

CW-WZ-0031

4G External Antenna

Key Features

Frequency: 698-960MHz/1710-2700MHz

SMA Male Connector

External Rubber

Dimensions 50*8 mm



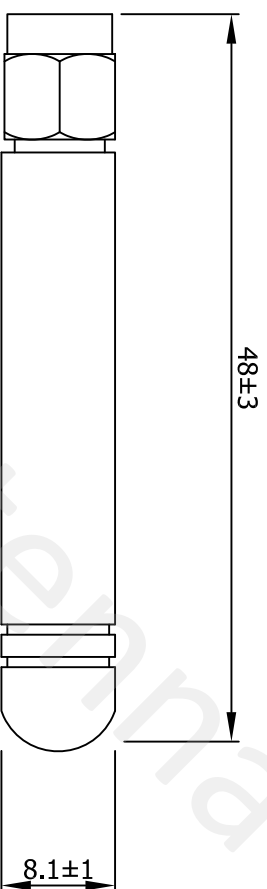
1. Antenna Electrical Characteristics

Band (MHz)		
Frequency (MHz)	698-960MHz	1710-2700MHz
VSWR	3:1	2:1
Efficiency (%)	55.78%	69.3%
Peak Gain (dBi)	1.72	4.04
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	TPEE
Cable Type	N/A
Connector Type	SMA male
Dimensions (mm)	50*8MM
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	2021/09/08	New issue



Specification(Free Test):
 Frequency Range: 698-960MHZ/1710-2700MHZ
 Impedance: 50Ω
 V.S.W.R: ≤3/2

4	Signal pole	Brass	1	
3	Connector	SMA male	1	
2	PCB	FR4	1	
1	Radome	Black TPEE	1	
NO	Name	Description	Q'TY	Remark
XX.	±5.0	Approved		
X.	±3.0			
X	±1.0	Checked		
.XX	±0.2			
.XXX	±0.1	Drawing		
		Customer		
		Part NO.		
		Part name	External antenna	
		CW P/NO.	CW-WZ-0031	
		REV	Unit	File
		X1	m/m	Sheet :
				1/1



Cowin Antenna

4. Antenna test parameters

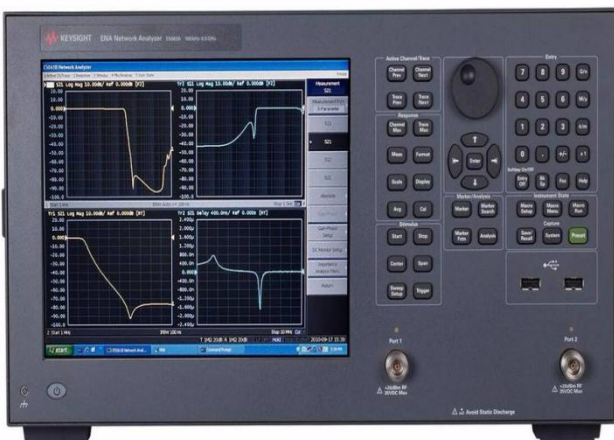
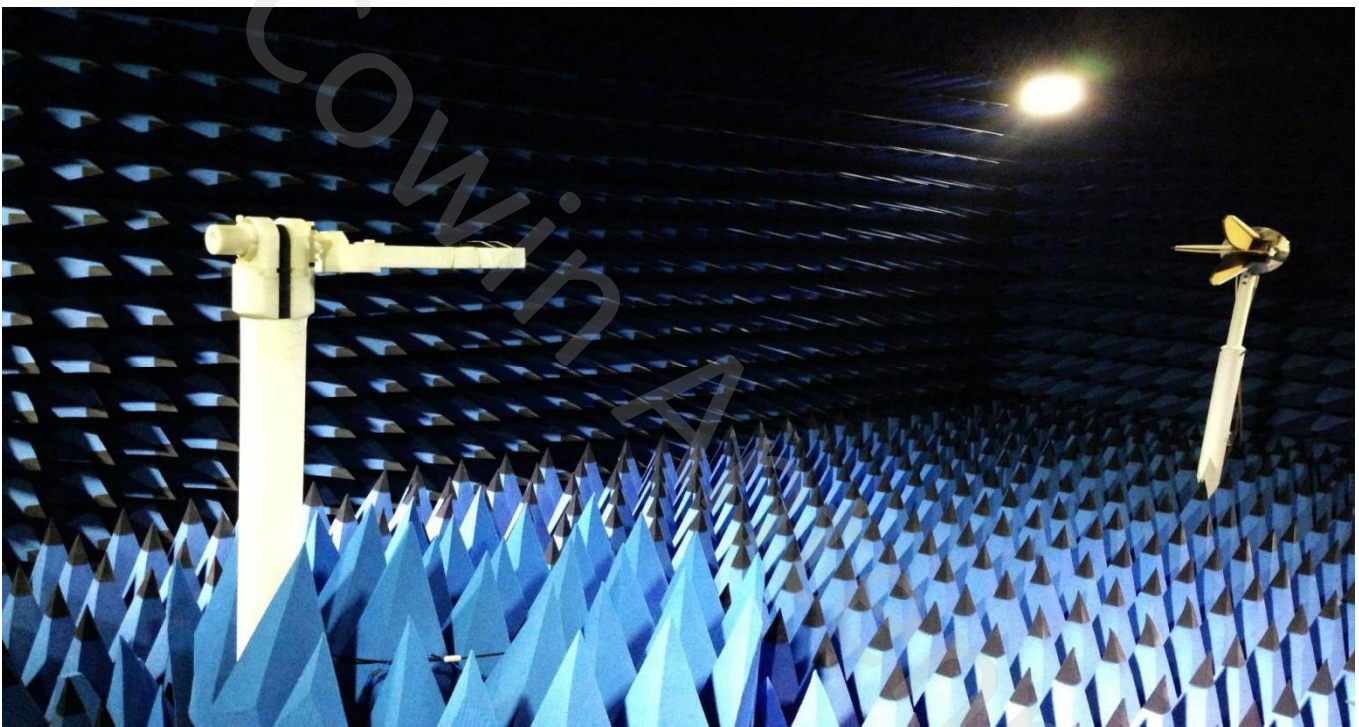
Antenna Measurement Conditions:

