

CW-WZ-0024

5G External Antenna

Key Features

Frequency: 698-960 MHz/1575-2700MHz/3300-3800MHz/5125-5925MHz

SMA Male Connector

External Rubber

Dimensions 196*38 mm



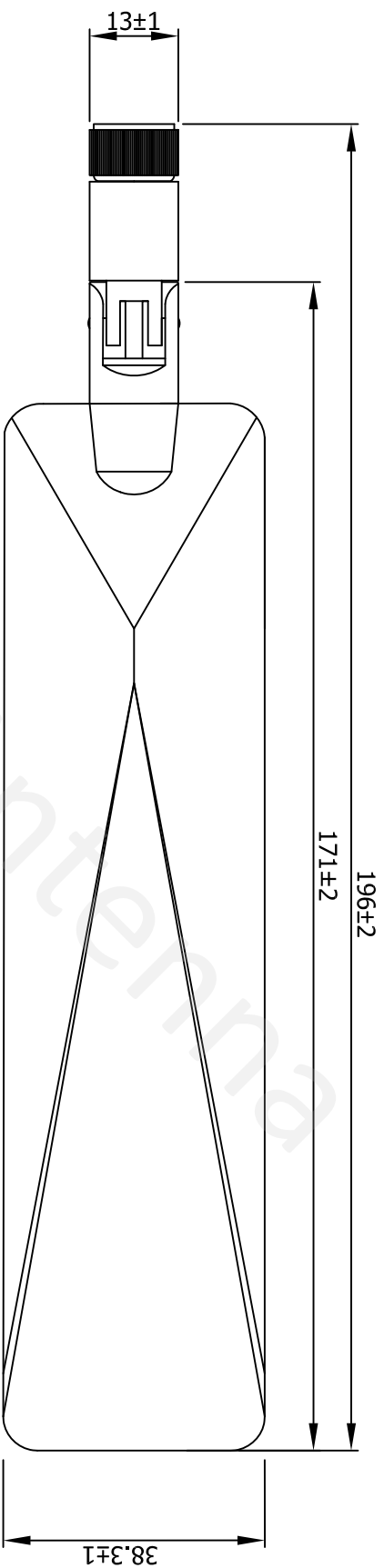
1. Antenna Electrical Characteristics

Band (MHz)				
Frequency (MHz)	698-960MHz	1575-2700MHz	3300-3800MHz	5125-5925MHz
VSWR	3.5:1	3:1	2:1	4:1
Efficiency (%)	76.54%	73.5%	70.33%	48.25%
Peak Gain (dBi)	3.08	3.28	4.84	3.43
Impedance (Ohm)	50			
Polarisation	Vertical			
Max. Input Power (W)	10			
Connector Type	SMA male			

2. Material and environmental characteristics

Material of PCB	FR4
Material of Plastic	PC+PBT/ABS
Cable Type	RG316
Connector Type	SMA male
Dimensions (mm)	196*38MM
Antenna color	Black
Operation Temperature	-40 to +80
Storage Temperature	-40 to +80
Antenna Storage life(year)	10
Substance Compliance	ROHS

REV	Date	Description
X1	2021/07/28	New issue



Specification(Free Test):

Frequency Range: 698-960MHZ/1575-2700MHZ
3300-3800MHZ/5125-5925MHZ

Impedance: 50Ω

V.S.W.R: $\leq 3.5/3/2/4$

6	Radome	Black ABS	1						
5	Lower fixing seat	Black PC+PBT	1						
4	Upper fixing seat	Black PC+PBT	1						
3	Connector	Black SMA male	1						
2	Cable	RG316 Brown double silver wire	1						
1	PCB	FR4	1						
NO	Name	Description	Q'TY	Remark					
XX.	± 5.0	Approved	Customer						
X.	± 3.0		Part NO.						
.X	± 1.0	Checked	Part name	External antenna					
.XX	± 0.2		CW P/NO.	CW-WZ-0024					
.XXX	± 0.1		REV	Unit	File				
		Drawing	X1	m/m	Sheet	1/1			



Cowin Antenna

4. Antenna test parameters

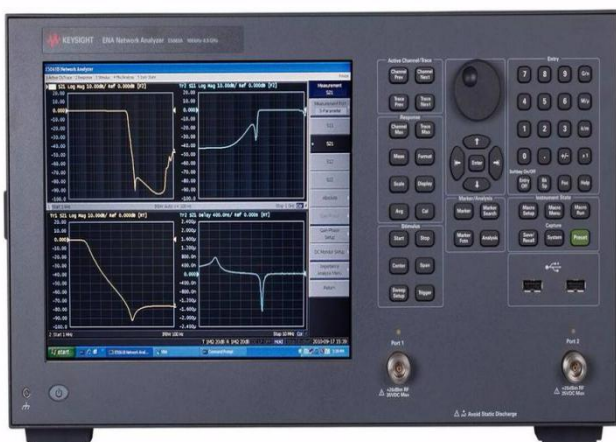
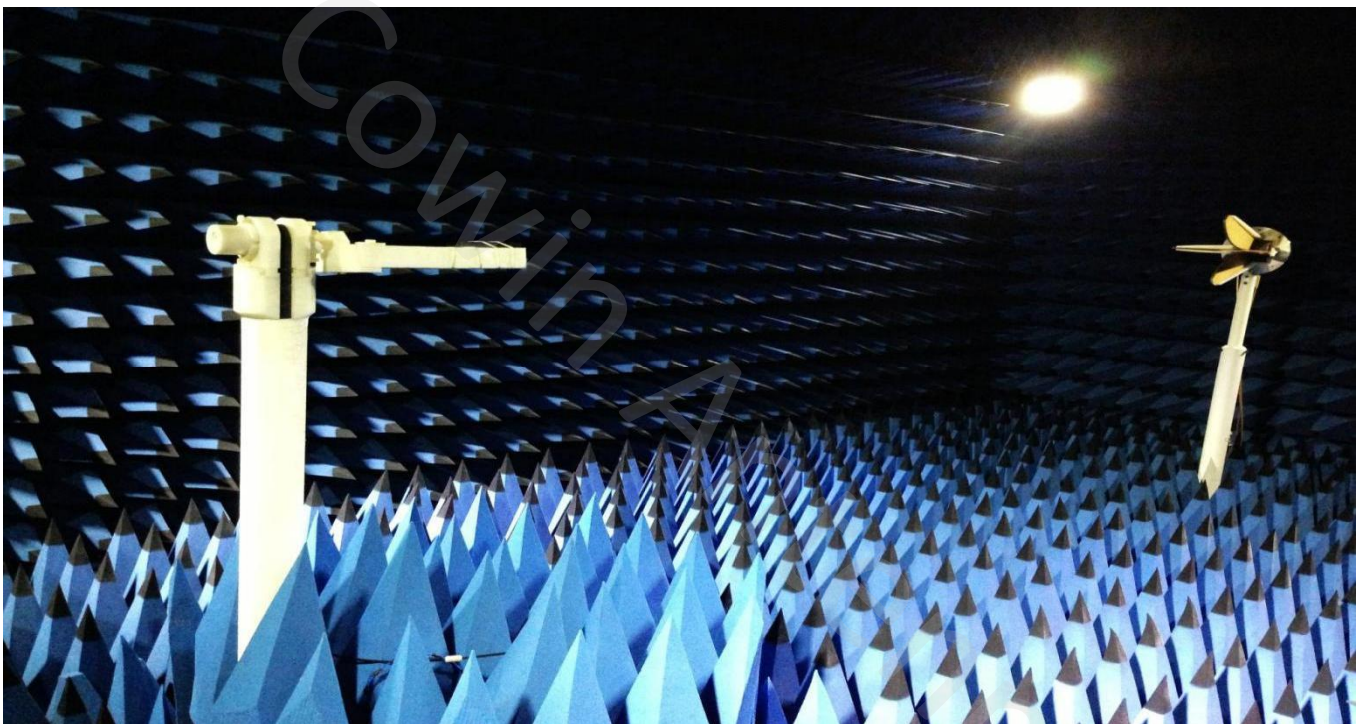
Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

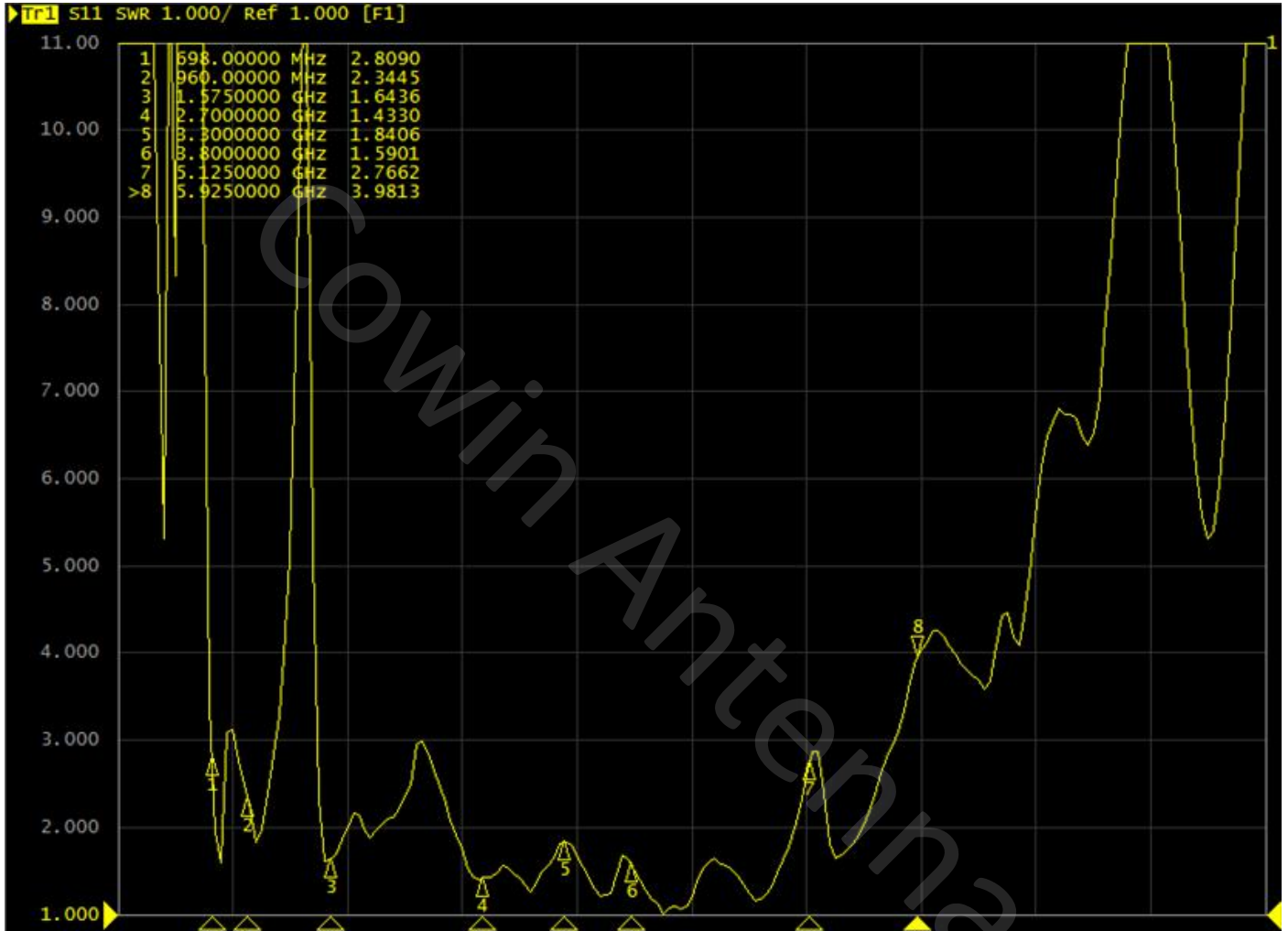
Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

