

CW-WZ-0003

4G External Antenna

Key Features

Frequency: 698-960MHz/1710-2700MHz

SMA Male Connector

External Rubber

Dimensions 158*17.6mm



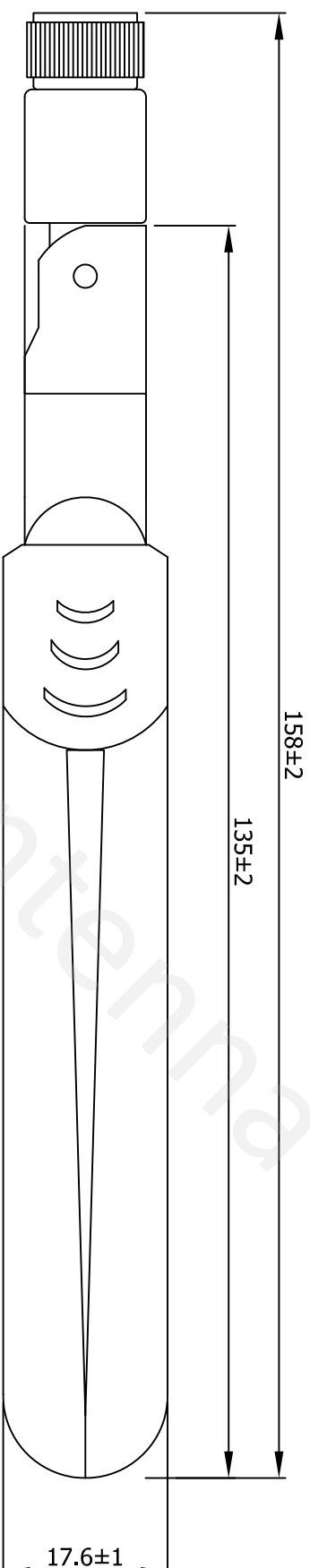
1. Antenna Electrical Characteristics

Band (MHz)		
Frequency (MHz)	698-960MHz	1710-2700MHz
VSWR	4:1	2.5:1
Efficiency (%)	63.76%	66.26%
Peak Gain (dBi)	1.89	4.03
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/TPEE
Cable Type	RG178
Connector Type	SMA Male
Dimensions (mm)	158*17.6MM
Antenna color	Black
Operation Temperature	-40 to +80
Storage Temperature	-40 to +80
Antenna Storage life(year)	10
Substance Compliance	ROHS

F			G	
REV	Date	Description		
X1	2021/07/31	New issue		



Specification(Free Test):
Frequency Range: 698-960MHZ/1710-2700MHZ
Impedance: 50Ω
V.S.W.R: ≤4.5/4

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	RG178 Single silver wire	1	
1	PCB	FR4	1	
NO	Name	Description	Q'TY	Remark
XX.	±5.0	Approved		
X.	±3.0	Customer		
.X	±1.0	Part NO.		
.XX	±0.2	Part name		
.XXX	±0.1	CW P/NO.		
		External antenna		
		REV	Unit	File
		X1	m/m	Sheet:
				1/1



Cowin Antenna

4. Antenna test parameters

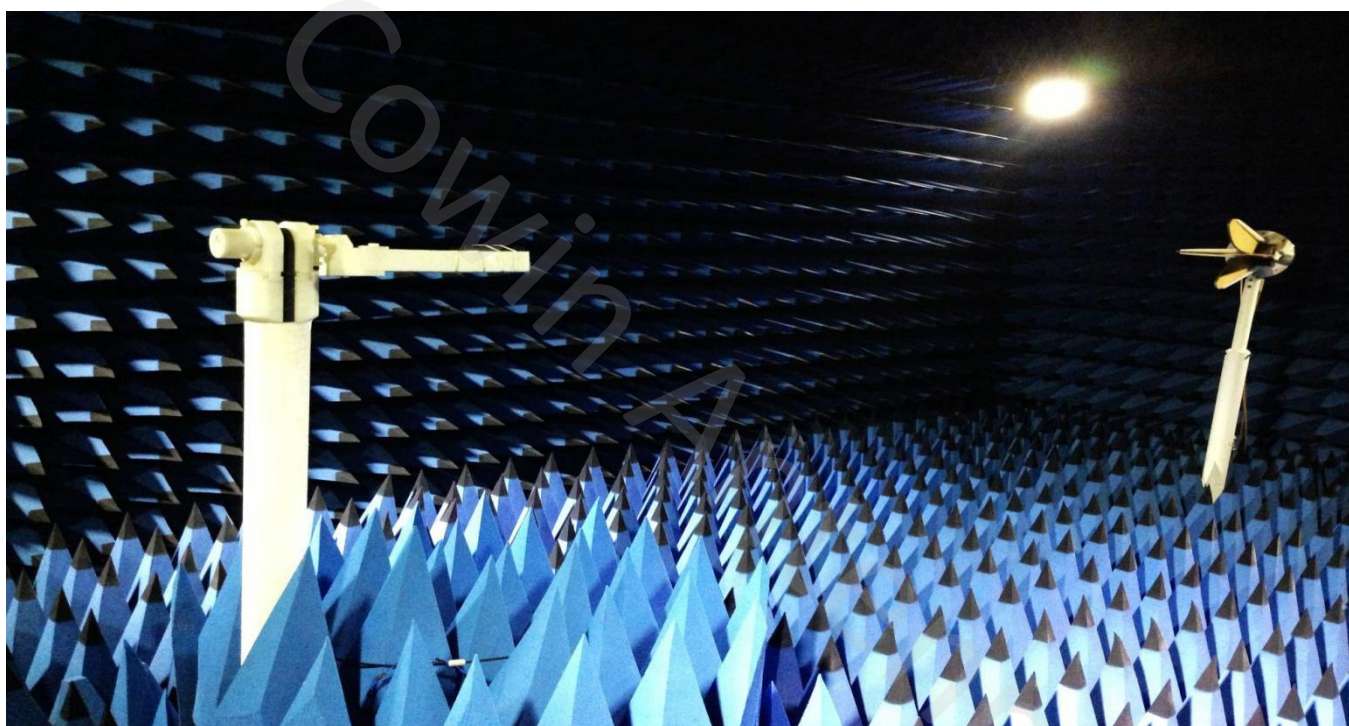
Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

