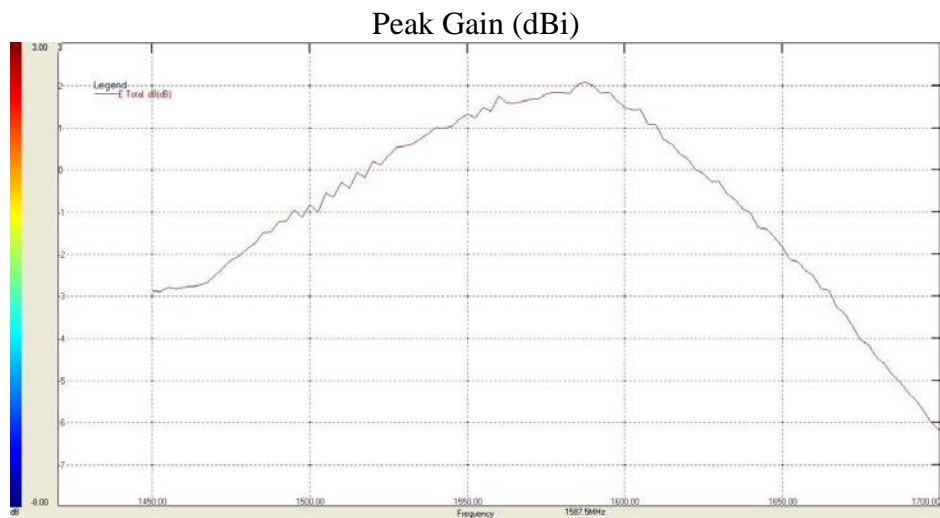
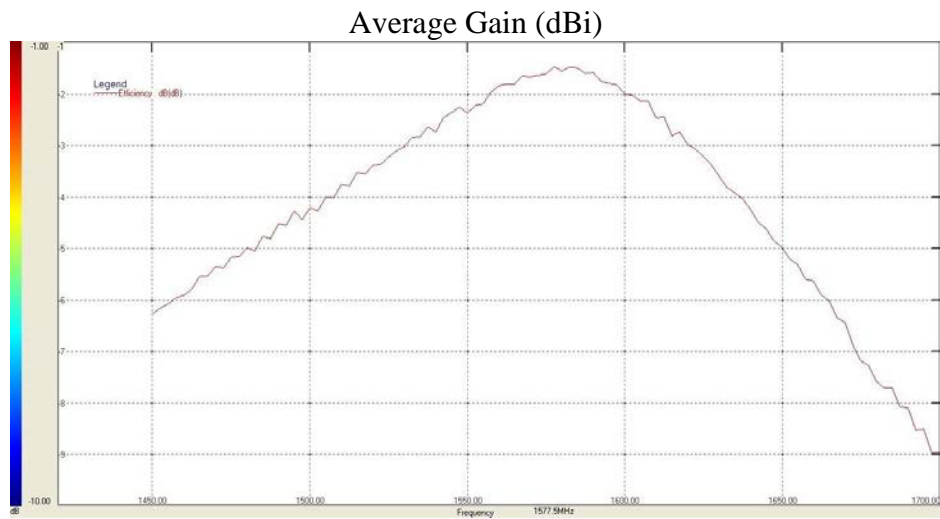
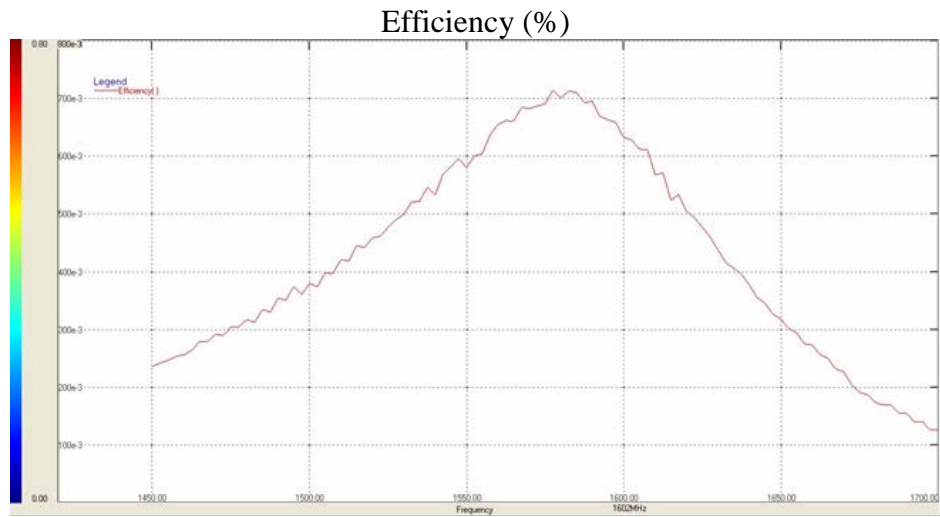
6. Performance