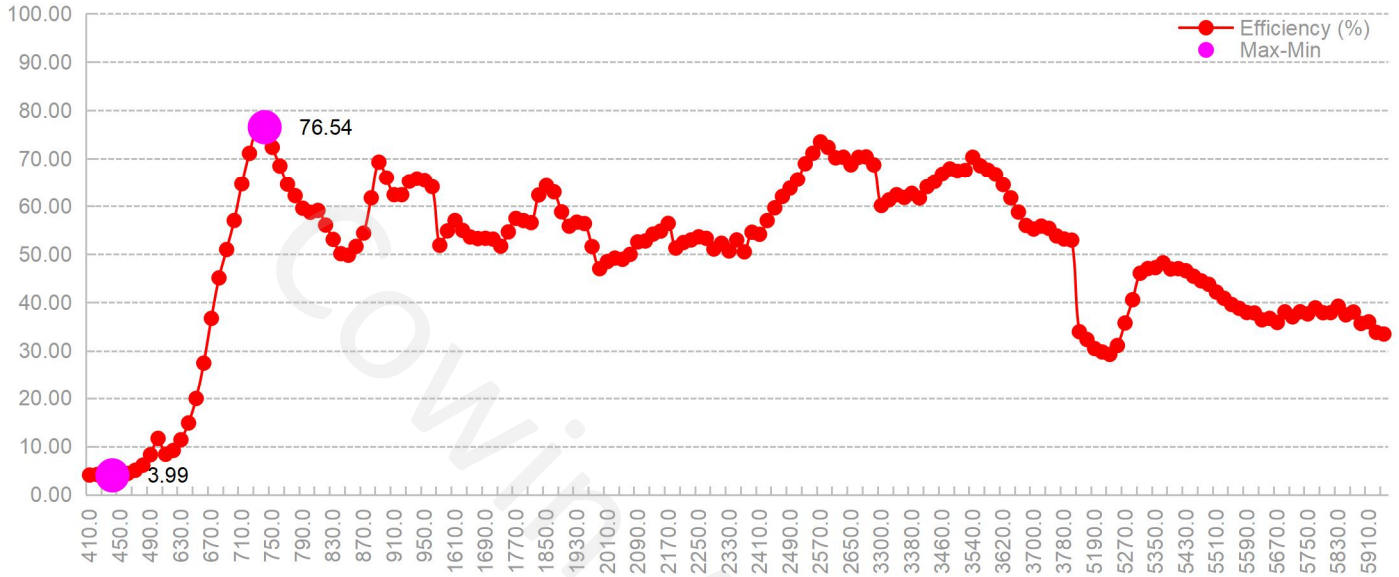
The comprehensive tester is Agilent cmv500