Mounted on Ground Plane of 280 x 80 mm

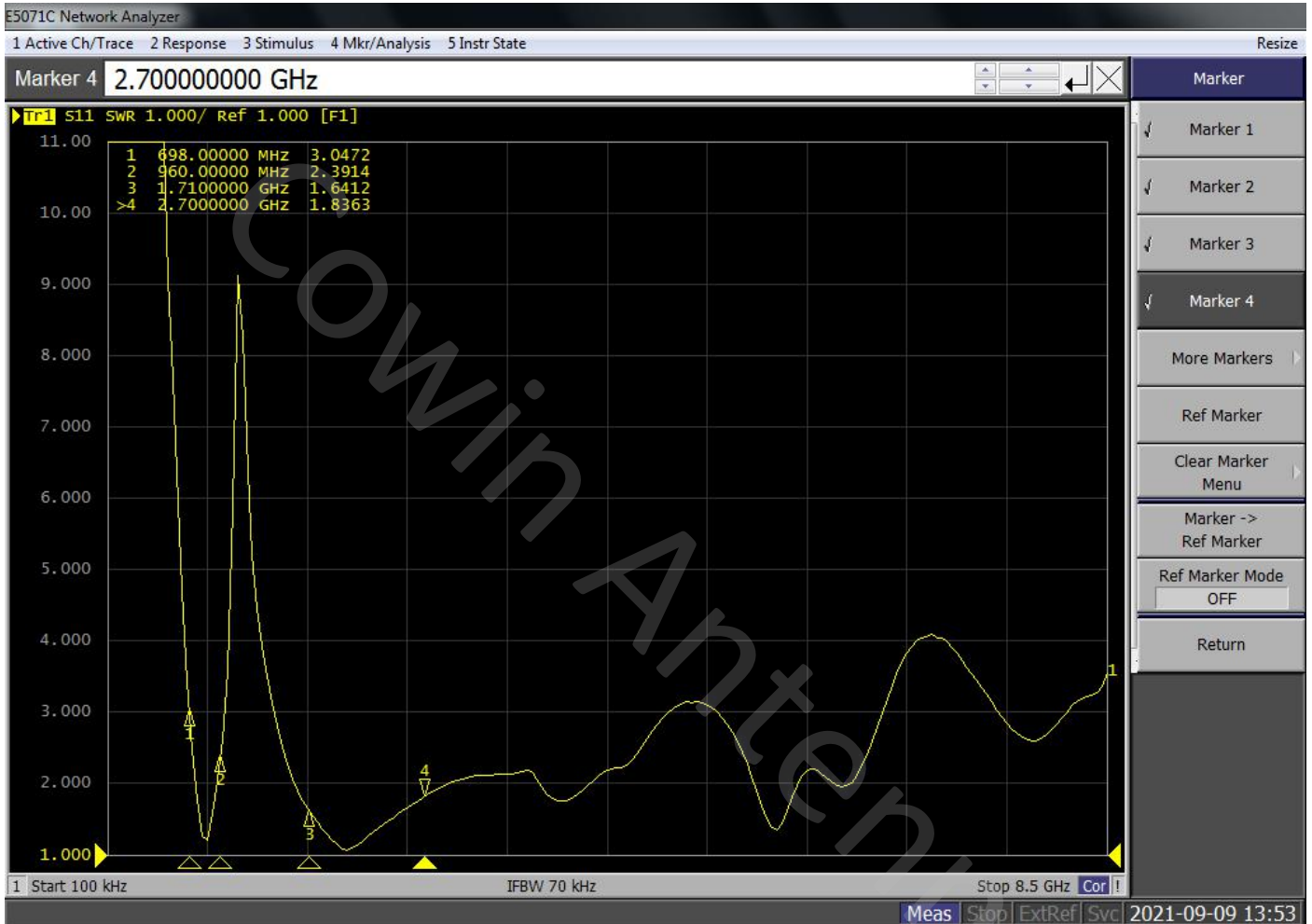
Measured in Certified 3D Anechoic Chamber

The network analyzer is Agilent 5071c

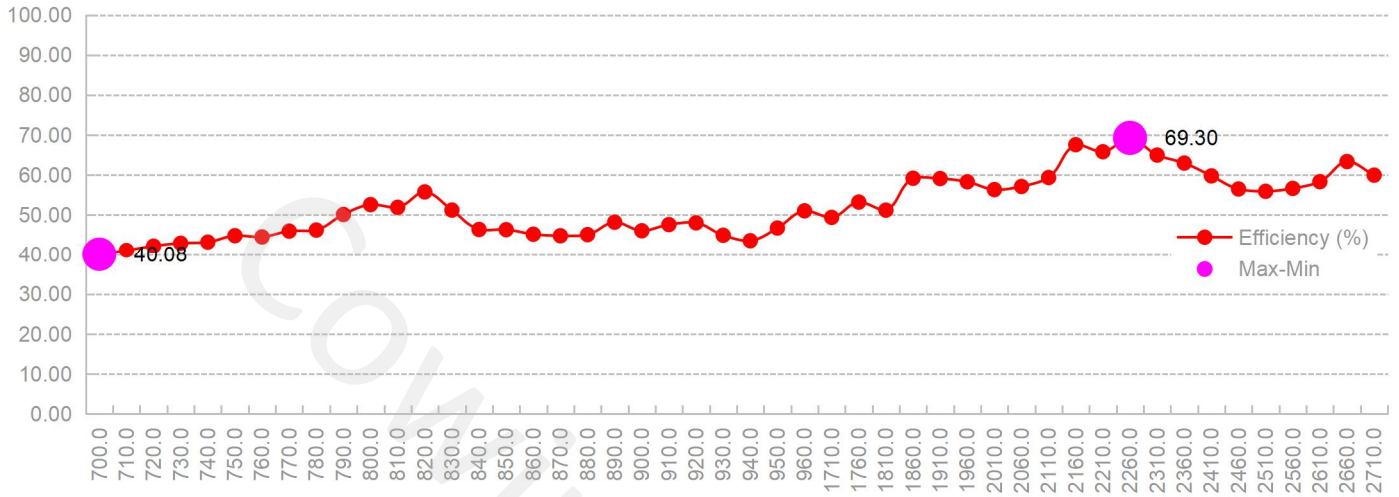
The comprehensive tester is Agilent cmv500