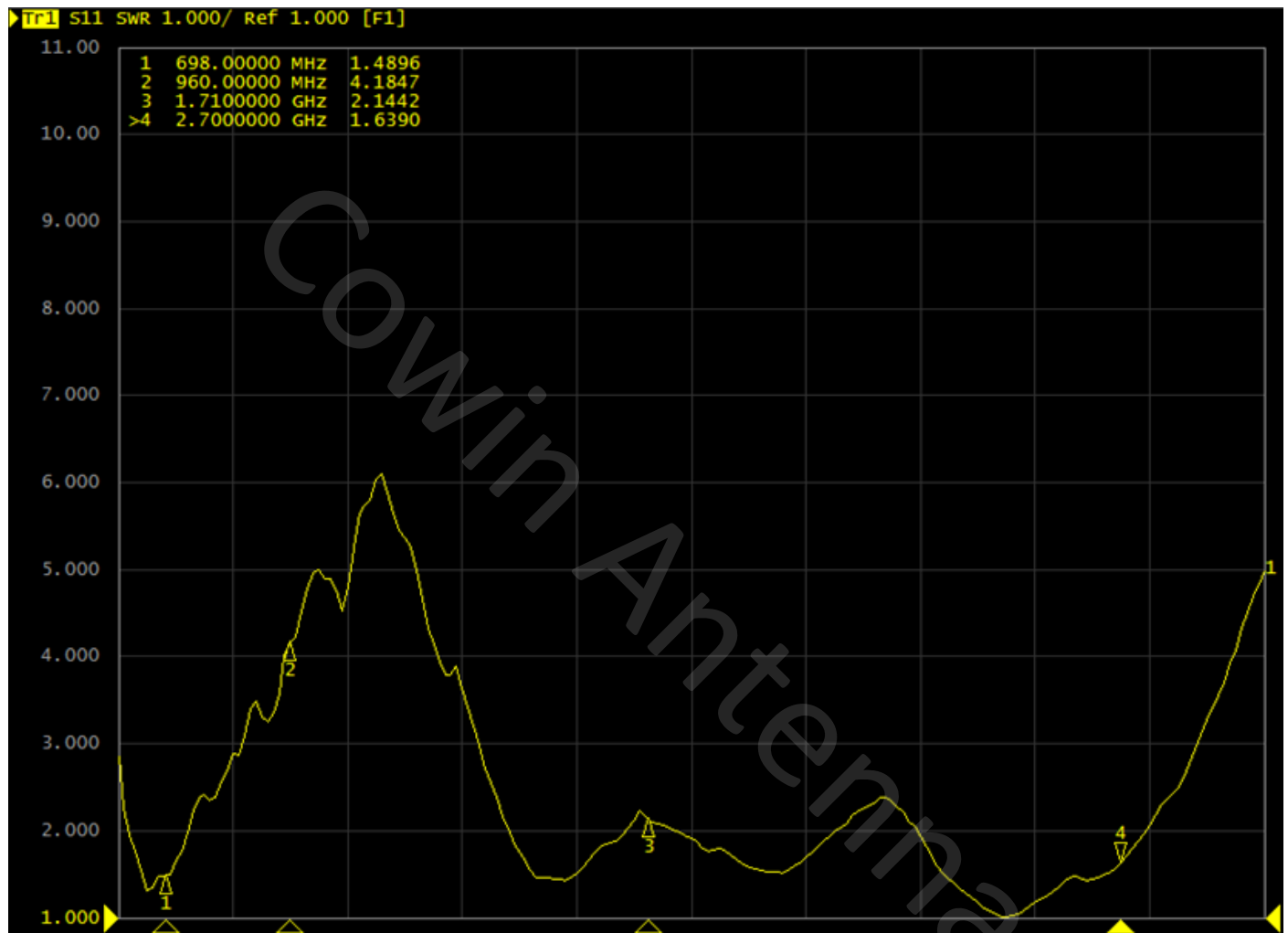
Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

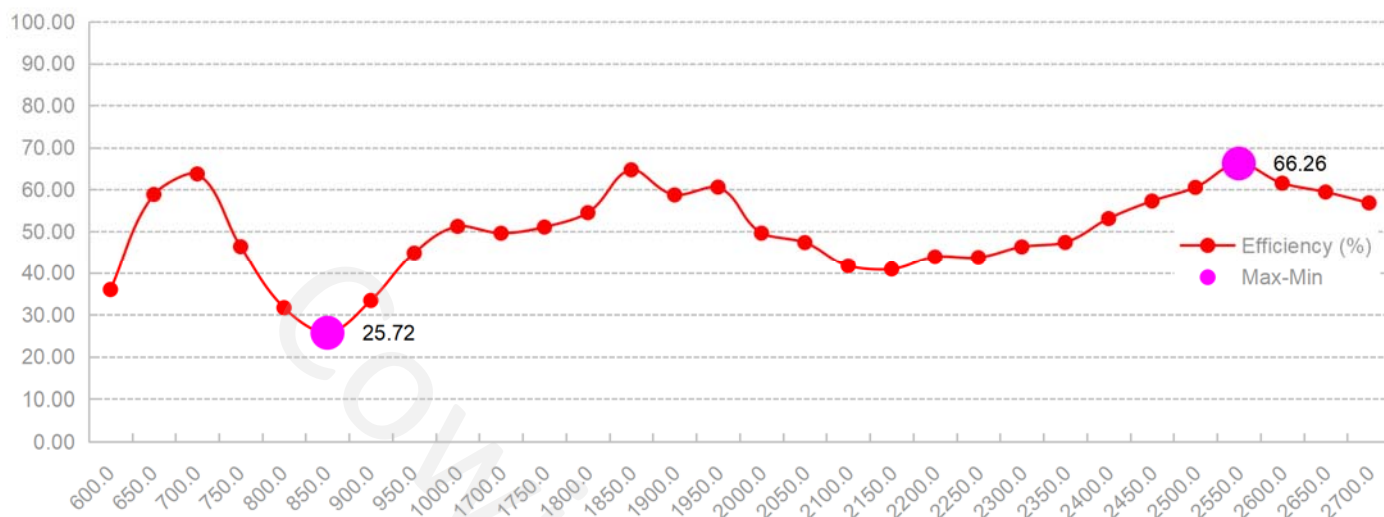
The comprehensive tester is Agilent cmv500



