

## CW-WZ-0122

### 5G External Antenna

#### Key Features

Frequency: 698-2700MHZ/3300-3800MHZ/5150-5850MHZ

SMA Male Connector

External Rubber

Dimensions 176\*18 mm

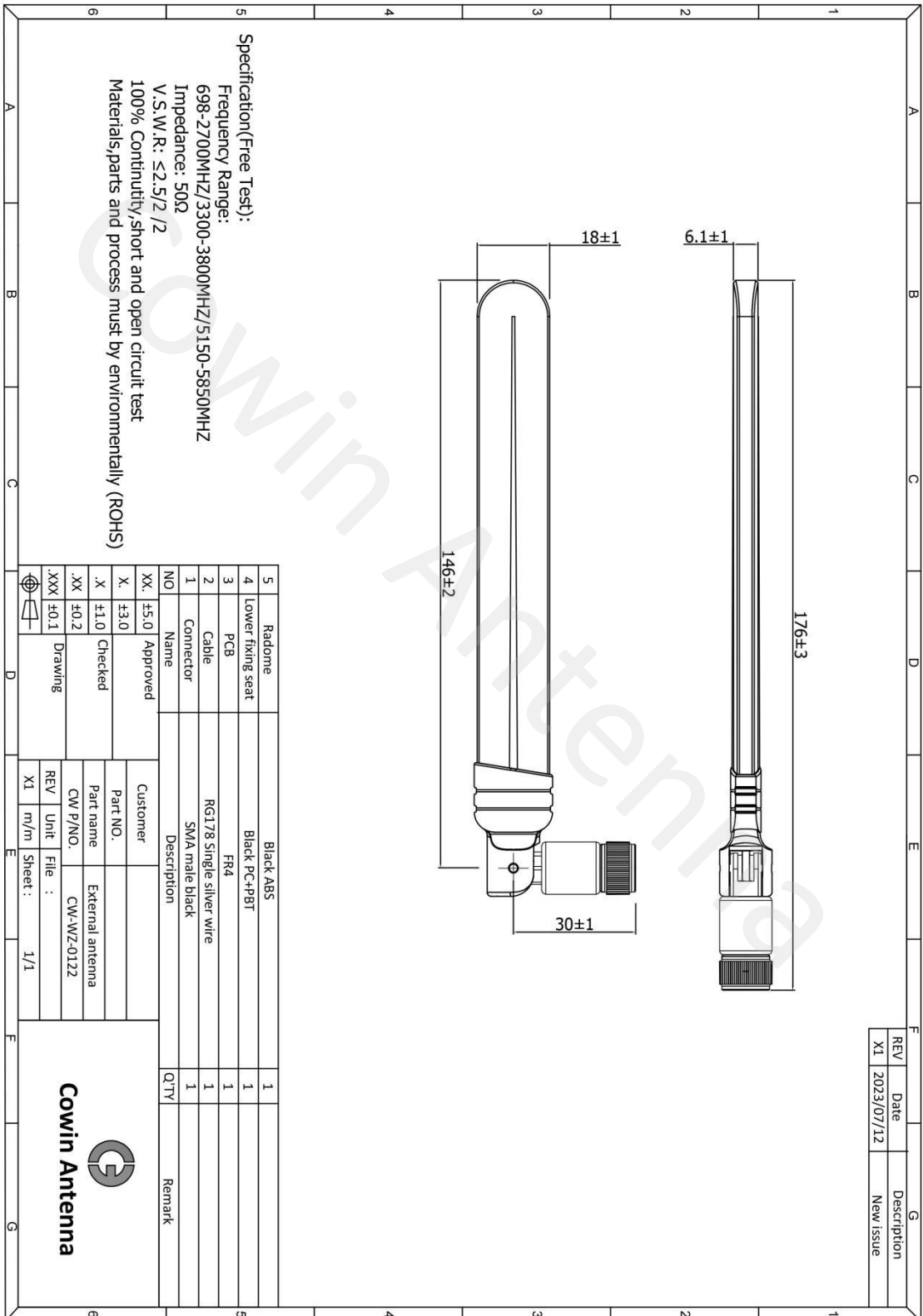


## 1. Antenna Electrical Characteristics

Band (MHz)	
Frequency (MHz)	698-2700MHZ/3300-3800MHZ/5150-5850MHZ
VSWR	2.5/2/2
Efficiency (%)	91.52% /82.24%/60.86%
Peak Gain (dBi)	5.133/5.36/6.04
Impedance (Ohm)	50
Polarisation	Vertical
Max. Input Power (W)	10
Connector Type	SMA Male

## 2. Material and environmental characteristics

Inner structure	PCB
Material of Plastic	PC+PBT/ABS
Cable Type	RG178
Connector Type	SMA Male
Dimensions (mm)	176*18MM
Antenna color	Black
Operation Temperature	-40 to +80
Storage Temperature	-40 to +80
Antenna Storage life(year)	10
Substance Compliance	ROHS



Specification(Free Test):  
 Frequency Range:  
 698-2700MHZ/3300-3800MHZ/5150-5850MHZ  
 Impedance: 50Ω  
 V.S.W.R: ≤2.5/2 /2  
 100% Continuity/short and open circuit test  
 Materials,parts and process must by environmentally (ROHS)

5	Radome	Black ABS	1	
4	Lower fixing seat	Black PC+PBT	1	
3	PCB	FR4	1	
2	Cable	RG178 Single silver wire	1	
1	Connector	SMA male black	1	
NO	Name	Description	QTY	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-0122	
XXX: ±0.1	Drawing	REV	File :	
		X1	m/m	Sheet : 1/1