6.1 Return Loss



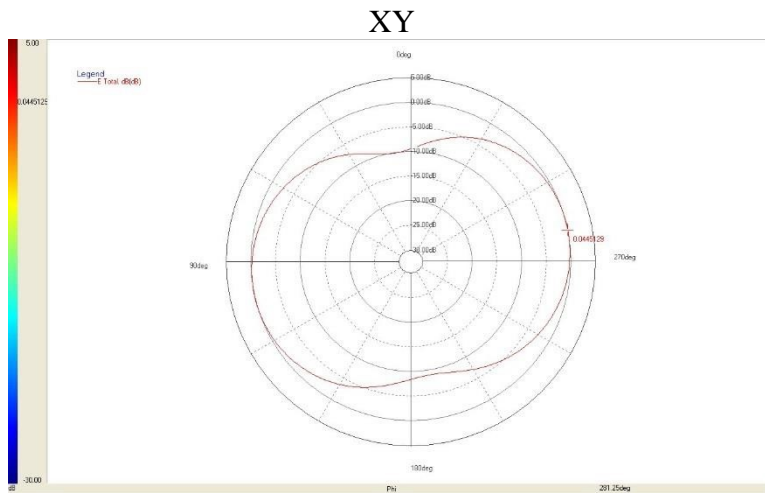
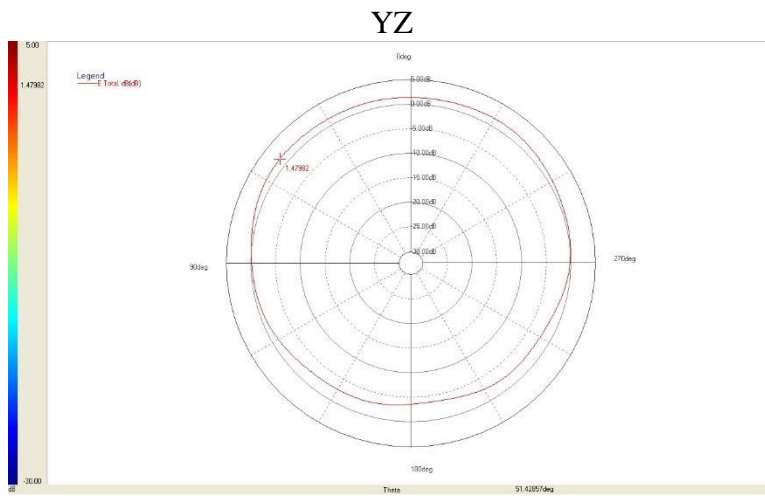
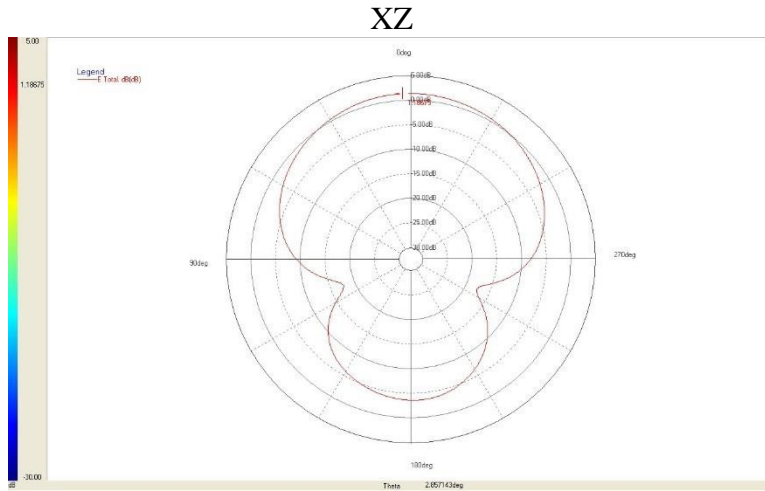