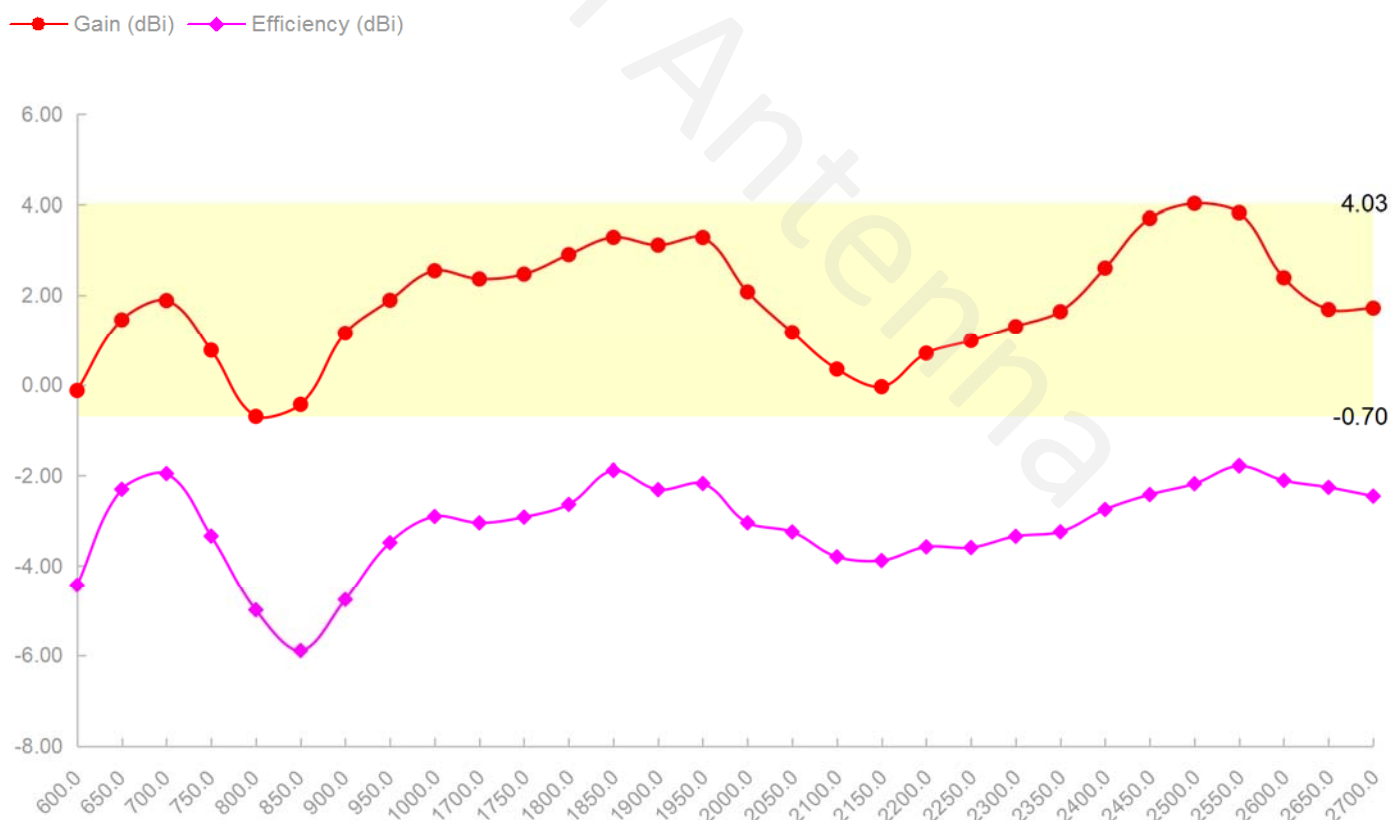
4.1 VSWR



4.2 Efficiency



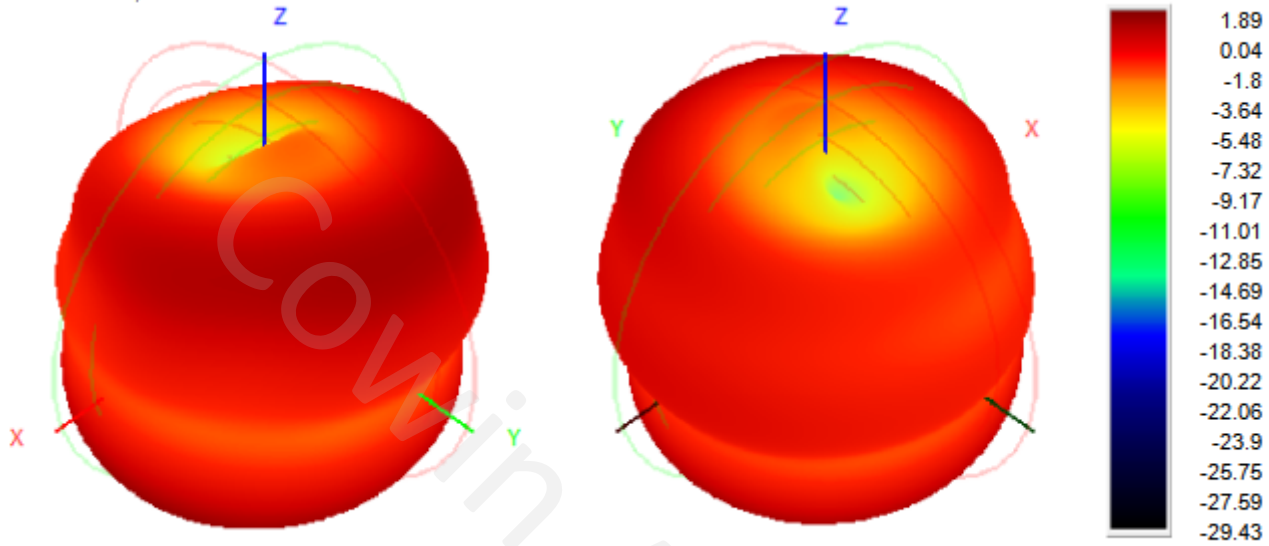
4.3 Peak gain



4.4 3D&2D Radiation Patterns

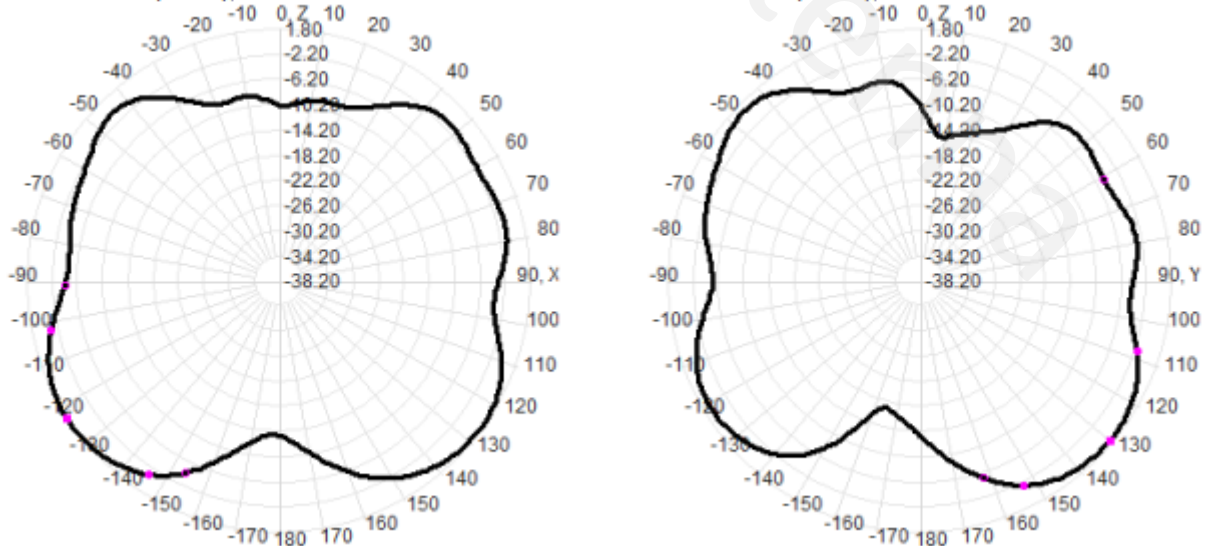
700.0MHz H+V, Eff: 63.8%

Back View



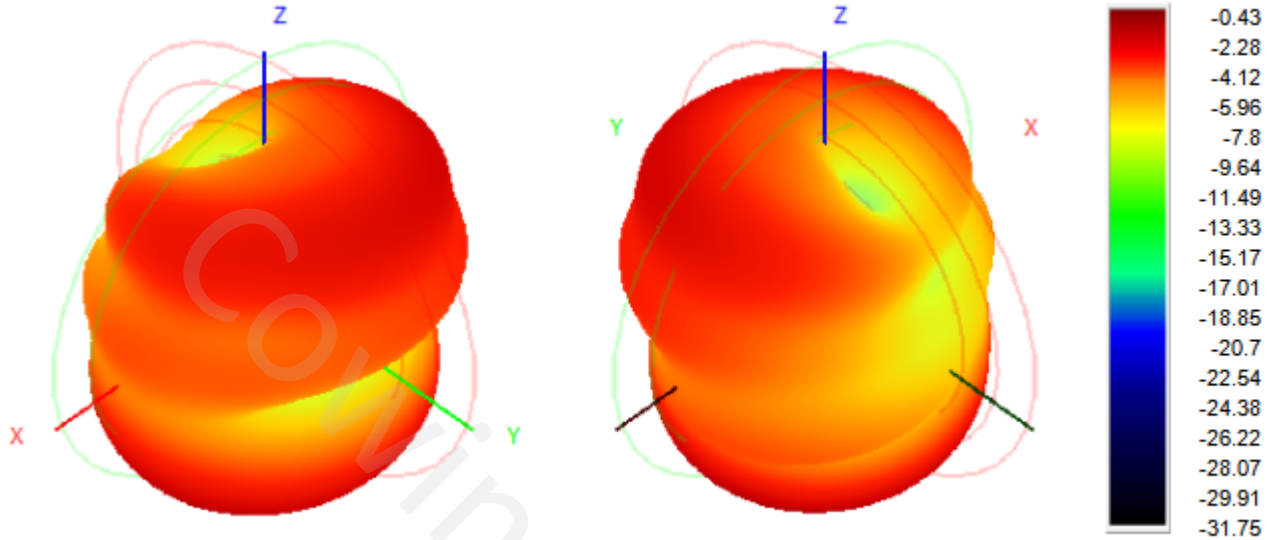
700.0MHz Total(E1-XZ), Max= 1.80dBi

700.0MHz Total(E2-YZ), Max= 1.02dBi