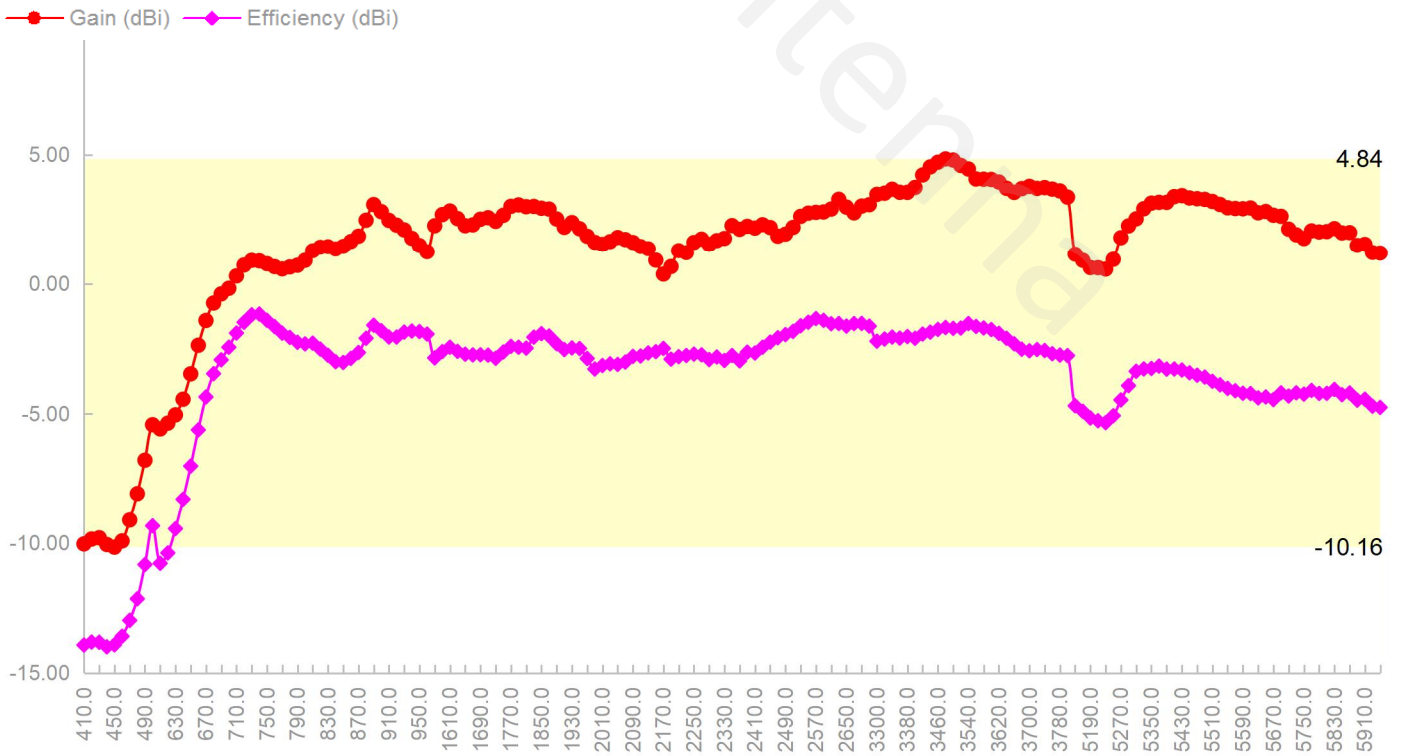
4.1 VSWR



4.2 Efficiency



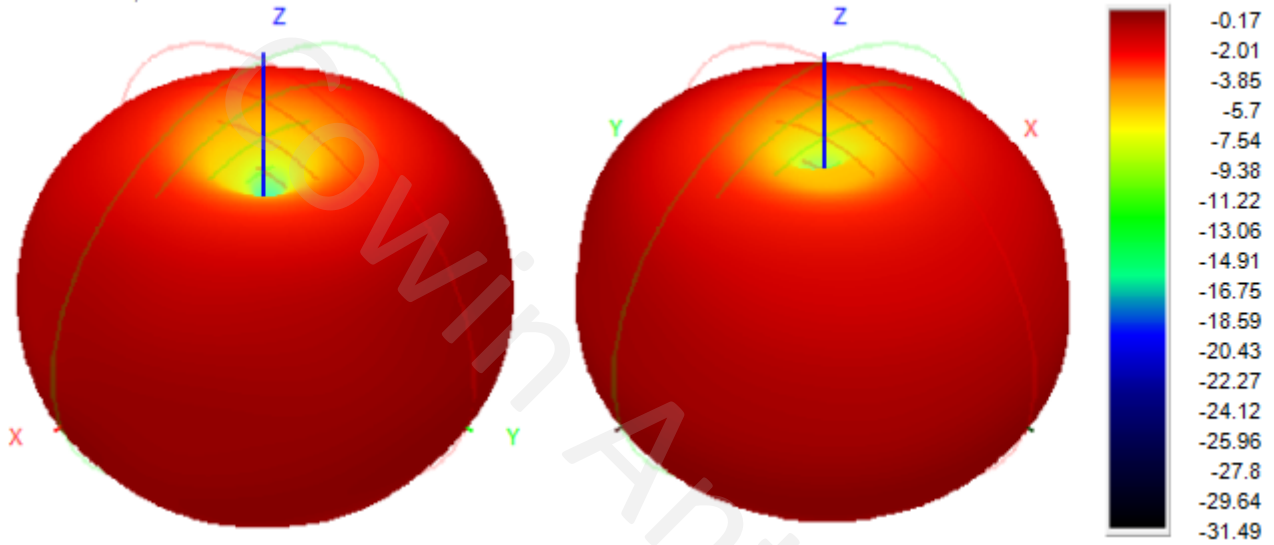
4.3 Peak gain



4.4 3D&2D Radiation Patterns

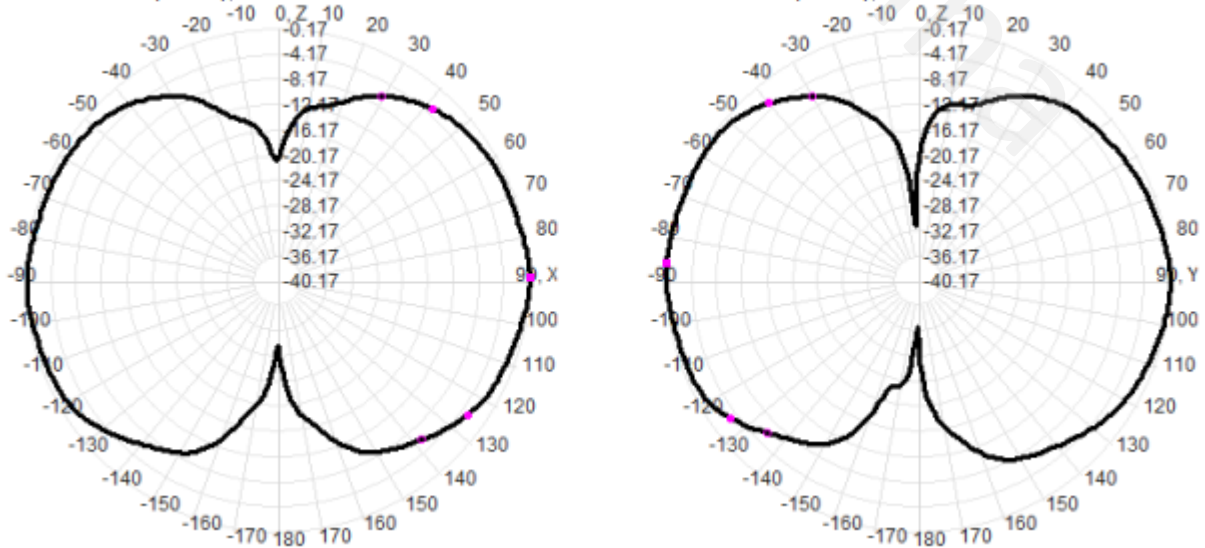
700.0MHz H+V, Eff: 57.0%

Back View

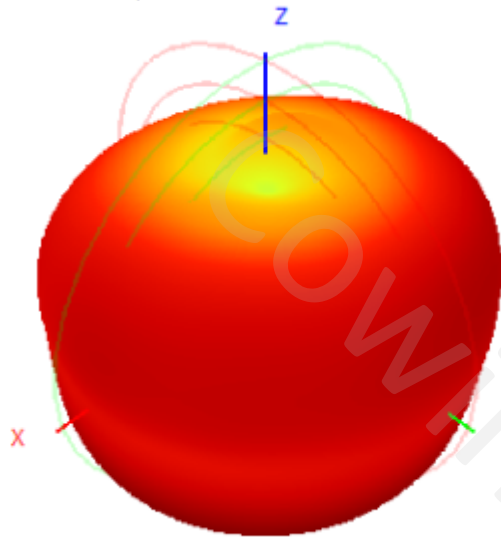


700.0MHz Total(E1-XZ), Max=-0.32dBi

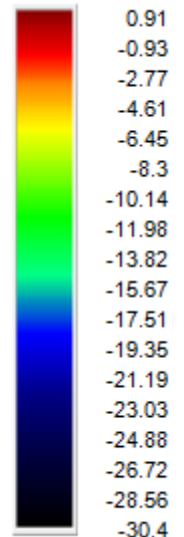
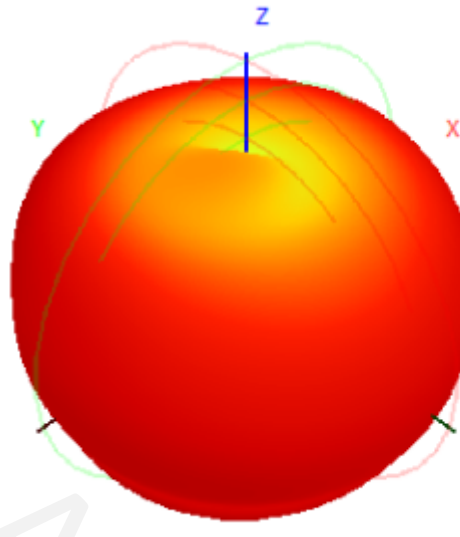
700.0MHz Total(E2-YZ), Max=-0.17dBi



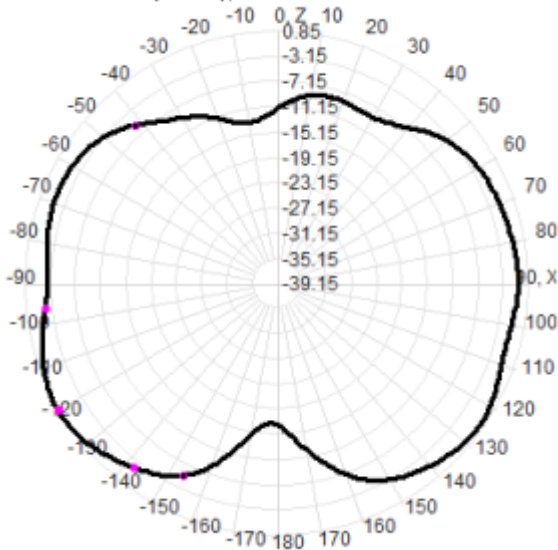
800.0MHz H+V, Eff: 58.7%



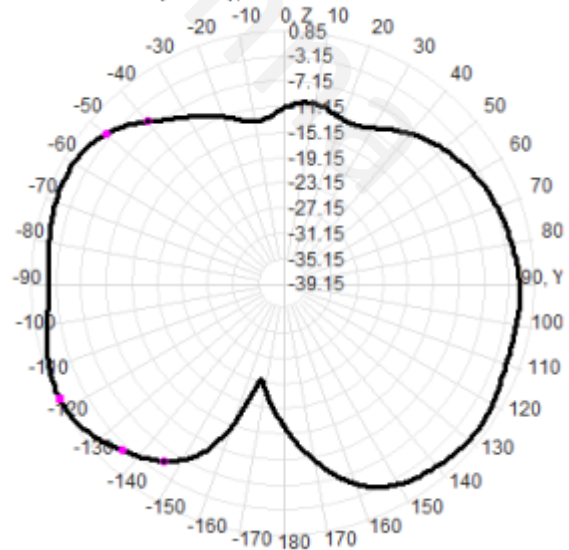
Back View



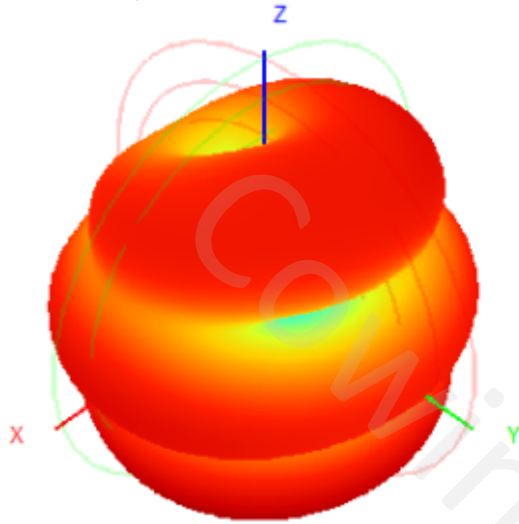
800.0MHz Total(E1-XZ), Max= 0.85dBi



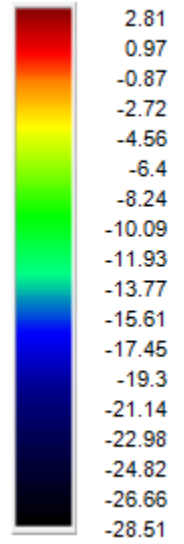
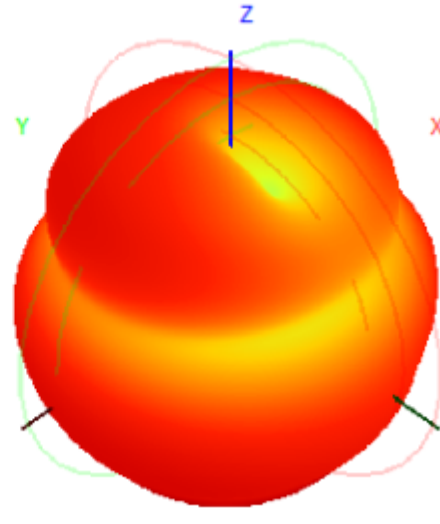
800.0MHz Total(E2-YZ), Max= 0.61dBi