6.2 Efficiency , Average Gain , Peak Gain



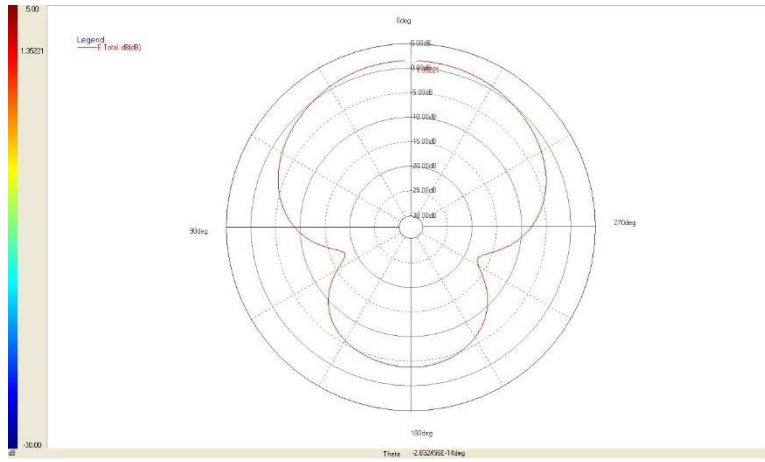
6.3 2D Radiation Pattern

1561 MHz

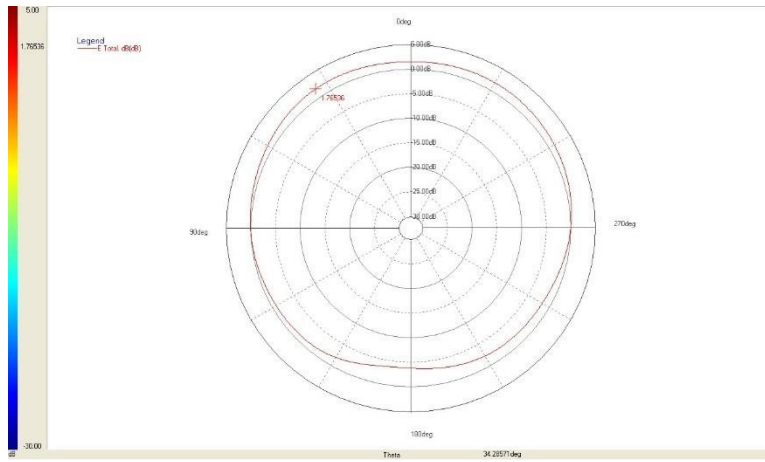