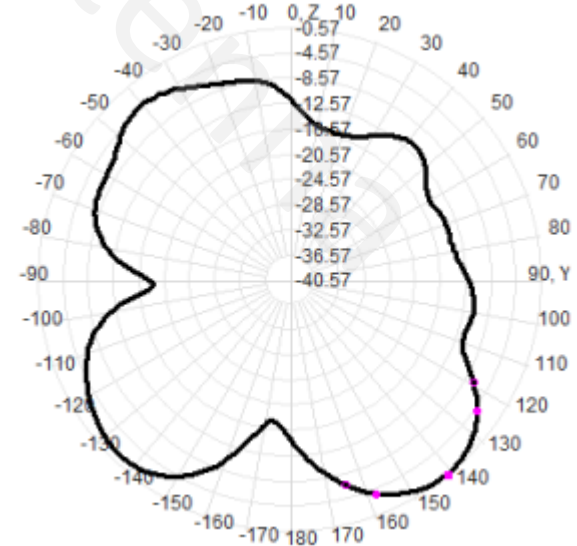
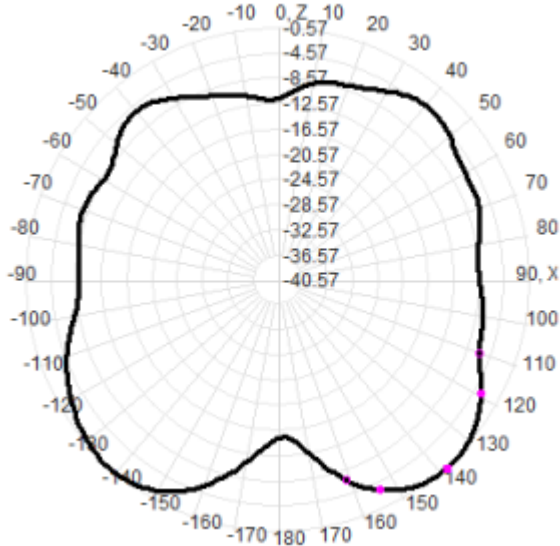
850.0MHz H+V, Eff: 25.7%

Back View

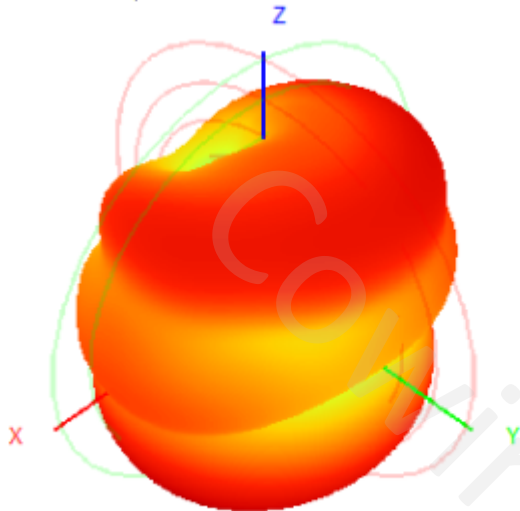


850.0MHz Total(E1-XZ), Max= -0.57dBi

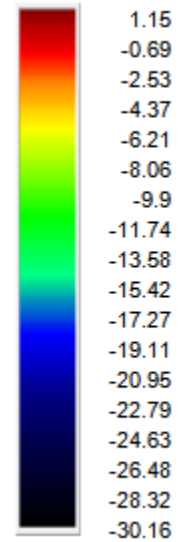
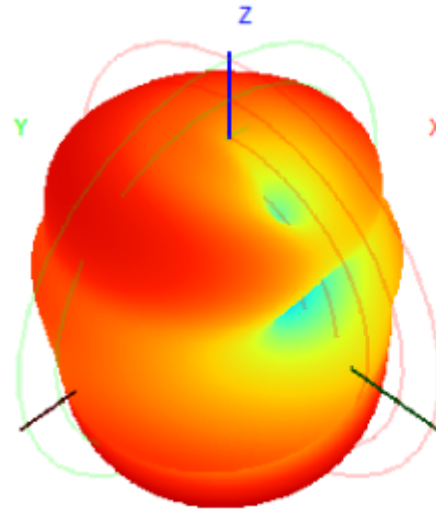
850.0MHz Total(E2-YZ), Max= -1.07dBi