REV	Date	Description
X1	2023/07/12	New issue



**Cowin Antenna**

## 4. Antenna test parameters

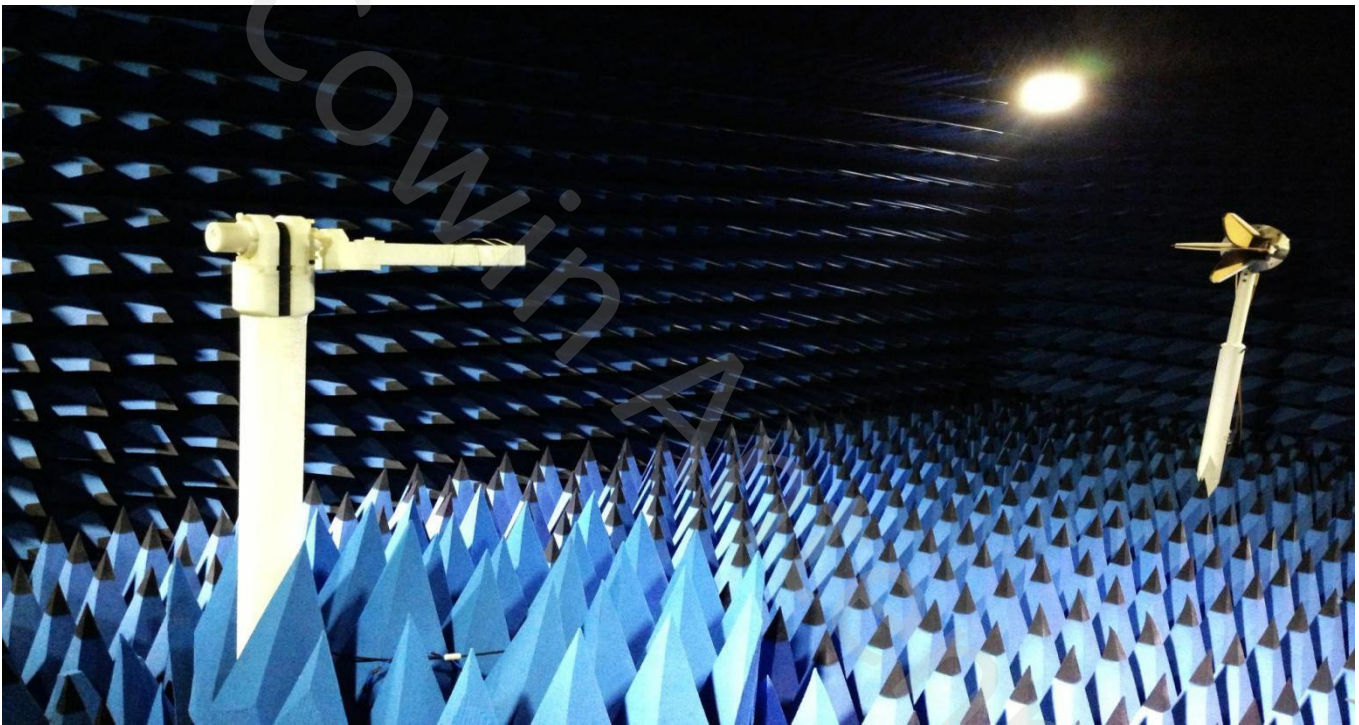
### Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

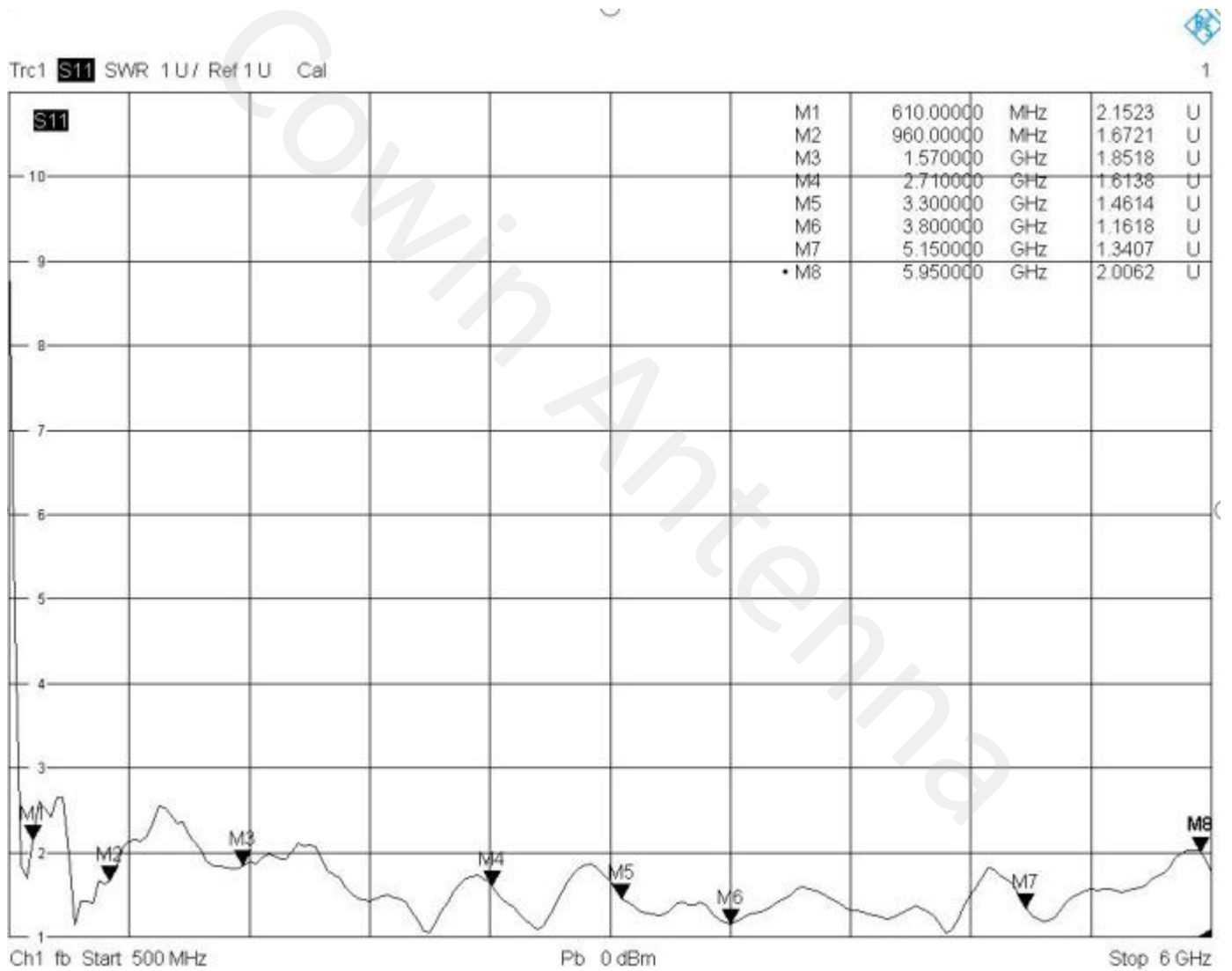
Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