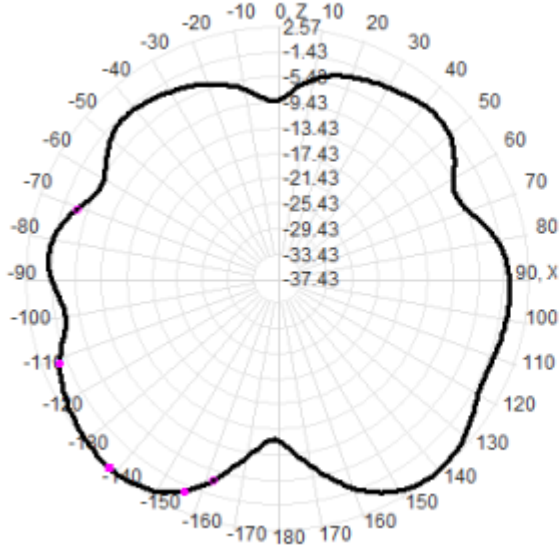
900.0MHz H+V, Eff: 66.0%



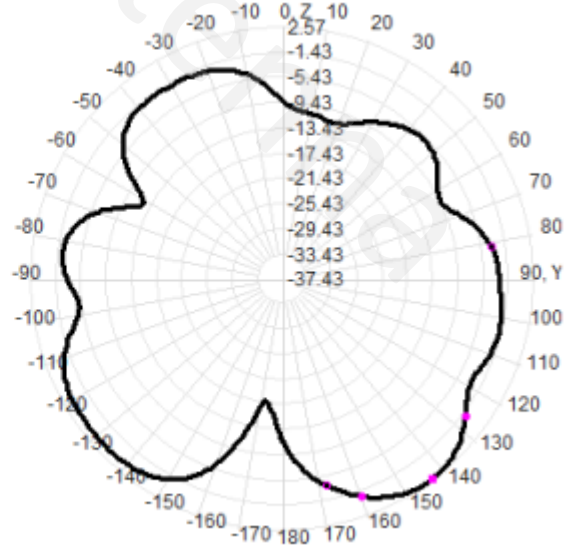
Back View



900.0MHz Total(E1-XZ), Max= 2.57dBi

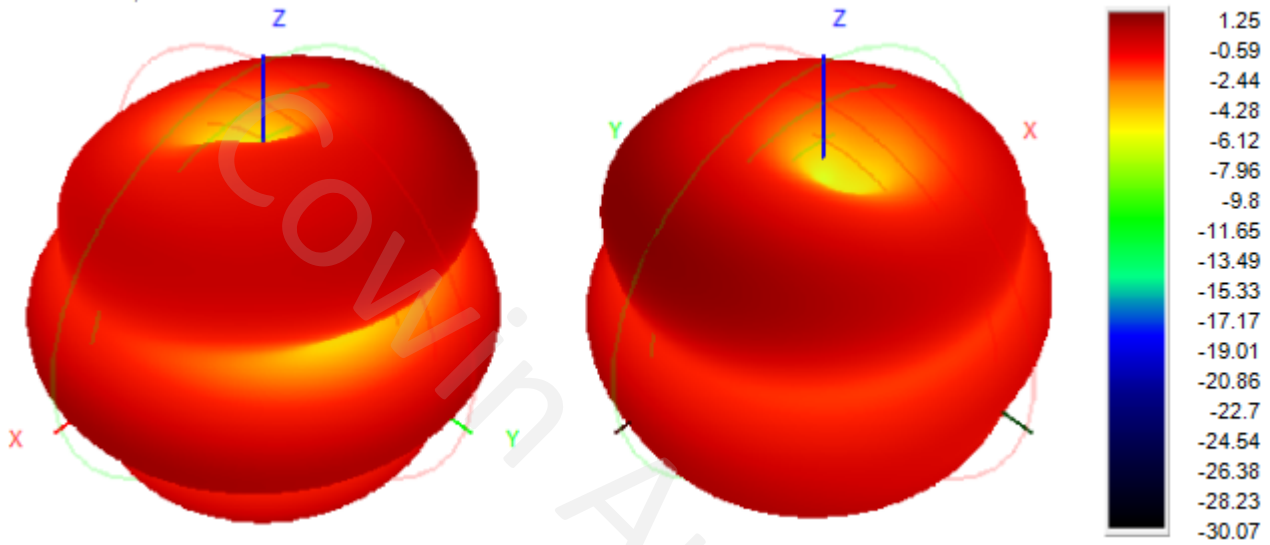


900.0MHz Total(E2-YZ), Max= 2.12dBi



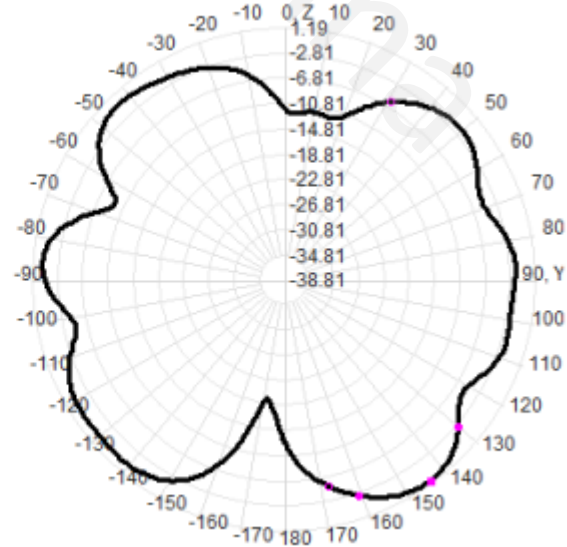
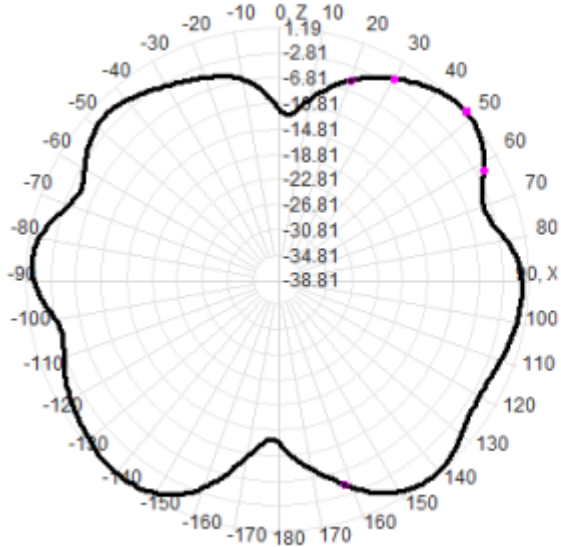
960.0MHz H+V, Eff: 64.1%

Back View

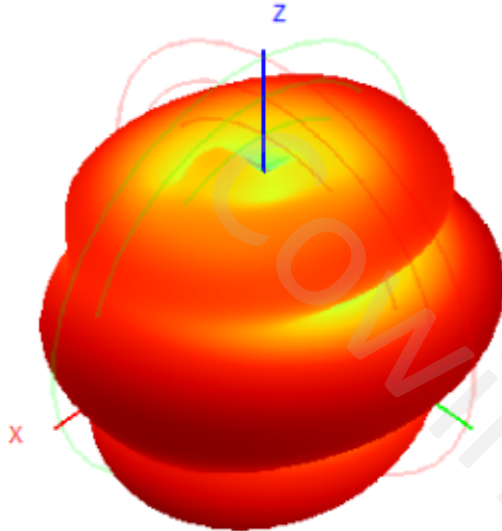


960.0MHz Total(E1-XZ), Max= 1.19dBi

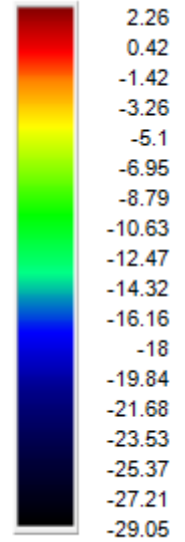
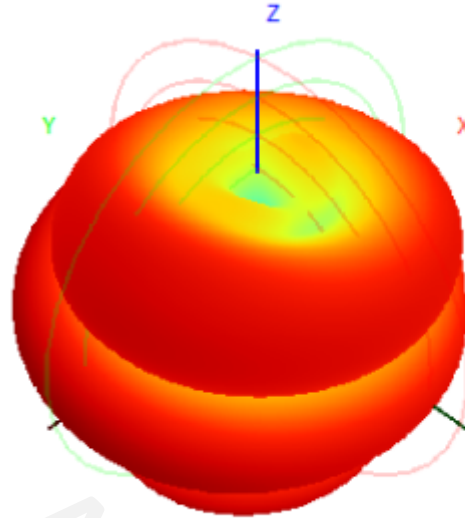
960.0MHz Total(E2-YZ), Max= 0.46dBi



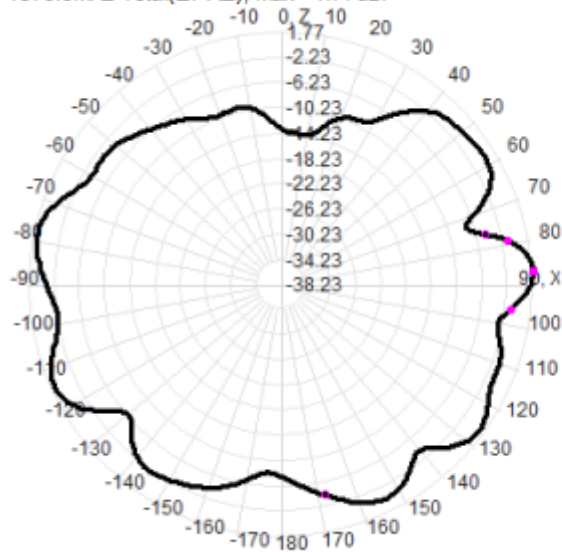
1570.0MHz H+V, Eff: 51.9%



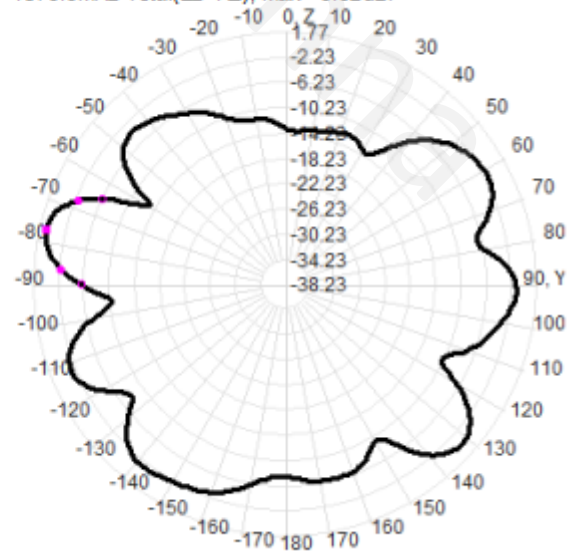
Back View



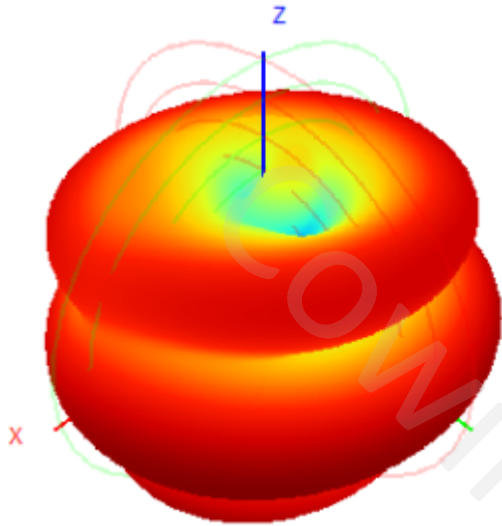
1570.0MHz Total(E1-XZ), Max= 1.77dBi



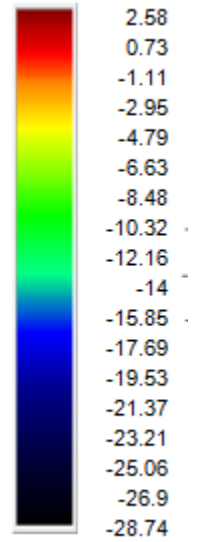
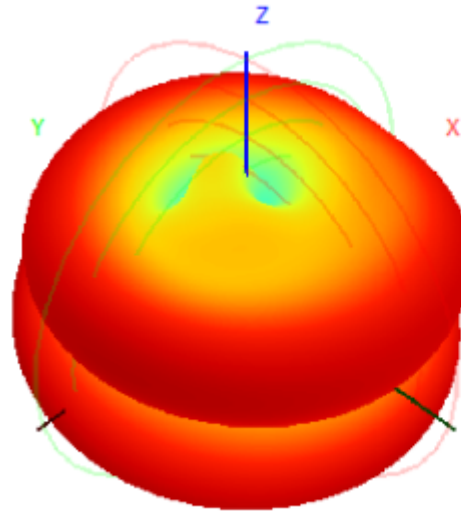
1570.0MHz Total(E2-YZ), Max= 0.62dBi