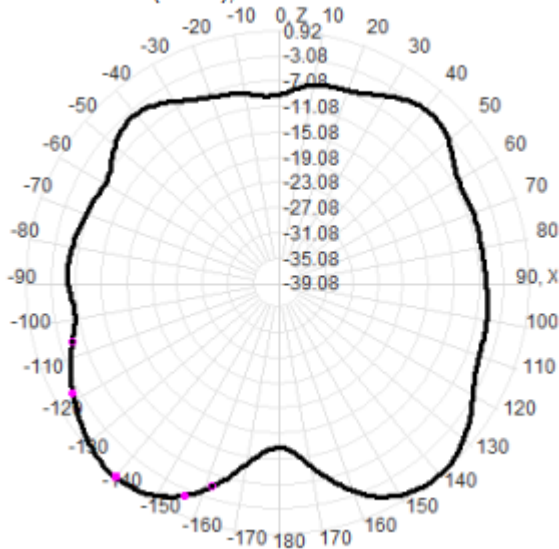
900.0MHz H+V, Eff: 33.4%



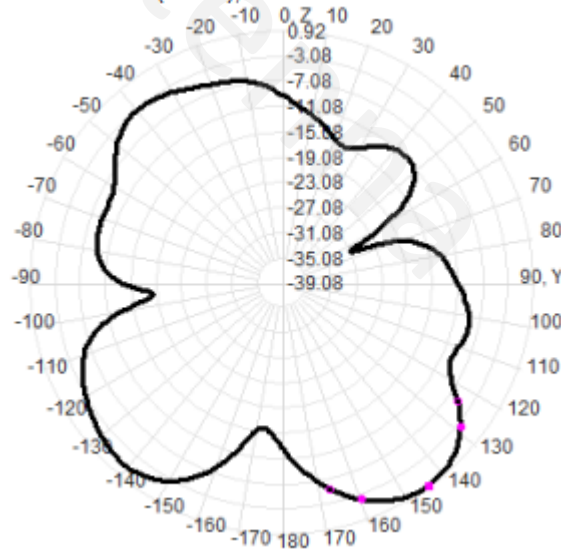
Back View



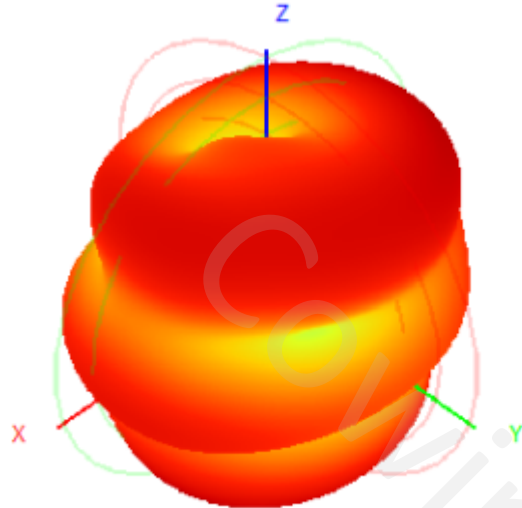
900.0MHz Total(E1-XZ), Max= 0.92dBi



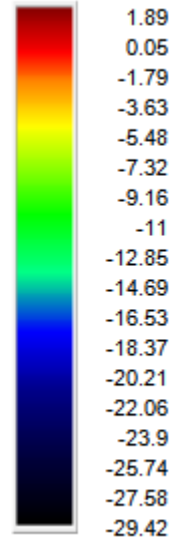
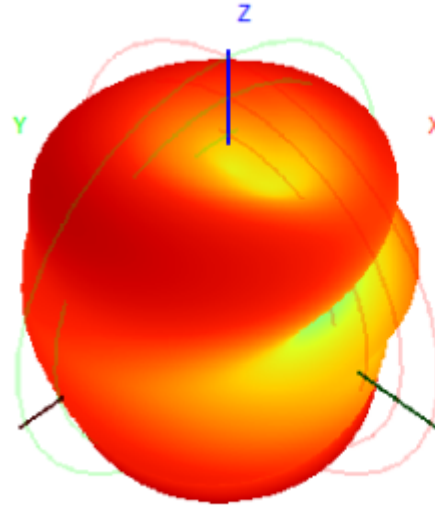
900.0MHz Total(E2-YZ), Max= 0.48dBi



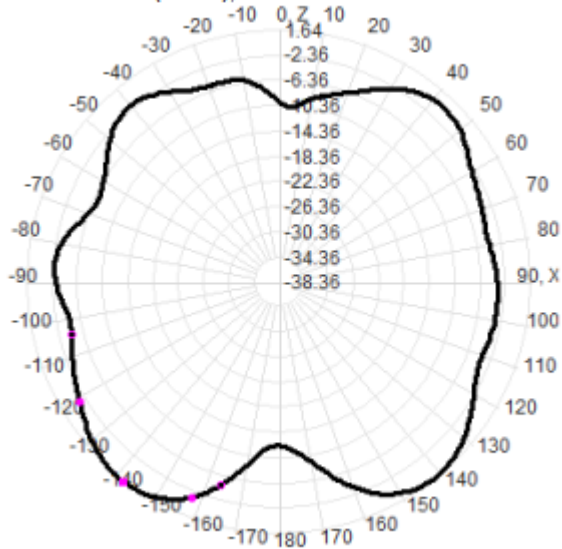
950.0MHz H+V, Eff: 44.8%



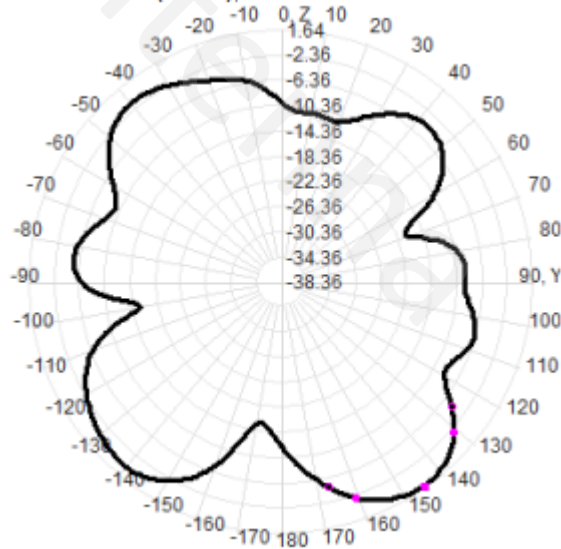
Back View



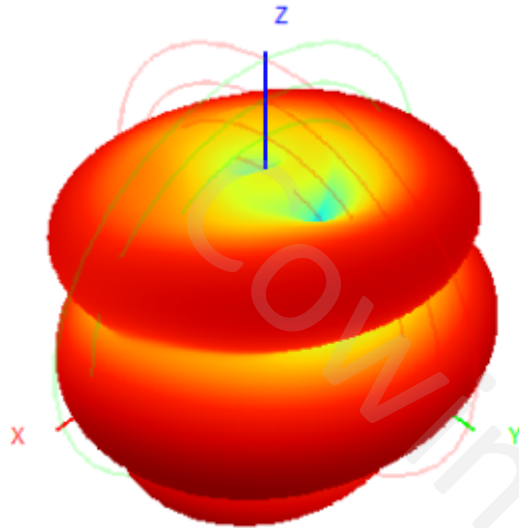
950.0MHz Total(E1-XZ), Max= 1.64dBi



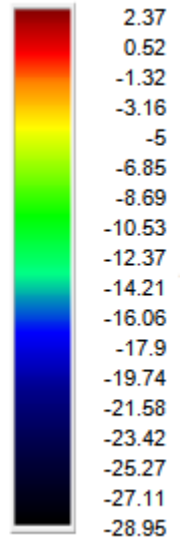
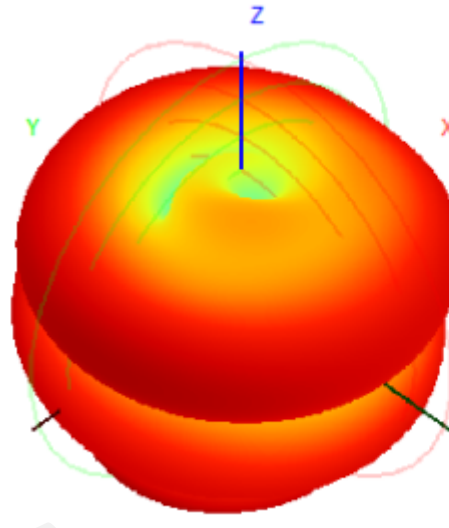
950.0MHz Total(E2-YZ), Max= 1.01dBi