1575.42 MHz

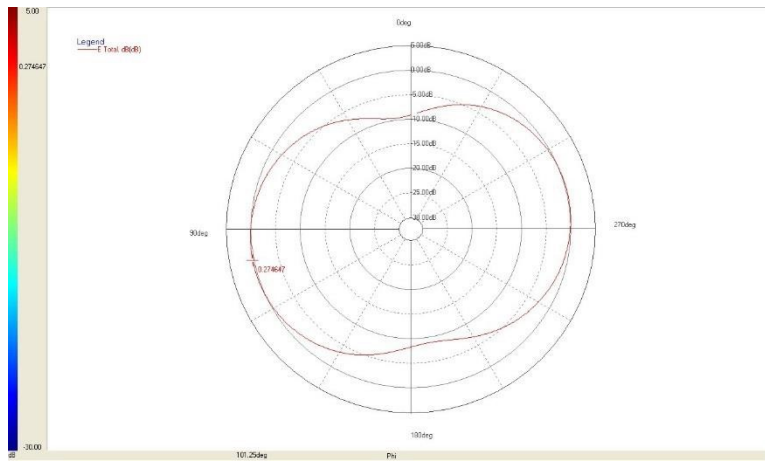
XZ



YZ

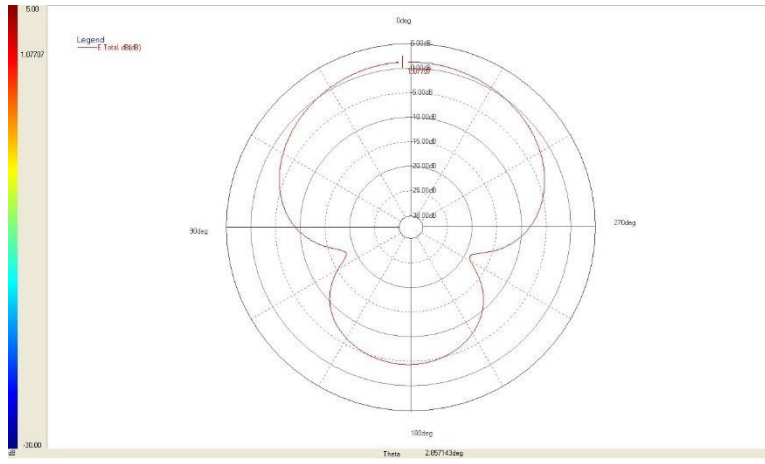


XY

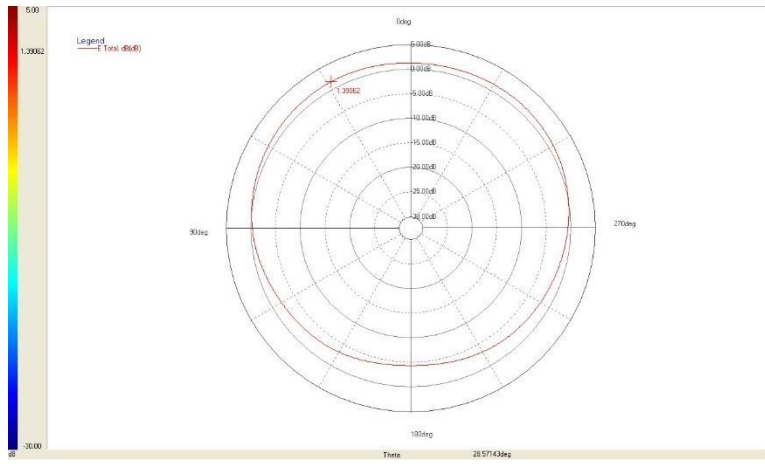