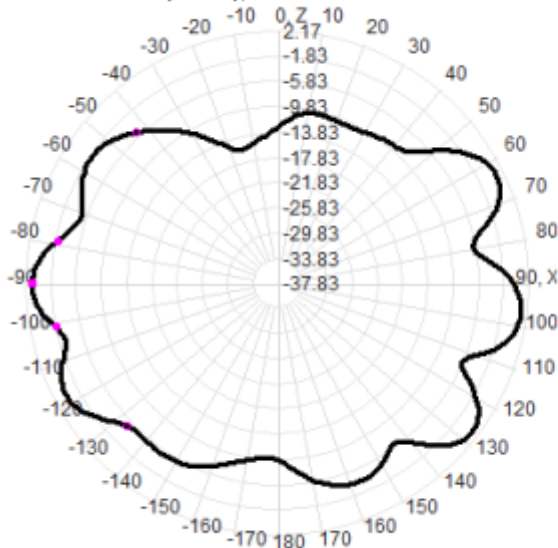
1710.0MHz H+V, Eff: 53.2%



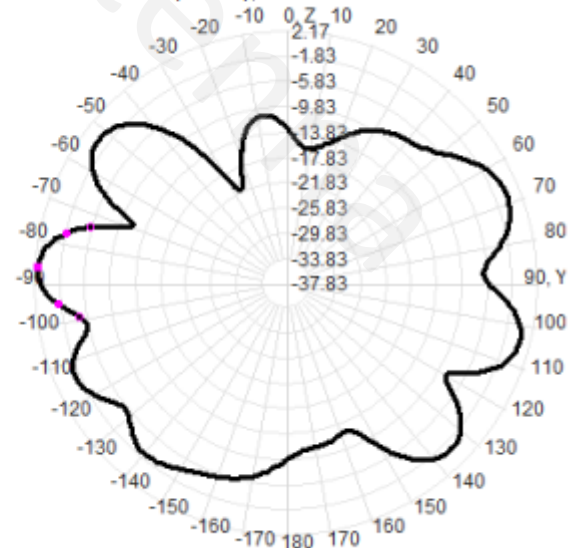
Back View



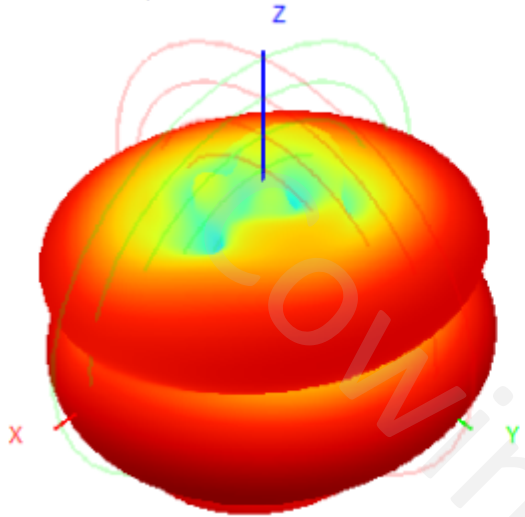
1710.0MHz Total(E1-XZ), Max= 1.13dBi



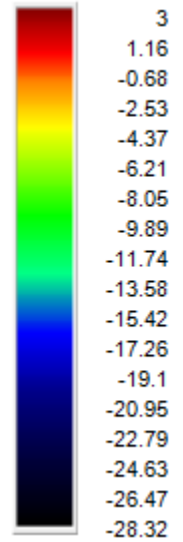
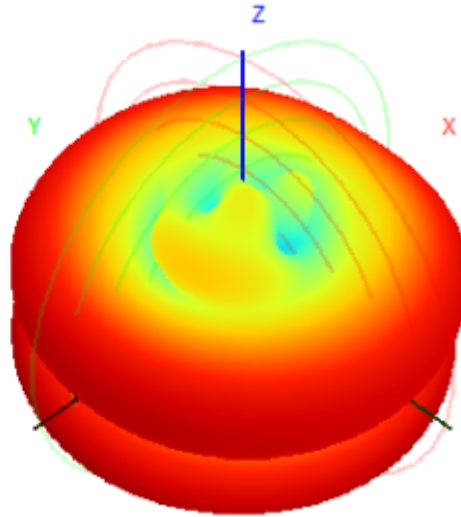
1710.0MHz Total(E2-YZ), Max= 1.62dBi



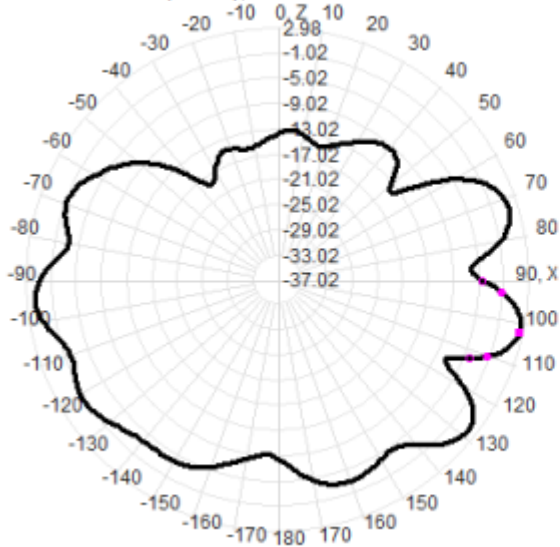
1810.0MHz H+V, Eff: 56.6%



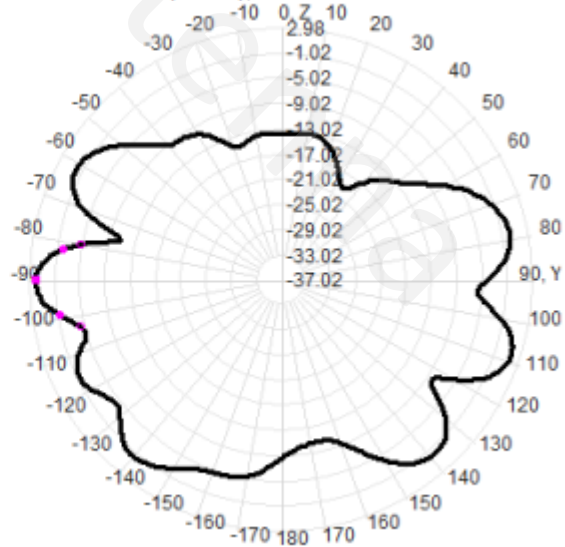
Back View



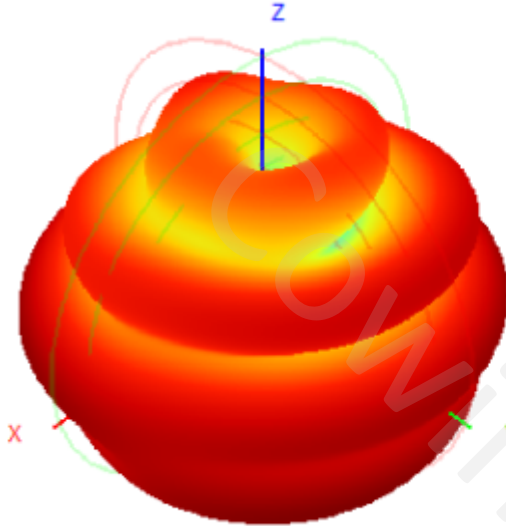
1810.0MHz Total(E1-XZ), Max= 2.12dBi



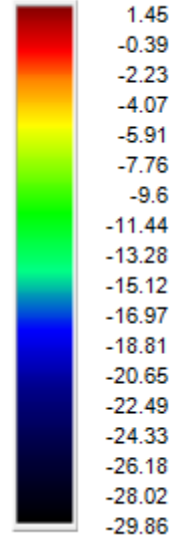
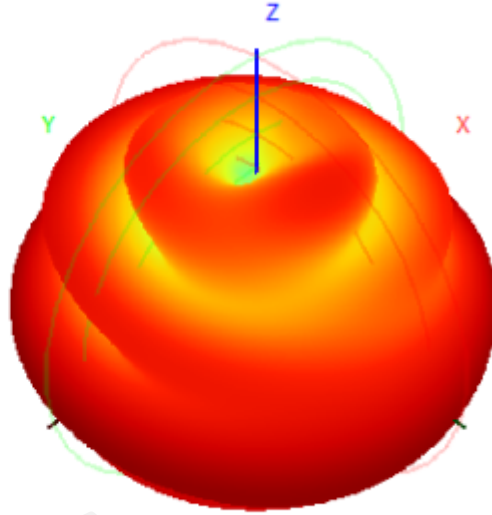
1810.0MHz Total(E2-YZ), Max= 1.89dBi