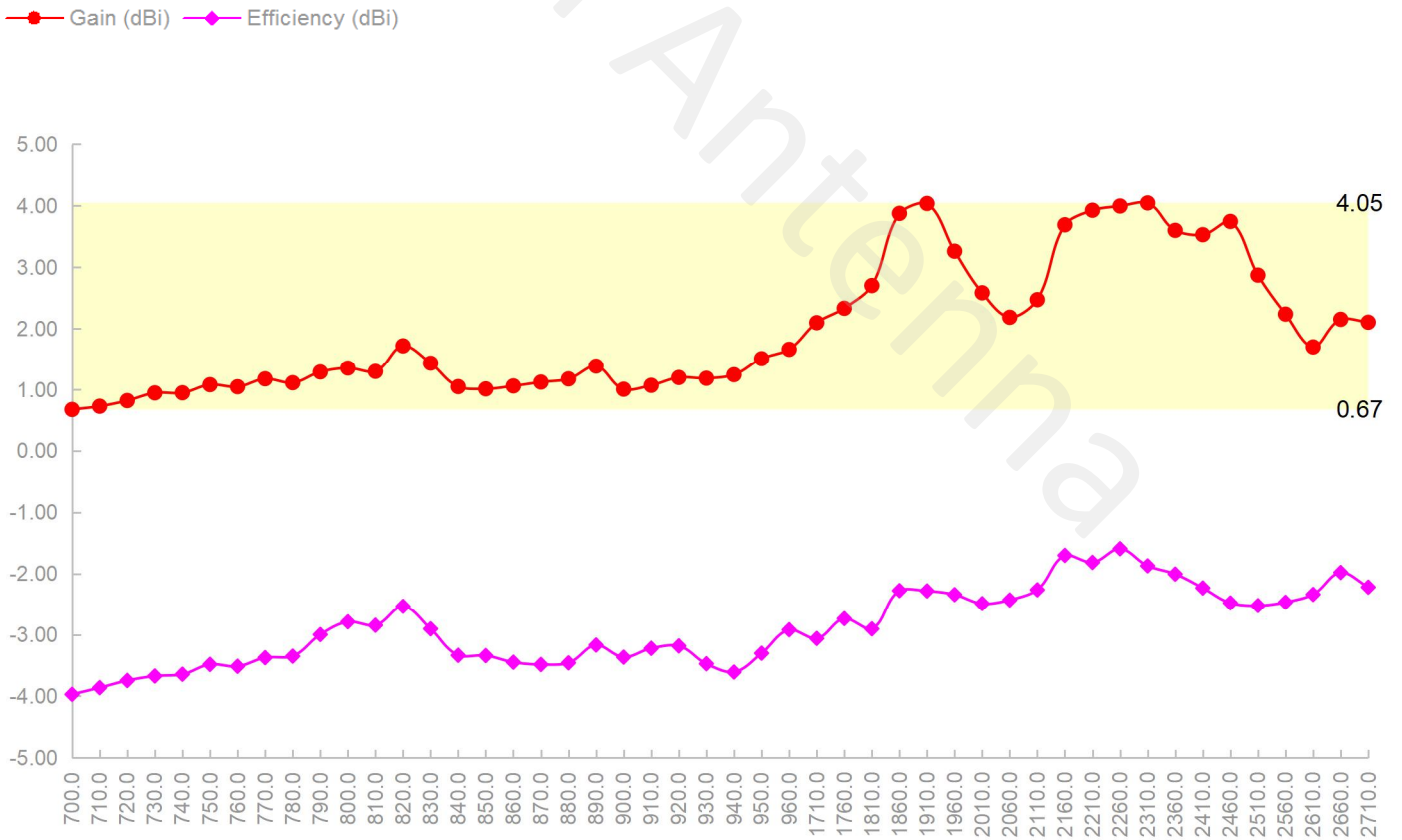
4.1 VSWR



4.2 Efficiency

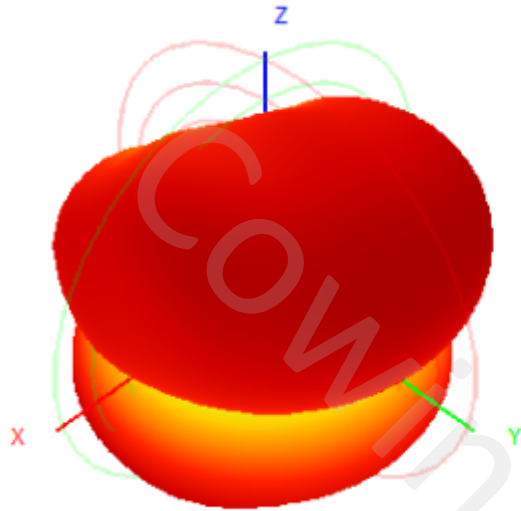


4.3 Peak gain

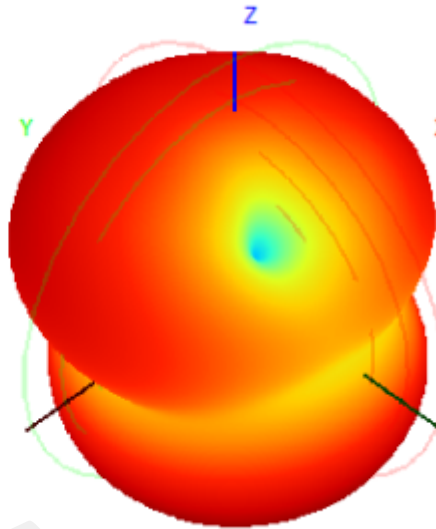


4.4 3D&2D Radiation Patterns

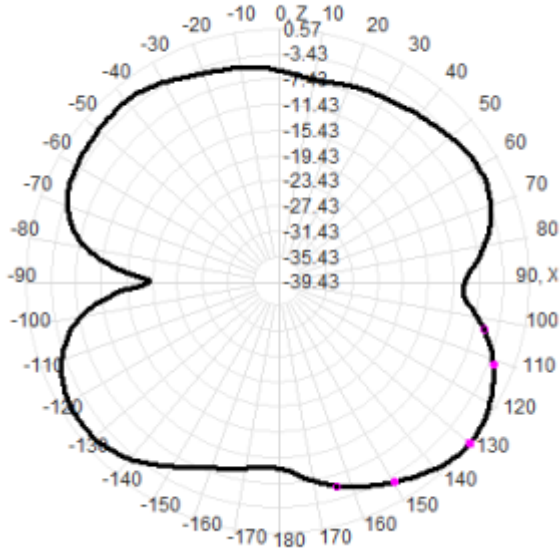
700.0MHz H+V, Eff: 40.1%