1602 MHz

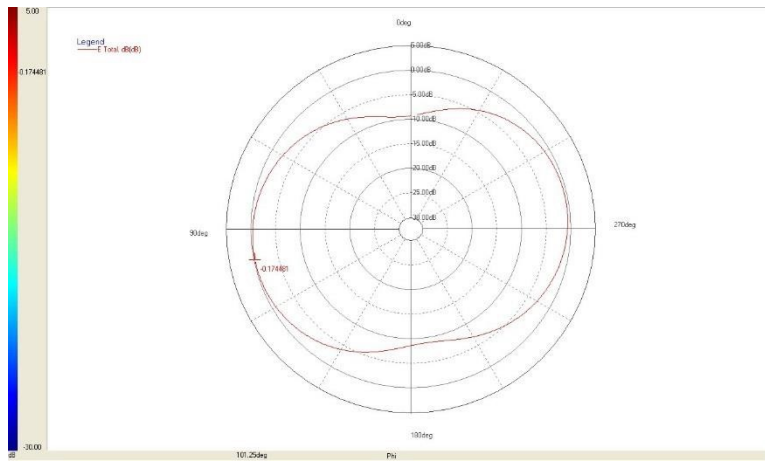
XZ



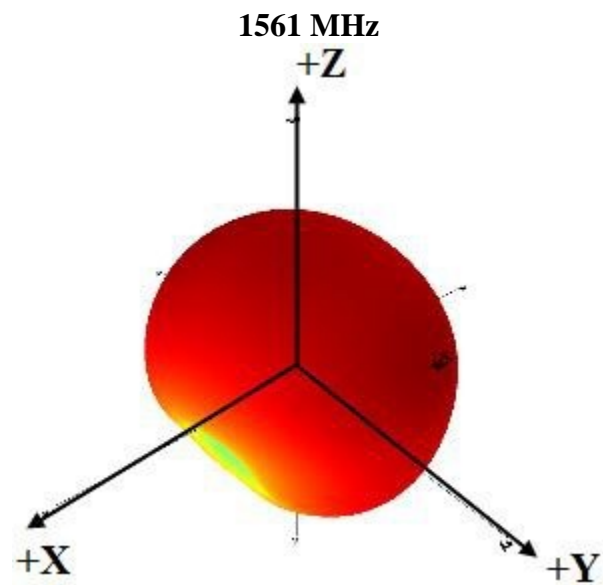
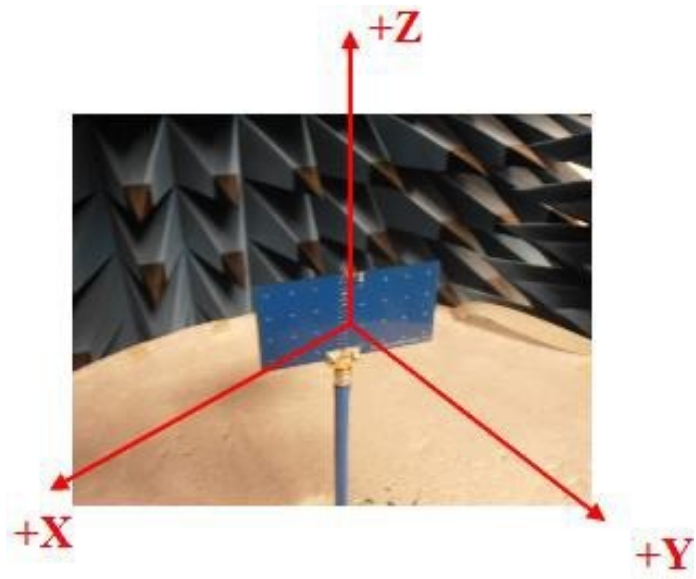
YZ