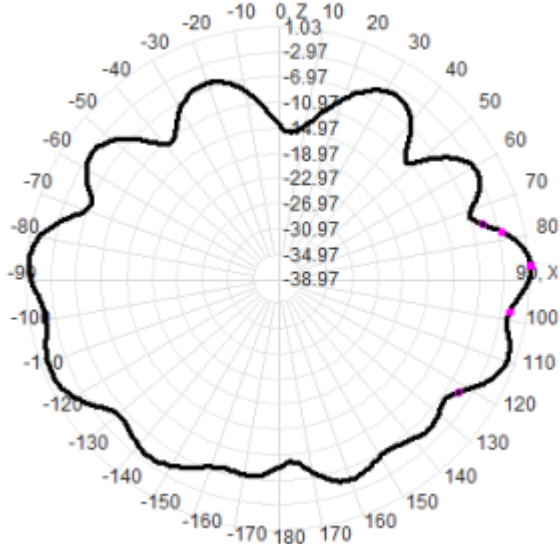
2110.0MHz H+V, Eff: 52.8%



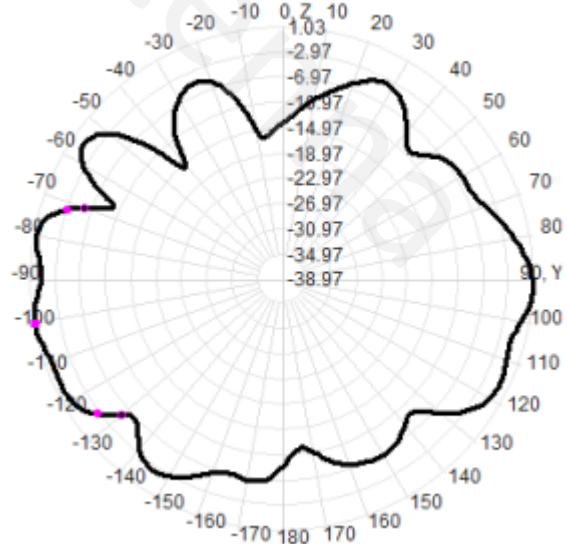
Back View



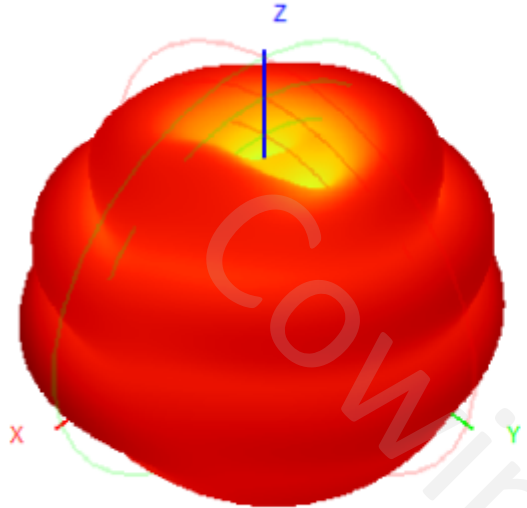
2110.0MHz Total(E1-XZ), Max= 1.03dBi



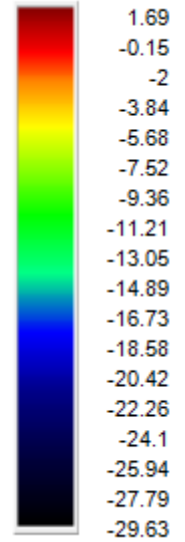
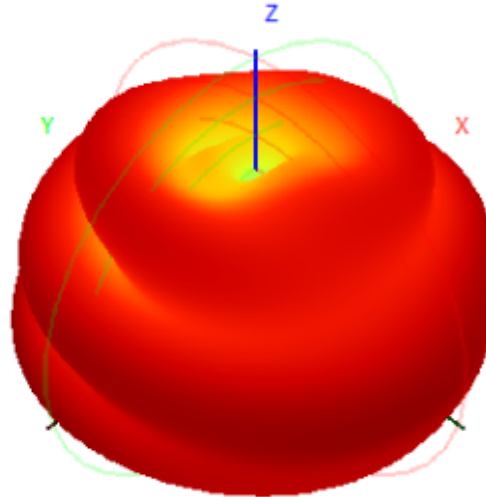
2110.0MHz Total(E2-YZ), Max= 0.82dBi



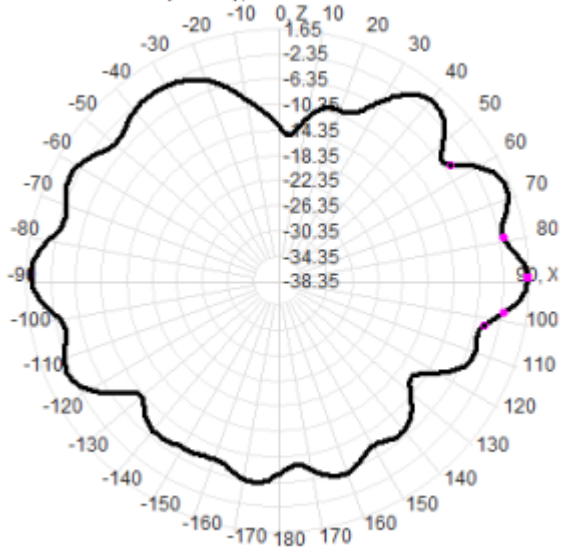
2310.0MHz H+V, Eff: 52.3%



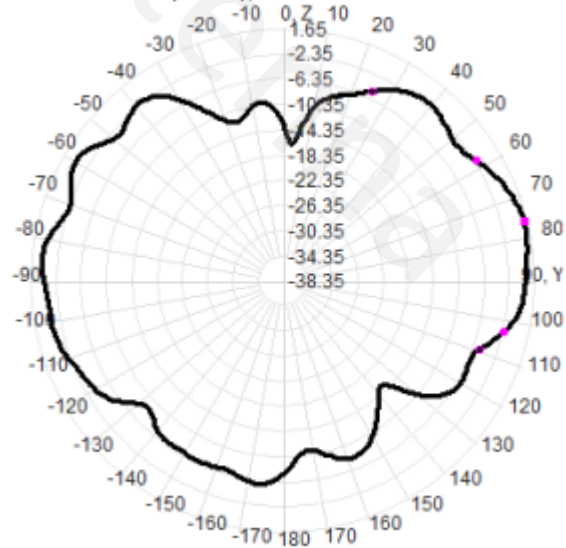
Back View



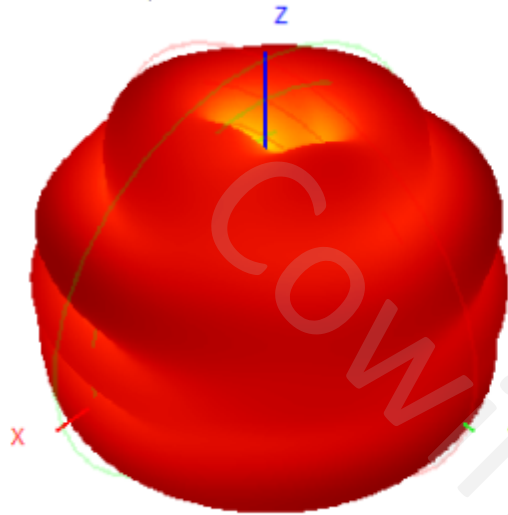
2310.0MHz Total(E1-XZ), Max= 1.09dBi



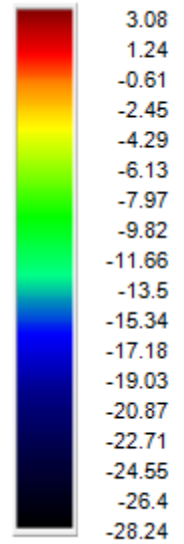
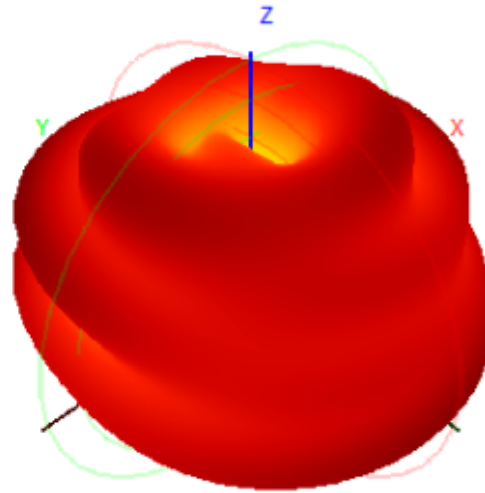
2310.0MHz Total(E2-YZ), Max= 0.89dBi