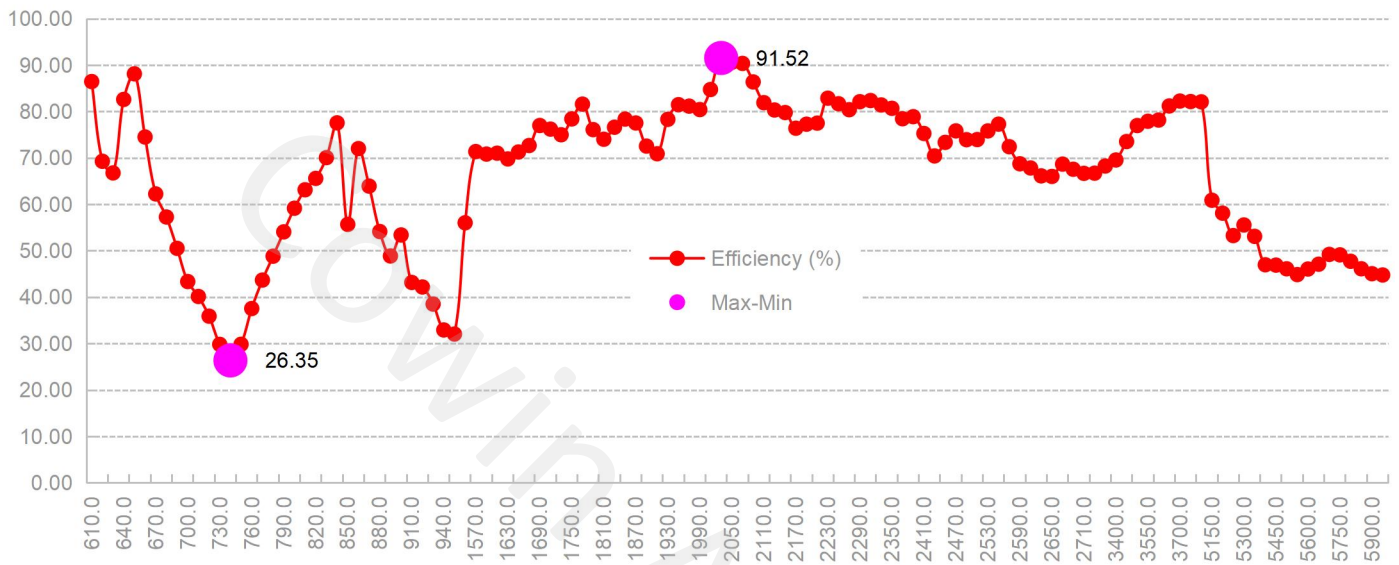
The comprehensive tester is Agilent cmv500