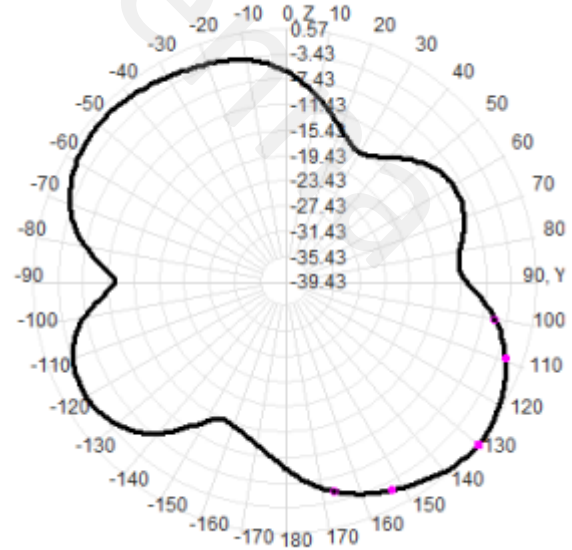
Back View



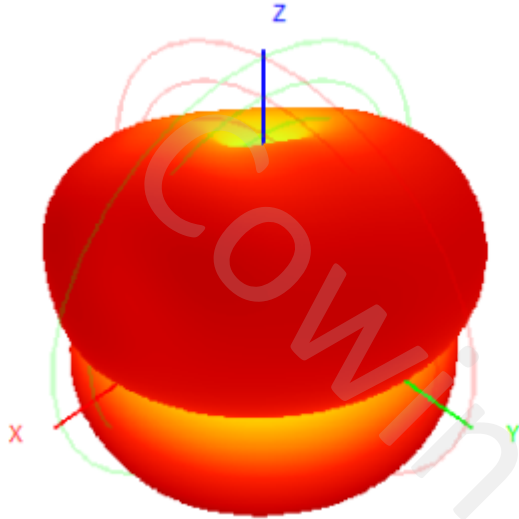
700.0MHz Total(E1-XZ), Max= 0.22dBi



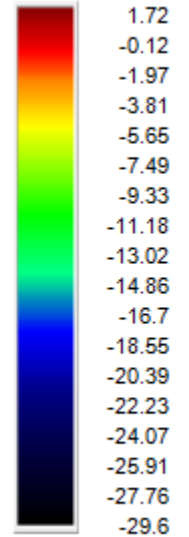
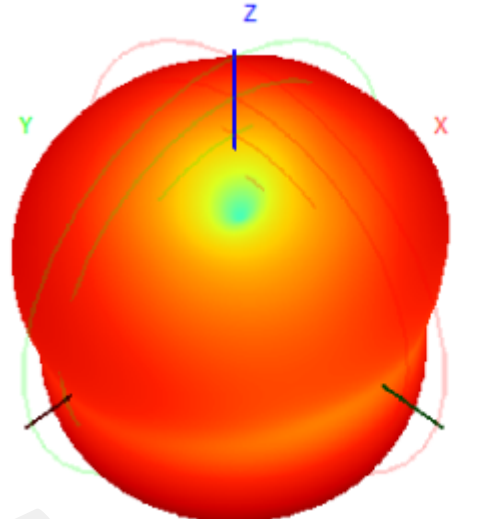
700.0MHz Total(E2-YZ), Max= 0.57dBi