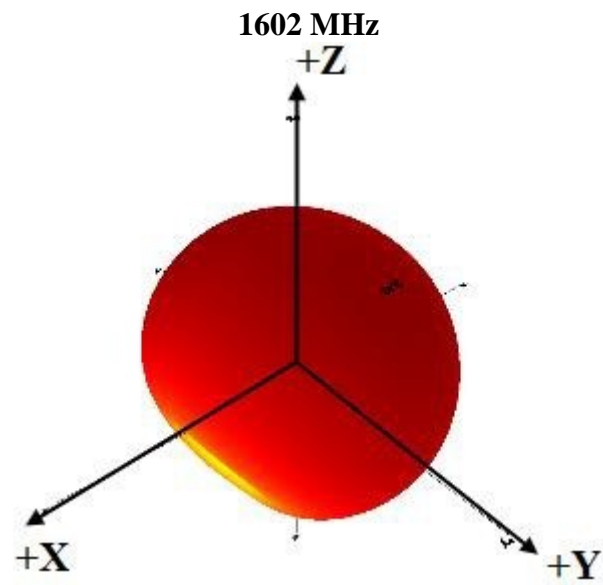
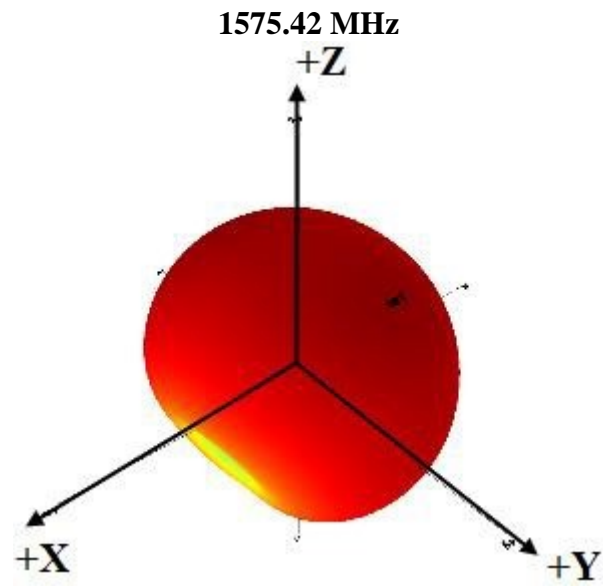


XY



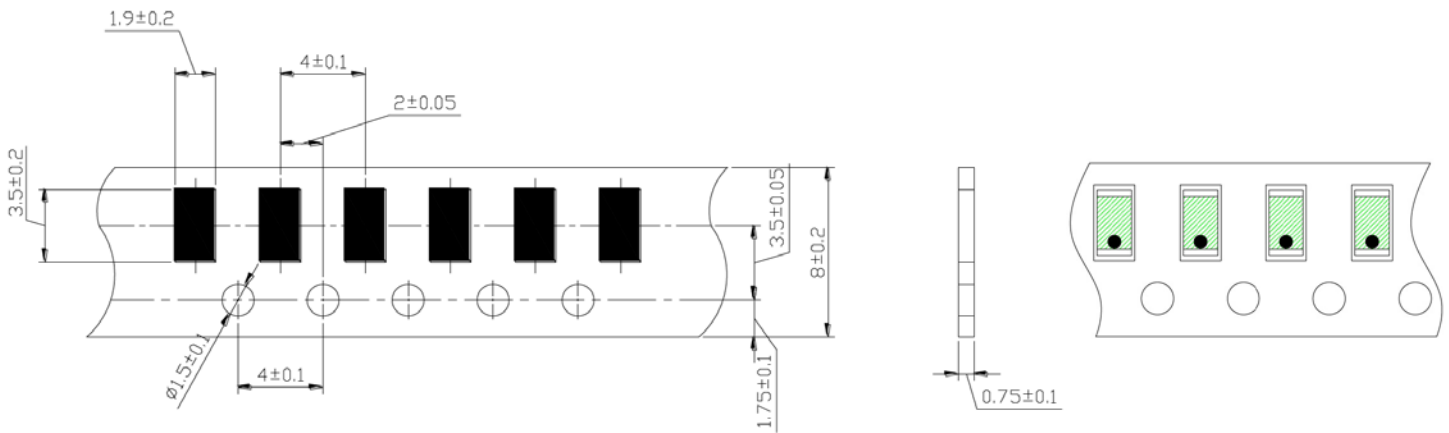
6.4 3D Radiation Pattern





7. Packing

- Tape :



- Reel : 5,000 pcs