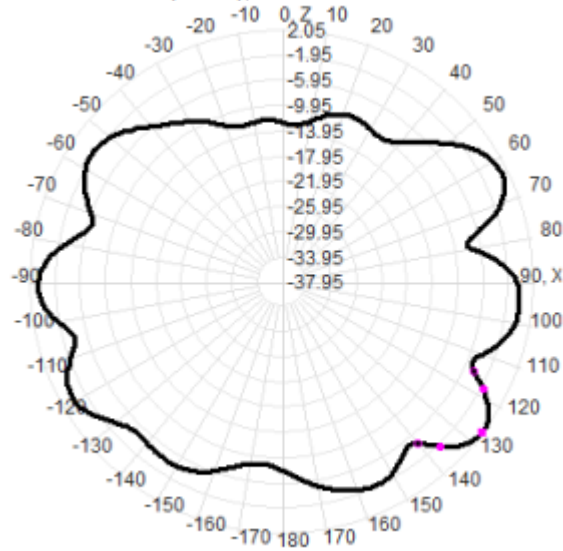
1700.0MHz H+V, Eff: 49.6%



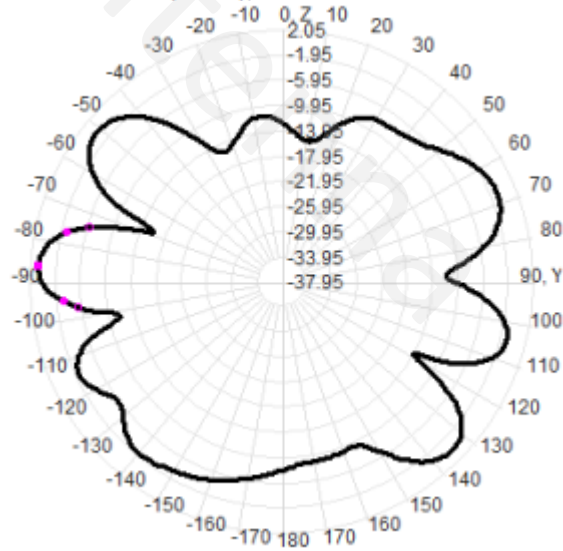
Back View



1700.0MHz Total(E1-XZ), Max= 1.65dBi

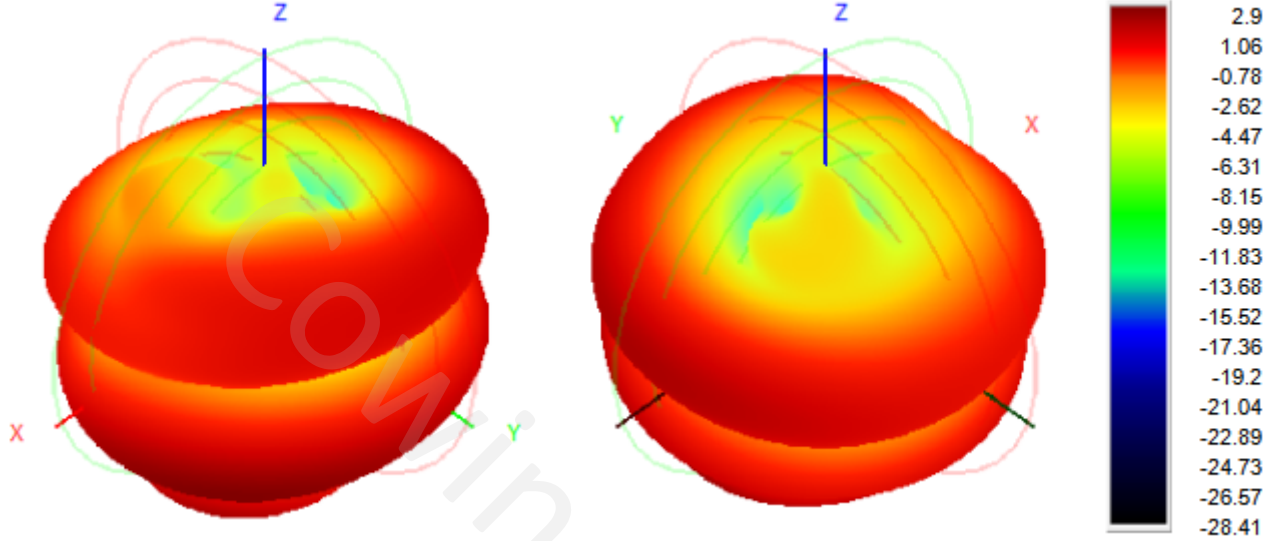


1700.0MHz Total(E2-YZ), Max= 0.75dBi

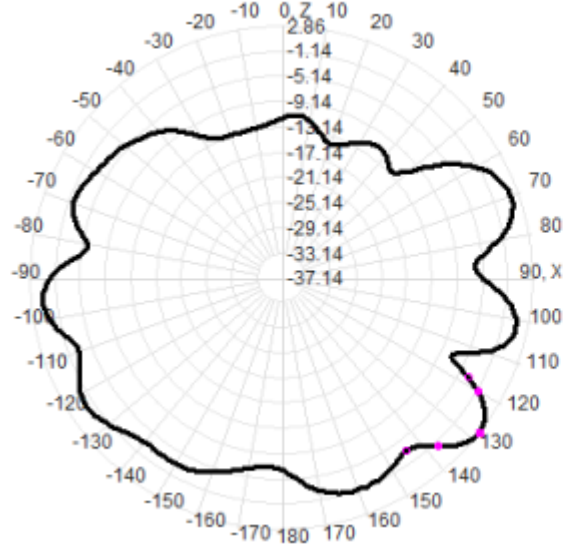


1800.0MHz H+V, Eff: 54.5%

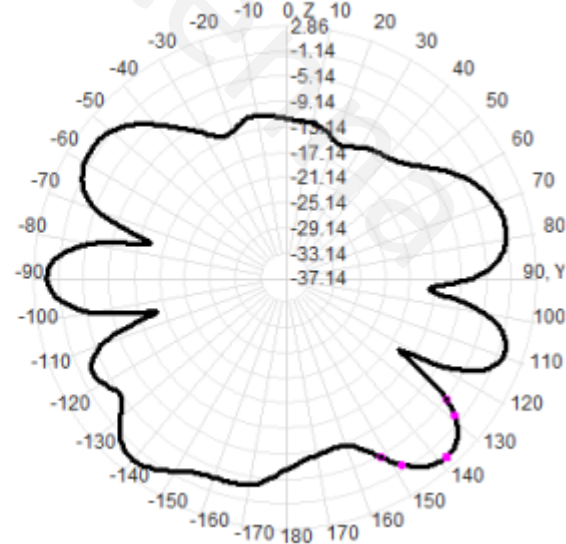
Back View