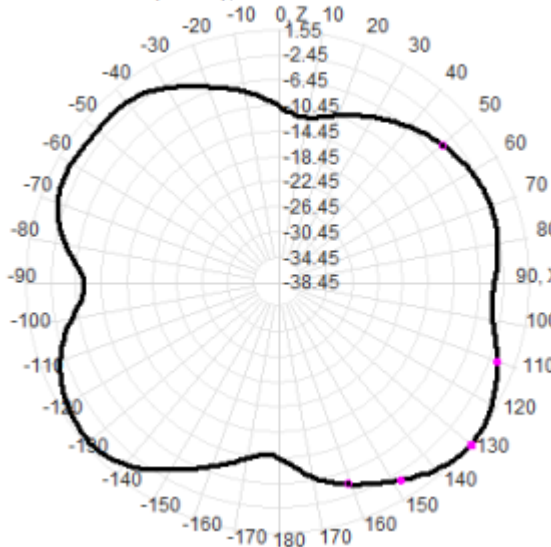
820.0MHz H+V, Eff: 55.8%



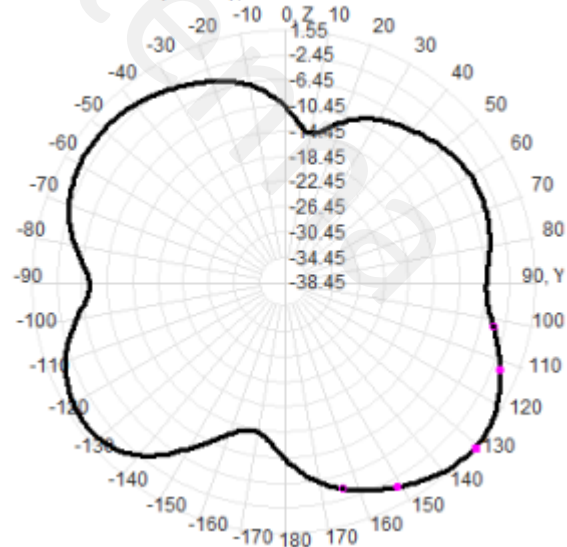
Back View



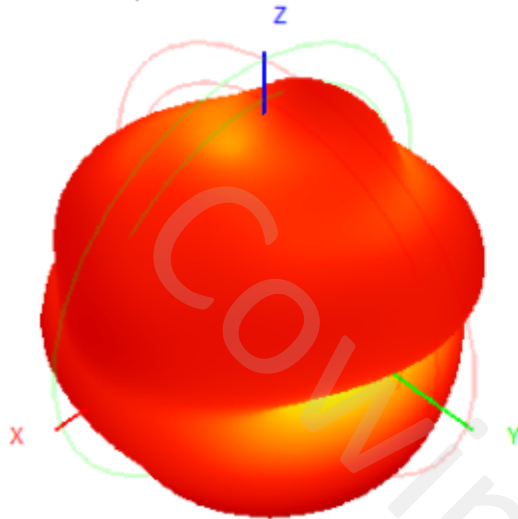
820.0MHz Total(E1-XZ), Max= 1.48dBi



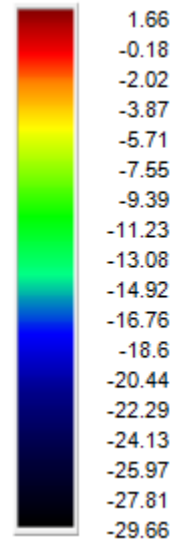
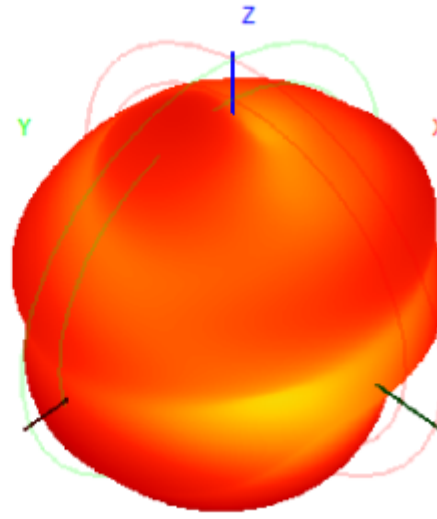
820.0MHz Total(E2-YZ), Max= 1.55dBi



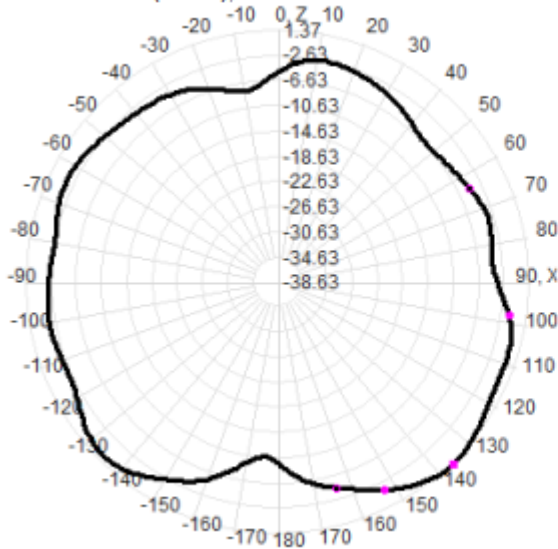
960.0MHz H+V, Eff: 51.1%



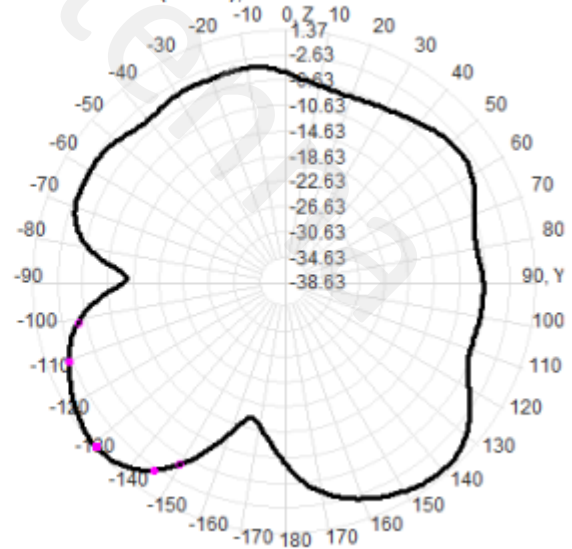
Back View



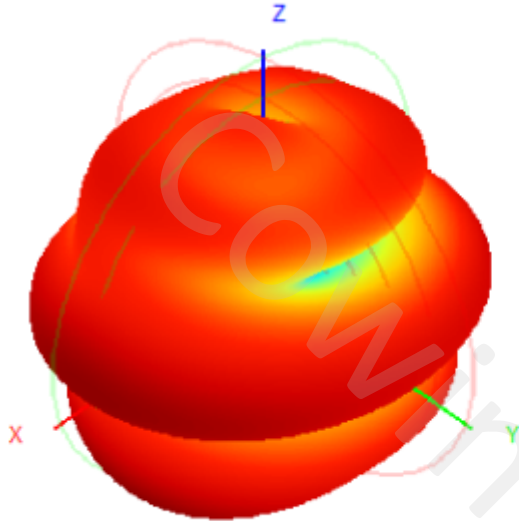
960.0MHz Total(E1-XZ), Max= 1.37dBi



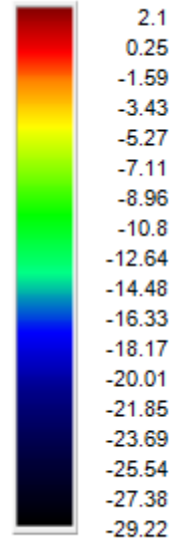
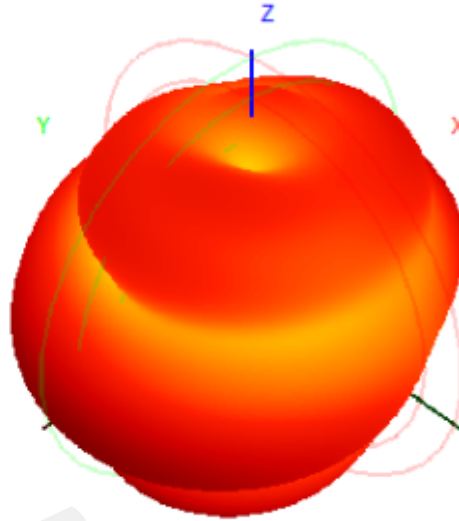
960.0MHz Total(E2-YZ), Max= 0.92dBi