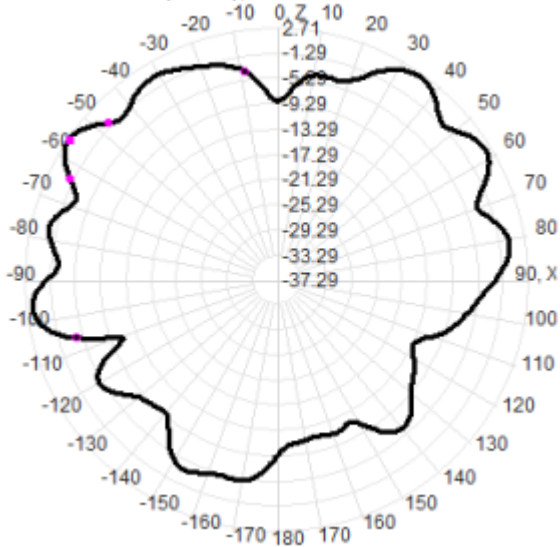
2710.0MHz H+V, Eff: 68.7%



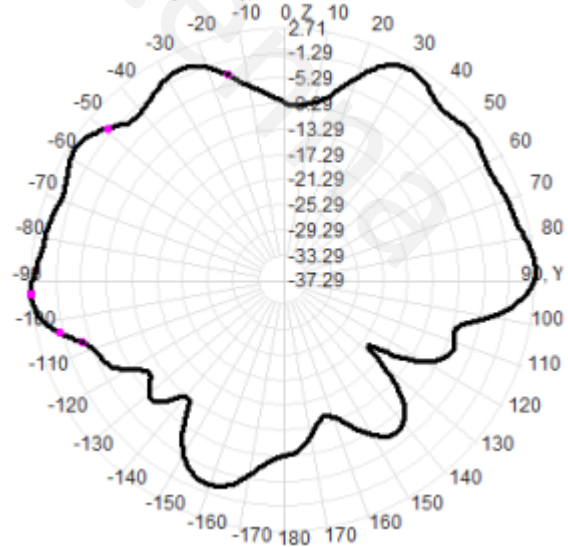
Back View



2710.0MHz Total(E1-XZ), Max= 2.43dBi

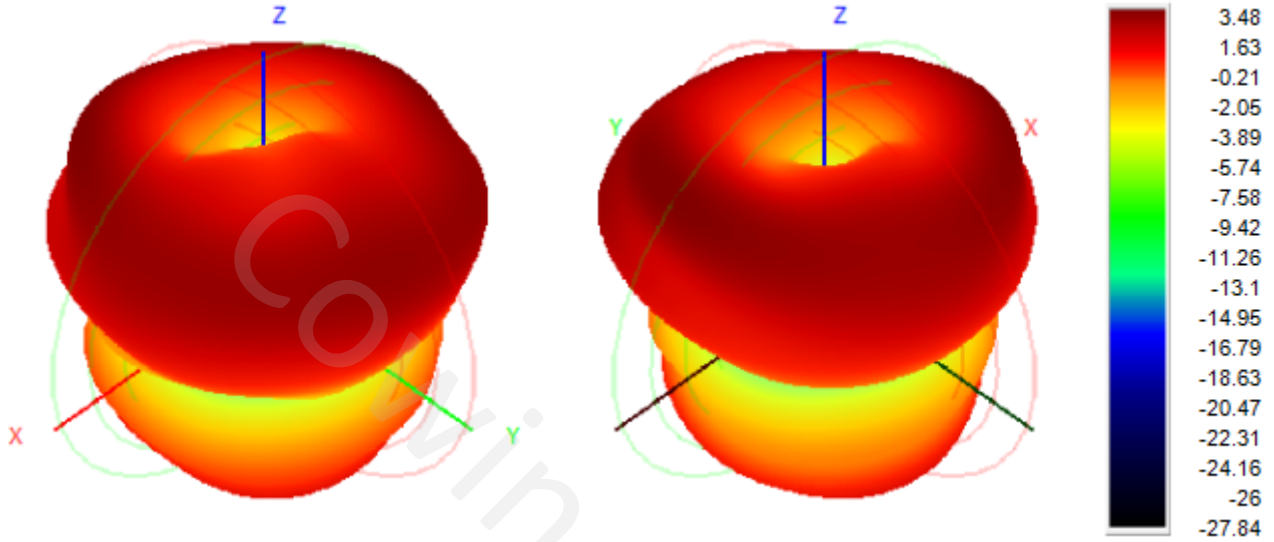


2710.0MHz Total(E2-YZ), Max= 2.71dBi



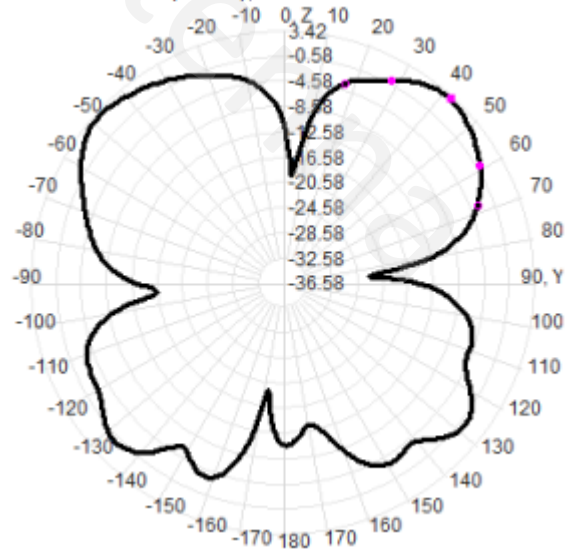
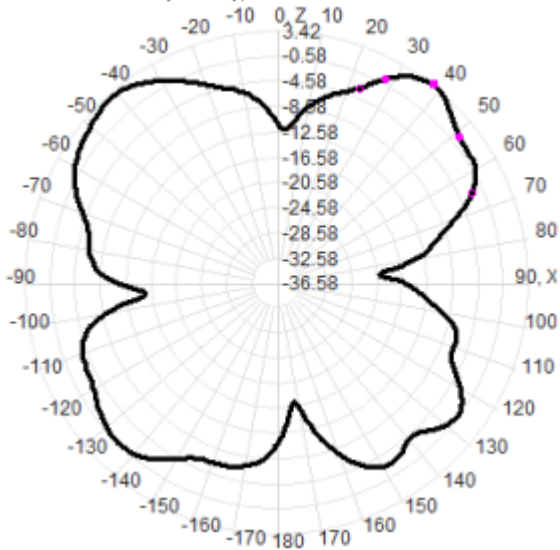
3300.0MHz H+V, Eff: 60.1%

Back View



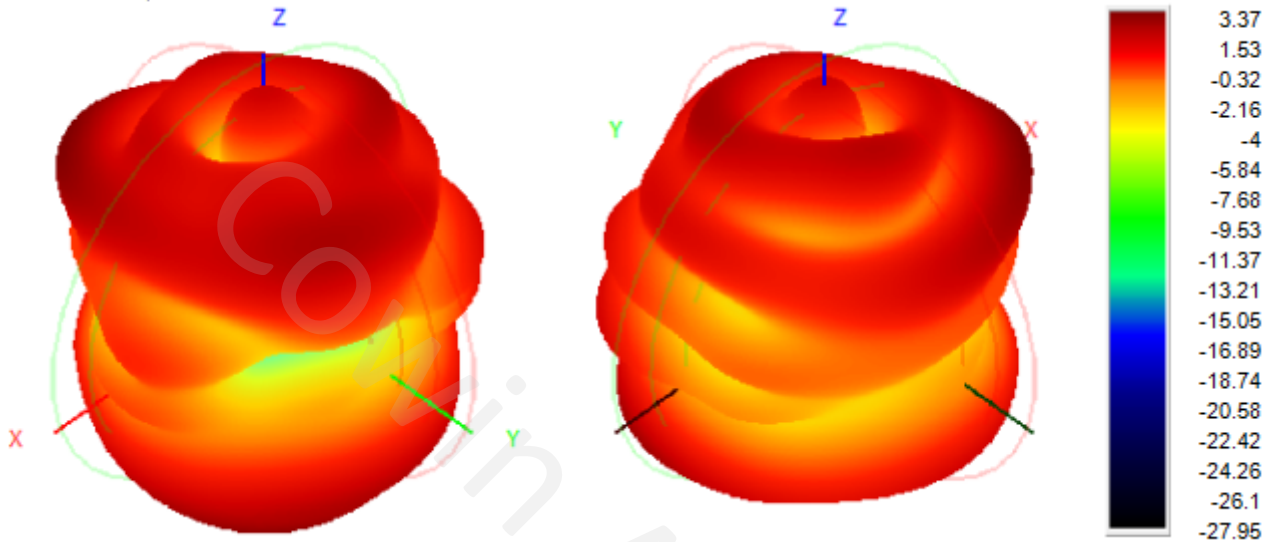
3300.0MHz Total(E1-XZ), Max= 3.42dBi

3300.0MHz Total(E2-YZ), Max= 2.84dBi



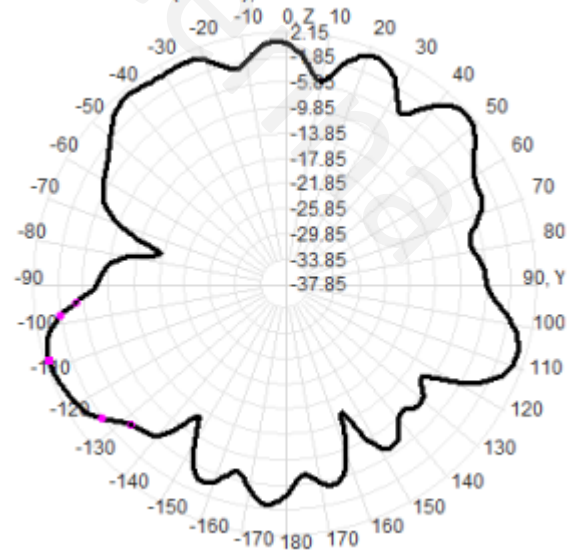
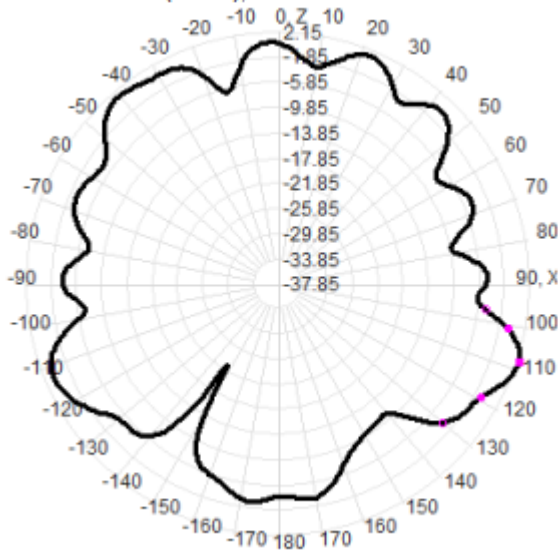
3800.0MHz H+V, Eff: 52.9%

Back View

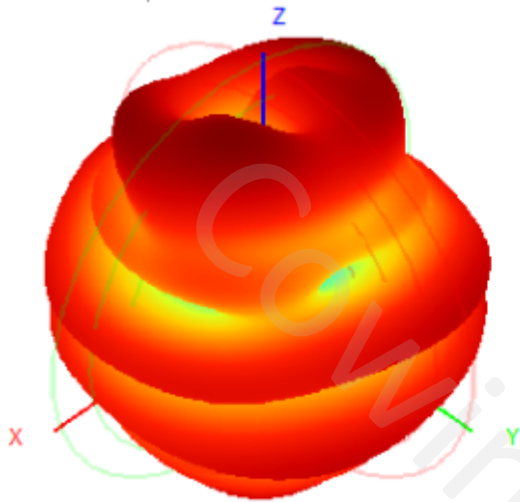


3800.0MHz Total(E1-XZ), Max= 2.15dBi

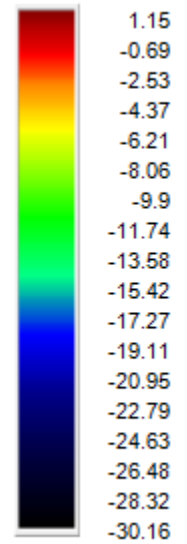
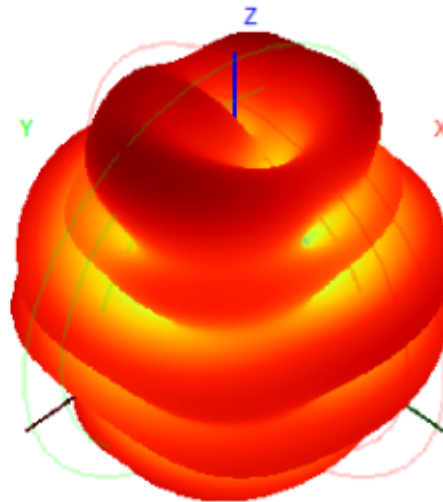
3800.0MHz Total(E2-YZ), Max= 1.47dBi