1800.0MHz Total(E1-XZ), Max= 2.50dBi

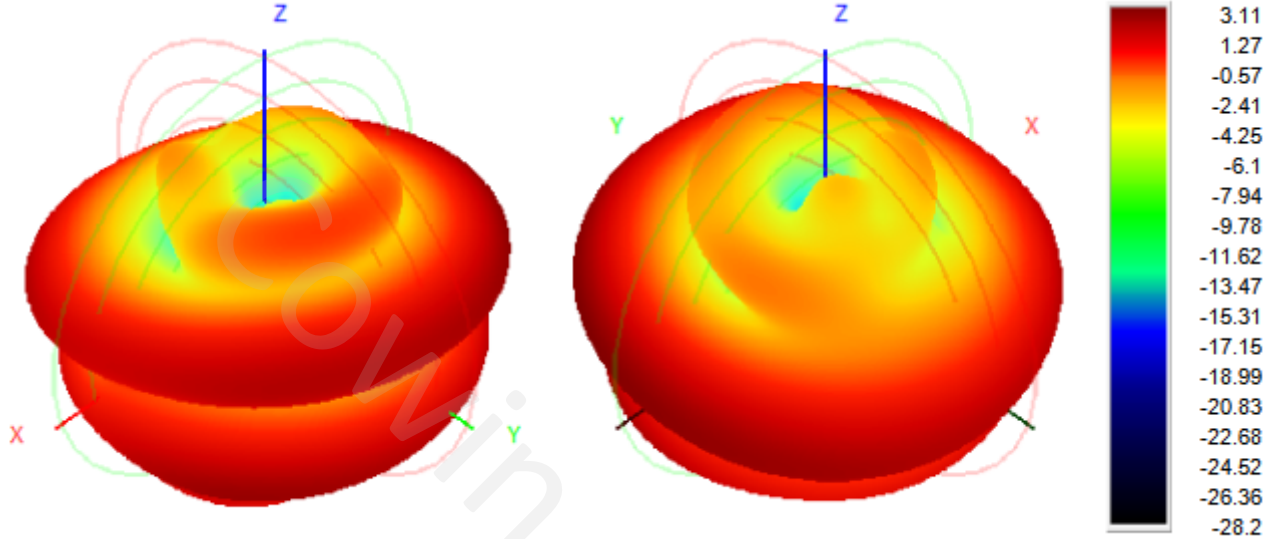


1800.0MHz Total(E2-YZ), Max= 0.99dBi



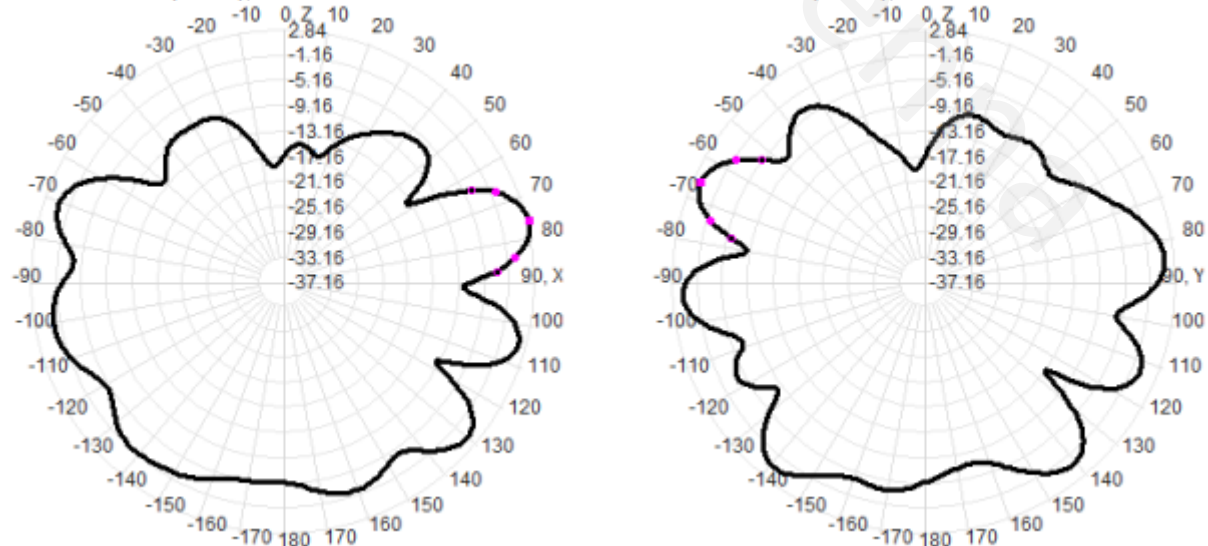
1900.0MHz H+V, Eff: 58.7%

Back View



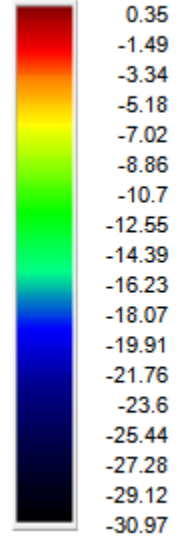
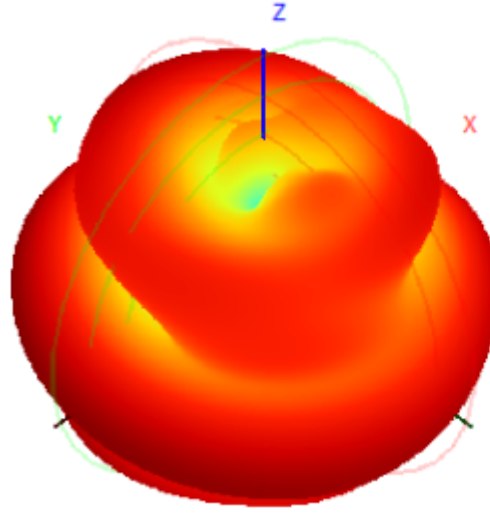
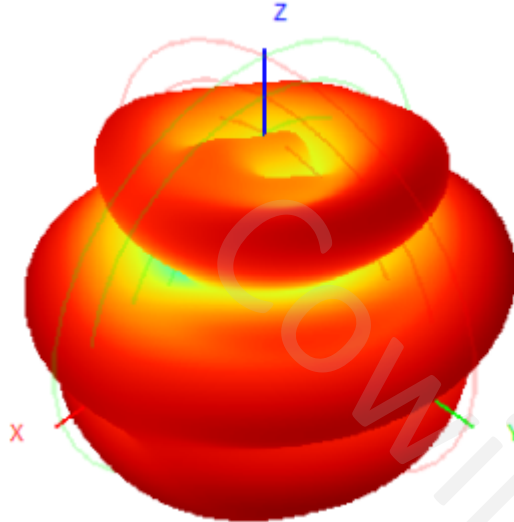
1900.0MHz Total(E1-XZ), Max= 2.84dBi