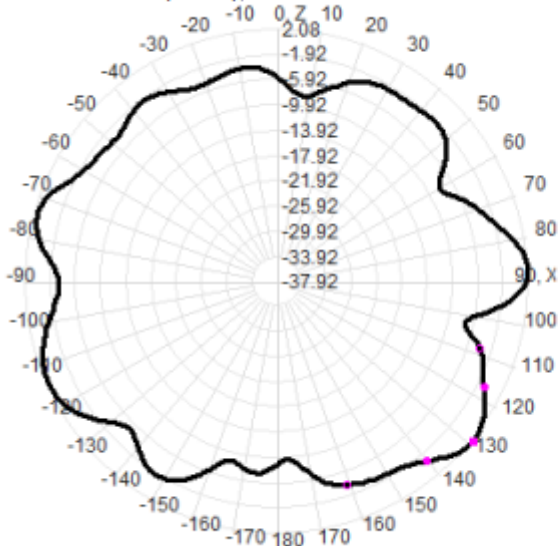
1710.0MHz H+V, Eff: 49.4%



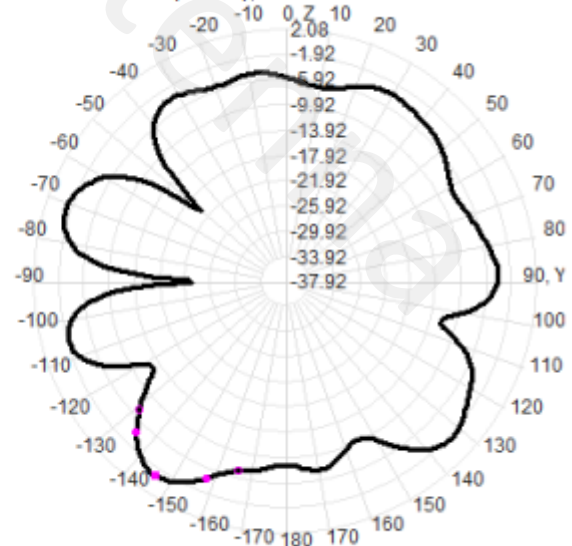
Back View



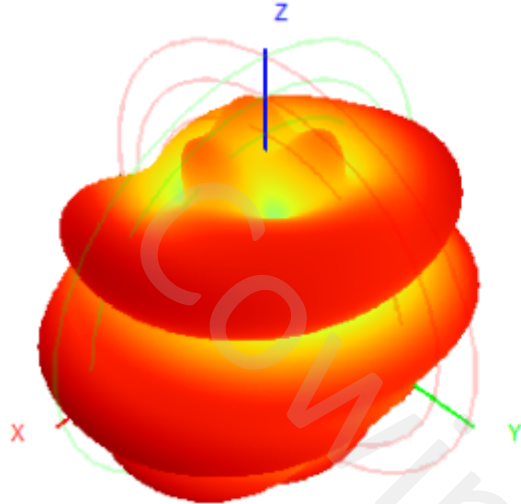
1710.0MHz Total(E1-XZ), Max= 2.08dBi



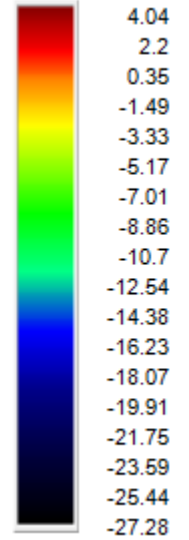
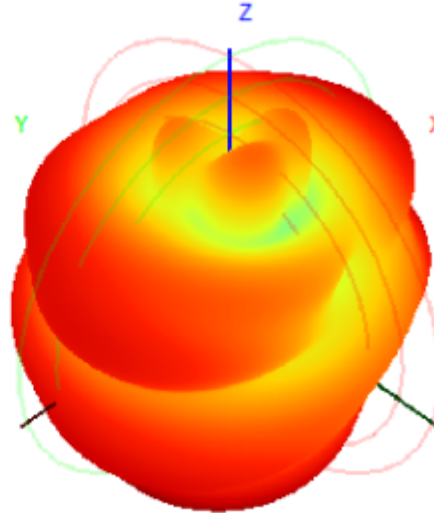
1710.0MHz Total(E2-YZ), Max= -1.06dBi