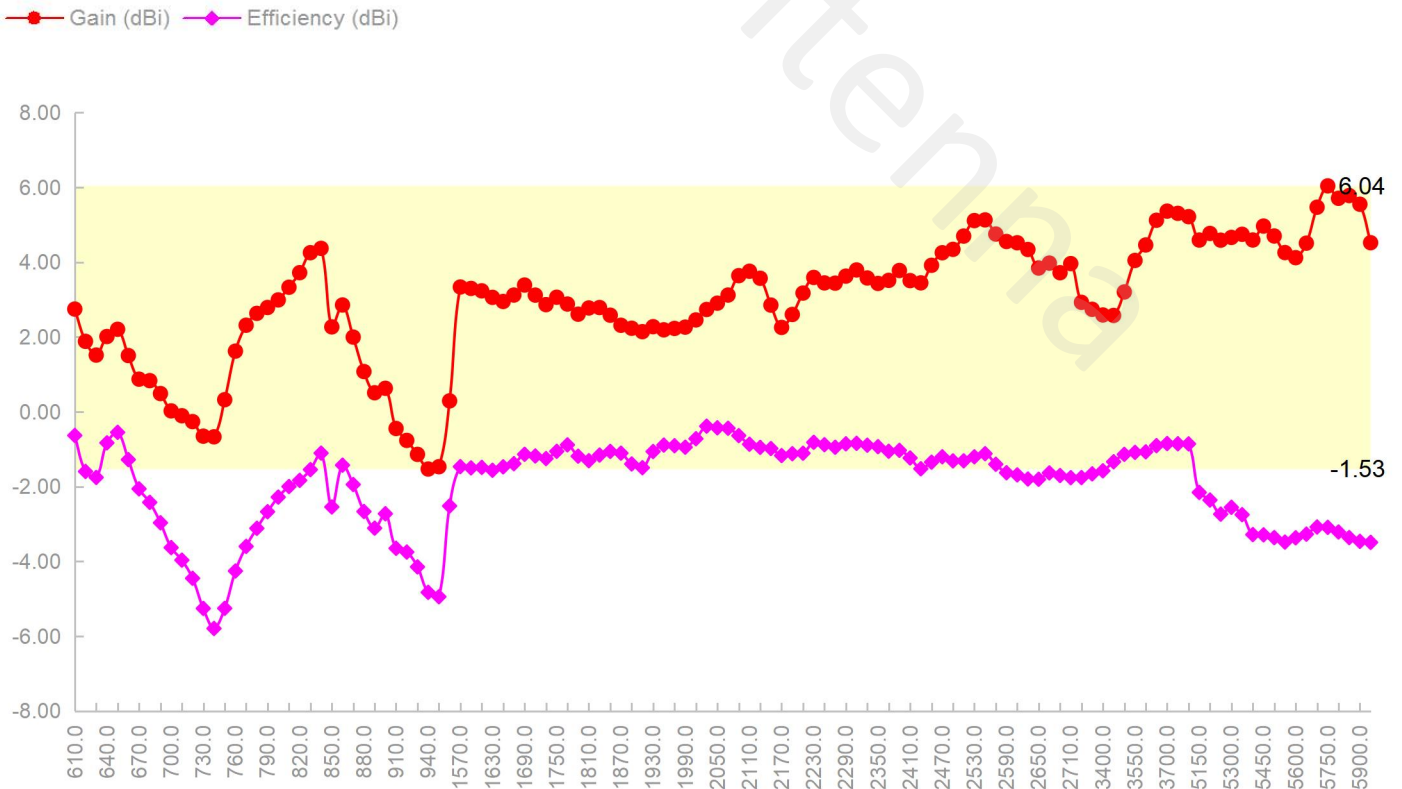
## 4.1 VSWR



## 4.2 Efficiency

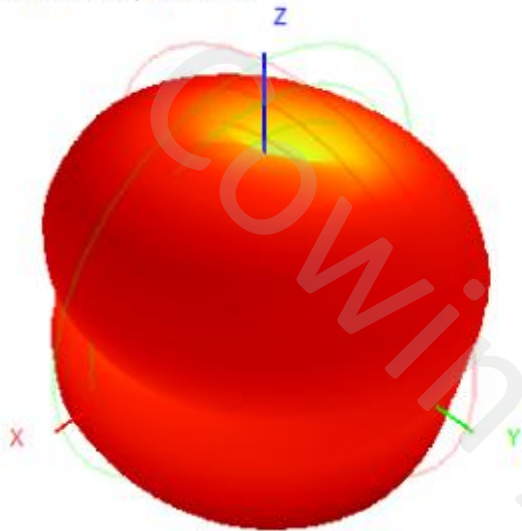


## 4.3 Peak gain

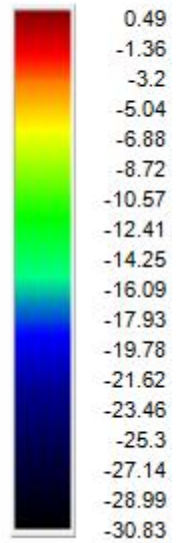
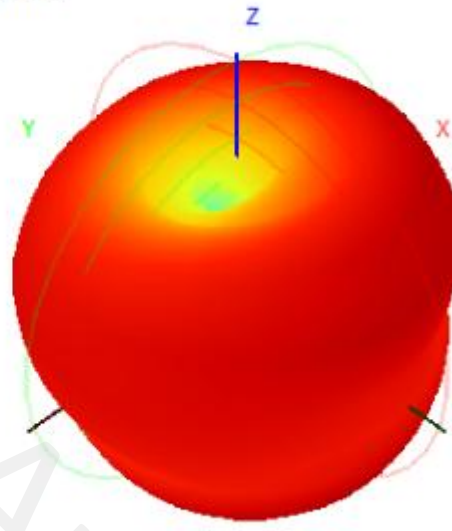