1900.0MHz Total(E2-YZ), Max= 1.49dBi

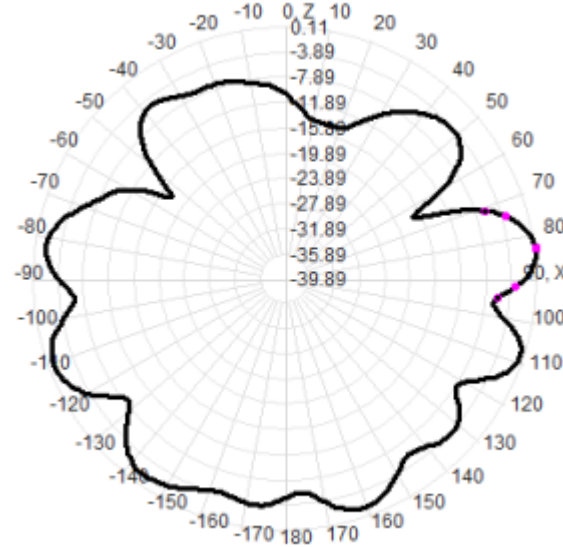


2100.0MHz H+V, Eff: 41.7%

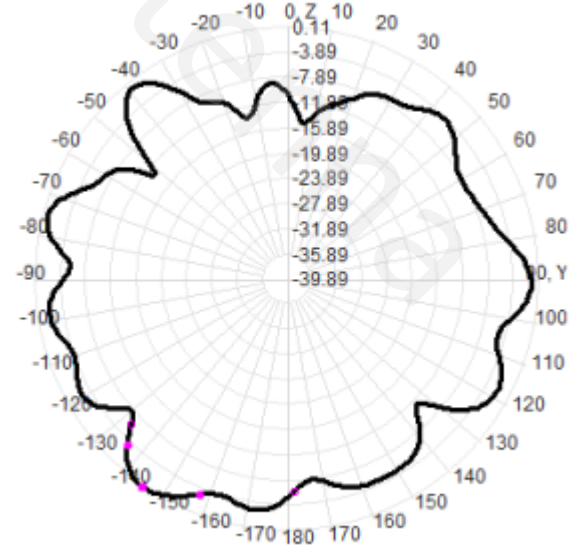
Back View



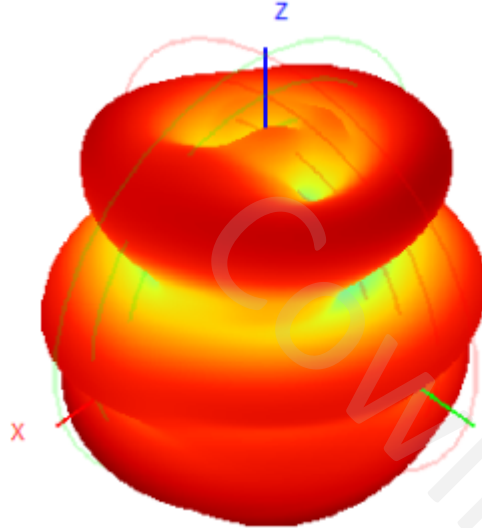
2100.0MHz Total(E1-XZ), Max= 0.01dBi



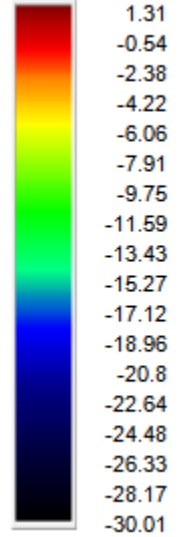
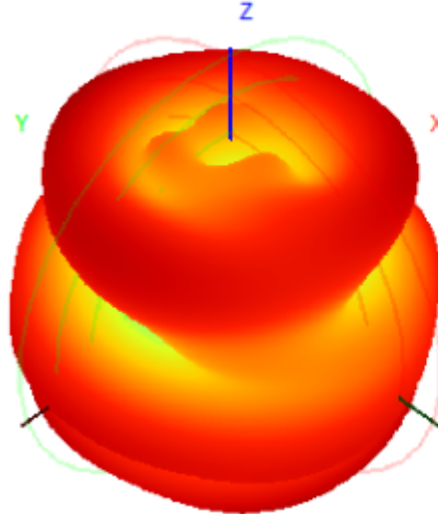
2100.0MHz Total(E2-YZ), Max= 0.11dBi



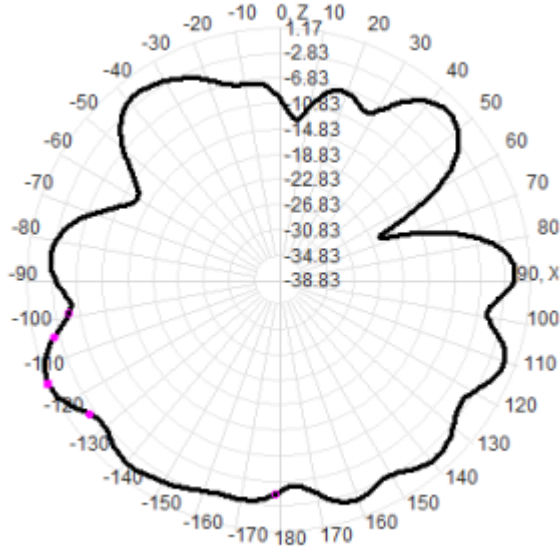
2300.0MHz H+V, Eff: 46.3%



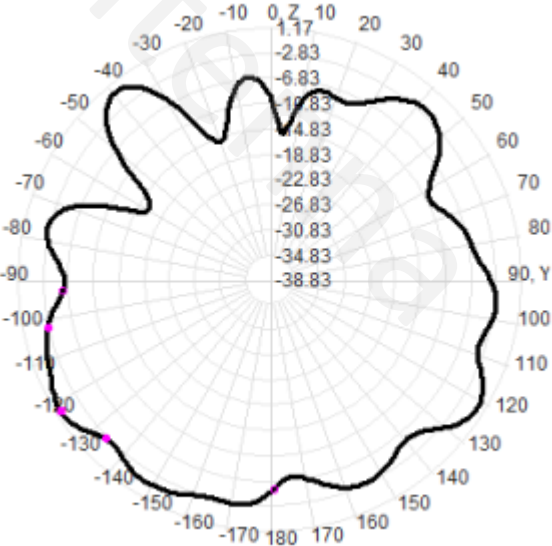
Back View



2300.0MHz Total(E1-XZ), Max= 1.17dBi

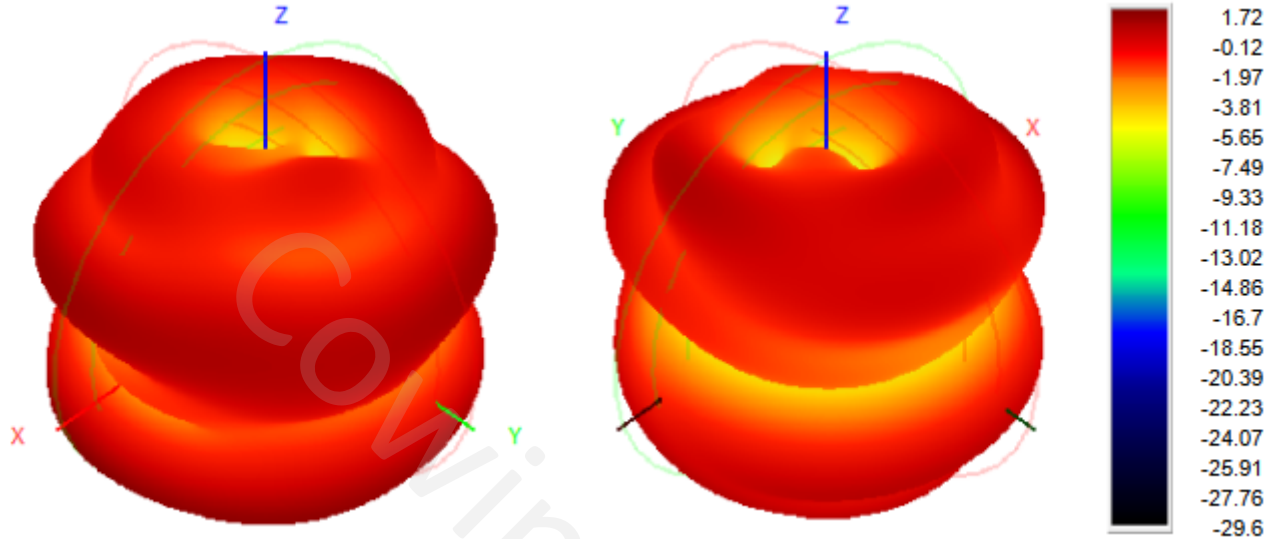


2300.0MHz Total(E2-YZ), Max= 0.27dBi



2700.0MHz H+V, Eff: 56.8%

Back View



2700.0MHz Total(E1-XZ), Max= 1.71dBi

2700.0MHz Total(E2-YZ), Max= 0.51dBi