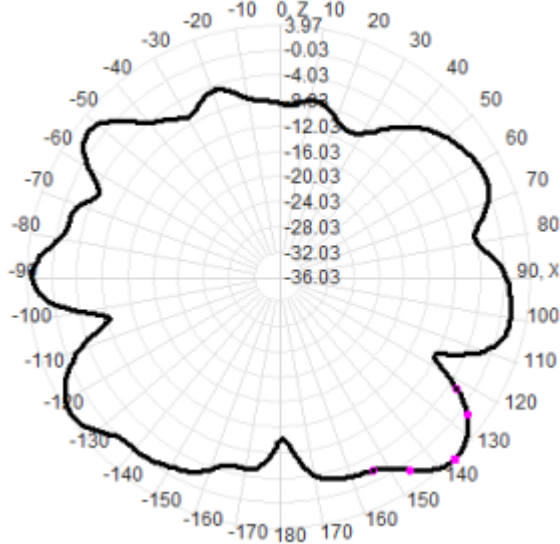
1910.0MHz H+V, Eff: 59.1%



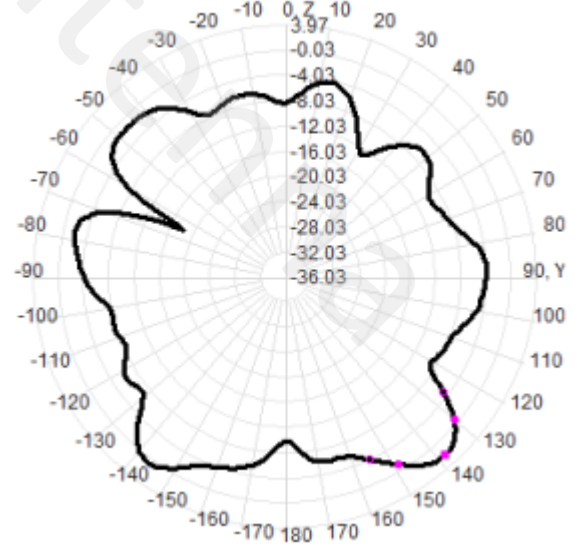
Back View



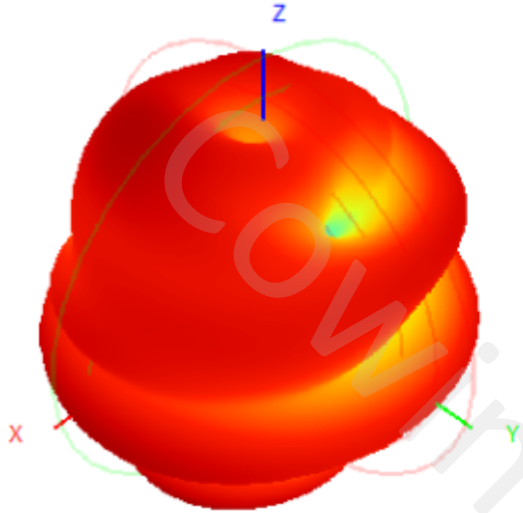
1910.0MHz Total(E1-XZ), Max= 3.97dBi



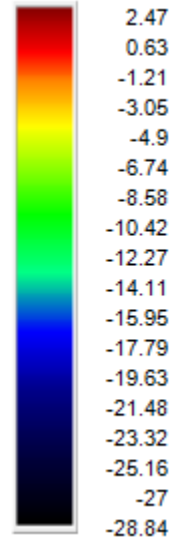
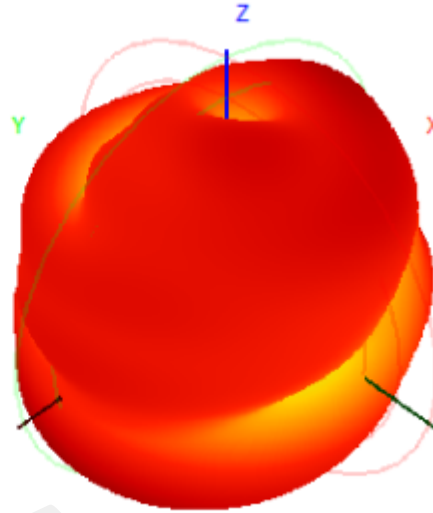
1910.0MHz Total(E2-YZ), Max= 1.84dBi



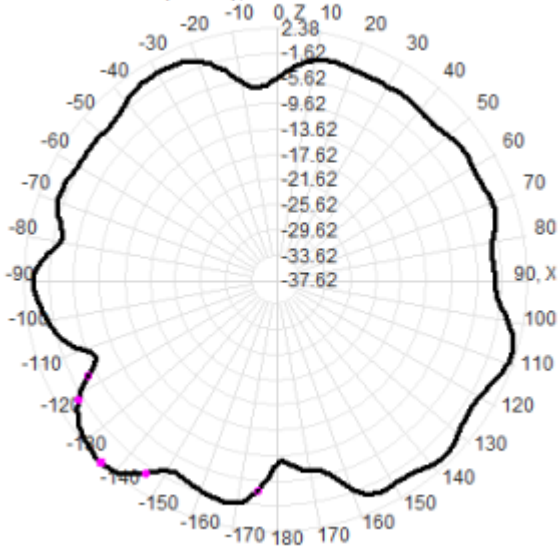
2110.0MHz H+V, Eff: 59.4%



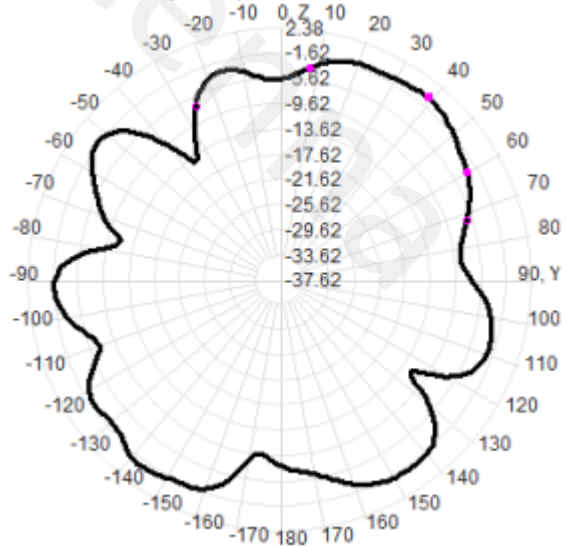
Back View



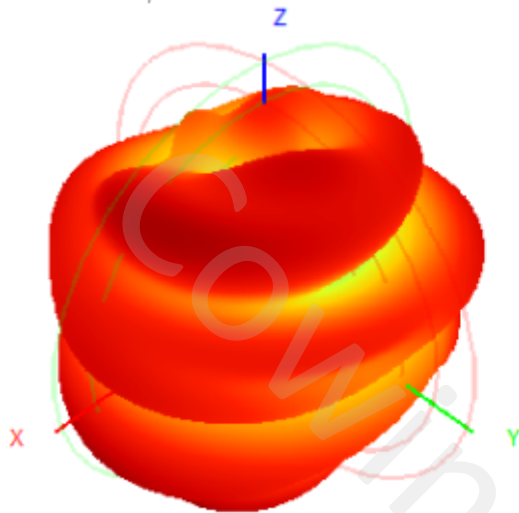
2110.0MHz Total(E1-XZ), Max= 2.38dBi



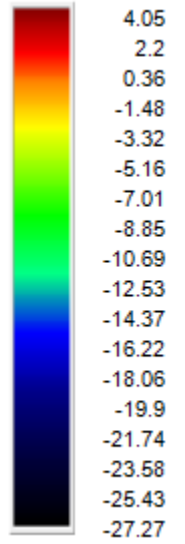
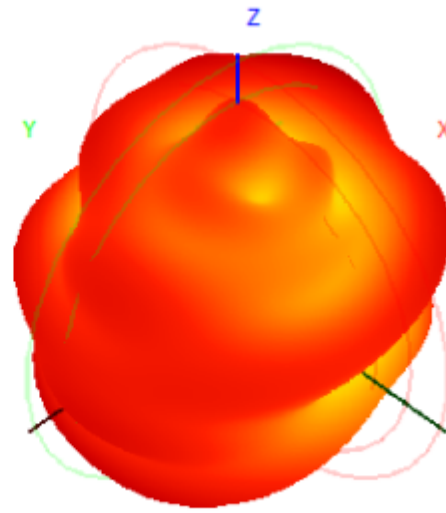
2110.0MHz Total(E2-YZ), Max= -0.39dBi