## 4.4 3D&2D Radiation Patterns

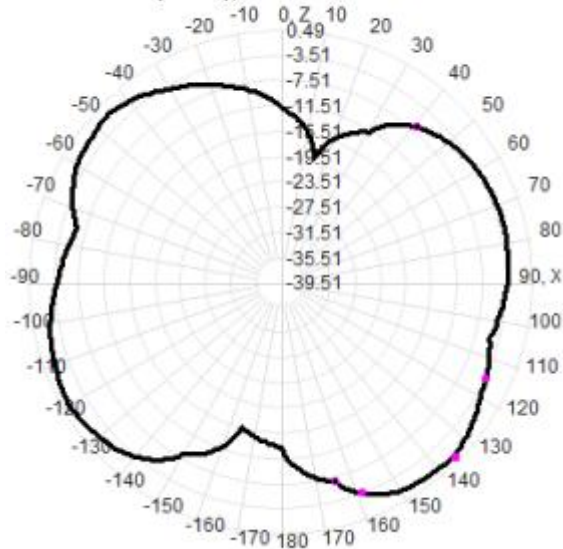
690.0MHz H+V, Eff: 50.5%



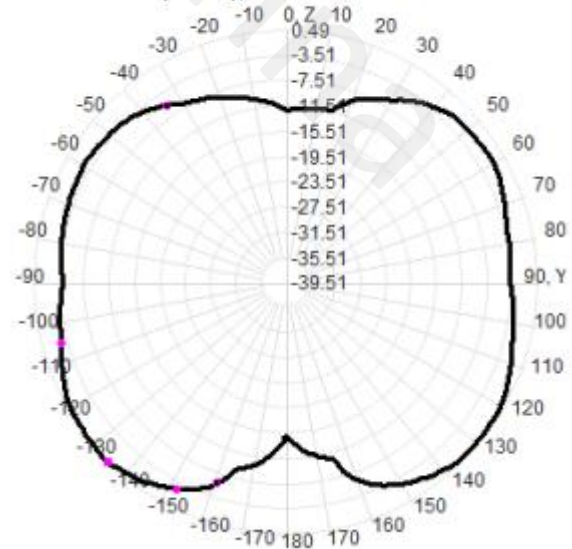
Back View



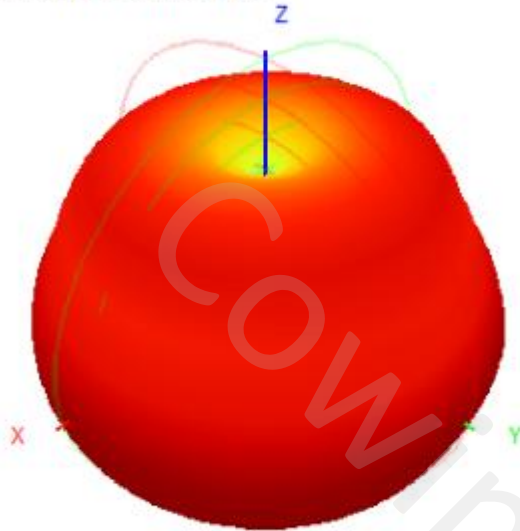
690.0MHz Total(E1-XZ), Max= -0.73dBi



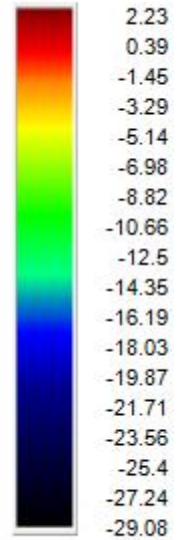
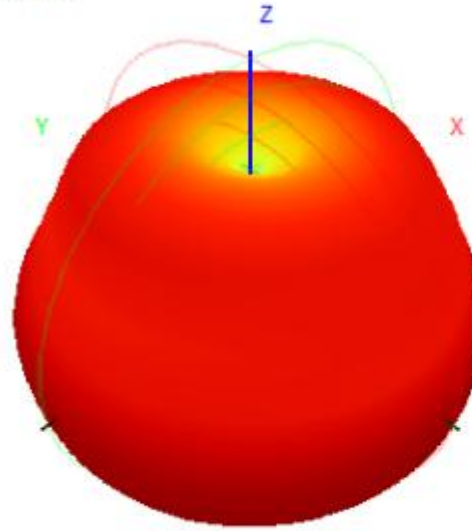
690.0MHz Total(E2-YZ), Max= 0.49dBi



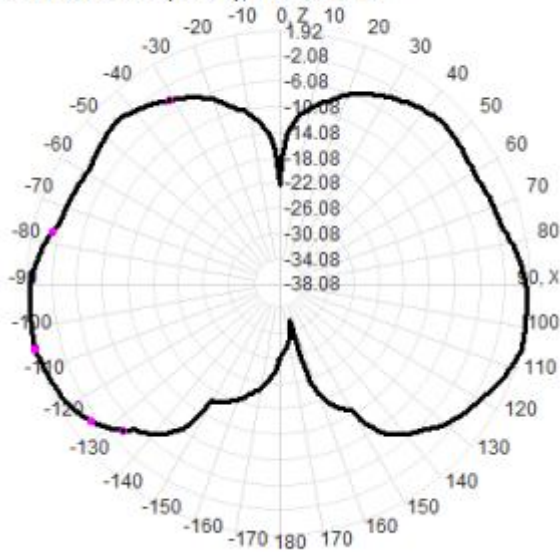
1890.0MHz H+V, Eff: 72.5%



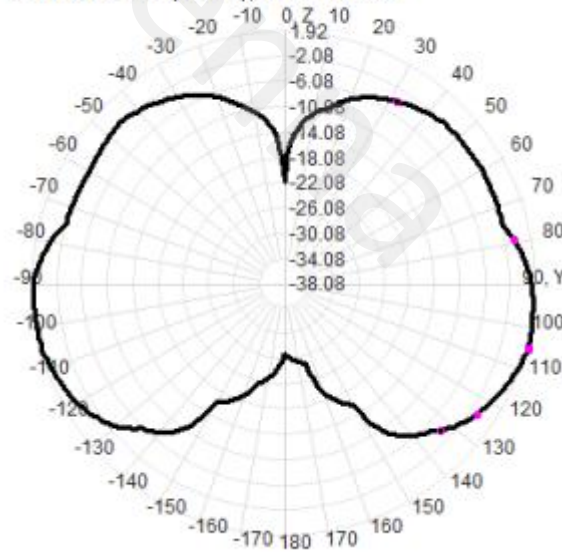
Back View



1890.0MHz Total(E1-XZ), Max= 1.88dBi

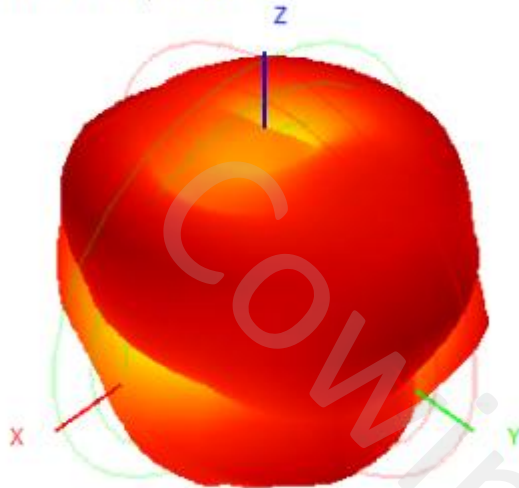


1890.0MHz Total(E2-YZ), Max= 1.92dBi

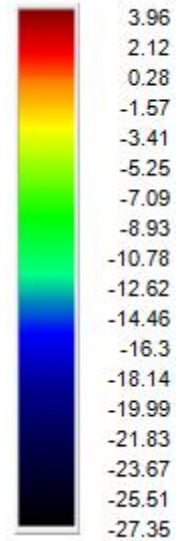
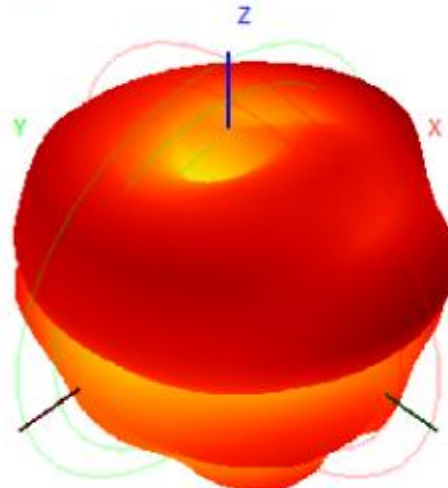