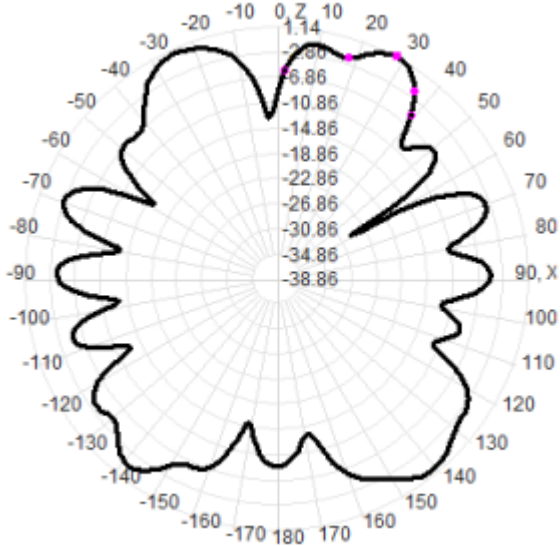
5150.0MHz H+V, Eff: 33.9%



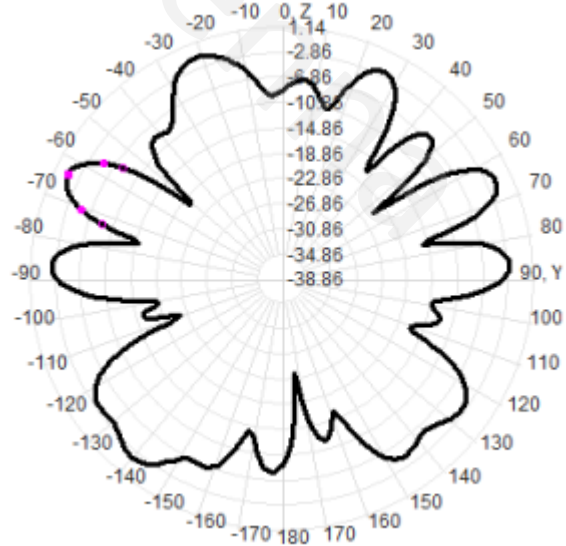
Back View



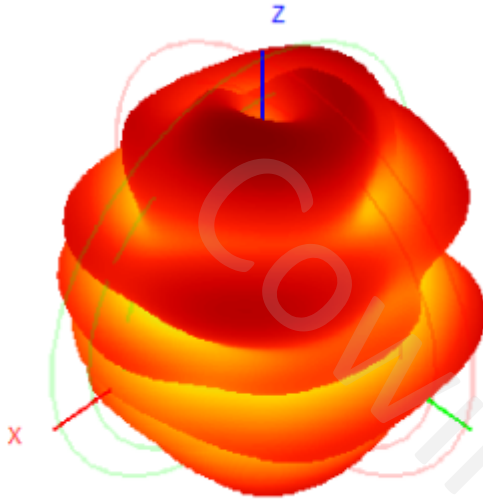
5150.0MHz Total(E1-XZ), Max= 1.14dBi



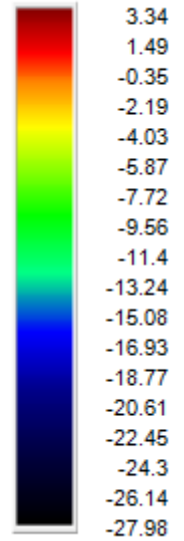
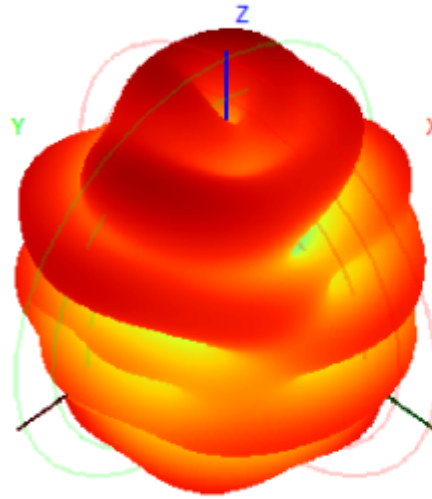
5150.0MHz Total(E2-YZ), Max= -1.21dBi



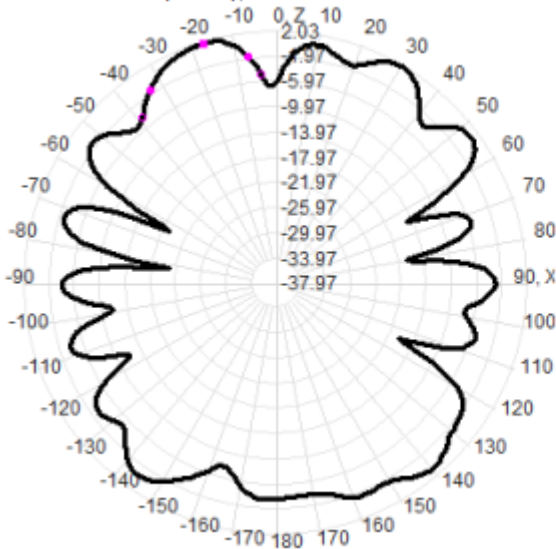
5450.0MHz H+V, Eff: 45.5%



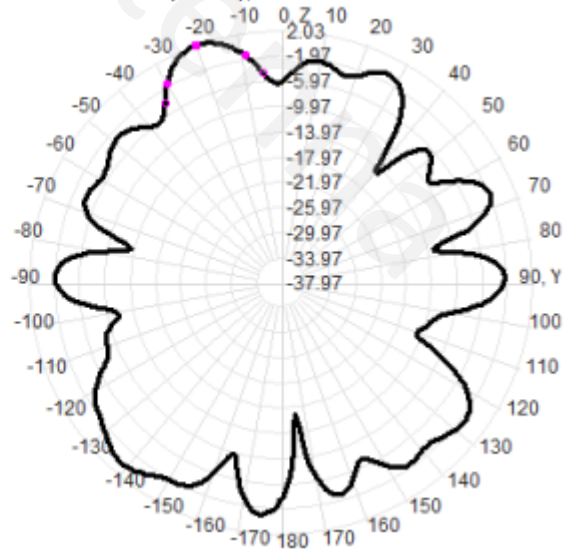
Back View



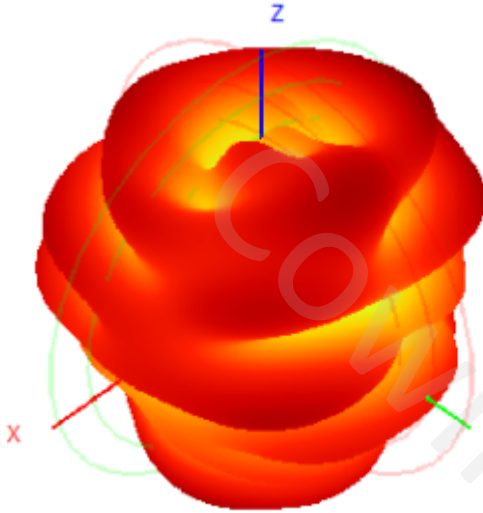
5450.0MHz Total(E1-XZ), Max= 1.72dBi



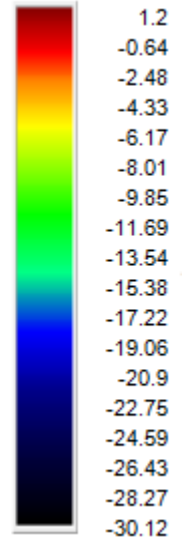
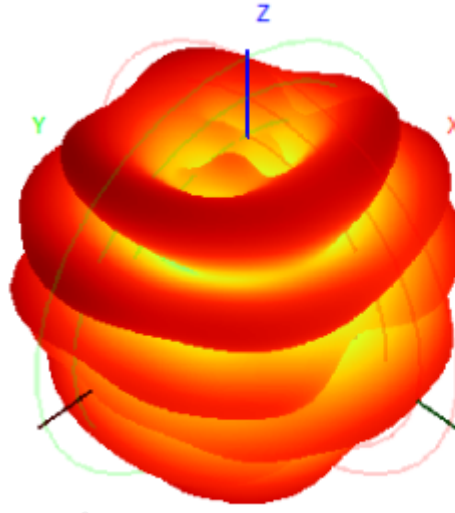
5450.0MHz Total(E2-YZ), Max= 2.03dBi



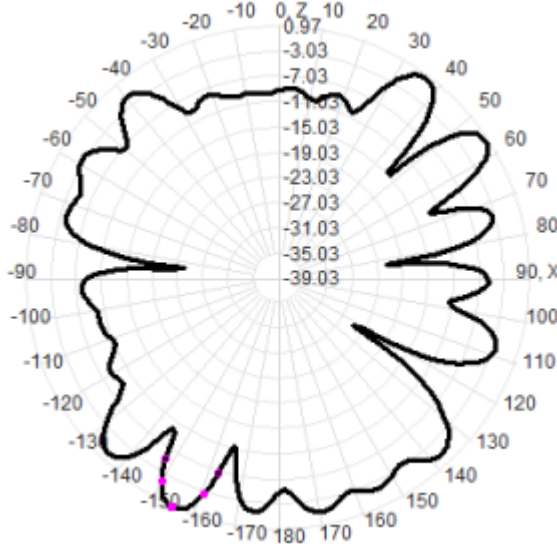
5950.0MHz H+V, Eff: 33.5%



Back View



5950.0MHz Total(E1-XZ), Max= 0.97dBi



5950.0MHz Total(E2-YZ), Max= -0.90dBi