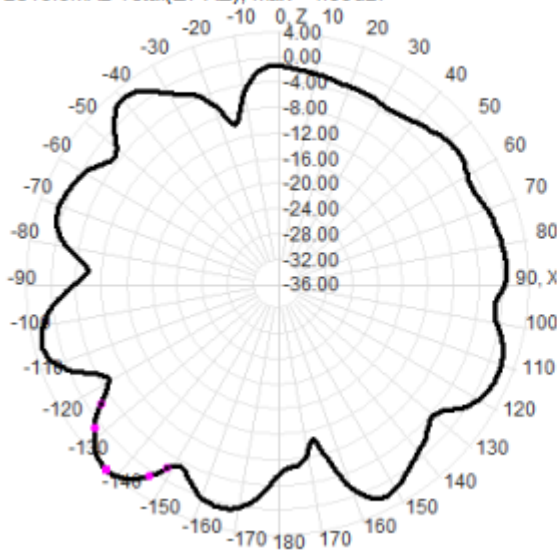
2310.0MHz H+V, Eff: 65.0%



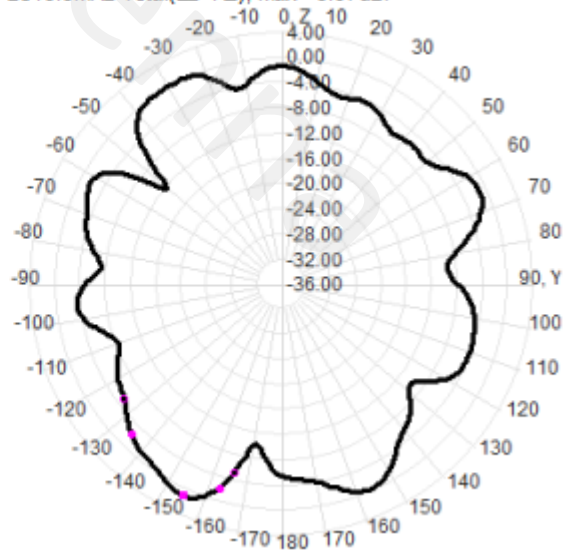
Back View



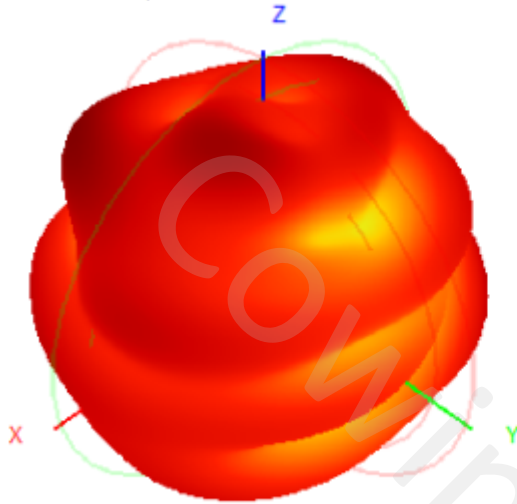
2310.0MHz Total(E1-XZ), Max= 4.00dBi



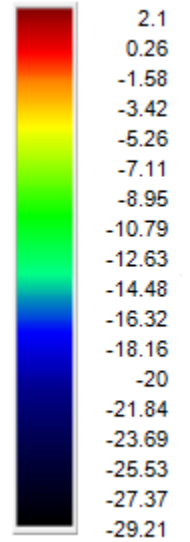
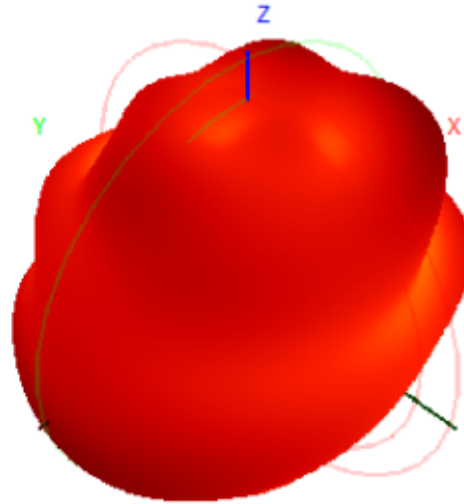
2310.0MHz Total(E2-YZ), Max= 0.87dBi



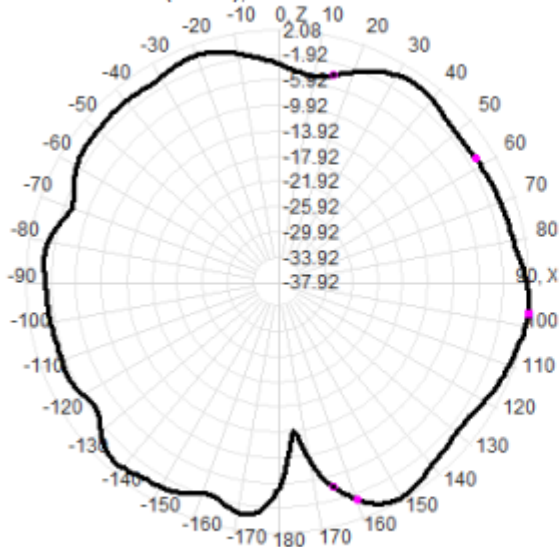
2710.0MHz H+V, Eff: 60.0%



Back View



2710.0MHz Total(E1-XZ), Max= 2.08dBi



2710.0MHz Total(E2-YZ), Max= -0.33dBi