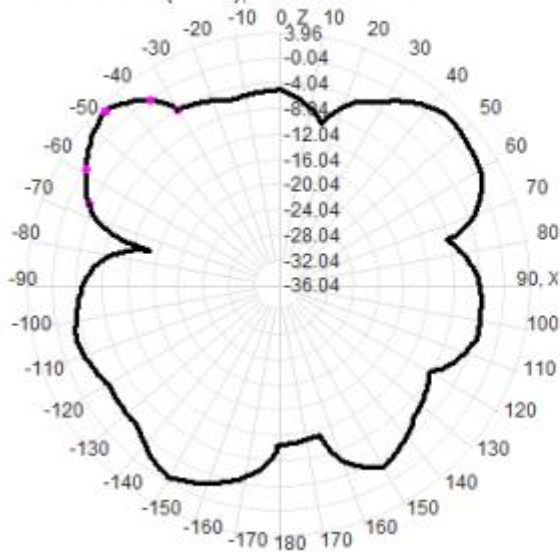
2710.0MHz H+V, Eff: 66.7%



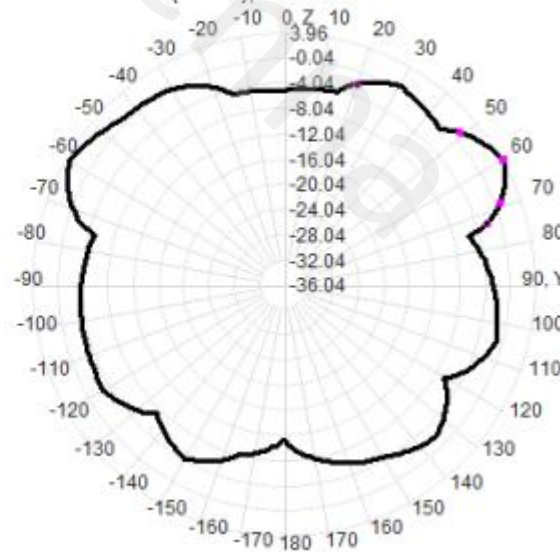
Back View



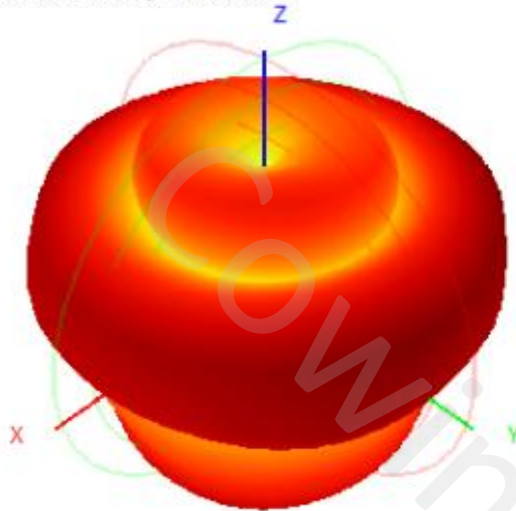
2710.0MHz Total(E1-XZ), Max= 2.98dBi



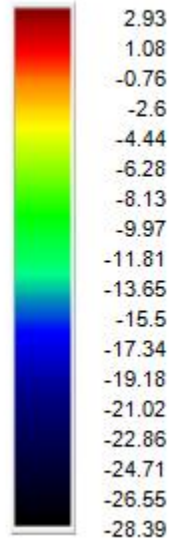
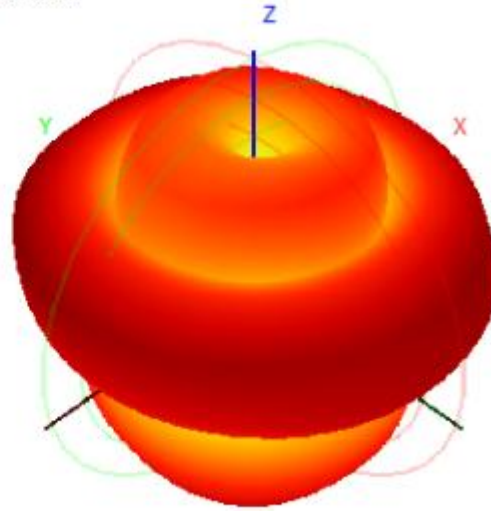
2710.0MHz Total(E2-YZ), Max= 3.96dBi



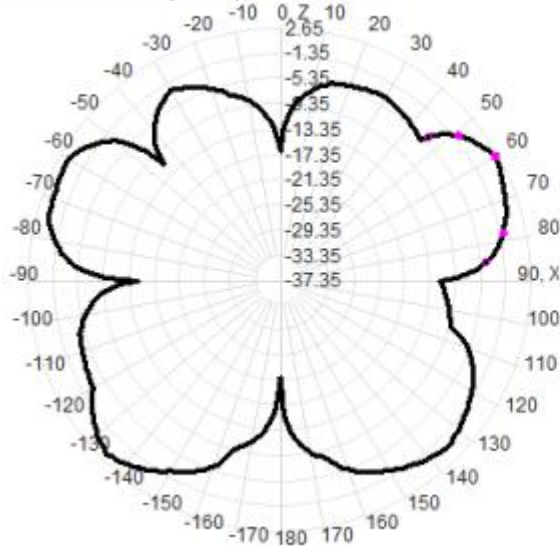
3300.0MHz H+V, Eff: 66.7%



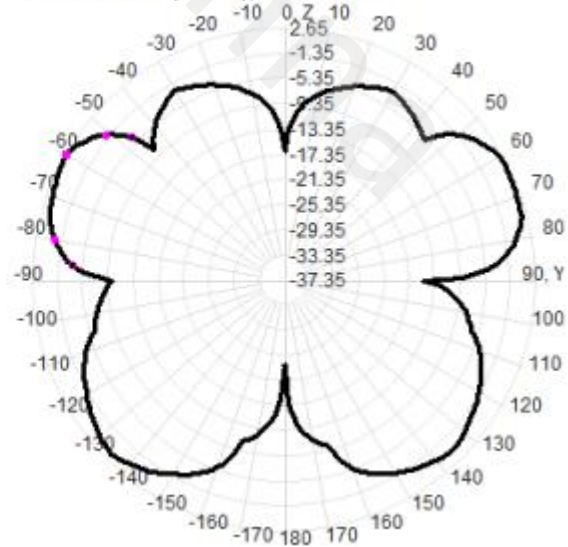
Back View



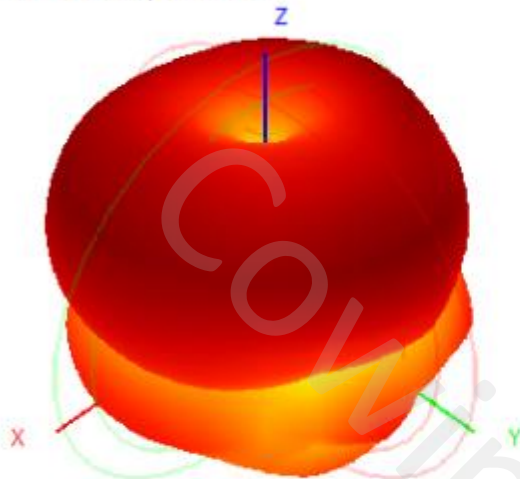
3300.0MHz Total(E1-XZ), Max= 2.04dBi



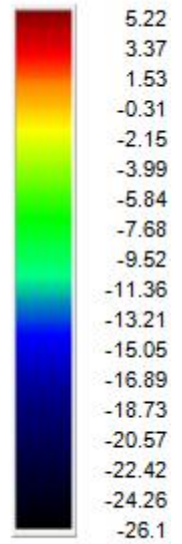
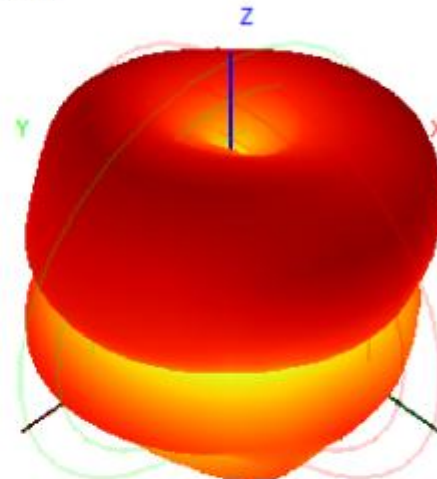
3300.0MHz Total(E2-YZ), Max= 2.65dBi



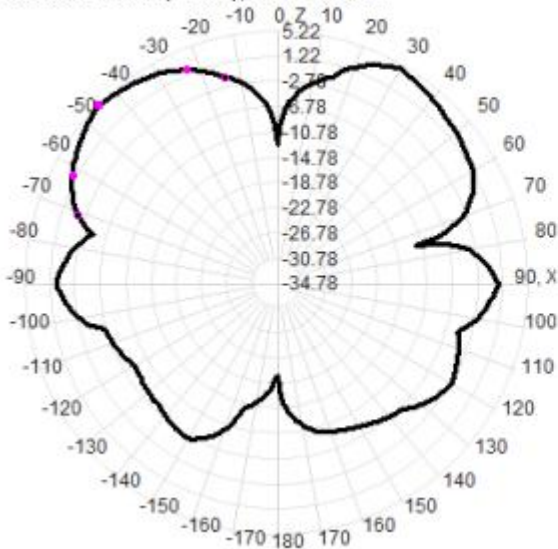
3800.0MHz H+V, Eff: 82.1%



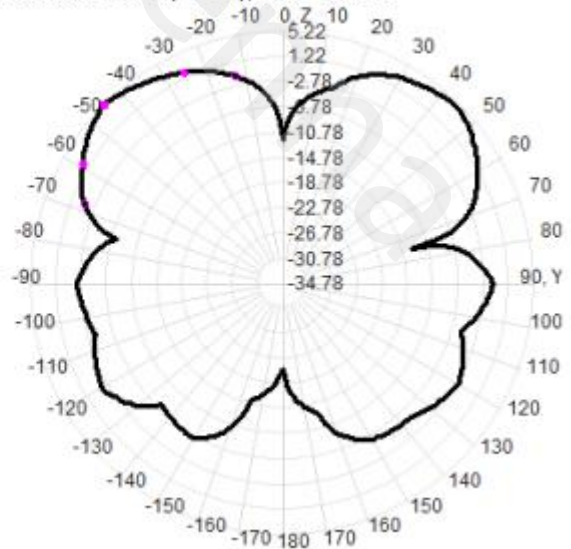
Back View



3800.0MHz Total(E1-XZ), Max= 5.07dBi

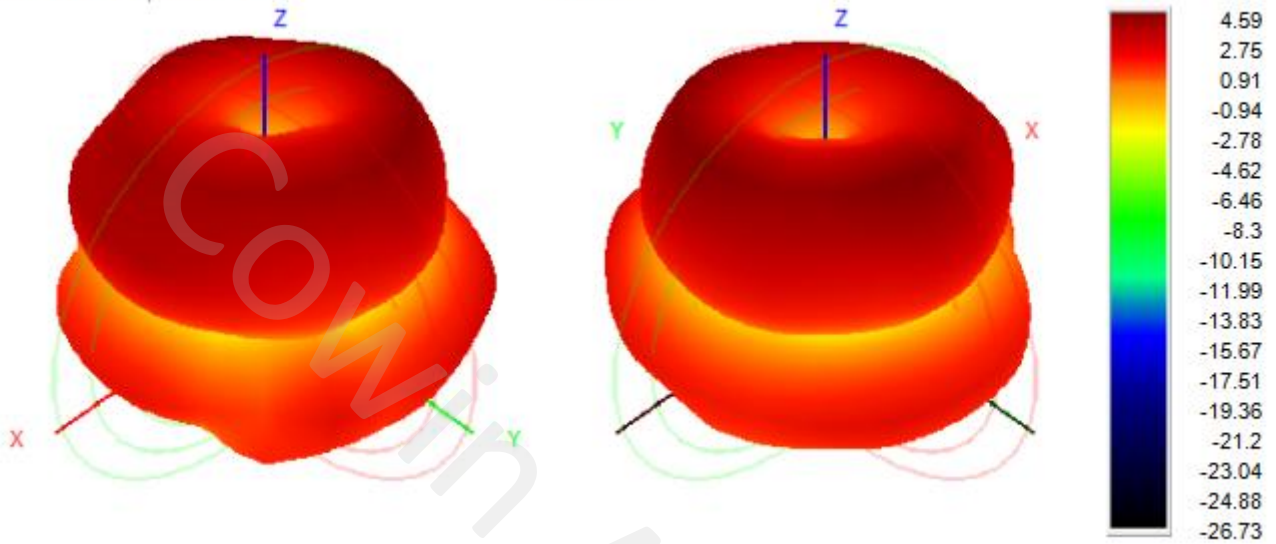


3800.0MHz Total(E2-YZ), Max= 5.22dBi



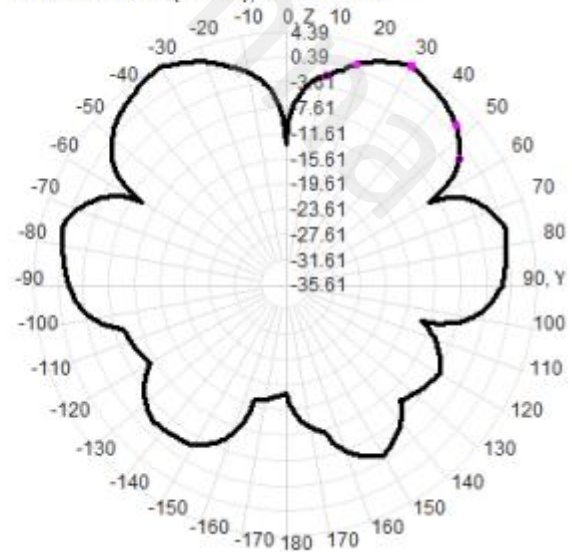
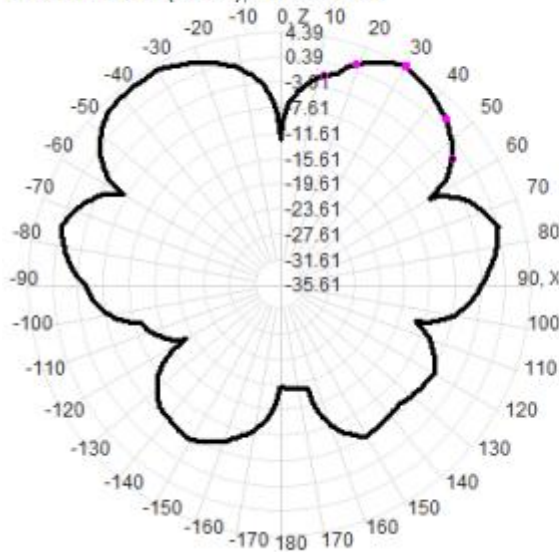
5150.0MHz H+V, Eff: 60.9%

Back View

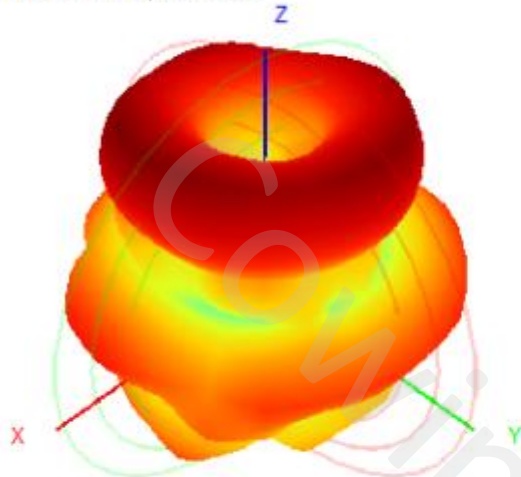


5150.0MHz Total(E1-XZ), Max= 4.39dBi

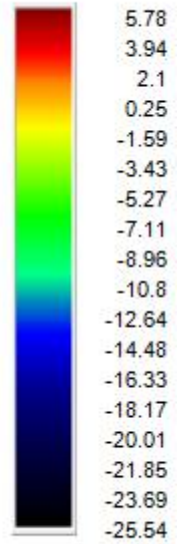
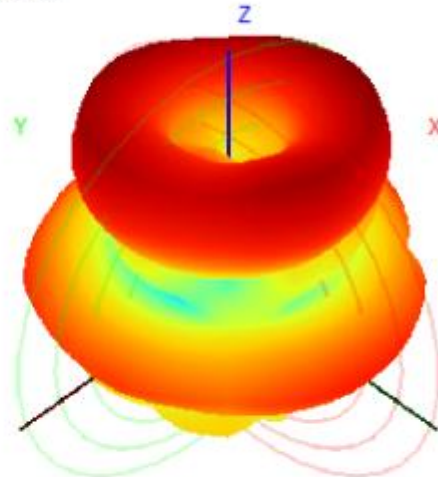
5150.0MHz Total(E2-YZ), Max= 4.38dBi



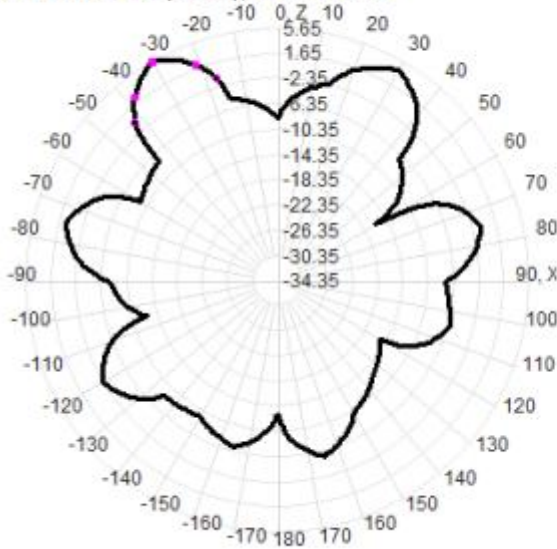
5850.0MHz H+V, Eff: 46.1%



Back View



5850.0MHz Total(E1-XZ), Max= 5.65dBi



5850.0MHz Total(E2-YZ), Max= 5.47dBi

